NEWPORT MUNICIPAL AIRPORT

AIRPORT LAYOUT PLAN REPORT

NEWPORT

OREGON DEPARTMENT OF AVIATION

CONTENTS

NEWPORT MUNICIPAL AIRPORT
Newport, Oregon

AIRPORT LAYOUT PLAN REPORT

"The preparation of this document may have been supported, in part, through the Airport Improvement Program financial assistance from the Federal Aviation Administration (Project Number 3-41-4100-13) as provided under Title 49, United States Code, section 47104. The contents do not necessarily reflect the official views of policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public laws."

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CHAPTER ONE

Inventory

The initial step in the preparation of the Airport Layout Plan Report for Newport Municipal Airport is the collection of information pertaining to the airport and the area it serves. The information collected in this chapter will be used in subsequent analyses in this study. The inventory portion of this chapter will summarize the airport location, history and existing facilities. By establishing a thorough and accurate inventory, an appropriate forecast, along with airfield and landside development can be determined.

The information was obtained from several sources, including on-site inspections, airport records, reviews of other planning studies, the Federal Aviation Administration (FAA), various government agencies, a number of on-line (Internet sites), which presently summarize most statistical information and facts about the airport, and interviews with airport staff, planning associations, and airport tenants. As with any airport planning study, an attempt has been made to utilize existing data, or information provided in existing planning documents, to the maximum extent possible.

AIRPORT LOCATION AND ACCESS

Newport Municipal Airport is located in the City of Newport, Oregon in Lincoln County. The county stretches more than 60 miles along the Pacific Ocean and boasts natural wonders such as Cascade Head and Cape Perpetua, as well as the evergreen forests of the Coast Range.

Lincoln County has more state parks and public waysides than any other county in the State of Oregon. Newport is the largest city in Lincoln County and serves as the county seat. The city is served by U.S. Highways 20, 34, and 101. Public transportation to and from the city is provided by Greyhound Bus Lines and Sky Taxi air service to the airport. Only two hours from Portland and an hour from the Interstate 5 corridor, the city is a key western portal to Oregon's Central Coast.

AREA TOPOGRAPHY

The airport sits along the coastal terrace just above the Pacific Ocean. The hillside continues to climb to the east of the airport.

CLIMATE

Newport has a mild, marine climate, where winter temperatures rarely get below freezing. Winter temperatures are generally in the mid 40's, while summer temperatures hover around the high 50's and low 60's. Newport averages 68 inches of rainfall annually. Winds in the summer generally come from the northwest. In the winter, the winds are stronger and come from the southwest.

COMMUNITY AND AIRPORT HISTORY

The area, which is now the City of Newport, was originally settled in 1855 and the city was officially founded on July 4, 1866. The city quickly became a popular travel destination, though no roads reached Newport until 1927. Major industries are fishing and tourism.

The airport was originally constructed by the Civil Aeronautics Administration (the FAA predecessor) in 1943 with a land grant from the City of Newport. The airport was returned to the City of Newport ownership in 1947. Since that time, the airport has continued to grow into an important general aviation and commuter service facility.

SOCIOECONOMIC PROJECTIONS

A variety of historical and forecast socioeconomic data related to the City of Newport, Lincoln County, and the State of Oregon has been collected for use in various elements of this airport layout plan. This information provides essential background for use in determining aviation service level requirements. Aviation forecasts are often related to the population base, as well as the economic strength of the region (i.e. personal income per capita and employment sectors).

POPULATION

Population is one of the most important elements to consider when planning for future needs of the airport. Historical population totals for the City of Newport, Lincoln County, and the State of Oregon were obtained from the U.S. Census Bureau and are presented in **Table 1A**. Oregon's population experienced a 1.9 percent average annual growth rate between 1990 and 2000, with over half a million new residents. During this same time, Lincoln County's population increased at an average annual rate of 1.4 percent, or 14.4 percent overall. The city's population increased by nearly 1,100 persons over the past decade, growing at an average annual rate of 1.2 percent

Projections of population for the State of Oregon and its counties were provided by the State of Oregon Office of Economic Analysis. The state's population is projected to grow at an average annual rate of 1.2 percent, which is nearly identical to the county's projected growth rate of 1.1 percent. According to the *2000 Oregon Department of Aviation Plan*, approximately 72 percent of the state's projected growth will be in the Portland metro area and Willamette Valley. Population forecasts for the city were obtained from Portland State University's *Center for Population Research and Census*, which projects a 1.1 percent average annual growth rate for the city. This growth rate yields a total population of 12,260 in Newport by 2023.

TABLE 1A
Historical and Forecast Population

	HISTORICAL			FORECAST			
Area	1990	2000	Avg. Ann. Growth Rate (1990-2000)	2008	2013	2023	Avg. Ann. Growth Rate (2000-2023)
City of Newport	8,437	9,532	1.2%	10,400	10,990	12,260	1.1%
Lincoln County	38,889	44,479	1.4%	48,740	51,420	57,180	1.1%
State of Oregon	2,842,321	3,421,399	1.9%	3,764,950	3,995,750	4,462,600	1.2%

Source: Historical population – U.S. Census Bureau; Forecast population – State and county forecasts interpolated from State of Oregon Office of Economic Analysis, city forecasts interpolated from PSU Center for Population Research & Census.

EMPLOYMENT

Analysis of a community's employment base can be valuable in determining the overall well-being of that community. In most cases, the community's make-up and health is significantly impacted by the number of jobs, variety of employment opportunities, and types of wages provided by local employers.

Tourism is the primary industry in Lincoln County. According to the Greater Newport Chamber of Commerce, it is estimated that the city receives approximately 3.3 million visitors each year, 66 percent of which are Oregon residents. Total direct impact of the visitor industry to Lincoln County represents an estimated 6,050 direct jobs. Other elements in the economic base of the county are fishing and seafood processing, forest products, forest management, ocean research, and manufacturing. **Table 1B** presents the ten largest employers in Lincoln County.

TABLE 1B Major Employers in Lincoln County	
EMPLOYER NAME	**# OF EMPLOYEES**
Confederated Tribes of the Siletz Indians	904
Lincoln County School District	800
Georgia-Pacific	500
Samaritan Health Services	396
Lincoln County	380
Oregon State Univ./Hatfield Marine Science Center Campus	265
Salishan Lodge/Resort	215
Central Lincoln PUD	151
Depoe Bay Fish Company	150
Shilo Inns	142
Source: Greater Newport Chamber of Commerce.	

Employment by economic sector was also examined for Lincoln County. In 2001, the county experienced a loss of 230 jobs from the previous years. These losses were generally restricted to the goods-producing and related industry sectors. Manufacturing was down due largely to losses in food processing resulting from more restrictive fishing regulations. On the other hand, the tourism-related industry experienced an increase in jobs, indicating little ill effect on tourism in the county from the recession or the September 11th terrorist attacks.

Table 1C presents current and forecasted employment (non-agricultural) in Lincoln County by economic sector. As shown in the table, the services and retail trade industries currently dominate the county's total employment. The services industry accounts for the largest share (8,710), capturing nearly 35 percent of all employment, while the retail trade industry contributes approximately 25 percent (6,190) of all jobs. Government (state and local) also plays an important part of the economic sector, currently capturing more than 13 percent of total employment in Lincoln County.

The current industry projections for Lincoln County indicate that total employment will increase at an average annual rate of 1.3 percent (7,410 jobs) by 2023. The services industry will continue to dominate employment, growing at an average annual rate of 2.1 percent and capturing more than 40 percent of total employment by the year 2023. Retail trade, along with state and local government, will also continue to be significant sectors of employment through 2023.

TABLE 1C
Employment by Economic Sector
Lincoln County

Economic Sector	2003	% of Total Employment 2003	2023	% of Total Employment 2023	Avg. Annual Growth Rate (2003-2023)
Total Employment	**25,010**	**100.0%**	**32,420**	**100.0%**	**1.3%**
Mining	110	0.4%	155	0.5%	1.7%
Construction	1,560	6.2%	,1885	5.8%	1.0%
Manufacturing	1,620	6.5%	1,600	4.9%	-0.1%
Transp. & Public Utilities	730	2.9%	830	2.6%	0.6%
Wholesale Trade	290	1.2%	365	1.1%	1.2%
Retail Trade	6,190	24.8%	7,555	23.3%	1.0%
Fin., Ins., & Real Estate	1,920	7.7%	2,070	6.4%	0.4%
Services	8,710	34.8%	13,150	40.6%	2.1%
Federal Government	520	2.1%	555	1.7%	0.3%
State & Local Government	3,360	13.4%	4,255	13.1%	1.2%

Source: CEDDS, Woods & Poole (2003).

As of June 2000, Oregon had experienced nearly nine consecutive years of annual job growth. Nonfarm payroll employment was up by more than 43,000 jobs over the previous year, with gains across nearly all industry sectors. The unemployment rate was at an all-time low of 4.8 percent. However, in 2001 Oregon was hit especially hard by the nation-wide recession. By June 2002, the state had shed more than 20,000 jobs over the previous year.

Unemployment rates (not seasonally adjusted) for Lincoln County, the State of Oregon, and the United States are presented in **Table 1D**. The unemployment rates were obtained from the Oregon Labor Market Information System. Currently, the unemployment rates of the county and the state are well above the nation's unemployment rate. Furthermore, all of Oregon qualifies as an "Area of Substantial Unemployment" (ASU). An ASU is an area with high numbers of unemployed persons relative to the total labor force. For an area to qualify as an ASU they must have an unemployment rate of 6.5 percent. Additional requirements include a population of at least 10,000 people and the entire state must be an aggregate of several geographical areas that are contiguous. The purpose of defining an area as an ASU is to better allocate funds to the areas that need it the most.

TABLE 1D
Unemployment Rates

Area	1990	2000	Current*
Lincoln County	6.0%	6.2%	9.0%
State of Oregon	5.5%	4.9%	8.4%
United States	5.6%	4.0%	6.2%

Source: Oregon Labor Market Information System.
*Average as of March 2003.

INCOME

Table 1E compares per capita personal income (PCPI), adjusted for 1996 dollars, for Lincoln County, the State of Oregon, and the United States. Historically, the PCPI for Lincoln County has remained below that of both Oregon and the United States. Forecasts project an annual growth rate of 1.1 percent for Lincoln County and the United States, while the State of Oregon is projected to grow at an average annual rate of 1.0 percent.

TABLE 1E
Personal Income Per Capita (1996$)

	HISTORICAL			FORECAST			
Area	1990	2000	Annual Increase 1990-2000	2008	2013	2023	Annual Increase 2000-2023
Lincoln County	$18,950	$22,480	1.7%	$24,860	$26,220[1]	$29,100[1]	1.1%
Oregon	$21,300	$25,740	1.9%	$27,970	$29,420[1]	$32,470[1]	1.0%
United States	$22,850	$27,430	1.8%	$29,950	$31,690[1]	$35,510[1]	1.1%

Source: CEDDS, Woods & Poole (2003).
[1]Interpolated by Coffman Associates.

EXISTING FACILITIES

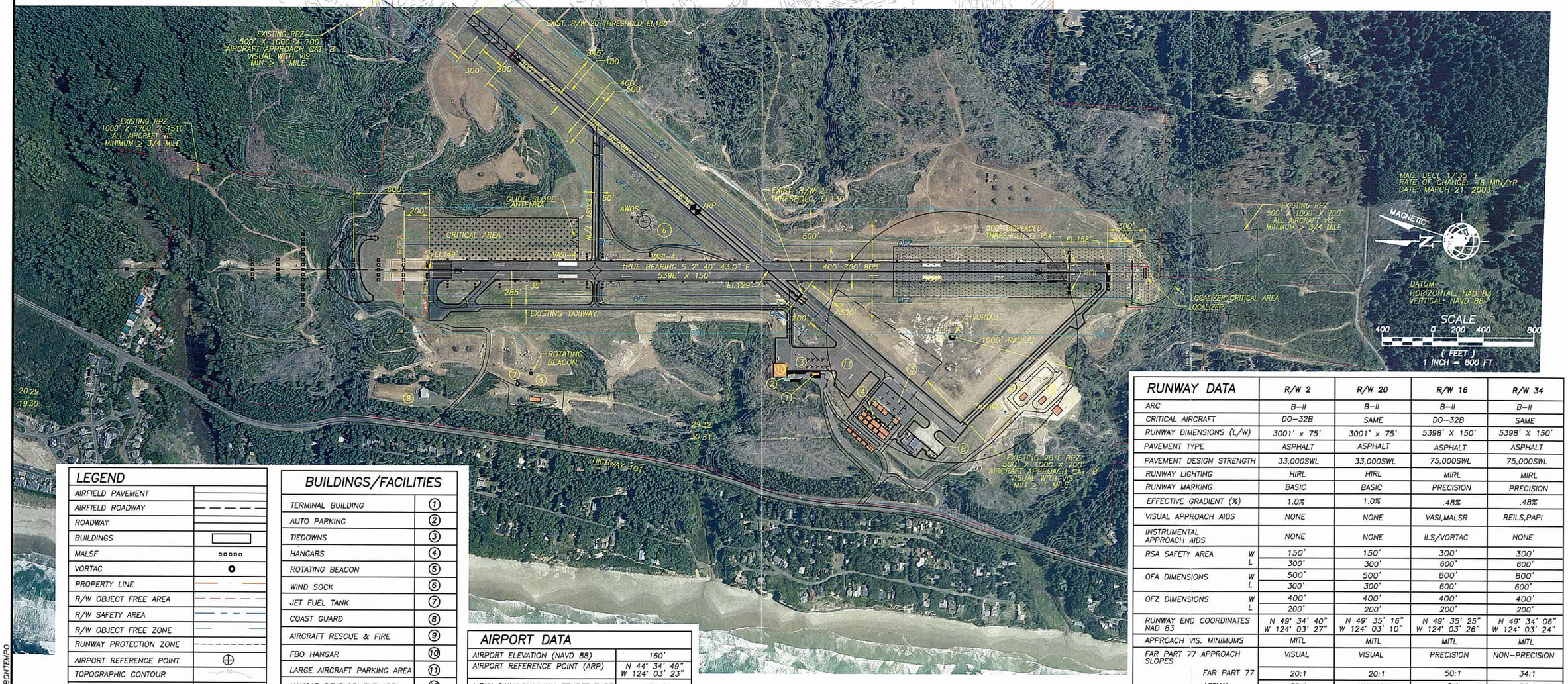
The airport is currently located on 700 acres of land. It is attended daily from 8:00am until 5:00pm.

The airport reference code is a criterion that defines the critical airport dimensions by the characteristics of the aircraft operating at the airport. This code is defined specifically by the approach category and the design group of the aircraft. The approach category of the aircraft is determined by 1.3 times the stall speed of the aircraft in its landing configuration at its maximum landing weight. The approach category is represented by the letters A, B, C, D and E. The design group of the aircraft is based on the length of the wingspan and is defined by roman numerals I, II, III, IV, V and VI. Newport Municipal Airport has an existing ARC of B-II. Approach category B is equal to or greater than 91 knots, but less than 121 knots. Design group II has a wingspan equal to or greater than 49 feet, but less than 79 feet. The existing critical aircraft for the airport is a Dornier 328. The existing facilities at Newport Municipal Airport are discussed in the following paragraphs and are identified on **Exhibit 1A**.

AIRFIELD FACILITIES

All existing pavement section and pavement condition information was obtained from Pavement Consultants Inc.'s 2002 pavement survey.

DWG INDEX:
30295-XREF-NWP-BM01



LEGEND

AIRFIELD PAVEMENT	
AIRFIELD ROADWAY	
ROADWAY	
BUILDINGS	
MALSF	
VORTAC	
PROPERTY LINE	
R/W OBJECT FREE AREA	
R/W SAFETY AREA	
R/W OBJECT FREE ZONE	
RUNWAY PROTECTION ZONE	
AIRPORT REFERENCE POINT	
TOPOGRAPHIC CONTOUR	
THRESHOLD LIGHTS	
REILS	
VASI	
AWOS	
RUNWAY LIGHTS	

BUILDINGS/FACILITIES

TERMINAL BUILDING	1
AUTO PARKING	2
TIEDOWNS	3
HANGARS	4
ROTATING BEACON	5
WIND SOCK	6
JET FUEL TANK	7
COAST GUARD	8
AIRCRAFT RESCUE & FIRE	9
FBO HANGAR	10
LARGE AIRCRAFT PARKING AREA	11
HANGAR DEVELOPMENT AREA	12

NOTE:
1. EXTENSION OF RUNWAY SAFETY AREA FOR RUNWAY 34 DESIGN STANDARDS LIMITED DUE TO TERRAIN.

AIRPORT DATA

AIRPORT ELEVATION (NAVD 88)	160'
AIRPORT REFERENCE POINT (ARP)	N 44° 34' 49" W 124° 03' 23"
MEAN DAILY MAXIMUM TEMPERATURE	65.1°F
AIRPORT REFERENCE CODE	B-II
NPIAS ROLE	GA
NAVIGATIONAL AIDS	ILS;VORTAC;MALSR
TAXIWAY LIGHTING	NONE
TAXIWAY MARKINGS	CENTERLINE

RUNWAY DATA		R/W 2	R/W 20	R/W 16	R/W 34
ARC		B-II	B-II	B-II	B-II
CRITICAL AIRCRAFT		DO-32B	SAME	DO-32B	SAME
RUNWAY DIMENSIONS (L/W)		3001' x 75'	3001' x 75'	5398' X 150'	5398' X 150'
PAVEMENT TYPE		ASPHALT	ASPHALT	ASPHALT	ASPHALT
PAVEMENT DESIGN STRENGTH		33,000SWL	33,000SWL	75,000SWL	75,000SWL
RUNWAY LIGHTING		HIRL	HIRL	MIRL	MIRL
RUNWAY MARKING		BASIC	BASIC	PRECISION	PRECISION
EFFECTIVE GRADIENT (%)		1.0%	1.0%	.48%	.48%
VISUAL APPROACH AIDS		NONE	NONE	VASI,MALSR	REILS,PAPI
INSTRUMENTAL APPROACH AIDS		NONE	NONE	ILS/VORTAC	NONE
RSA SAFETY AREA	W	150'	150'	300'	300'
	L	300'	300'	600'	600'
OFA DIMENSIONS	W	500'	500'	800'	800'
	L	300'	300'	600'	600'
OFZ DIMENSIONS	W	400'	400'	400'	400'
	L	200'	200'	200'	200'
RUNWAY END COORDINATES NAD 83		N 49° 34' 40" W 124° 03' 27"	N 49° 35' 16" W 124° 03' 10"	N 49° 35' 25" W 124° 03' 26"	N 49° 34' 06" W 124° 03' 24"
APPROACH VIS. MINIMUMS		MITL	MITL	MITL	MITL
FAR PART 77 APPROACH SLOPES		VISUAL	VISUAL	PRECISION	NON-PRECISION
	FAR PART 77	20:1	20:1	50:1	34:1
	ACTUAL	39:1	UNKNOWN	0:1	50:1
THRESHOLD DISPLACEMENT		NONE	NONE	NONE	300'
THRESHOLD RELOCATION		1700'	400'	NONE	NONE
DECLARED DISTANCES	TORA	2980'	2980'	5100'	5400'
	TODA	2980'	2980'	5400'	5400'
	ASDA	2980'	2980'	5100'	5400'
	LDA	2980'	2980'	5100'	5100'

DESIGNED BY: _____ CHECKED BY: LAM
DRAWN BY: CMB APPROVED BY: _____
LAST EDIT: 04/29/04 PLOT DATE: 08/31/04

DATE	BY	REV#	REVISION	CK'D	APPR.

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Coffman Associates
Airport Consultants

OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT

AIRPORT FACILITIES
EXHIBIT 1A

NEWPORT OREGON

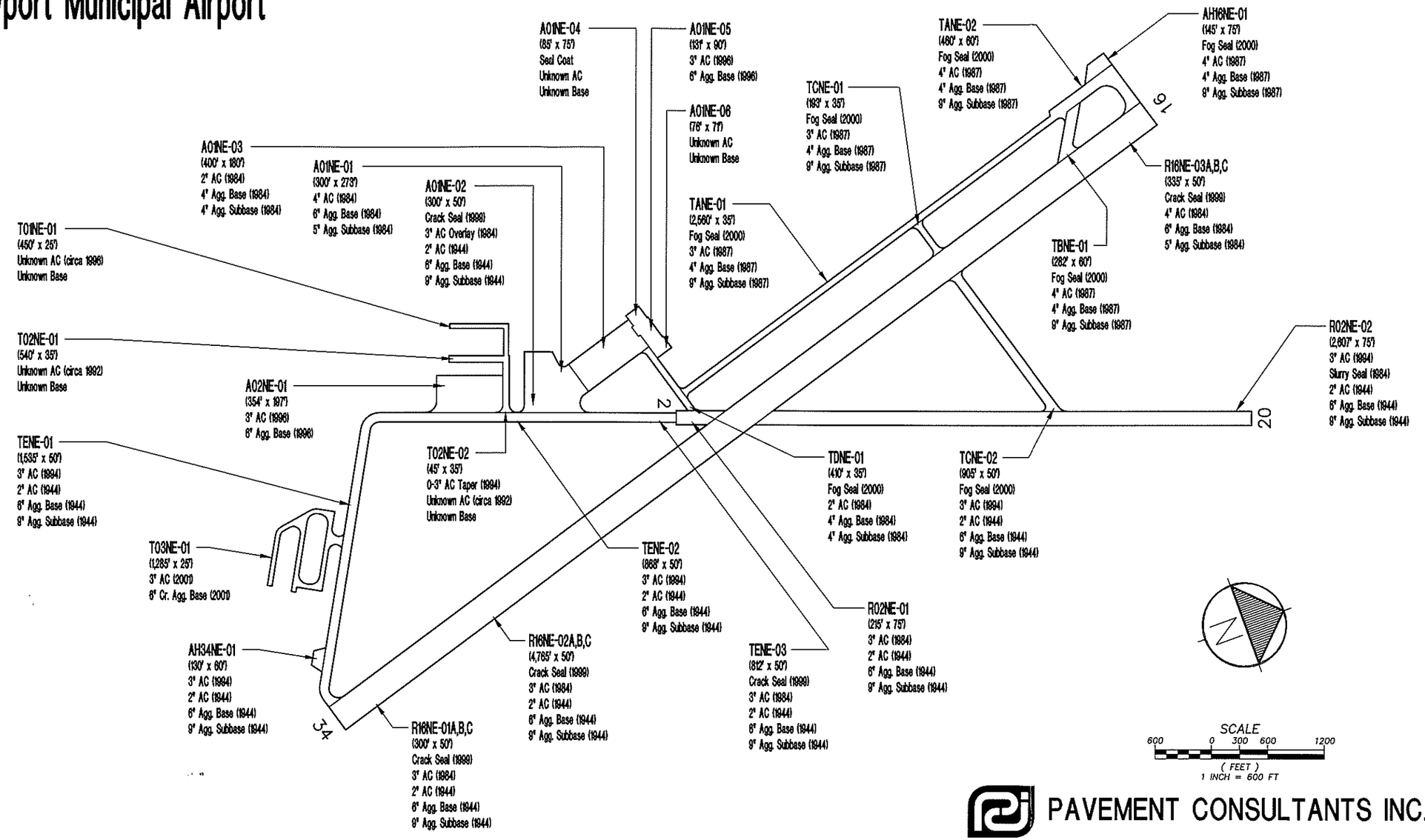
SCALE:	PROJECT NO.	DRAWING FILE NAME:	SHEET
1"=800'	30295	30295-NWP-EX1A	1A

Office: SEATTLE / System: WWP-SEA-BRCY121 / User: CBONTEMPO

DWG INDEX:

Figure NE-1. Airport Layout, Dimensions and Pavement Cross-Sections.

Newport Municipal Airport



PAVEMENT CONSULTANTS INC.

DESIGNED BY:		CHECKED BY:	LAM
DRAWN BY:	CMB	APPROVED BY:	REA
LAST EDIT:	04/29/04	PLOT DATE:	05/04/04

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EXPLORE NEWPORT FRIENDLIEST

Coffman Associates Airport Consultants

OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT

AIRPORT LAYOUT, DIMENSIONS AND PAVEMENT CROSS-SECTIONS

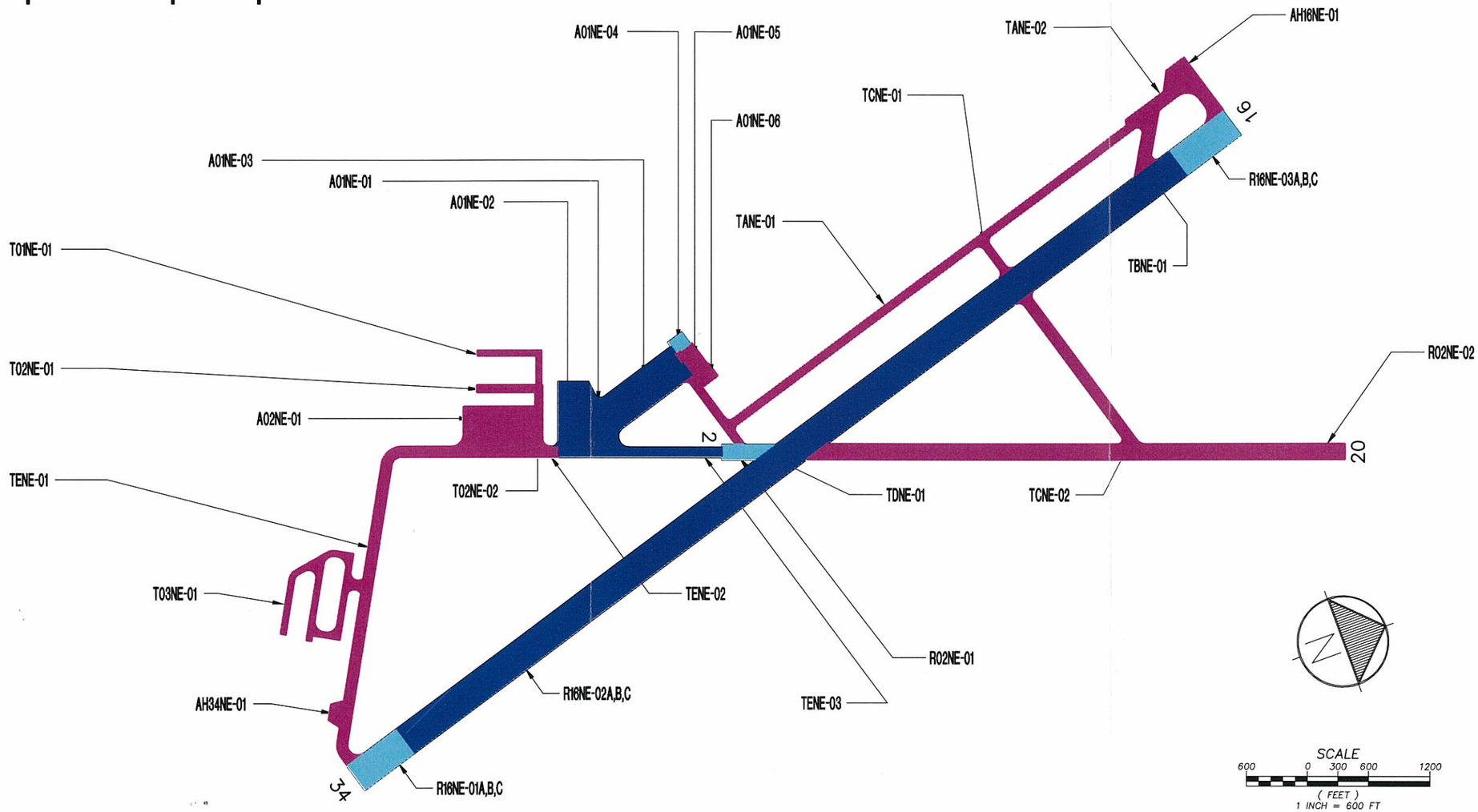
NEWPORT OREGON

SCALE:	PROJECT NO.	DRAWING FILE NAME:	SHEET
1"=600'	30295	30295-NWP-EX1B	1B

Office: SEATTLE | System: WHP-SEA-BRCY121 | User: CBONTEMPO

DWG INDEX:

Figure NE-3. Pavement Condition in September 2001.
Newport Municipal Airport



PCI / PCR

PCI	PCR
100	EXCELLENT
85	VERY GOOD
70	GOOD
55	FAIR
40	POOR
25	VERY POOR
10	FAILED
0	

SCALE
600 0 300 600 1200
(FEET)
1 INCH = 600 FT

PAVEMENT CONSULTANTS INC.

DESIGNED BY:		CHECKED BY:	LAM
DRAWN BY:	CMB	APPROVED BY:	REA
LAST EDIT:	04/29/04	PLOT DATE:	05/04/04

DATE	BY	REV#	REVISION	CK'D	APPR

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EXPLORE NEWPORT FRIENDLIEST

Coffman Associates Airport Consultants

NEWPORT MUNICIPAL AIRPORT
OREGON DEPARTMENT OF AVIATION
PAVEMENT CONDITIONS
SEPTEMBER 2001

NEWPORT OREGON

SCALE:	PROJECT NO.	DRAWING FILE NAME:	SHEET
1"=600'	30295	30295-nwp-ex1c	1C

Office: SEATTLE | System: WHP-SEA-8RCY121 | User: CBONTEMPO

Runway

Newport Municipal Airport has two runways, Runway 2-20 and Runway 16-34. Both runways were originally constructed in 1944. Runway 2-20 is the crosswind runway, with a length of 3,001 feet and a width of 75 feet. Runway 16-34 is the primary runway, with a length of 5,398 feet and a width of 150 feet.

The pavement section for Runway 16-34 is five inches of asphalt concrete, six inches of crushed aggregate base course, and nine inches of aggregate sub-base course. The exception to this pavement section is the last 335 feet of Runway 16, where the pavement section is four inches of asphalt concrete, six inches of crushed aggregate base course, and five inches of aggregate sub-base course. The pavement is rated for single wheel gear 75,000 lbs aircraft; 120,000 lbs for dual wheel gear aircraft; and 170,000 lbs for dual tandem wheel gear aircraft. The pavement section for Runway 2-20 is five inches of asphalt concrete, six inches of crushed aggregate base course, and nine inches of aggregate sub-base course. The pavement is rated for single wheel gear 33,000 lbs aircraft; 50,000 lbs for dual wheel gear aircraft; and 84,000 lbs for dual tandem wheel gear aircraft. Both runways were slurry sealed in 2002 as part of the ODA Pavement Maintenance program and are in good to excellent condition.

Taxiways and Taxilanes

Runway 16-34 has a partial parallel taxiway with a length of 3,020 feet. Another taxiway extends from the end of Runway 2 and eventually angles around to Runway 34. This partial parallel taxiway was slurry sealed in 2002 as part of the ODA Pavement Maintenance Program. The main parallel taxiway has a pavement section of three to four inches of asphalt concrete, four inches of crushed aggregate base course, and nine inches of aggregate sub-base course. The other taxiways have the same pavement sections as the runways. The taxiway pavement is in good to excellent condition.

Aprons and Aircraft Parking

There are three apron areas on the airport, all adjacent to the taxiway which is along the extended centerline of Runway 2. The northernmost apron is approximately 190,000 square feet and contains ten tiedowns. The pavement on this apron in is good to excellent condition. The central apron is approximately 420 feet by 35 feet wide and contains eight tiedowns. The pavement on this apron is in excellent condition. Both of these aprons were slurry sealed in 2002 as part of the ODA Pavement Maintenance program. The southernmost apron, owned by the Coast Guard is concrete and approximately 300 feet by 80 feet wide. No pavement condition information for this apron was obtained since it is privately owned.

LANDSIDE FACILITIES

Hangars and Airport Buildings

Nineteen (19) hangar spaces are available for aircraft in eighteen (18) hangar buildings located adjacent to the central apron. The hangar buildings are in good to excellent condition.

Three other buildings are located adjacent to the three aprons. The Coast Guard occupies a building adjacent to their apron. Central Oregon Coast Air Services has a ground lease with the airport for their building. The third building on the airport is the terminal building.

Fixed Based Operators (FBOs)

There is one fixed based operator (FBO) at Newport Municipal Airport, Central Oregon Coast Air Services (COCAS). COCAS provides a number of services, including maintenance arrangements, tiedowns, hangar space, rental cars, hotel reservations, catering, aircraft rental, flight instruction, scenic flights, photography flights, pilot supplies and fueling. COCAS leases land for their hangar and airport fueling facilities from the City of Newport. Sky Taxi has unscheduled daily flights to and from Newport Municipal Airport. COCAS owns the above ground fuel tanks which were installed in 1997. No card locking system is on either fuel tank. The Jet A tank has a 12,000 gallon capacity and the 100LL tank has a 10,000 gallon capacity.

Internal Circulation, Access and Vehicle Parking

Vehicle and pedestrian access to the airfield is limited only by a fence along the north and east sides of Runway 2-20 and along the hangar buildings on the southwest side of the airport. Vehicular traffic must get around the airport via the taxiways and aprons. Access to the airport is gained from a two-lane access roadway that stems directly from Highway 101. A paved parking area is located adjacent to the terminal building and the FBO. The parking lot accommodates approximately 20 vehicles.

AIRFIELD SUPPORT FACILITIES

Aircraft Rescue and Firefighting

Aircraft rescue and firefighting (ARFF) is available through the City of Newport Fire Department, which is located on the northwest end of the airfield.

Fueling Facilities

Fueling facilities are operated by Central Oregon Coast Air Services. Both 100 low lead fuel and Jet A fuel are available.

Airport Maintenance

Airport maintenance is provided by the City of Newport. Limited airport maintenance facilities are located on site.

Utilities

Pioneer Telephone Cooperative provides phone service to the airport. The Seal Rock Water District has a waterline that serves the airport property. Sewer services are not available at the

airport but septic systems are used as needed. Power, cell phone coverage, cable television, and high speed internet service are available locally.

Unicom (Aeronautical Advisory Station)

The Federal Communications Commission issued Newport Airport Unicom frequency 122.8.

AIRPORT NAVIGATIONAL AIDS

Airport Navigational Aids, or NAVAIDS, provide electronic navigational assistance to aircraft for approaches to an airport. NAVAIDS are either visual approach aids or instrument approach aids; the former providing a visual navigational tool, and the latter being an instrument-based navigational tool. The types of approaches available at an airport are based on the NAVAIDS which are provided.

Instrument Approach Aids

Newport Municipal Airport is equipped with a number of instrument NAVAIDS for approaches to Runway 16-34. A Very High Frequency Omni directional Range Collocated Tactical Air Navigation device (VORTAC) is located on the airfield west of Runway 34. The VORTAC provides a VOR/DME nonprecision approach to Runway 16 and Runway 34. A GPS overlay approach is also associated with these approaches. Runway 16 is equipped with an Instrument Landing System (ILS), a Nondirectional Beacon (NDB), and a recently constructed Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). The NDB provides a nonprecision approach to Runway 16. The ILS provides a precision approach to Runway 16. The recent addition of the MALSF is another tool to increase the quality of the approach to Runway 16. The MALSF is required to achieve approach minimums of less than 1-statute mile.

Visual Approach Aids

Runway 34 is equipped with runway end identifier lights (REILs). REILs are flashing white lights that identify the end of the runway. Runway 34 has a precision approach path indicator (PAPI). PAPIs contain multiple light units that are angled to provide the pilot with information as to whether he is approaching too low or too high. The PAPI for Runway 34 is a four-box system. Runway 16 is equipped with a Visual Approach Slope Indicator (VASI) which is similar to the PAPI, though older and slightly less accurate. The airport also has a segmented circle, lighted wind cone, and a rotating beacon.

Airport Lighting and Signing

Runway 16-34 is equipped with high intensity runway edge lighting (HIRL) and Runway 2-20 is equipped with medium intensity runway edge lighting (MIRL), both which operate via radio control from approaching aircraft. The partial parallel taxiway has edge reflectors, while the rest of the taxiways have no lights or reflectors. The airport has lighted hold signs.

Other NAVAIDS

Newport Municipal Airport has its own Automated Weather Observing System (AWOS) system. It is an AWOS 1, which contains sensors to measure pressure, altimeter setting, wind data, temperature, dew point, and report density altitude. The AWOS frequency is 133.9 MHz.

AIRSPACE

PART 77 IMAGINARY SURFACES

Part 77 imaginary surfaces are the basis for protection of airspace around the airport. It is ideal to keep these areas clear of obstructions. The Part 77 surfaces consist of a primary surface, an approach surface, a transitional surface, a horizontal surface and a conical surface. Specifics on the dimensions of these surfaces and the obstructions to them will be further addressed with the airport plans.

Newport Municipal Airport has visual approaches to Runways 2 and 20, a nonprecision approach to Runway 34, and a precision approach to Runway 16. The visual approaches allow aircraft to takeoff and land only when the movements can be made through visual (and not electronic) navigation. The nonprecision and precision approaches are achieved through electronic navigation aids. There are currently obstructions to the visual approach surface of Runway 20. The obstructions consist of the trees that need to be topped or removed to maintain a clear approach surface. The precision approach to Runway 16 is obstructed by the ground surface resulting in an effective 0:1 approach. Runway 34 is obstructed by trees. The obstructions will be addressed more specifically in the airport plans.

LAND USE PLANNING AND ZONING

ON-AIRPORT LAND USE

Newport Municipal Airport is designated by the City of Newport as a "Public Buildings and Structures Zone." This designation is general zoning for any public buildings and structures. It is recommended that the city consider re-zoning the airport property to a "public use airport" zone. This change would limit the use of this property more specifically to airport and airport-related uses. The airport property would then be protected from uses that may be undesirable or damaging to the airport. A model "Public Use Airport Zone" definition is provided in the Oregon Administrative Rule (OAR) 660 Division 13 and in the appendix to this plan. The city does not have a published zoning map for this area at this time, but it is in the development process. Lincoln County does not have any specific zoning designations for the airport and airport property.

In addition to the zoning of the airport property, there are four special land use concerns on which the FAA focuses. The first is floodplains on the airport property. There are no floodplains within the boundaries of the airport property. Another issue is if there is any land regulated by Section 303 (C) of Title 49, U.S.C. Section 303 (C) land is publicly owned public parks and recreation areas, waterfowl and wildlife refuges, historic sites, public bikeways and

trails, bodies of water, and a number of other similar categories. The nearby beaches and the Pacific Ocean would fall into this category, but there is no Section 303 (C) land on the airport property. Landfills within five miles of the airport are also a concern. However, there are no landfills within five miles of Newport Municipal Airport.

OFF-AIRPORT LAND USE

It is important to the health and future of an airport to restrict the uses of the surroundings areas, so that they are compatible with airport uses and consideration is given to prevent restrictions to airport growth in the future. There are a number of ways to protect the surrounding areas for airport use which include, zoning restrictions, height restriction zoning, avigation easements, and noise easements. The following addresses the current land use restrictions and any recommended improvements.

Existing Zoning and Compatibility

The airport is located within the city limits, along with some of the surrounding areas, and therefore under the City of Newport zoning jurisdiction. Other nearby areas that are outside the city limits are under Lincoln County's zoning jurisdiction. The city has developed an "Airport Restricted Area" zoning designation that covers the entire airport and the associated Part 77 Imaginary Surfaces, including the approach surfaces. The "Airport Restricted Area" is similar to the model for the "Airport Safety and Compatibility Overlay Zone (for public use airports with instrument approaches)" developed by the Oregon Department of Aviation (ODA). This document is contained in the appendix for reference.

The zoning around the airport generally consists of residential to the west and southeast of the airport, industrial to the north of the airport, timber conservation to the east of the airport, and the Wolf Tree Resort to the south of the airport. The zoning is shown in **Exhibit 1D**, Zoning Map. Zoning compatibility with the airport is evaluated based on noise levels within certain zoning areas, zoning allowances within the runway protection zone (RPZ), and general zoning around the airport.

The runway protection zone (RPZ) is a trapezoidal area beyond each runway end. The ODA recommends that only farm uses and, under limited circumstances, public airports, roads, parking, utilities, parks/open space, and golf courses, be allowed within the airport's RPZ. No structures should be allowed within the RPZ, unless they are structures accessory to airport operations that have been approved by the FAA. For an expanded list of limitations to uses within the RPZ, see the ODA "Public Use Airport Safety and Compatibility Overlay Zone." The zoning categories of the areas within the airport RPZs are industrial for a portion of the Runway 16 and Runway 20 RPZs. The Runway 34 and Runway 20 RPZs are entirely within the "Airport Restricted Zone." Industrial use should not be allowed within the airport RPZs per the ODA standards. The city should carefully review this use.

The city has used their "Airport Restricted Area" zoning to incorporate limiting the use of the areas within the RPZ. Obtaining avigation and hazard easements is recommended to specifically define control over these areas as needed for aviation.

In general, zoning around the airport is compatible with airport use, though the residential zoning areas to the west of the airport could introduce issues with aircraft noise. Noise impacts of the airport will be evaluated in this airport layout plan update as part of the environmental review summary. Noise contours will be developed for both existing and future conditions.

Part 77 Surfaces and Airport Overlay Zone

The City of Newport has incorporated an "Airport Restricted Area" section into their zoning ordinance, as previously mentioned. As previously noted, the ODA "Airport Safety and Compatibility Overlay Zone (for public use airports with instrument approaches)" should be reviewed and incorporated into the existing zoning criteria. By incorporating this document into their zoning ordinance, the city will have taken the appropriate steps to protect the Part 77 Airport Imaginary Surfaces and limit uses to avoid issues with noise, outdoor lighting, glare, visibility obstruction from emissions, electrical interference to NAVAIDs, and wildlife attractions.

Other Easements

The City of Newport has an existing easement with Pioneer Telephone Cooperative for installation and maintenance of buried telephone cable in the northwest corner of the airport property.

DWG INDEX:
30295-XREF-NWP-BM01

SCALE
500 0 250 500 1000
(FEET)
1 INCH = 1000 FT

LEGEND	
LINCOLN COUNTY	
DESIGNATION	DESCRIPTION
R-1	SINGLE FAMILY RESIDENTIAL
T-C	TIMBER CONSERVATION
I-P	PLANNED INDUSTRIAL
RR-5	AGRICULTURE
P-F	RURAL RESIDENTIAL
CITY OF NEWPORT	
DESIGNATION	DESCRIPTION
P-1	PUBLIC BUILDINGS & STRUCTURES
	AIRPORT BOUNDARY
	RUNWAY PROTECTION ZONE
	PROPERTY BOUNDARY

T-C
T-C
P-1
I-P
P-1
RR-5
T-C
I-P
I-P
P-F
P-F
P-F
R-1A
R-1
WOLF TREE RESORT

DESIGNED BY: LAM CHECKED BY: REA
DRAWN BY: CMB APPROVED BY:
LAST EDIT: 04/29/04 PLOT DATE: 05/04/04

DATE	BY	REV#	REVISION	CK'D	APPR.

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OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT
ZONING MAP
EXHIBIT 1D

NEWPORT OREGON

SCALE:	PROJECT NO.	DRAWING FILE NAME:	SHEET
1"=1000'	31468	30295-NWP-EX1D	1D

Office: SEATTLE | System: WHP-SEA-BRCY121 | User: CBONTEMPO

CHAPTER TWO

Forecasts

This chapter will provide forecasts of aviation activity through the year 2023. Forecasts of based aircraft, based aircraft fleet mix, and annual aircraft operations will serve as the basis for facility planning. The resulting forecast may be used for several purposes including facility needs assessments, airfield capacity evaluation, and environmental evaluations. The forecasts will be reviewed and approved by the Federal Aviation Administration (FAA) and the Oregon Department of Aviation (ODA) to ensure that they are reasonable projections of aviation activity. The intent is to permit the City of Newport and the Oregon Department of Aviation to make the necessary planning adjustments to ensure the facility meets projected demands in an efficient and cost-effective manner.

NATIONAL AVIATION TRENDS

Each year, the FAA publishes its national aviation forecast. Included in this publication are forecasts for air carriers, regional/commuters, general aviation, air cargo, and military activity. The forecasts are prepared to meet budget and planning needs of the constituent units of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and by the general public. The current edition when this chapter was prepared was FAA *Aerospace Forecasts-Fiscal Years 2003-2014*, published in March 2003. The forecasts use the economic performance of the United States as an indicator of future aviation

industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets.

The FAA expects modest recovery in 2003. However, a return to pre-September 11 levels is not expected to be achieved until 2005, and even then the level of enplanements may not return to, or surpass those of 2001 until 2006. The majority of this decline is forecast to occur with the large air carriers, while the regional airline industry is expected to continue its growth, possibly returning to its long-term historical growth trend in 2004. Air cargo traffic is expected to grow faster than passenger traffic. General aviation is expected to achieve low-to-moderate increases in the active fleet and hours flown, with most of the growth occurring in business/corporate flying.

The forecasts prepared by the FAA assume that aviation demand will follow a similar path to recovery, as with previous altering incidents such as the 1991 Gulf War, the 1997-98 Southeast Asia financial crisis, the 1998 Northwest Airlines' strike, or the September 11 terrorist attacks. However, these forecasts were prepared prior to the war in Iraq as well as the recent epidemic of Severe Acute Respiratory Syndrome (SARS), both of which have had a negative impact on the commercial airline industry. How deeply the aviation industry is impacted can only be determined over time.

REGIONAL/COMMUTER AIRLINES

The regional/commuter airline industry, defined as air carriers providing regularly scheduled passenger service and fleets composed primarily of aircraft having 70 seats or less, continues to be the strongest growth sector of the commercial air carrier industry. Dramatic growth in code-sharing agreements with the major carriers, followed by a wave of air carrier acquisitions and purchases of equity interests, has resulted in the transfer of large numbers of short-haul jet routes to their regional partners, fueling the industry's growth.

The impact of September 11 on regional/commuter carriers was generally more positive than negative. This was largely because major carriers transferred a large number of routes to their regional partners. This allowed the larger carriers to cut capacity while still maintaining presence in these markets.

Industry growth is expected to outpace that of the larger commercial air carriers. The introduction of new state-of-the-art aircraft, especially high-speed turboprops and regional jets with ranges of up to 1,000 miles, is expected to open up new opportunities for growth in nontraditional markets. The regional airline industry will also continue to benefit from continued integration with the larger air carriers. The further need for larger commercial air carriers to reduce costs and fleet size will insure that these carriers continue to transfer smaller, marginally profitable routes to the regional air carriers.

Likewise, the increased use of regional jets is expected to lead to another round of route rationalization by the larger commercial carriers, particularly on low-density routes in the 500-mile range. Regional jet aircraft can serve these markets with the speed and comfort of a large jet, while at the same time providing greater service frequency that is not economically feasible

with the speed and comfort of a large jet. According to the *FAA Aerospace Forecasts,* this transfer of routes is expected to be one of the major drivers of growth during the early years of the forecast.

Regional/commuter revenue passenger miles (RPMs) are expected to increase 14.6 percent (to 35.3 billion) in 2003, 13.3 percent in 2004 (to 40.0 billion), and 9.9 percent in 2005 (to 43.9 billion). The high growth rates reflect the longer stage lengths being flown by the large number of regional jets continuing to enter the fleet. Over the 12-year forecast period, the average annual rate of growth in RPMs is 7.8 percent, for a total of 75.1 billion by 2014. Domestic passenger miles are forecast to increase at rates of 14.5, 13.4, and 10.0 percent over the first three years of the forecast period, and slowing to 6.2 percent annually over the remainder of the forecast period.

Over the 12-year forecast period, the regional/commuter passenger fleet is projected to net an average annual increase of 126 aircraft, going from 2,521 aircraft in 2002 to 4,034 aircraft in 2014. During this same period, the overall fleet of turboprop aircraft will decrease by 324 aircraft. For the first three years of the forecast, 3.5 regional jets will enter the fleet for every one turboprop aircraft retired.

Regional/commuter passenger enplanements are projected to increase by 7.1 percent in 2003 (to 97.1 million), 9.7 percent in 2004 (to 106.6 million), and 7.0 percent in 2005 (to 114.0 million). The strong growth rate during this three-year period reflects the transfer of additional routes from the larger air carriers and the addition of regional jet aircraft to their fleet. It is expected that enplanements will total 174.1 million by 2014. **Exhibit 2A** depicts passenger enplanements and fleet mix forecasts for the U.S. regional/commuter market.

GENERAL AVIATION

Following more than a decade of decline, the general aviation industry was revitalized with the passage of the *General Aviation Revitalization Act* in 1994 (federal legislation which limits the liability on general aviation aircraft to 18 years from the date of manufacture). This legislation sparked an interest to renew the manufacturing of general aviation aircraft due to the reduction in product liability, as well as renewed optimism for the industry. The high cost of product liability insurance was a major factor in the decision by many American aircraft manufacturers to slow or discontinue the production of general aviation aircraft.

However, this continued growth in the general aviation industry slowed considerably in 2001 and 2002, negatively impacted by the events of September 11. Thousands of general aviation aircraft were grounded for weeks, due to "no-fly zone" restrictions imposed on operations of aircraft in security-sensitive areas. Some U.S. airports in and around Washington, D.C., and New York City remained closed to visual flight rules (VFR) traffic. This, in addition to the economic recession already taking place in 2001-02, has had a profoundly negative impact on the general aviation industry. Weak traffic demand, coupled with the failure of full-fare

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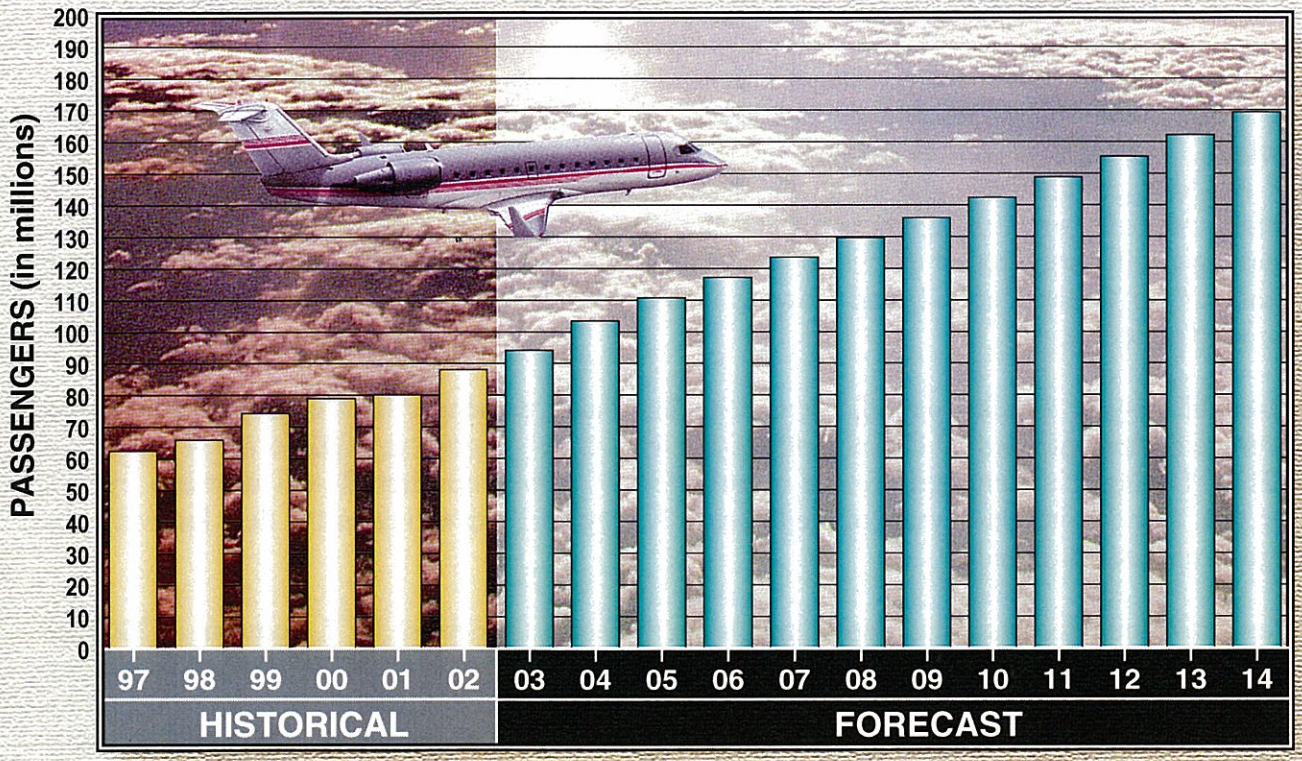
U.S. REGIONAL/COMMUTER SCHEDULED PASSENGER ENPLANEMENTS



Source: FAA Aerospace Forecasts, FY 2003-2014

PERCENT BY AIRCRAFT SEAT SIZE

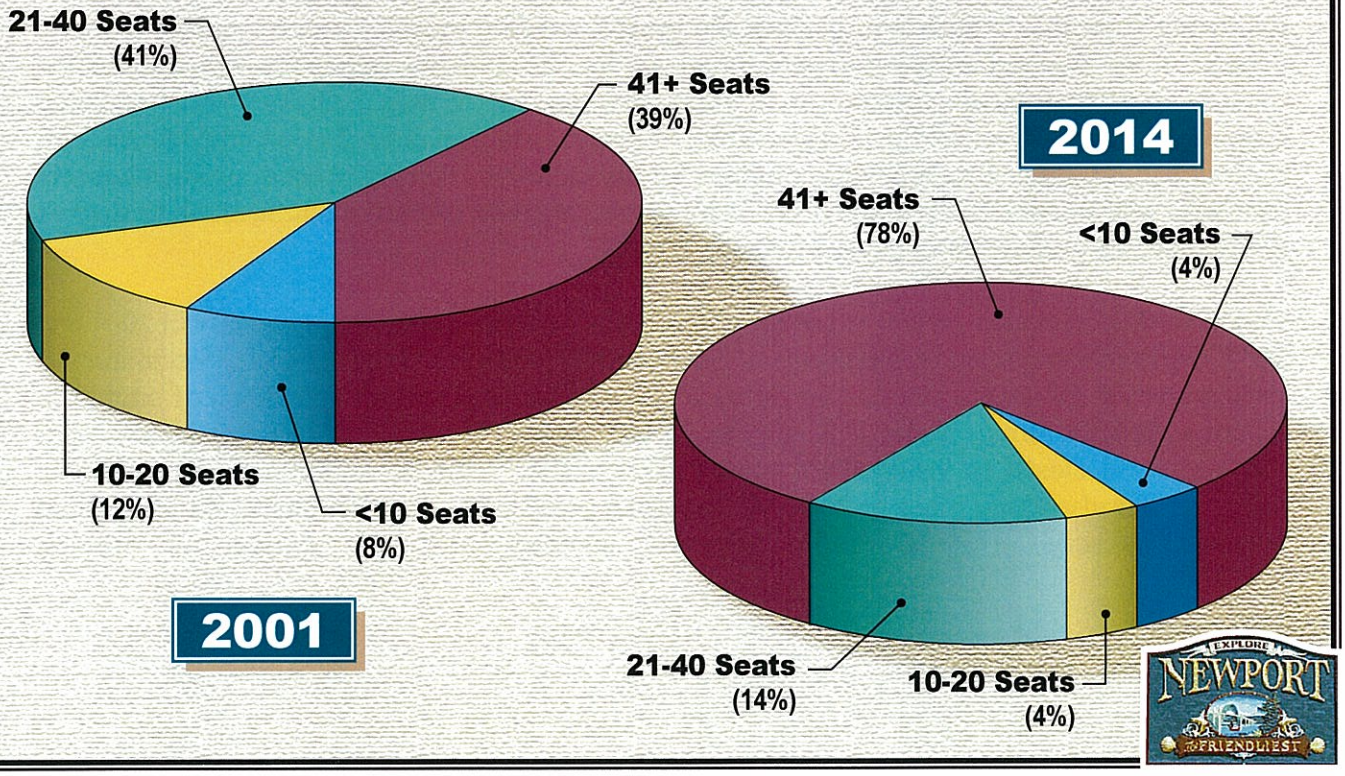


Exhibit 2A
U.S. REGIONAL/COMMUTER FORECASTS

business travelers to return in any significant numbers, forced carriers to resort to discounting to fill empty seats. This had a devastating impact on both passenger yields and profits.

According to statistics released by the General Aviation Manufacturers Association (GAMA), shipments of general aviation aircraft declined for a second consecutive year in 2002. During the first three quarters of calendar year (CY) 2002, aircraft shipments and billing declined 16.9 percent and 25.2 percent, respectively. Business jet shipments were down 5.6 percent during the same period, the first reported decline since 1996. The Aerospace Industries Association of America (AIAA) expects general aviation shipments to total 2,153 in 2002, a decline of 17.7 percent. AIAA also projects that industry billings will decline 13.8 percent to $6.9 billion in 2002. This would also be the first reported decline in billings since 1990.

At the end of 2002, the total pilot population, including student, private, commercial, and airline transport, was estimated at 661,358, an increase of almost 4,000 over 2001. Student pilots were the only group to experience a significant decrease in 2002, down 8.9 percent from 2001. It is assumed that much of this decline is due to the restrictions placed on flight schools and student pilot training, particularly with regard to foreign students after September 11.

However, the events of September 11 have not had the same negative impact on the business/corporate side of general aviation. The increased security measures placed on commercial flights has increased interest in fractional and corporate aircraft ownership, as well as on-demand charter flights for short-haul routes. The most notable trend in general aviation is the continued strong use of general aviation aircraft for business and corporate uses. The forecast for general aviation aircraft assumes that business use of general aviation will expand much more rapidly than personal/sport use, due largely to the expected growth in fractional ownership.

In 2001, there was an estimated 211,447 active general aviation aircraft, representing a decrease of 2.8 percent from the previous year. This was the second straight year of recorded decline following five consecutive years of growth. Single-engine piston aircraft continue to dominate the fleet, accounting for 68.6 percent of the total active fleet in 2001. The next largest groups are experimental aircraft (9.7 percent) and multi-engine piston aircraft (8.6 percent). Turboprops, rotorcraft, and turbojets make up relatively small shares of the active fleet, accounting for 3.1, 3.2, and 3.7 percent, respectively.

Exhibit 2B depicts the FAA forecast for active general aviation aircraft in the United States. The FAA forecasts general aviation aircraft to increase at an average annual rate of 0.7 percent over the 13-year forecast period, reaching 229,490 by 2014. Single-engine piston aircraft is expected to decrease from 145,034 in 2001 to 144,500 in 2002, and then begin a period of slow recovery, reaching 149,600 in 2014. The number of multi-engine piston aircraft is expected to decline by 0.2 percent per year over the forecast period, totaling 17,810 in 2014. The turbine-powered fleet is expected to grow at an average annual rate of 2.5 percent over the forecast period. The number of turboprop aircraft is forecast to grow 1.5 percent per year, increasing from 6,596 in 2001 to 8,020 in 2014. Turbojet aircraft are expected to provide the

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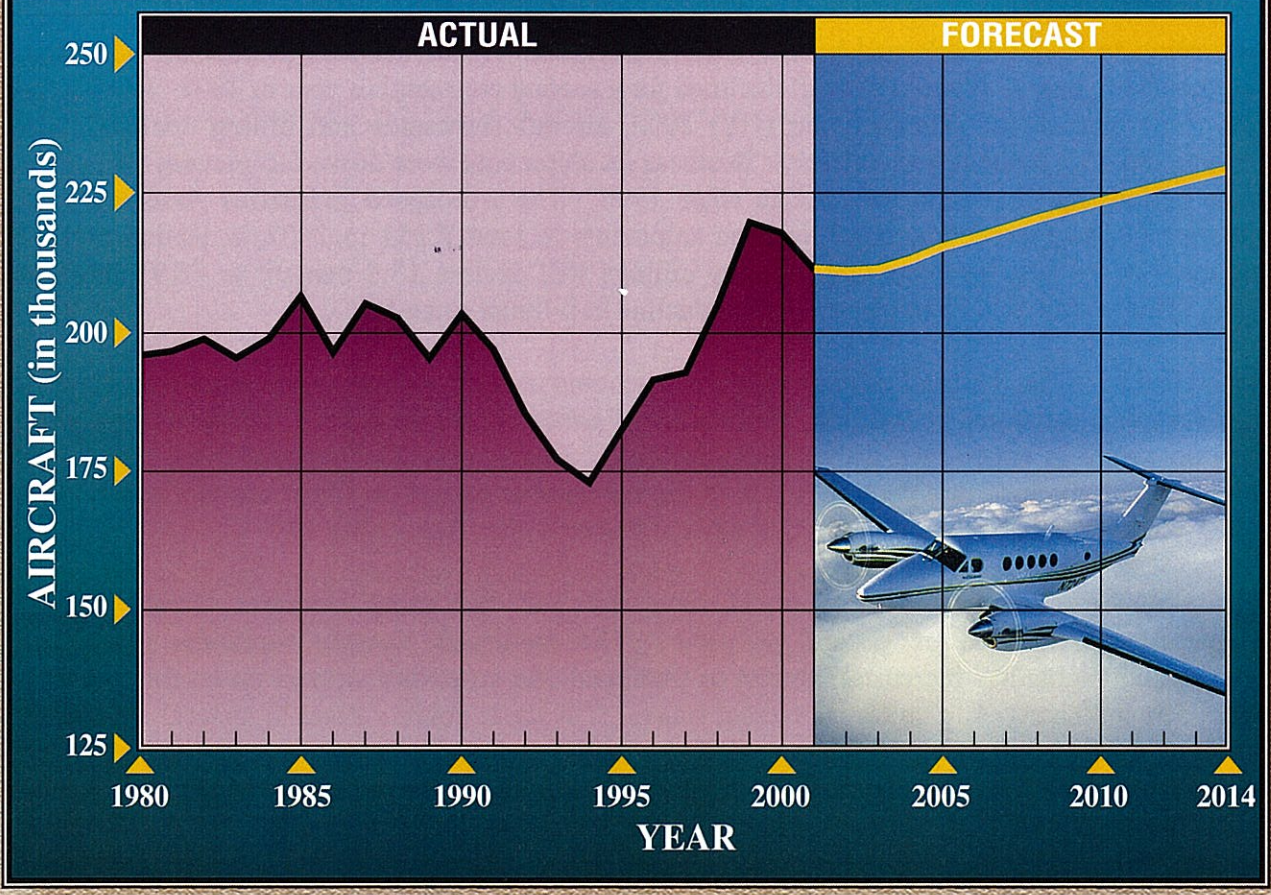
ACTIVE GENERAL AVIATION AIRCRAFT



U.S. ACTIVE GENERAL AVIATION AIRCRAFT (in thousands)

Year	FIXED WING				ROTORCRAFT		Experimental	Sport	Other	Total
	PISTON		TURBINE							
	Single Engine	Multi-Engine	Turbo-prop	Turbojet	Piston	Turbine				
2001 (Actual)	145.0	18.3	6.6	7.8	2.3	4.5	20.4	NA	6.5	211.4
2004	144.9	18.2	6.8	8.4	2.5	4.4	20.4	1.0	6.5	213.1
2009	147.6	18.0	7.4	10.3	2.6	4.5	21.0	4.1	6.6	222.2
2014	149.6	17.8	8.0	12.3	2.8	4.6	21.4	6.2	6.7	229.5

Sources: FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.
FAA Aerospace Forecasts, Fiscal Years 2003-2014.

Notes: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

Exhibit 2B
U.S. ACTIVE GENERAL AVIATION
AIRCRAFT FORECASTS

largest portion of this growth, with an annual average growth rate of 3.6 percent. This strong growth projected for the turbojet aircraft can be attributed to a strong recovery in both the U.S. and global economy, continued success and growth in the fractional ownership industry, new product offerings (which include new entry level aircraft and long-range global jets), and a shift from commercial travel by many travelers and corporations.

Over the past several years, manufacturer and industry programs and initiatives have continued to revitalize the general aviation industry. Notable initiatives include the "No Plane, No Gain" program promoted jointly by the General Aviation Manufacturers Association (GAMA) and the National Business Aircraft Association (NBAA). This program was designed to promote cost-effectiveness of using general aviation aircraft for business and corporate uses. Other programs, which are intended to promote growth in new pilot starts and to introduce people to general aviation include "Project Pilot," sponsored by the Aircraft Owners and Pilots Association (AOPA), "Be a Pilot," jointly sponsored and supported by more than 100 industry organizations, and "Av Kids," sponsored by the NBAA.

The general aviation industry is also launching new programs to make aircraft ownership easier and more affordable. Piper Aircraft Company has created Piper Financial Services (PFS) to offer competitive interest rates and/or leasing of Piper aircraft. The Experimental Aircraft Association (EAA) offers financing for kit-built airplanes through a private lending institution. Over the years, programs such as these have played an important role in the success of general aviation, and will continue to be vital to its growth in the future.

FORECASTING APPROACH

The development of aviation forecasts proceeds through both analytical and judgmental processes. A series of mathematical relationships is tested to establish statistical logic and rationale for projected growth. However, the judgment of the forecast analyst, based upon professional experience, knowledge of the aviation industry, and assessment of the local situation, is important in the final determination of the preferred forecast.

It is important to note that one should not assume a high level of confidence in forecasts that extend beyond five years. Facility and financial planning usually require at least a ten-year preview, since it often takes more than five years to complete a major facility development program. However, it is important to use forecasts which do not overestimate revenue-generating capabilities or understate demand for facilities needed to meet public (user) needs.

A wide range of factors are known to influence the aviation industry and can have significant impacts on the extent and nature of air service provided in both the local and national market. Technological advances in aviation have historically altered and will continue to change, the growth rates in aviation demand over time. The most obvious example is the impact of jet aircraft on the aviation industry, which resulted in a growth rate that far exceeded expectations. Such changes are difficult, if not impossible to predict, and there is simply no mathematical way to estimate their impacts. Using a broad spectrum of local, regional, and national economic and

aviation information, and analyzing the most current aviation trends, forecasts have been developed and presented in the following sections.

AIRPORT SYSTEM PLANNING ROLE

Airport planning exists on many levels: local, state, and national. Each level has a different emphasis and purpose. An airport master plan is the primary local airport planning document.

At the national level, the airport is included in the *National Plan of Integrated Airport Systems* (NPIAS), which identifies 3,344 existing airports which are significant to national air transportation, as well as airport development necessary to meet the present and future requirements in support of civil needs. An airport must be included in the NPIAS to be eligible for federal funding assistance. Newport Municipal Airport is classified as a commercial service airport in the NPIAS. Currently, the airport does not offer scheduled air service, but has maintained a Part 139 certificate since their last scheduled air service ended over a year and a half ago.

At the state level, the Oregon Department of Aviation provides state-wide planning through the *2000 Oregon Department of Aviation Plan*. The purpose of this plan is to identify the physical facility needs for the state's system of airports. According to this plan, there are 101 public-use airports in the State of Oregon, including nine commercial service airports that provide regularly scheduled passenger services.

The *2000 Oregon Department of Aviation Plan* has established five categories of airports based on their different functions. Newport Municipal Airport is listed as a Category 1 airport, which is classified as a commercial service airport. A criterion of Category 1 airports is the presence of scheduled commercial service, while their function is to accommodate scheduled major/national or regional/commuter commercial air carrier service. Category 1 coverage is concentrated along the Interstate 5 corridor, east of the Cascades for Redmond and Klamath Falls, and in eastern Oregon at Pendleton. Parts of eastern Oregon are served by the Boise airport in Idaho. Parts of southwest Oregon, particularly in areas surrounding Brookings, are served by the airport in Crescent City, California.

The condition of existing facilities and the most recent estimates of based aircraft and annual operations were provided in the *2000 Oregon Department of Aviation Plan*. Forecasts included in this plan, as well as the *1997 Continuous Aviation System Plan*, will be examined for their projections of based aircraft, based aircraft fleet mix, and annual operations.

LOCAL SERVICE AREA

The general aviation service area is affected by the number of nearby airfields which offer the same services. Other factors, including availability of hangars (and rates), services offered (including fuel), access to major highways, and instrument capabilities, affect the decision to base at a given airport.

There are three public-use airports within a 30 nautical mile (nm) radius of Newport Municipal Airport; Toledo State Airport (5.2nm ENE in Toledo, OR), Wakonda Beach State Airport (11.8nm S in Waldport, OR), and Siletz Bay State Airport (17.9nm N in Glenden Beach, OR). Siletz Bay State Airport has the longest runway of these three airports and measures 3,000 feet in length. None of these three airports have an airport traffic control tower and the only services offered are aircraft tiedowns. Mahlon Sweet Field Airport, which is located approximately 45nm southeast in Eugene, OR, is the nearest commercial service airport. Services offered at Mahlon Sweet Field Airport include major airframe and powerplant repair, fuel (100 LL and Jet A), flight training, aircraft rentals/charters, aircraft hangars, and tiedowns.

BASED AIRCRAFT FORECASTS

The number of based aircraft at the airport is the most basic indicator of general aviation demand. By first developing a forecast of based aircraft, the growth of other general aviation activities and demands can be projected.

According to the *1997 Oregon Continuous Aviation System Plan*, there were 22 aircraft based at Newport Municipal Airport in 1994. This number has remained relatively steady, with the airport currently reporting 24 based aircraft.

The first method used to project based aircraft examined registered aircraft in Lincoln County, which is the local service area for Newport Municipal Airport. There are currently 89 aircraft registered in the county, as compared to 66 registered in 1994. This increase represents an average annual growth rate of 3.4 percent. Applying this growth rate to the forecast years yields 105 registered aircraft by 2008; 125 registered aircraft by 2013; and 175 registered aircraft by 2023.

The next step was to examine the airport's market share of registered aircraft in Lincoln County. In 1994, the airport captured 33 percent of aircraft registered in Lincoln County. Since then, the airport's market share has decreased, currently capturing 27 percent. Forecasts of based aircraft were developed based on registered aircraft projections and the airport's market share. The first forecast assumes the airport's market share will remain constant at 27 percent, yielding 47 based aircraft by 2023. The second forecast uses a decreasing market share projection to reflect the historical trend and yields 35 based aircraft by the year 2023. The third forecast assumes an increasing share projection to reflect a return to earlier market share percentages and yields 54 based aircraft by 2023. These market share forecasts are presented in **Table 2A**.

TABLE 2A
Based Aircraft Market Share of Registered Aircraft (Lincoln County)
Newport Municipal Airport

Year	Based Aircraft	Registered Aircraft (Lincoln County)	% of Registered Aircraft Based at Newport
1994	22	66	33%
2003	24	89	27%
Constant Share Projection			
2008	28	105	27%
2013	34	125	27%
2023	47	175	27%
Decreasing Share Projection			
2008	26	105	25%
2013	29	125	23%
2023	35	175	20%
Increasing Share Projection			
2008	29	105	28%
2013	36	125	29%
2023	54	175	31%

Source: Based aircraft – *2000 Oregon Aviation Plan* (1994), FAA 5010 Form (2003); Registered aircraft - Census of U.S. Civil Aircraft (1994), FAA (2003).
* Registered aircraft projections based on historical growth rate (3.4 %).

Projections of based aircraft were also made in comparison to the percent of U.S. active general aviation aircraft based at Newport Municipal Airport. Currently, there are a reported 211,370 active general aviation aircraft in the United States. By examining the airport's historical market share, three projections were developed. First, a constant market share projection assumes the airport's market share will remain at 0.011 percent through the planning period, which yields 27 based aircraft by the year 2023. Second, a decreasing market share projection was developed to reflect the historical trend. This decreasing market share forecast yields 19 based aircraft by the year 2023. Assuming the airport would recapture its previous market share, an increasing share projection was developed and yields 36 based aircraft by the year 2023. These market share forecasts are presented in **Table 2B**.

TABLE 2B
Based Aircraft Market Share of U.S. Active General Aviation Aircraft
Newport Municipal Airport

Year	Based Aircraft	U.S. Active General Aviation Aircraft	% of U.S. Active GA Aircraft Based at Newport
1994	22	185,700	0.012%
2003	24	211,370	0.011%
Constant Share Projection			
2008	24	220,600	0.011%
2013	25	228,100	0.011%
2023	27	243,300[1]	0.011%
Decreasing Share Projection			
2008	22	220,600	0.010%
2013	21	228,100	0.009%
2023	19	243,300[1]	0.008%
Increasing Share Projection			
2008	26	220,600	0.012%
2013	30	228,100	0.013%
2023	36	243,300[1]	0.015%

Source: Historical based aircraft – *2000 Oregon Aviation Plan*, Current based aircraft – FAA 5010 Form; Historical and forecast U.S. active general aviation aircraft from FAA *Aerospace Forecasts, Fiscal Years 2003-2014.*

[1] Extrapolated by Coffman Associates.

Another forecast examined the airport's historical based aircraft at a ratio of 1,000 residents in Lincoln County. The 2003 estimated population of Lincoln County is 46,090, which equals 0.52 based aircraft per 1,000 residents. Assuming a constant share projection of 0.52 based aircraft per 1,000 residents yields 30 based aircraft by the end of the planning period. An increasing share projection was also developed to reflect the historical trend and yields 32 based aircraft at Newport Municipal Airport by 2023. Both of these forecasts are presented in **Table 2C**.

TABLE 2C
Based Aircraft Per 1,000 Population (Lincoln County)
Newport Municipal Airport

Year	Based Aircraft	Lincoln County Population	Based Aircraft Per 1,000 Residents
1994	22	43,050	0.51
2003	24	46,090	0.52
Constant Share Projection			
2008	25	48,740[1]	0.52
2013	27	51,420[1]	0.52
2023	30	57,180[1]	0.52
Increasing Share Projection			
2008	26	48,740[1]	0.53
2013	28	51,420[1]	0.54
2023	32	57,180[1]	0.56

Source: Historical based aircraft – *2000 Oregon Aviation Plan*, Current based aircraft – FAA 5010 Form; Historical population - U.S. Census Bureau, Forecast population - State of Oregon Office of Economic Analysis.
[1] Interpolated by Coffman Associates.

The airport's historical growth rate of based aircraft between 1994 and 2003 was also examined. During this time, based aircraft grew at an average annual rate of 1.0 percent. This growth rate was applied to the forecast period and yields 29 based aircraft by the year 2023.

The FAA's *Terminal Area Forecast* (TAF) was also examined. The TAF projects based aircraft for all commercial service airports in the United States. The TAF uses 2001 as a basis for their forecasts, when they estimated 25 based aircraft at Newport Municipal Airport. The TAF projects this number to remain static through the year 2020.

The *1997 Oregon Continuous Aviation System Plan* was also examined. The 1997 Plan provided statewide forecasting of aviation activity through the year 2014. The base year for this forecast was 1994, when there were a reported 22 aircraft based at Newport Municipal Airport. Projections were provided through 2014 and yield 28 based aircraft by 2014. Extrapolation of this forecast yields 32 based aircraft by the year 2023.

The *2000 Oregon Aviation Plan* provides the most recent forecasting of aviation activity at Newport Municipal Airport. Forecasts included in this plan were extrapolated from the 1997 Plan and provide projections through the year 2018, when 30 aircraft are expected to be based at the airport. This projection reflects an extension of the average annual growth rate projected between 2004 and 2014 in the 1997 Plan. Further extrapolation of this forecast yields 33 based aircraft by 2023.

For planning purposes, a mid-range forecast is generally chosen. The *2000 Oregon Aviation Plan*, which projects 26 based aircraft by 2008; 28 based aircraft by 2013; and 33 based aircraft by 2023, falls in the mid-range of all the forecasts and also reflects the current number of based

aircraft at the airport. Therefore, the projections included in the 2000 Plan are the preferred planning forecast. **Table 2D** and **Exhibit 2C** summarize the based aircraft forecasts developed for Newport Municipal Airport.

TABLE 2D
Summary of Based Aircraft Forecasts
Newport Municipal Airport

	2008	2013	2023
Market Share of Registered Aircraft (Lincoln County)			
Constant Market Share	28	34	47
Decreasing Market Share	26	29	35
Increasing Market Share	29	36	54
Market Share of U.S. Active General Aviation Aircraft			
Constant Market Share	24	25	27
Decreasing Market Share	22	21	19
Increasing Market Share	26	30	36
Aircraft Per 1,000 Population (Lincoln County)			
Constant Ratio Projection	25	27	30
Increasing Ratio Projection	26	28	32
Historical Growth Rate (1994-2003) 1.0%	25	27	29
FAA *Terminal Area Forecast*	25	25	25[2]
1997 Oregon Continuous Aviation System Plan	26[1]	28[1]	32[2]
***2000 Oregon Aviation Plan* (Preferred Planning Forecast)**	**26[1]**	**28[1]**	**33[2]**

[1]Interpolated by Coffman Associates.
[2]Extrapolated by Coffman Associates.

BASED AIRCRAFT FLEET MIX

While the number of general aviation aircraft basing at Newport Municipal Airport is projected to increase, it is important to know the fleet mix of the aircraft expected to use the airport. This will ensure the proper facilities in the future.

According to airport records, the fleet mix at Newport Municipal Airport consists of the following: 20 single-engine aircraft, one multi-engine air-craft, one jet (a Cessna Citation V), one helicopter (a Sykorski operated by the U.S. Coast Guard), and one military aircraft. In addition to the one jet based at Newport Municipal Airport, several itinerant jets utilize the airport, particularly in the summer months.

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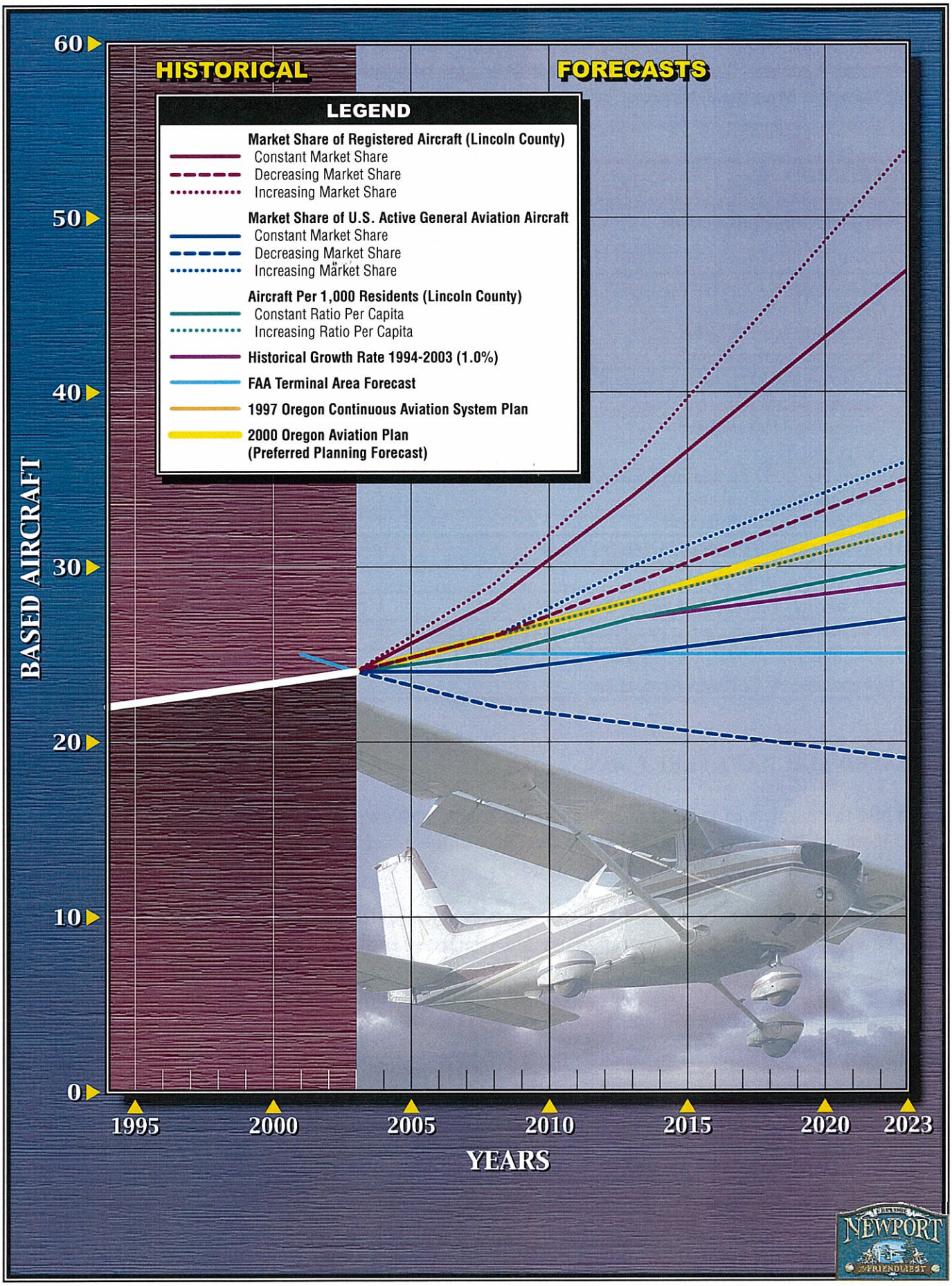


Exhibit 2C
BASED AIRCRAFT
FORECAST SUMMARY

The forecast mix of based aircraft was determined by comparing existing and forecast U.S. general aviation trends. The trend in general aviation is toward a greater percentage of larger, more sophisticated aircraft as part of the national fleet. This can be noted by the projection of additional multi-engine aircraft and jets at Newport Municipal Airport. An increase in both single-engine and helicopters can also be expected at the airport. General aviation fleet mix projections for the airport are presented in **Table 2E**.

TABLE 2E
General Aviation Fleet Mix Forecast
Newport Municipal Airport

	EXISTING		FORECAST					
Type	**2003**	**%**	**2008**	**%**	**2013**	**%**	**2023**	**%**
Single-Engine	20	83.3%	21	80.0%	22	77.0%	23	71.0%
Multi-Engine	1	4.2%	2	6.5%	2	7.0%	3	10.0%
Jets	1	4.2%	1	5.1%	2	6.0%	3	8.0%
Helicopters	1	4.2%	1	4.2%	1	5.0%	2	5.5%
Other	1	4.2%	1	4.2%	1	5.0%	2	5.5%
Total	**24**	**100.0%**	**26**	**100.0%**	**28**	**100.0%**	**33**	**100.0%**

*Multi-engine category includes turboprops.

OPERATIONS PROJECTIONS

General aviation operations are classified as either local or itinerant. A local operation is a take-off or landing performed by an aircraft that operates within sight of the airport, or which executes simulated approaches or touch-and-go operations at the airport. An itinerant operation is one that arrives at the subject airport which originated at another airport. A local operation is one where an aircraft stays in the traffic pattern, is executing instrument approaches, or is departing the local traffic pattern. Generally, local operations are characterized by training operations. Typically, itinerant operations increase with business and commercial use, since business aircraft are operated on a high frequency.

The first step in forecasting annual operations at Newport Municipal Airport was the examination of previous forecasts, including the *1997 Oregon Continuous Aviation System Plan*, the *2000 Oregon Aviation Plan*, and forecasts included in the FAA *Terminal Area Forecast* (TAF). Each of these forecasts is described in the following paragraphs.

The 1997 Plan, which uses an estimated total of 10,652 annual operations in 1994 as a base number, projects annual operations at Newport Municipal Airport to reach 16,660 by 2014. Extrapolation of this forecast yields 20,380 annual operations by 2023. The 2000 Plan, which is an update of the 1997 Plan, was also exam-ined. This forecast uses an estimated number of 13,652 annual operations in 1994 and projects annual operations at the airport to reach 17,003 by 2018. Extrapolation of this forecast yields 17,900 annual operations by 2023.

As previously mentioned, forecasts by the FAA TAF were also examined. The TAF estimates there were 20,720 annual operations at Newport Municipal Airport in 2001. Forecasts included

in the TAF project annual operations at the airport to remain static through the year 2020. However, without an airport traffic control tower, this total number of operations is only a rough estimate and therefore was not considered an accurate number from which to project annual operations.

An alternative method for forecasting annual operations at Newport Municipal Airport was also examined. This method, the *Model for Estimating General Aviation Operations at Non-Towered Airports*, was prepared for the FAA *Statistics and Forecast Branch* in July 2001. This report develops and presents a regression model for estimating general aviation (GA) operations at non-towered airports. The model was derived using a combined data set for small towered and non-towered GA airports and incorporates a dummy variable to distinguish the two airport types. In addition, the report applies the model to estimate activity at 2,789 non-towered GA airports contained in the FAA *Terminal Area Forecast*.

Forecasts of annual operations at Newport Municipal Airport were computed using the recommended equation (#15) for non-towered airports. Independent variables used in the equation include airport characteristics (i.e., number of based aircraft, number of flight schools), population totals, and geographic location. The equation yields an initial annual operations total of 11,220 which equates to 470 operations per based aircraft. Using these numbers as a basis, two forecasts of annual operations were prepared for Newport Municipal Airport. The first forecast assumes a constant level of operations per based aircraft (470), which yields 15,510 annual operations by 2023. The second forecast uses an increasing number of operations per based aircraft and yields 16,170 annual operations by 2023. Itinerant operations were estimated to account for approximately 74 percent of total operations, while local operations were estimated to account for approximately 26 percent. These forecasts are presented in **Table 2F**.

TABLE 2F
Annual Operations Per Based Aircraft Forecasts (Non-Towered Equation #15)
Newport Municipal Airport

Year	Based Aircraft	Itinerant Operations	Local Operations	Total Operations	Operations Per Based Aircraft
Current	24	8,300	2,920	11,220*	470
Constant Ratio Projection					
2008	26	9,040	3,180	12,220	470
2013	28	9,740	3,420	13,160	470
2023	33	11,480	4,030	15,510	470
Increasing Ratio Projection					
2008	26	9,140	3,210	12,350	475
2013	28	9,950	3,490	13,440	480
2023	33	11,970	4,200	16,170	490

* Current operations total derived from the *Model for Estimating General Aviation Operations at Non-Towered Airports*, Equation #15 (July 2001).

Projections of annual operations based on acoustical counts were also examined. The most recent acoustical counts for Newport Municipal Airport were performed by the Oregon Department of Aviation in 2000. According to the acoustical counts, there were an estimated 16,359 annual operations that year, which equates to 685 operations per based aircraft. Using this as a basis, two projections of annual operations were prepared.

The first projection assumes the ratio of operations per based aircraft will remain constant at 685, yielding 22,500 annual operations by 2023. Since the FAA has projected growth in annual hours flown by general aviation aircraft and air taxi aircraft in their annual forecasts, the second projection assumes that the ratio of operations per based aircraft will increase over time. The increasing ratio projection is consistent with the historical trend and yields 23,270 annual operations by 2023. These projections are presented in **Table 2G**.

TABLE 2G
Operations Per Based Aircraft Forecasts
Newport Municipal Airport

Year	Based Aircraft	Itinerant Operations	Local Operations	Total Operations	Operations Per Based Aircraft
1994	22	10,051	3,531	13,582	617
2000	24	12,106	4,253	16,359	685
Constant Ratio Projection					
2008	26	13,120	4,610	17,730	685
2013	28	14,190	4,990	19,180	685
2023	33	16,650	5,850	22,500	685
Increasing Ratio Projection					
2008	26	13,280	4,660	17,940	690
2013	28	14,400	5,060	19,460	695
2023	33	17,220	6,050	23,270	705

Source: Historical operations – acoustical counts.

A summary of the forecasts is presented in **Table 2H**. As shown in the table, the projections of operations included in the 1997 and 2000 plans are below the level recorded by the acoustical counts for 2000. Therefore, an updated forecast of annual operations was needed. The acoustical counts completed in 2000 provide the most recent data of annual operations. Therefore, the preferred planning forecast is the increasing ratio projection, which is consistent with historical trends. This forecast yields 23,270 annual operations by 2023.

It is expected that local operations will continue to account for 26 percent of total operations and itinerant operations 74 percent, as they have historically. Furthermore, air taxi and military operations are expected to account for eight percent and 17 percent of itinerant operations, respectively, through the planning period.

PEAKING CHARACTERISTICS

Most facility planning relates to levels of peak activity. The following planning definitions apply to the peak periods:

- **Peak Month** – The calendar month when peak aircraft operations occur.
- **Design Day** – The average day in the peak month.
- **Busy Day** – The busy day of a typical week in the peak month.
- **Design Hour** – The peak hour within the design day.

TABLE 2H
Annual Operations Forecasts Summary

	2000	2008	2013	2023
Acoustical Counts				
Constant Ratio Projection		17,680	19,040	22,440
Increasing Ratio Projection (Preferred Planning Forecast)		**17,940**	**19,460**	**23,270**
Equation #15 for Non-Towered Airports				
Constant Ratio Projection		12,220	13,160	15,510
Increasing Ratio Projection		12,350	13,440	16,170
FAA *Terminal Area Forecast*		20,720	20,720	20,720[2]
1997 Continuous Aviation System Plan		14,570[1]	16,290[1]	20,380[2]
2000 Oregon Aviation Plan	16,359	15,470[1]	16,170[1]	17,900[2]

[1]Interpolated by Coffman Associates/[2]Extrapolated by Coffman Associates.

It is important to note that only the peak month is an absolute peak within a given year. All other peak periods will be exceeded at various times during this year. However, they do represent reasonable planning standards that can be applied without overbuilding or being too restrictive.

Typically, the peak month for operations represents between ten and twelve percent of the airport's annual operations. Monthly operational totals were not available at Newport Municipal Airport. Therefore, for planning purposes, the peak month has been estimated at 10.0 percent of forecast annual operations. The design day was then calculated by dividing the peak month operations by 30. The busy day has been estimated at 25 percent higher than the average day in the peak month and was calculated by multiplying the design day by 1.25. Design hour operations were calculated at 12.0 percent of design day operations. **Table 2J** summarizes the general aviation peak activity forecasts.

TABLE 2J
Forecasts of Peak Activity
Newport Municipal Airport

	2000	2008	2013	2023
General Aviation Operations				
Annual	16,359	17,940	19,460	23,270
Peak Month (10.0%)	1,636	1,794	1,946	2,327
Design Day	55	60	65	78
Busy Day	68	75	81	97
Design Hour (12.0%)	7	7	8	9

ANNUAL INSTRUMENT APPROACHES

Forecasts of annual instrument approaches (AIAs) provide guidance in determining an airport's requirements for navigational aid facilities. An instrument approach is defined by the FAA as "an approach to an airport with the intent to land by an aircraft in accordance with an instrument flight rule (IFR) plan, when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude." The projections of AIAs for Newport Municipal Airport, which assume a constant percentage of itinerant operations, are summarized in **Table 2K**.

TABLE 2K
Annual Instrument Approaches (AIAs)
Newport Municipal Airport

Year	AIAs	Itinerant Operations	AIAs % of Itinerant Operations
2000	512	12,106	4.2%
Forecasts			
2008	560	13,280	4.2%
2013	600	14,400	4.2%
2023	720	17,220	4.2%

Source: FAA/APO Data and Coffman Associates analysis.

SUMMARY

This chapter has provided forecasts for each sector of aviation demand anticipated over the planning period. **Exhibit 2D** presents a summary of the aviation forecasts developed for Newport Municipal Airport. The airport is expected to experience an increase in total based aircraft and annual operations, as well as an increase in turbine-powered aircraft throughout the planning period. The next step in this study is to assess the capacity of the existing facilities to accommodate forecast demand and determine what types of facilities will be needed to meet these demands.

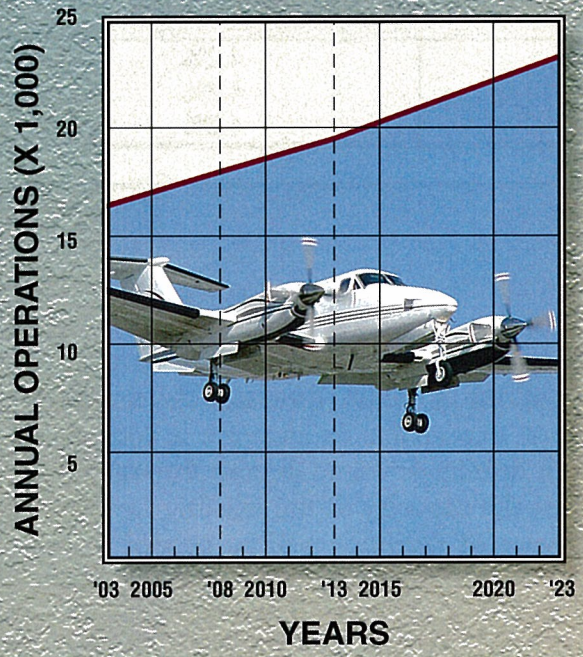
02MP14-2D-5/16/03

SUMMARY OF AVIATION ACTIVITY FORECASTS

CATEGORY	Historical 2000	Forecasts 2008	2013	2023
ANNUAL OPERATIONS				
Itinerant				
General Aviation	9,076	9,960	10,800	12,910
Air Taxi	970	1,060	1,150	1,380
Military	2,060	2,260	2,450	2,930
Total Itinerant	**12,106**	**13,280**	**14,400**	**17,220**
Local				
General Aviation	4,253	4,660	5,060	6,050
Total Operations	**16,359**	**17,940**	**19,460**	**23,270**

CATEGORY	CURRENT	2008	2013	2023
BASED AIRCRAFT				
Single Engine	20	21	22	23
Multi-Engine	1	2	2	3
Jet	1	1	2	3
Helicopter	1	1	1	2
Other	1	1	1	2
Total Based Aircraft	**24**	**26**	**28**	**33**

OPERATIONS FORECAST



BASED AIRCRAFT FORECAST

Exhibit 2D
FORECAST SUMMARY

Facility Requirements/Alternatives

An updated set of aviation demand forecasts for Newport Municipal Airport were established in the previous chapter. These activity forecasts include aircraft operations, based aircraft, fleet mix, and peaking characteristics. With this information, specific components of the airfield and landside system can be evaluated to determine their capability to accommodate future demand.

The objective of this effort is to identify, in general terms, the adequacy of the existing airport facilities, outline what new facilities may be needed, and when these may be needed to accommodate forecast demands. Having established these facility requirements, alternatives for providing these facilities will be evaluated in Chapter Four to determine the most cost-effective and efficient means for implementation.

As indicated earlier, airport facilities include both airfield and landside components. Airfield facilities include those facilities that are related to the arrival, departure, and ground movement of aircraft. These components include:

- Runways
- Taxiways
- Navigational Approach Aids
- Lighting, Marking, and Signage

Landside facilities are needed for the interface between air and ground transportation modes. This includes components for general aviation needs such as:

- General Aviation Terminal
- Aircraft Hangars
- Aircraft Parking Aprons
- Auto Parking and Access
- Airport Support Facilities

PLANNING HORIZONS

Cost-effective, safe, efficient, and orderly development of an airport should rely more upon actual demand at an airport than a time-based forecast figure. Thus, in order to develop an airport layout plan report that is demand-based rather than time-based, a series of planning horizon milestones have been established that take into consideration the reasonable range of aviation demand projections.

It is important to consider that the actual activity at the airport may be higher or lower than what the annualized forecast portrays. By planning according to activity milestones, the resultant plan can accommodate unexpected shifts, or changes, in the area's aviation demand. It is important for the plan to accommodate these changes so that airport officials can respond to unexpected changes in a timely fashion. These milestones provide flexibility, while potentially extending the plan's useful life if activity slows.

The most important reason for utilizing milestones is that they allow the airport to develop facilities according to need generated by actual demand levels. The demand-based schedule provides flexibility in development, as development schedules can be slowed or expedited according to actual demand at any given time over the planning period. The resultant plan provides airport officials with a financially responsible and need-based program.

Table 3A presents the planning horizon milestones for each aircraft activity category. The planning milestones essentially correlate to the five, ten, and twenty-year periods used in the previous chapter.

TABLE 3A
Aviation Demand Planning Horizons
Newport Municipal Airport

	2000	Short Term	Intermediate Term	Long Term
OPERATIONS				
Local	4,253	4,660	5,060	6,050
Itinerant	12,106	13,280	14,400	17,220
Total	16,359	17,940	19,460	23,270
Based Aircraft	24	26	28	33

In this chapter, existing components of the airport are evaluated so that the capacities of the overall system are identified. Once identified, the existing capacity is compared to the planning horizon milestones to determine where deficiencies currently exist or may be expected to materialize in the future. Once deficiencies in a component are identified, a more specific determination of the approximate sizing and timing of the new facilities can be made.

AIRFIELD REQUIREMENTS

Airfield requirements include the need for those facilities related to the arrival and departure of aircraft. These facilities are comprised of the following items:

- Runways (including safety areas)
- Taxiways
- Navigational Aids
- Airfield Lighting and Marking

The selection of appropriate Federal Aviation Administration (FAA) design standards for the development and location of airport facilities is based primarily upon the characteristics of the aircraft which are currently using, or are expected to use, the airport. Planning for future aircraft use is of particular importance since design standards are used to plan separation distances between facilities. These standards must be determined now since the relocation of these facilities will likely be extremely expensive at a later date.

The FAA has established a coding system to relate airport design criteria to the operational and physical characteristics of aircraft expected to use the airport. This code, the airport reference code (ARC), has two components: the first component, depicted by a letter, is the aircraft approach speed (operational characteristic); the second component, depicted by a Roman numeral, is the airplane design group and relates to aircraft wingspan (physical characteristic). Generally, aircraft approach speed applies to runways and runway-related facilities, while aircraft wingspan primarily relates to separation criteria involving taxiways, taxilanes, and landside facilities.

According to FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, an aircraft's approach category is based upon 1.3 times its stall speed in landing configuration at that aircraft's maximum certificated weight. The five approach categories used in airport planning are as follows:

Category A: Speed less than 91 knots.

Category B: Speed 91 knots or more, but less than 121 knots.

Category C: Speed 121 knots or more, but less than 141 knots.

Category D: Speed 141 knots or more, but less than 166 knots.

Category E: Speed greater than 166 knots.

The airplane design group (ADG) is based upon the aircraft's wingspan. The six ADG's used in airport planning are as follows:

Group I: Up to but not including 49 feet.

Group II: 49 feet up to but not including 79 feet.

Group III: 79 feet up to but not including 118 feet.

Group IV: 118 feet up to but not including 171 feet.

Group V: 171 feet up to but not including 214 feet.

Group VI: 214 feet or greater.

In order to determine facility requirements, an ARC should first be determined, then appropriate airport design criteria can be applied. This begins with a review of the type of aircraft using and expected to use Newport Municipal Airport. **Exhibit 3A** summarizes representative aircraft by ARC.

The FAA recommends designing airport functional elements to meet the requirements of the most demanding ARC for that airport (minimum of 250 annual departures). Newport Municipal Airport currently accommodates a wide variety of civilian aircraft, including small single and multi-engine aircraft (which fall within approach categories A and B and airplane design group I) and business turboprop and jet aircraft (which fall within approach category B and airplane design groups I and II). The most demanding aircraft currently operating at Newport Municipal Airport is the Cessna 414 Chancellor, which is operated by Sky Taxi. This aircraft, which is classified as a B-I aircraft, seats six passengers and can be operated on short runways.

The existing ARC for the facility is B-II. The forecasts anticipate increasing utilization by corporate aircraft throughout the planning period. This potential mix of aircraft will continue to place the airport in the B-II category. However, the upgrading of Runway 16-34 to an ARC B-III should be considered if the airport begins offering scheduled air service. Newport Municipal Airport last had scheduled air service a year and a half ago, but has since maintained their Part 139 operating certificate.

AIRFIELD DESIGN STANDARDS

The FAA has established several imaginary surfaces to protect aircraft operational areas and keep them free from obstructions that could affect the safe operation of aircraft. These include the runway safety area (RSA), object free area (OFA), object free zone (OFZ), and runway protection zone (RPZ).

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A-I

- Beech Baron 55
- **Beech Bonanza**
- Cessna 150
- Cessna 172
- Piper Archer
- Piper Seneca

B-I less than 12,500 lbs.

- Beech Baron 58
- Beech King Air 100
- Cessna 402
- **Cessna 421**
- Piper Navajo
- Piper Cheyenne
- Swearingen Metroliner
- Cessna Citation I

B-II less than 12,500 lbs.

- **Super King Air 200**
- Cessna 441
- DHC Twin Otter

B-I, II over 12,500 lbs.

- Super King Air 300
- Beech 1900
- Jetstream 31
- Falcon 10, 20, 50
- Falcon 200, 900
- **Citation** II, **III**, IV, V
- Saab 340
- Embraer 120

A-III, B-III

- DHC Dash 7
- **DHC Dash 8**
- DC-3
- Convair 580
- Fairchild F-27
- ATR 72
- ATP

C-I, D-I

- **Lear** 25, **35**, 55
- Israeli Westwind
- HS 125

C-II, D-II

- **Gulfstream** II, III, **IV**
- Canadair 600
- Canadair Regional Jet
- Lockheed JetStar
- Super King Air 350

C-III, D-III

- Boeing Business Jet
- B 727-200
- **B 737-300 Series**
- MD-80, DC-9
- Fokker 70, 100
- A319, A320
- Gulfstream V
- Global Express

C-IV, D-IV

- **B-757**
- B-767
- DC-8-70
- DC-10
- MD-11
- L1011

D-V

- **B-747** Series
- B-777

Note: Aircraft pictured is identified in bold type.

Exhibit 3A
AIRPORT REFERENCE CODES

The RSA is "a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or an excursion from the runway." An object free area is an area on the ground centered on the runway, taxiway, or centerline provided to enhance the safety of aircraft operations, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. An obstacle free zone is a volume of airspace that is required to be clear of objects, except for frangible items required for navigation of aircraft. It is centered along the runway and extended runway centerline. The RPZ is defined as an area off the runway end to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. The dimensions of an RPZ are a function of the runway ARC and approach visibility minimums.

Table 3B summarizes the design requirements of these safety areas by airport reference code for Newport Municipal Airport. A printout of these standards is presented in the appendix. The FAA expects these areas to be free from obstructions. As shown in the table, Runway 2-20 currently meets the required dimensions for ARC B-II standards with three-fourth mile visibility. Runway 16-34 currently meets the required dimensions for ARC B-II standards with half mile visibility. Upgrading Runway 16-34 to ARC B-III standards with a half mile visibility will require changes in runway safety area, which can be accommodated by displacing the runway threshold.

TABLE 3B
Airfield Safety Dimensional Standards (feet)
Newport Municipal Airport

	Existing Runway 2-20	ARC B-II Standards (3/4 mi vis)	Existing Runway 16-34	ARC B-II Standards (1/2 mi vis)	ARC B-III Standards (1/2 mi vis)
Runway Safety Area (RSA)					
Width	150	150	300	300	400
Length Beyond Runway End	300	300	600	600	800
Runway Object Free Area (OFA)					
Width	500	500	800	800	800
Length Beyond Runway End	300	300	600	600	800
Runway Obstacle Free Zone (OFZ)					
Width	400	400	400	400	400
Length Beyond Runway End	200	200	200	200	200
Runway Protection Zone (RPZ)					
Inner Width	500	500	1,000	1,000	1,000
Outer Width	700	700	1,750	1,750	1,750
Length	1,000	1,000	2,500	2,500	2,500

Source: FAA Airport Design Computer Program, Version 4.2D.

RUNWAYS

The adequacy of the existing runway system at Newport Municipal Airport was analyzed from a number of perspectives, including airfield capacity, runway orientation, runway length, runway width, and pavement strength. From this information, requirements for runway improvements were determined for the airport.

Airfield Capacity

A demand/capacity analysis measures the capacity of the airfield configuration in order to identify and plan for additional development needs. Annual capacity of a single runway configuration normally exceeds 150,000 operations with a suitable parallel taxiway available. Since the forecasts for Newport Municipal Airport remain well below 150,000 operations, the capacity of the existing runway and taxiway system will not be reached, and the airfield will be able to meet operational demands.

Runway Orientation

Newport Municipal Airport is equipped with two intersecting runways. The primary runway (Runway 16-34) is oriented in a north-south direction, while the crosswind runway (Runway 2-20) is oriented in a northeast-southwest manner. For the operational safety and efficiency of an airport, it is desirable for the principal runway of an airport's runway system to be oriented as close as possible to the direction of the prevailing wind. This reduces the impact of crosswind components during landing or takeoff.

FAA design standards recommend additional runway configurations when the primary runway configuration provides less than 95 percent wind coverage at specific crosswind components. The 95 percent wind coverage is computed on the basis of crosswinds not exceeding 10.5 knots for small aircraft weighing less than 12,500 pounds and from 13 to 20 knots for aircraft weighing over 12,500 pounds. No wind data is currently available for Newport Municipal Airport. However, a review of wind coverage at the nearest weather station on the Oregon Coast located at North Bend Municipal Airport indicates that the 16-34 alignment provides 96.13 percent wind coverage in 10.5 knot conditions.

Runway Length

The runway length requirements for an airport are based on five primary factors: airport elevation; mean maximum temperature of the hottest month; runway gradient (difference in runway elevation of each runway end); critical aircraft type expected to use the airport; and stage length of the longest nonstop trip destination. Aircraft performance declines as each of these factors increase. Summertime temperatures and stage lengths are the primary factors in determining runway length requirements.

The local airport elevation has a North American Vertical Datum (NAVD88) of 160 feet and the mean maximum temperature of the hottest month is 65.1 degrees Fahrenheit (F). Runway end elevations vary by approximately two feet along Runway 16-34.

Using the site-specific described above, runway length requirements for the various classifications of aircraft that may operate at the airport were examined using the FAA Airport Design computer program, Version 4.2D. The program groups general aviation aircraft into several categories, reflecting the percentage of the fleet within each category and useful load (passengers and fuel) of the aircraft.

Table 3C summarizes FAA's generalized recommended runway lengths for Newport Municipal Airport. The appropriate FAA runway length planning category for Runway 16-34 (if stage lengths do not normally exceed 500 miles) is "75 percent of large aircraft at 60 percent useful load." As shown in the table, the FAA recommends a minimum runway length of 2,300 feet for small aircraft (less than 12,500 pounds) and 5,300 feet for larger aircraft using the facility. The current runway length of 5,398 feet accommodates most small business jets operating at Newport Municipal Airport.

Based upon this examination of runway length requirements for aircraft which currently operate, and those which can be expected to operate at the airport in the future, the existing runway length will be able to serve most aircraft on 500-mile stage lengths. However, these same aircraft will experience payload and/or fuel limitations during the warmest summer days, when attempting longer stage lengths. Therefore, the alternatives evaluation should consider additional runway length to serve the growing corporate fleet.

TABLE 3C
Runway Length Requirements
Newport Municipal Airport

AIRPORT AND RUNWAY DATA	
Airport elevation	160 feet
Mean daily maximum temperature of the hottest month	65.1 F
Maximum difference in runway centerline elevation	30 feet
Length of haul for airplanes of more than 60,000 pounds	1,000 miles
Wet and slippery runways	
RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN	
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes	2,300 feet
95 percent of these small airplanes	2,900 feet
100 percent of these small airplanes	3,400 feet
Small airplanes with 10 or more passengers seats	3,900 feet
Large airplanes of 60,000 pounds or less	
75 percent of business jets at 60 percent useful load	5,300 feet
75 percent of business jets at 90 percent useful load	6,700 feet
100 percent of business jets at 60 percent useful load	5,500 feet
100 percent of business jets at 90 percent useful load	7,000 feet
Airplanes of more than 60,000 pounds	6,000 feet

Reference: FAA's airport design computer software utilizing Chapter Two of AC 150/5325-4A, *Runway Length Requirements for Airport Design*, no changes included.

As previously mentioned, an increasing number of business jets are expected to use the facility. Therefore, several jets falling in B-I, B-II, and C-I categories were examined for their takeoff and landing length requirements. This data is presented in **Table 3D**.

TABLE 3D
Runway Length Requirements – Individual Aircraft Performance

Aircraft Type	Maximum Take-off Weight (lbs.)	Required Take-off Length (feet)	Required Landing Length (feet)
Cessna 525 Citation (B-I)	10,400	3,080	2,750
Raytheon 390 Premier (B-I)	12,500	3,792	3,300
Cessna Citation Encore (B-II)	16,830	3,560	2,865
Cessna 560 Citation Excel (B-II)	20,000	3,590	3,180
Learjet 55 (C-I)	21,500	5,310	3,250
Sabreliner 75 (C-I)	23,300	5,500	3,750

Source: Business jet data – FAA and manufacturers takeoff and landing distances for standard conditions (sea level and 59* F).

RUNWAY WIDTH

The width of each of the existing runways was also examined to determine the need for facility improvements. Currently, Runway 16-34 has a width of 150 feet, while Runway 2-20 has a width of 75 feet. These widths are adequate for each runway's respective ADG.

RUNWAY PAVEMENT STRENGTH

The most important feature of airfield pavement is its ability to withstand repeated use by aircraft of significant weight. At Newport Municipal Airport, this includes a wide range of general aviation aircraft, including small single and multi-engine aircraft and business jets.

Runway 16-34 is currently strength rated at 75,000 pounds single wheel gear loading (SWL), 120,000 pounds dual wheel gear loading (DWL), and 170,000 pounds dual tandem wheel loading (DTWL). Runway 2-20 is currently strength rated at 33,000 pounds SWL, 50,000 pounds for DWL, and 84,000 pounds for DTWL. The current strength ratings on both runways are sufficient for the existing and future fleet.

TAXIWAYS

Taxiways are constructed primarily to facilitate aircraft movements to and from the runway system. Some taxiways are necessary simply to provide access between the aprons and the runways, whereas other taxiways become necessary as activity increases at an airport to provide safe and efficient use of the airfield.

Taxiway width is determined by the ADG of the most demanding aircraft to use the taxiway. As previously mentioned, the most demanding aircraft to use the airfield fall within ADG III. According to FAA design standards, the minimum taxiway width for ADG III is 50 feet. Based

upon a review of the current airport layout drawing, there is one taxiway at Newport Municipal Airport which is only 35 feet wide. This taxiway should be widened to comply with the 50-foot standard. The other taxiways are each 50 feet wide and will be sufficient throughout the planning period.

The runway-taxiway separation distance was also examined. This distance is such to satisfy the requirement that no part of an aircraft (tail tip, wing tip) on the taxiway/taxilane centerline is within the runway safety area or penetrates the obstacle free zone (OFZ). According to the Airport Layout Plan, there are no OFZ object penetrations on the airport at this time. The current distances between the Runway 16-34 centerline and the partial parallel taxiway centerline is 285 feet. The required distance for ARC B-III is 300 feet. The following chapter will examine possible alternatives to comply with this standard.

NAVIGATIONAL AND APPROACH AIDS

Electronic and visual guidance to arriving aircraft enhance the safety and capacity of the airfield. Such facilities are vital to the success of the airport, and provide additional safety to passengers using the air transportation system.

Instrument approaches are categorized as either precision or nonprecision. Precision instrument approach aids provide an exact alignment and descent path for an aircraft on final approach to a runway, while nonprecision instrument approach aids provide only runway alignment information. Most existing precision instrument approaches in the United States are instrument landing systems (ILS).

Presently, Newport Municipal Airport is served with seven instrument approaches: ILS Runway 16, GPS Runway 16, GPS Runway 34, GPS Runway 34, VOR/DME Runway 16, VOR/DME Runway 34, and NDB Runway 16. A VOR provides azimuth readings to pilots of properly equipped aircraft by transmitting a signal at every degree to provide 360 individual navigational courses. Frequently, distance measuring equipment (DME) is combined with a VOR facility to provide distance as well as direction information to the pilot.

The ILS approach to Runway 16 provides the airport with the lowest minimums, allowing aircraft to land in instrument flight rules (IFR) weather with ceilings as low as 200 feet and visibility reduced to three-fourths mile for aircraft in all categories. Details of all the published instrument approaches are provided in **Table 3D**.

TABLE 3D
Instrument Approach Data – Newport Municipal Airport

	WEATHER MINIMUMS BY AIRCRAFT TYPE					
	Category A/B		Category C		Category D	
	CH	VIS	CH	VIS	CH	VIS
ILS Runway 16 Approach						
Straight-In (ILS)	200	0.75	200	0.75	200	0.75
Straight-In (Localizer)	600	0.75	600	1.50	600	1.75
Circling	800	1	800	2	800	2.50
RNAV (GPS) Runway 16						
LNAV/VNAV DA	500	1.50	500	1.50	500	1.50
LNAV MDA	600	0.75	600	1.50	600	1.75
Circling	800	1.50	800	2	800	2.50
RNAV (GPS) Runway 34						
LNAV MDA	800	1	800	2.25	800	2.50
Circling	800	1	800	2.25	800	2.50
VOR/DME Runway 16						
Straight-In	500	1	500	1.25	-	-
Circling	800	1	800	2	800	2.50
VOR/DME Runway 34						
Straight-In	800	1	800	2.25	800	2.50
Circling	800	1	800	2.25	800	2.50
VOR-A						
Circling	1,000	1.25	1,000	3	1,000	3
NDB Runway 16						
Straight-In	600	1	600	1.50	600	1.75
Circling	800	1	800	2	800	2.50

Aircraft categories are based on 1.3 times the stall speed in landing configuration as follows:

- Category A/B (0-120 knots)
- Category C (121-140 knots)
- Category D (141-165 knots)

CH – Cloud Height (in feet above ground level)
VIS – Visibility (in miles)

Source: FAA *Terminal Procedures, Northwest U.S.*, July 10, 2003 Edition.

The advent of technology has been one of the most important contributing factors in the growth of the aviation industry. Much of civil aviation and aerospace technology has been derived and enhanced from the initial development of technological improvements for military purposes. The use of orbiting satellites to confirm an aircraft's location is the latest military development to be made available to the civil aviation community.

The FAA has already approved the publication of thousands of "overlay" GPS instrument approach procedures. Stand-alone GPS approaches using the Wide-Area Augmentation System (WAAS) will gradually be phased in to provide precision instrument approaches.

AIRFIELD LIGHTING, SIGNAGE, AND MARKING

Airports commonly include a variety of lighting and pavement markings to assist pilots utilizing the airport. These lighting systems and marking aids are used to assist pilots in locating the airport during the day, at night, during poor weather conditions, and assisting in the ground movement of aircraft.

Identification Lighting

Newport Municipal Airport is equipped with a rotating beacon to assist pilots in location the airport at night. The existing rotating beacon, located on the west side of the airfield near the end of Runway 16, is sufficient and should be maintained in the future.

Runway and Taxiway Lighting

Airport lighting systems provide critical guidance to pilots during nighttime and low visibility operations. Both runways are equipped with medium intensity runway lighting (MIRL), which will be adequate throughout the planning period.

Effective ground movement of aircraft at night is enhanced by the availability of taxiway lighting. Currently, blue reflectors are installed on all taxiways and taxilanes. Taxiways should be planned for medium intensity edge lighting.

Visual Approach Lighting

In most instances, the landing phase of any flight must be conducted in visual conditions. To provide pilots with visual guidance information during landings to the runway, visual glideslope indicators are commonly provided at airports. Presently, a four-light precision approach path indicator (PAPI-4) is available at the Runway 34 end. This lighting aid is sufficient and should be maintained in the future.

A visual approach slope indicator (VASI-4) is available at the Runway 16 end. As most airports are replacing older VASIs with the PAPI system, consideration should be given to replacing the existing VASI-4 on Runway 16 with a PAPI-4, which is less costly to maintain and operate.

Approach lighting systems provide the basic means to transition from instrument flight to visual flight for landing. Runway 16 is equipped with medium intensity approach lighting system with sequenced flashers (MALSF). The MALSF is required for the existing ILS approach minimums to Runway 16 and is sufficient for the precision GPS approach to this runway.

Runway identification lighting provides the pilot with a rapid and positive identification of the runway end. The most basic system involves runway end identifier lights (REILs). REILs are presently installed at the end of Runway 34 and the airport will be adding REILS to the end of Runway 16 later this year. This should be sufficient through the planning period.

Pilot-Controlled Lighting

Newport Municipal Airport is equipped with pilot-controlled lighting (PCL). PCL allows pilots to control the intensity of runway lighting using the radio transmitter in the aircraft. This system should be maintained through the planning period.

Airfield Signage

Lighted directional and hold signs are installed at Newport Municipal Airport. This signage identifies runways, taxiways, and apron areas. These aid pilots in determining their position on the airport and provide directions to their position on the airport and provide directions to their desired location on the airport. These lighting aids are sufficient and should be maintained through the planning period.

Pavement Markings

Runway markings are designed according to the type of instrument approach available on the runway. FAA Advisory Circular 150/5340-1H, *Marking of Paved Areas on Airports*, provides the guidance necessary to design airport markings. Precision instrument markings are in place on Runway 16-34. However, the runway threshold markings on this runway are not compliant with standards. For runways with a width of 150 feet, 12 stripes are required to mark the threshold. Runway 16-34 currently has only eight stripes marking the threshold. Additional stripes will need to be added to comply with the standard. The basic markings on Runway 2-20 will suffice throughout the planning period.

Taxiway and apron areas also require marking. Yellow centerline stripes are currently painted on all taxiway surfaces at the airport to provide this guidance to pilots. The paved aircraft parking aprons also have centerline markings to indicate the alignment of taxilanes within these areas. Besides routine maintenance of the taxiway striping, these markings will be sufficient through the planning period.

WEATHER REPORTING

Newport Municipal Airport is equipped with an automated weather observation system (AWOS-3). This automated system reports the altimeter setting, visibility, and cloud/ceiling data. The AWOS can be obtained by radio on the frequency 133.90 Mhz, or by phone at (541) 867-4175.

The airport is also equipped with a lighted wind cone and a segmented circle, which provides pilots with information about wind conditions and local traffic patterns. These facilities are required when an airport is not served by a 24-hour ATCT. These facilities are sufficient and should be maintained in the future.

LANDSIDE REQUIREMENTS

Landside facilities are those necessary for handling of aircraft and passengers while on the ground. These facilities provide the essential interface between the air and ground transportation modes. The capacities of the various components of each area were examined in relation to projected demand to identify future landside facility needs.

GENERAL AVITATION TERMINAL BUILDING

General aviation terminal facilities have several functions. Space is required for passenger waiting, pilot's lounge and flight planning, airport management, storage, and various other needs. The existing terminal building provides approximately 1,000 square feet and was formerly used for scheduled air service.

Table 3E outlines the space requirements for the general aviation terminal building at Newport Municipal Airport. A planning average of 2.5 passengers per flight throughout the planning period was multiplied by the number of design hour itinerant operations. Space requirements were then based upon providing a planning criterion of 90 square feet per design hour itinerant passenger. As shown in the table, additional area will be required in the short term.

TABLE 3E
General Aviation Terminal Building
Newport Municipal Airport

	Available	Short Term	Intermediate Term	Long Term
General Aviation Design Hour Itinerant Passengers	N/A	25	30	37
General Aviation Building Space (s.f.)	1,000	2,200	2,700	3,300

HANGARS

Utilization of hangar space varies as a function of local climate, security, and owner preferences. The trend in general aviation aircraft, whether single or multi-engine, is towards more sophisticated (and, consequently, more expensive) aircraft. Therefore, many aircraft owners prefer enclosed hangar space to outside tie-downs.

The demand for aircraft storage hangars is dependent upon the number and type of aircraft expected to be based at the airport in the future. For planning purposes, it is necessary to estimate hangar requirements based upon forecast operational activity. However, hangar development should be based upon actual demand trends and financial investment conditions. While a majority of aircraft owners prefer enclosed aircraft storage, a number of based aircraft will still tie-down outside (due to the lack of hangar availability, hangar rental rates, and/or operational needs). Therefore, enclosed hangar facilities should not be planned for each based

aircraft. At Newport Municipal Airport, approximately 90 percent of the based aircraft are currently stored in enclosed hangar facilities. In the future, it is estimated that the percentage of based aircraft stored in hangars will remain near this percent.

Currently, there are no T-hangars at Newport Municipal Airport. While current hangar needs are satisfied by executive and conventional hangars, there will be a demand for T-hangars in the future. A planning standard of 1,200 square feet per based aircraft stored in T-hangars has been used to determine future T-hangar requirements. T-hangars are used for small single and multi-engine storage and can be fully enclosed or open, simply providing a roof over pavement (shade hangars).

The majority of hangared aircraft (19) at Newport Municipal Airport are currently stored in executive hangars, while only a few aircraft are stored in the one conventional hangar (FBO hangar) at the airport. Each of these types of hangars is designed for multiple aircraft storage. Executive hangars are generally less than 10,000 square feet, while conventional hangars are generally greater than 10,000 square feet.

As the trend towards more sophisticated aircraft continues throughout the planning period, it is important to determine the need for more conventional and executive hangars. For conventional and executive hangars, a planning standard of 1,200 square feet was used for single-engine aircraft, while a planning standard of 3,000 square feet was used for multi-engines, jets, and helicopters. These planning standards recognize that some of the larger business jets require a greater amount of space. Since portions of conventional hangars are also used for aircraft maintenance and servicing, requirements for maintenance/service hangar area were estimated using a planning standard of approximately 15 percent of the total hangar space needs.

Future hangar requirements for the airport are summarized in **Table 3F**. As indicated in the table, current executive and conventional hangar area will be sufficient through the planning period. However, T-hangars will be needed in the intermediate term. The alternatives analysis will examine the options available for hangar development at the airport and determine the best location for each type of hangar facility.

TABLE 3F
Aircraft Storage Requirements
Newport Municipal Airport

		Future Requirements		
	Currently Available	**Short Term**	**Intermediate Term**	**Long Term**
Aircraft to be Hangared	23	23	25	30
T-Hangar Positions	0	0	6	15
Executive Hangar Positions	19	19	15	11
Conventional Hangar Positions	4	4	4	4
T-Hangar Area	0	0	7,200	18,000
Executive Hangar Area	37,700	22,800	19,800	20,400
Conventional Hangar Area	12,000	12,000	12,000	12,000
Total Maintenance Area	4,000	5,200	5,900	7,600
Total Hangar Area (s.f.)	**53,800**	**40,000**	**44,900**	**58,000**

AIRCRAFT PARKING APRON

A parking apron should provide for the number of locally-based aircraft that are not stored in hangars, and for those aircraft used for air taxi and training activity. Parking should be provided for itinerant aircraft as well. As mentioned in the previous section, 90 percent of based aircraft at Newport Municipal Airport are currently stored in hangars, and that percentage is expected to continue throughout the planning period.

For planning purposes, 15 percent of the based aircraft total will be used to determine the parking apron requirements of local aircraft, due to some aircraft requiring both hangar storage and parking apron. Since the majority of locally-based aircraft are stored in hangars, the area requirement for parking of locally-based aircraft is smaller than for transient aircraft. Therefore, a planning criterion of 650 square yards per aircraft was used to determine the apron requirements for local aircraft.

Along with based aircraft parking needs, transient aircraft parking needs must also be considered when determining apron requirements. A planning criterion of 800 square yards was used for single and multi-engine itinerant aircraft, and 1,600 square yards for itinerant jets. Current apron area at Newport Municipal Airport includes two paved aprons totaling approximately 22,700 square yards. A total of 18 tie-downs are available on these two aprons, as well as additional parking for large aircraft. These aprons are used by both based and transient aircraft. A third apron, made of concrete, is also available at the airport. This apron is privately owned by the Coast Guard and totals approximately 2,700 square yards. Total aircraft parking apron requirements are presented in **Table 3G**. According to the table, the current apron area will be sufficient through the planning period. However, additional tiedowns will be needed in the long term.

TABLE 3G
Aircraft Parking Apron Requirements
Newport Municipal Airport

	Currently Available	Short Term	Intermediate Term	Long Term
Single, Multi-Engine Transient				
Aircraft Positions		10	11	13
Apron Area (s.y.)		8,300	9,000	10,700
Transient Jet Positions		2	2	2
Apron Area (s.y.)		2,900	3,200	3,800
Locally-Based Aircraft Positions		4	4	5
Apron Area (s.y.)		2,500	2,700	3,200
Total Positions	18	16	17	20
Total Apron Area (s.y.)	25,400	13,700	14,900	17,700

VEHICLE PARKING

The airport currently maintains one parking lot, which provides approximately 7,200 square feet of space and accommodates approximately 20 vehicles. Vehicular parking demands have been determined based on an evaluation of the existing airport use, as well as industry standards, which consider one-half of based aircraft at the airport will require a parking space. As shown in **Table 3H**, additional parking area will be required at the airport in the short term.

TABLE 3H
Vehicle Parking Requirements
Newport Municipal Airport

		Future Requirements		
	Available	**Short Term**	**Intermediate Term**	**Long Term**
Design Hour Passengers		9	11	12
Terminal Vehicle Spaces		12	14	16
Parking Area (s.f.)		4,800	5,500	6,200
General Aviation Spaces		13	14	17
Parking Area (s.f.)		5,200	5,600	6,600
Total Parking Spaces	20	25	28	33
Total Parking Area (s.f.)	7,200	10,000	11,100	12,800

SUPPORT REQUIREMENTS

Various facilities that do not logically fall within classifications of airfield, terminal building, or general aviation areas have also been identified. These other areas provide certain functions related to the overall operation of the airport, and include: aircraft rescue and firefighting, fuel storage, and airport maintenance facilities.

AIRCRAFT RESCUE AND FIREFIGHTING

Aircraft rescue and firefighting (ARFF) is provided to the airport by the City of Newport. Their facilities are located in a 3,600 square foot building on the northwest end of the airfield.

AIRPORT MAINTENANCE/ STORAGE FACILITIES

Current storage facilities at Newport Municipal Airport include a 4,000 square foot building located west of the rotating beacon. Additional storage is provided by the executive and conventional hangars. Adequate area needs to be reserved for expansion of these facilities.

AVIATION FUEL STORAGE

Fueling facilities are operated by Central Oregon Coast Air Services. Both 100 LL fuel and Jet A fuel are available. Fuel storage requirements are typically based upon maintaining a two-week supply of fuel during an average month; however, more frequent deliveries can reduce the fuel storage capacity requirements. Storage to meet a two-week supply for both Avgas and Jet A fuel is currently available.

SUMMARY

The intent of this chapter has been to outline the facilities required to meet potential aviation demands projected for Newport Municipal Airport through the long term planning horizon. The next step is to develop a direction for development to best meet these projected needs. The remainder of the master plan will be devoted to outlining this direction, its schedule, and costs.

Chapter Three-Subpart One
DEVELOPMENT ALTERNATIVES

Three development alternatives were presented to the advisory committee on September 3, 2002 and to the general public later the same day. Each of the alternatives were designed to provide expansion capability for smaller executive style hangar development and the potential for a larger terminal facility for scheduled or non-scheduled passengers using the airport.

Alternative A provided for expansion of small hangars on the southwest side, where three hangars have recently been constructed. Parallel taxiways were extended full length along both sides of Runway 16-34. However, it was recognized that extension of the parallel taxiway along the west side may require the relocation of the VORTAC, which will be located only 215 feet from the centerline of the extended taxiway. An alternate location for the VORTAC was noted on the east side of the airfield. A new passenger terminal was depicted on the east side, south of Runway 2-20; however, the access road as depicted around the south end of Runway 16-34 will be difficult to construct because of the steep terrain.

Alternative B assumed the relocation of the VORTAC to the east side of the airfield, allowing for the extension of the parallel taxiway along the west side of Runway 16-34, expansion of small hangars, FBO facilities, and a new passenger terminal on the west side of the airfield. However, if the VORTAC cannot be relocated, most development presented in this alternative will not be feasible.

Mike Meigs with the FAA had the following information about the possibilities of relocating the VOR: "The VOR is not going away anytime soon. Relocation would have to be coordinated with DOD as well, because it provides TACAN service, which does not go away soon either. Newport is on the first draft of the list for the Minimum Operational Network – which means the VOR would never go away.

If the airport wants to look at this seriously, they should consider investing in paying ANI to do a siting study, which would run about $30,000 roughly. This would give them a firm answer of whether it's feasible for one, and nail down costs to about a 10% confidence factor. It could cost much less than a million, or much more, depending upon the available sites."

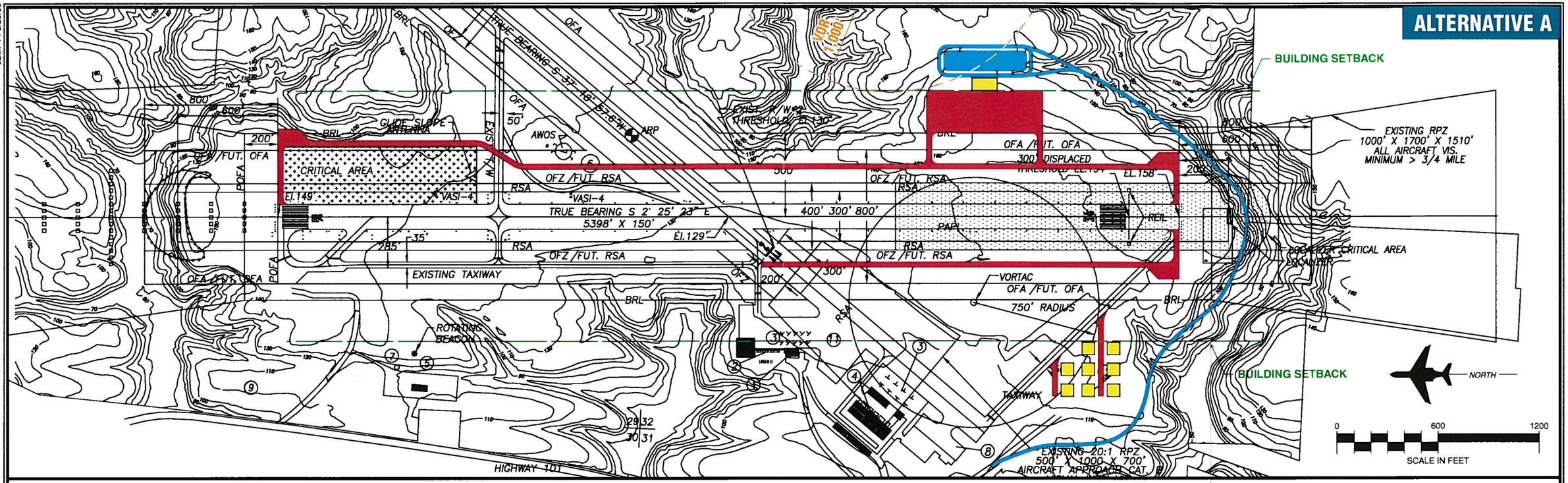
Alternative C assumed that the VORTAC will need to remain in its existing location. Future hangars were noted on the southwest side, and in two new areas on the northwest side where the terrain is relatively level. An area on the east side of the runway was noted for a parcelized subdivision, allowing for the construction of individual executive hangars.

Following a review of the alternatives with the advisory committee and the public, a recommended master plan concept was prepared. This concept is the basis for what is shown in the ALP and CIP. While the concept continues to show a potential relocation of the VORTAC to the east side of the airfield, the plan is not dependent on the relocation of the navaid facility. However, the full extension of the parallel taxiway on the west side may not be possible without VORTAC relocation. The construction of a full-length parallel taxiway on the east side is dependent on the need to construct new passenger terminal facilities on the east side of the airfield. Based upon rugged terrain on the south end of the runway, the roadway access into this

area is recommended from 98th Street, which connects with Highway 101. Continuing development of small hangars is recommended in the southwest area, and a new area for hangar development is recommended north of current facilities on the west side. This area will be accessed with a stub taxiway to be aligned with the existing connecting taxiway. The hangars will be offset from the runway approximately 650 feet, although the setback will depend on final building height elevations (to clear F.A.R. Part 77 surfaces). Roadway access will need to be developed from Highway 101, as noted on the drawing.

02MP14-8/25/03

ALTERNATIVE A



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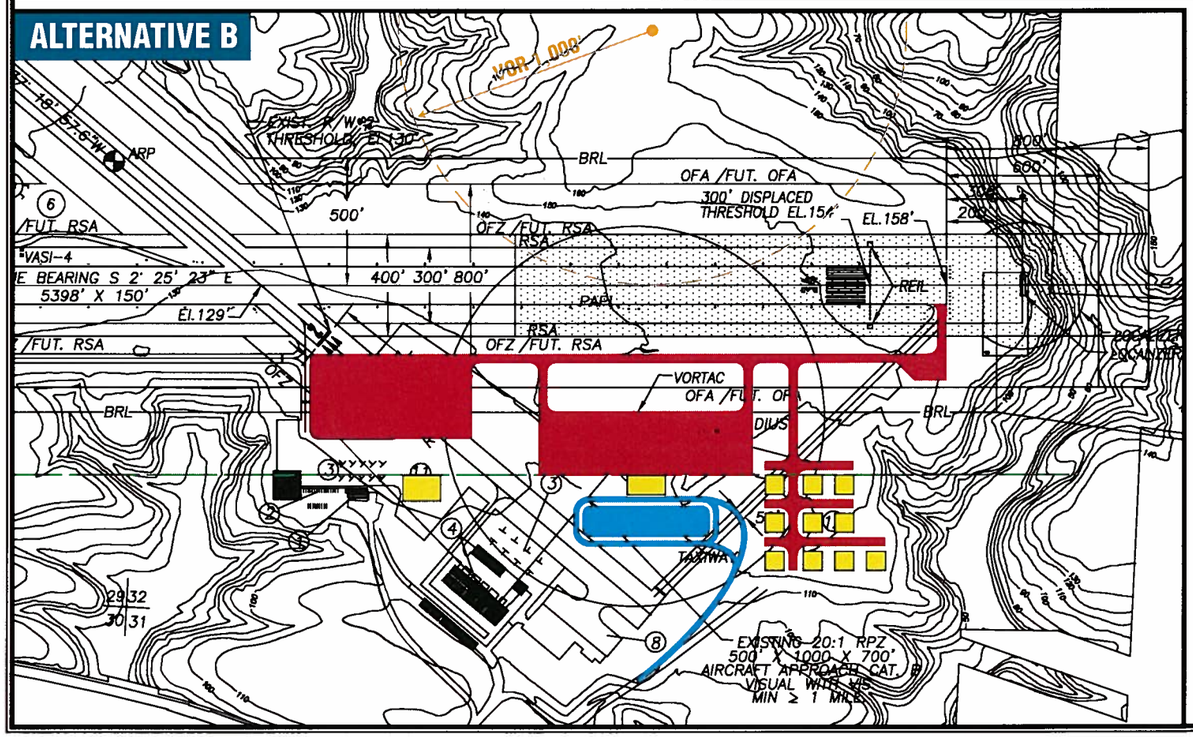

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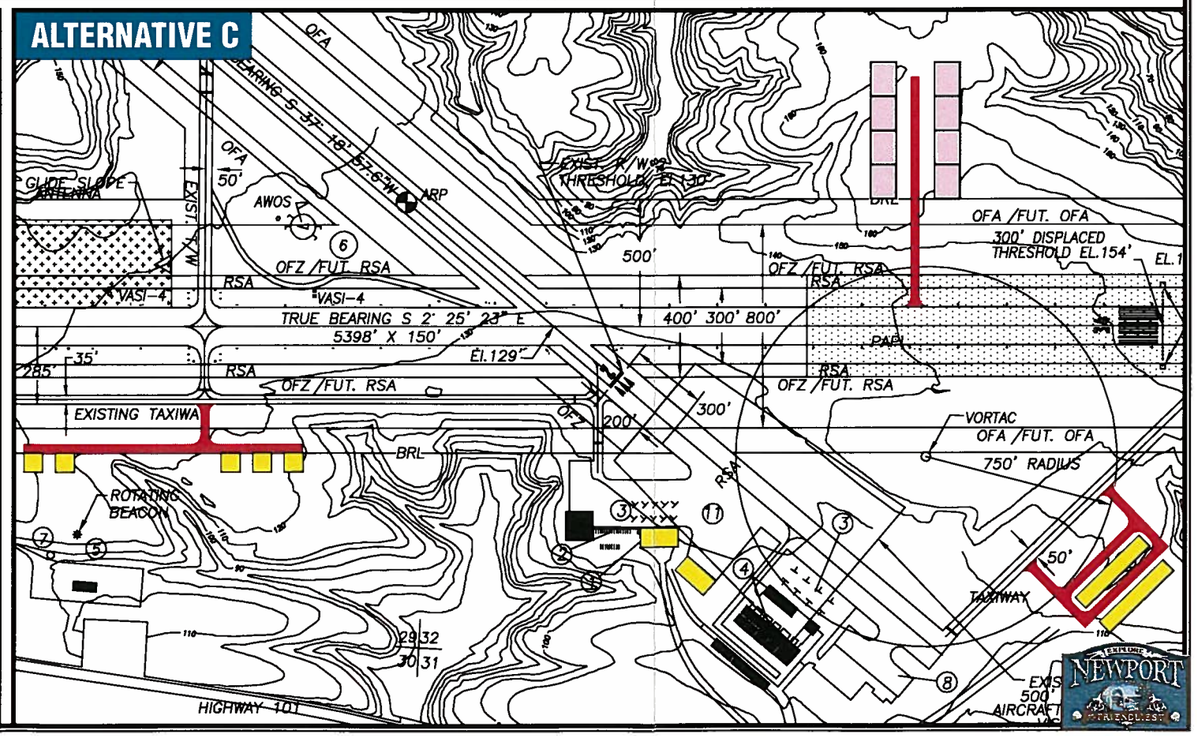
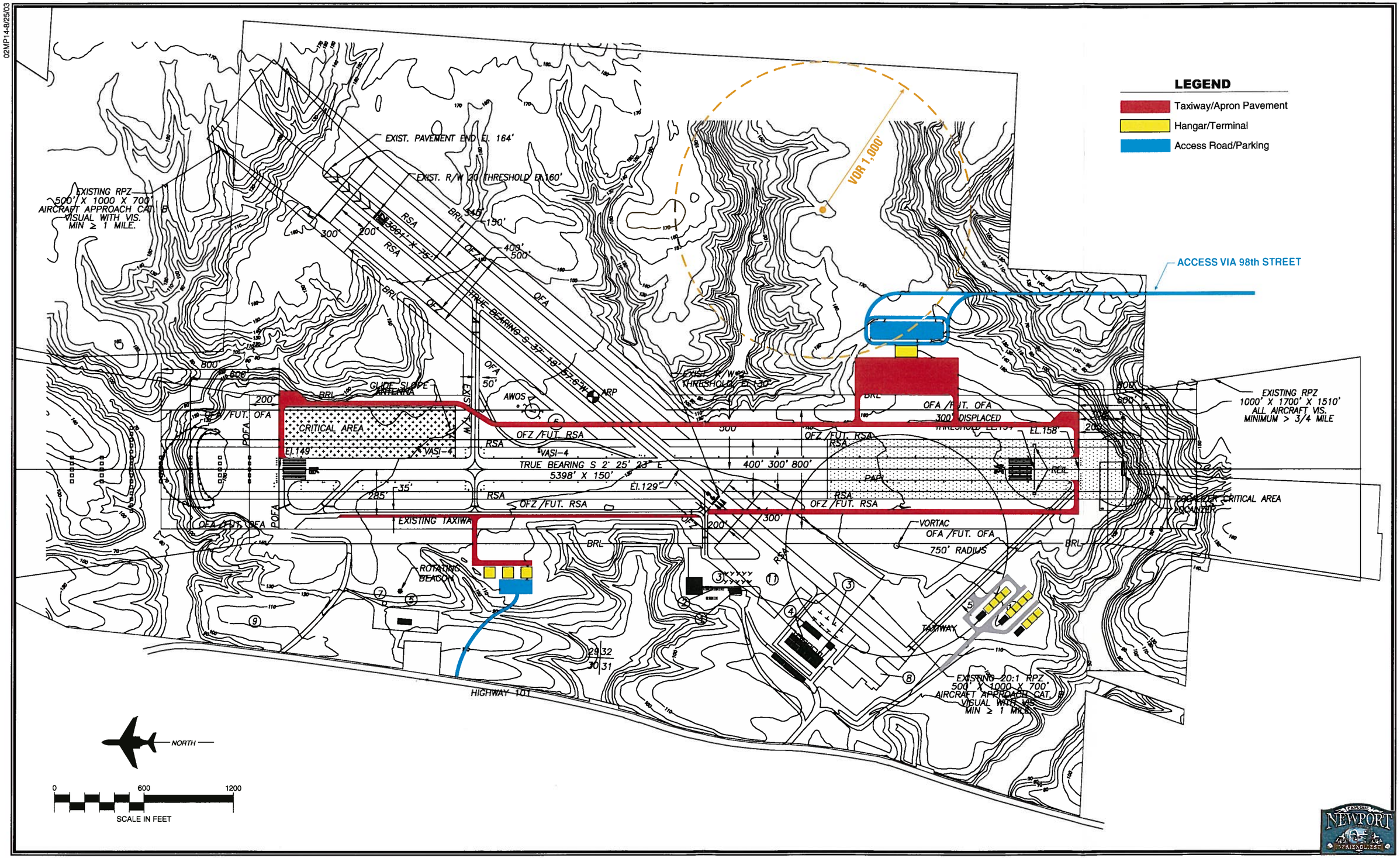


AIRSIDE AND LANDSIDE ALTERNATIVES

02MP14-8/25/03



MASTER PLAN CONCEPT

CHAPTER FOUR

Airport Plans

The airport plans are one of the last steps in the development of a airport layout plan report. They are a pictorial representation and summarization of the efforts made in the airport layout planning process. The previous chapters on Inventory, Forecasting, and Facility Requirements/Alternatives and the reviews provided by the Planning Advisory Committee (PAC) supply the basis for the existing and future airport layouts that are shown in the airport plans. As was previously discussed, the development at an airport should rely more on actual demand rather than a time-based forecast. The development shown in the airport plans reflects planned development, but the course and timing of this development must be carried forward as airport activity demands, rather than in the exact form it has been presented.

The basemapping developed for the previous master plan airport layout drawings was used for this updated set of drawings. An aerial photo of the airport is also used as a basemap when appropriate.

AIRPORT LAYOUT DRAWINGS

COVER SHEET

The cover sheet shows both the location and the vicinity map for the Newport Municipal Airport. A sheet index to the airport layout plan drawings is also provided on this sheet.

AIRPORT LAYOUT PLAN

The airport layout plan depicts the current airport layout and the proposed improvements to the airport for the 20-year planning period. Descriptions of the improvements and costs over the next 20-years are included in the Chapter 5, Capital Improvement Projects (CIP). As previously mentioned, the needs defined in the Facility Requirements/Alternatives (Chapter 3) and the reviews provided by the PAC were the basis for determining the proposed improvements at the Newport Municipal Airport. The future airport development is shown on the airport layout plan as required by the FAA. The plan can be modified to accommodate development as dictated by demand.

Runway visibility minimums, runway protection zones, object free areas, safety areas and other standard airport dimensions are shown in the plan and in the runway data tables.

AIRPORT AIRSPACE PLAN

This plan shows the Part 77 Imaginary Surfaces for the ultimate layout of Newport Municipal Airport with a USGS map as the background. Airport imaginary surfaces consist of five different types of surfaces. The surfaces for Newport Municipal Airport are as follows:

Primary Surface: A rectangular surface with a width that varies for each runway (centered on the runway centerline) and a length that extends 200 feet beyond each end of the runway. The elevation of the primary surface corresponds to the elevation of the nearest point of the runway centerline. The width of the primary surface is 500 feet for Runway 02/20 and 1,000 feet for Runway 16/34.

Approach Surface: A surface centered on the extended runway centerline, starting at each end of the primary surface, at a width equal to that of the primary surface and an elevation equal to that of the end of the runway; extending a horizontal distance of 5,000 feet at a slope of 20:1 for visual approaches (Runway 02/20), 10,000 feet at a slope of 34:1 for nonprecision approaches (Runway 34), and 10,000 feet at a slope of 50:1 with an additional 40,000 feet at a slope of 40:1 for all precision approaches (Runway 16) to a width of 1,500 feet for Runway 02/20, a width of 4,000 feet for Runway 34, and a width of 16,000 feet for Runway 16.

Transitional Surface: A sloping 7:1 surface that extends outward and upward at right angles to the runway centerline from the sides of the primary surface and the approach surfaces.

Horizontal Surface: An elliptical surface at an elevation 150 feet above the established airport elevation created by swinging 10,000-foot radius arcs from the center of each end of the primary surface of Runway 16/34 and by swinging a 5,000-foot radius arcs from the center of each end of the primary surface of Runway 02/20. Then the adjacent arcs are connected by lines tangent to those arcs.

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

It is ideal to keep these surfaces clear of obstructions whenever possible. The Part 77 surfaces are the basis for protection of the airspace around the airport. Obstructions to these surfaces are identified in the Obstruction Data Tables (on sheets 3, 4, and 5), along with the plan to address the described obstructions. Obstructions to the Part 77 surfaces were determined based on a review of the USGS map and a survey map provided by the National Oceanic Atmospheric Administration (NOAA) with the associated obstruction data sheet based on a survey performed in October of 1994. Past obstruction removal information and the FAA 5010 form were also used to identify the existing obstructions. Obstruction removal has been incorporated into the capital improvement program.

RUNWAY PROTECTION ZONE PLANS & PROFILES

This group of drawings provides a view of the runway protection zones and obstructions to the approach surfaces within those zones.

LAND USE PLAN

A land use plan has been developed for the airport and the surrounding area. This plan includes the zoning on and around the airport, future noise contours for 2008, and a table depicting the zoning ordinances that affect or are related to the airport.

Noise contours were created for both the existing (2003) and the future (2008) airport plan using the FAA Integrated Noise Model software program. The approach and take-off patterns of the aircraft and the number of aircraft operations dictate the noise contours. The future noise contours are shown on the land use plan. The two sets of noise contours are shown on Exhibit 4A. These noise contours provide a basis for evaluation of the land use around the airport, which is discussed in greater length in the Land Use Compatibility section of this chapter.

There is one zoning ordinance called the City of Newport Airport Restricted Area, which addresses airport uses. The zone is identified on the land use plan and discussed in more detail in the Land Use Compatibility Section of this chapter.

LAND USE COMPATIBILITY

The following section addresses the impact of the airport on the surrounding environs and the impact of adjacent land uses on the airport.

RUNWAY PROTECTION ZONES

Runway protection zones (RPZ's) are trapezoidal, two-dimensional areas off each runway end designated to "enhance the protection of people and property on the ground". The RPZ's are centered on the runway centerline. The RPZ dimensions for each runway end is dependent upon the type of aircraft and approach visibility minima. The Oregon Department of Aviation (ODA)

recommends that only farm uses and, under limited circumstances, public airports, roads, parking, utilities, parks/open space, and golf courses, be allowed within the airport's RPZ. No structures should be allowed within the RPZ, unless they are structures accessory to airport operations that have been approved by the FAA. New residential developments and public assembly facilities are prohibited in the RPZ's. For an expanded list of limitations to uses within the RPZ, see the ODA "Public Use Airport Safety and Compatibility Overlay Zone", contained in the appendix.

The portion of the land within the RPZ's for Runways 02, 16, 20, and 34, but outside of airport property, is designated by the City of Newport as Public Buildings and Structures, Planned Industrial, Rural Residential, Single Family Residential, Resort Land, and Agriculture. This zoning is somewhat in conflict with the recommended uses in the RPZ. The primary conflicts are residential and industrial uses in the RPZ. The City should consider changing the zoning in the RPZ and the immediate airport vicinity to eliminate the land use conflicts.

The City of Newport should consider avigation easements or property acquisition for the RPZ's, since the existing RPZ's are not entirely on airport property. There is an RPZ area at both ends of Runway 16/34 that would need to be acquired. Avigation easements or property acquisition will protect both the airport and those using the land within the easement areas by addressing "right of flight" for aircraft (including noise, fumes, etc.), height restrictions, limitations on construction, and right to clear vegetation or bringing the entirety of the land under airport control.

NOISE CONTOURS

Noise contours were created for both the existing (2003) and the future (2008) airport plan using the FAA Integrated Noise Model software program. The approach and take-off patterns of the aircraft and the number of aircraft operations dictate the noise contours. The future noise contours are shown on the land use plan. The two sets of noise contours are shown on **Exhibit 4A**. These noise contours provide a basis for evaluation of the land use around the airport.

Noise levels are measured in decibels of Day-Night Average Sound Levels or DNL. This measurement is then translated to contours, which depict the areas within the various DNL levels. F.A.R. Part 150, summarized in **Exhibit 4B**, provides guidelines for noise levels around an airport. Noise concerns are reduced when the noise level is below 65 DNL. The 65 DNL noise contour is completely within the existing airport property boundary, so there are no specific noise concerns for the airport. The 55 DNL contour is still reviewed by the ODA, so this contour has also been shown on the land use drawing. The 55 DNL also remains almost entirely within the airport property with the exception of a portion off Runway 34.

AIRPORT AIRSPACE OBSTRUCTION PROTECTION AND LAND USE COMPATIBILITY ADJACENT TO THE AIRPORT

In general, land use concerns associated with the areas around airports fall into one of the following categories:

- Lighting
- Glare, Smoke and Dust
- Bird Attractions/Landfills
- Airspace Obstructions and Height Restrictions
- Electrical Interference
- Concentrations of People
- Noise Impacts

Any of these activities can create safety concerns for airport users and people on the ground or can be impacted adversely by airport operations. It is important that these issues be addressed in the land use zoning and development around an airport.

The Newport Municipal Airport and the adjacent land areas are regulated by the City of Newport "Airport Restricted Area."

The ODA "Airport Safety and Compatibility Overlay Zone (for public uses airports with instrument approaches)" should be reviewed and incorporated into the existing zoning criteria. The document is contained in the appendix of this plan. By incorporating this document into their zoning ordinance, the city will have taken the appropriate steps to protect the Part 77 Airport Imaginary Surfaces and limit uses to avoid issues with noise, outdoor lighting, glare, visibility obstruction from emissions, electrical interference to NAVAIDs, and wildlife attractions.

Obstruction Removal

The obstructions and the proposed course for addressing those obstructions have been identified and are shown on airport plan sheets 3, 4 and 5. As previously mentioned, the obstructions information incorporated into this plan was obtained from a USGS map and a survey map provided by the National Oceanic Atmospheric Administration (NOAA) with the associated obstruction data sheet based on a survey performed in October of 1994. Past obstruction removal information and the FAA 5010 form were also used to identify the existing obstructions. Vegetation obstructions were removed and verified by survey during AIP-10 project work; these removals were taken into account on the plan. NAVAIDs were found to be obstructions to the primary surface, but are not a concern because they are frangible and fixed by a functional purpose. An equipment shelter is also an obstruction to the primary surface, but it is already lighted. There is an area of ground surface to the east of Runway 34 that is an obstruction to the primary surface. This area should be regraded. There are two poles that are obstructions to Part 77 surfaces that need to be lighted. The local access road is an obstruction to the Part 77 20:1 visual approach surface of Runway 20, but is cleared by the obstruction clearance approach surface, so it can remain in its existing location. The approaches for Runway's 2 and 16 are clear of obstructions.

DWG INDEX:
30295-NWP-NC2003
30295-NWP-NC2008

EXISTING NOISE CONTOURS – 2003

SCALE
1000 0 500 1000 2000
(FEET)
1 INCH = 1000 FT

ULTIMATE NOISE CONTOURS – 2008

DESIGNED BY: LAM	CHECKED BY: REA
DRAWN BY: CMB	APPROVED BY:
LAST EDIT: 10/28/03	PLOT DATE: 04/29/04

DATE	BY	REV#	REVISION	CK'D	APPR

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OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT

NOISE CONTOURS
EXHIBIT 4A

NEWPORT OREGON

SCALE:	PROJECT NO.	DRAWING FILE NAME:	SHEET
1"=1000'	31468	30295-NWP-EX4A	4A

Office: SEATTLE | System: WHP-SEA-BRCY121 | User: CBONTEMPO

LAND USE	Yearly Day-Night Average Sound Level (DNL) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N[1]	N[1]	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N[1]	N[1]	N[1]	N	N
PUBLIC USE						
Schools	Y	N[1]	N[1]	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y[2]	Y[3]	Y[4]	Y[4]
Parking	Y	Y	Y[2]	Y[3]	Y[4]	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y[2]	Y[3]	Y[4]	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y[5]	Y[5]	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally-determined land uses for those determined to be appropriate by local authorities in response to locally-determined needs and values in achieving noise compatible land uses.

See other side for notes and key to table.

Exhibit 4B
LAND USE COMPATIBILITY GUIDELINES

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

NOTES

1 Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB, respectively, 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. However, the use of NLR criteria will not eliminate outdoor noise problems.

2 Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

3 Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

4 Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

5 Land use compatible provided special sound reinforcement systems are installed.

6 Residential buildings require a NLR of 25.

7 Residential buildings require a NLR of 30.

8 Residential buildings not permitted.

Source: ***F.A.R. Part 150***, Appendix A, Table 1.

OTHER LAND USE ISSUES

In addition to the zoning of the airport property, there are four special land use concerns on which the FAA focuses. The first is floodplains on the airport property. There are no floodplains within the boundaries of the airport property. Another issue is if there is any land regulated by Section 303(C) of Title 49, U.S.C. Section 303(C) land is publicly owned public parks and recreation areas, waterfowl and wildlife refuges, historic sites, public bikeways and trails, bodies of water, and a number of other similar categories. The nearby beaches and the Pacific Ocean would fall into this category, but there is no Section 303(C) land on the airport property. Landfills within five miles of the airport are also a concern. However, there are no landfills within five miles of Newport Municipal Airport.

AIRPORT PROPERTY ZONING

Newport Municipal Airport is designated by the City of Newport as a "Public Buildings and Structures Zone." This designation is general zoning for any public buildings and structures. It is recommended that the City consider re-zoning the airport property to a "public use airport" zone. This change would limit the use of this property more specifically to airport and airport related uses. The airport property would then be protected from uses that may be undesirable or damaging to the airport. A model "Public Use Airport Zone" definition is provided in the Oregon Administrative Rule (OAR) 660 Division 1 and in the appendix to this plan. The City does not have a published zoning map for this area at this time, but it is in the development process. Lincoln County does not have any specific zoning designations for the airport and airport property.

The ODA is undertaking a state wide land use planning project in 2004. The first phase will be to inventory the current zoning at all airports through out the state. The second phase will be to assist individual communities with zone change procedures to bring the zoning into line with the OARs mention above.

Development Opportunities and Associated Land Uses

When an airport owns property the size of Newport Municipal Airport, there is an opportunity to look at the revenue producing land uses around that property. First and foremost, the airport property must be reserved for airfield facilities, OFA, RSA, OFZ and RPZ protection, NAVAIDS and aviation-dependent land uses. Through the development of this plan, the airport has identified the areas that need to be preserved over the next twenty years for these uses. In addition, the economic health of the airport must be maintained to keep the airport in operation. Other airports have successfully done this by leasing out areas of their property to industrial and commercial land uses. If this approach is taken, the industrial and commercial land uses must comply with all of the restrictions appropriate for development around the airport including light, glare, smoke, dust, bird attractions, airspace obstructions and height restrictions, electrical interference, concentrations of people and noise. The restrictions applicable to this property can

be written into the lease agreement to insure the protection of the airport. The standard ODA "Public Use Airport Zone" would need to be edited to include industrial or commercial land uses. If the appropriate steps are taken, leasing airport property for industrial and commercial development can benefit the financial health of the airport.

The section of airport property proposed for non-aviation related development was federal surplus property transferred from the Navy to the City of Newport. In order to lease this property for a non-aviation use, it must be shown that the property is not needed for airport development in the foreseeable future (up to 50-years) and that the airport benefits from the leasing of the property. In addition, the FAA must approve this non-aviation use.

OREGON DEPARTMENT OF AVIATION

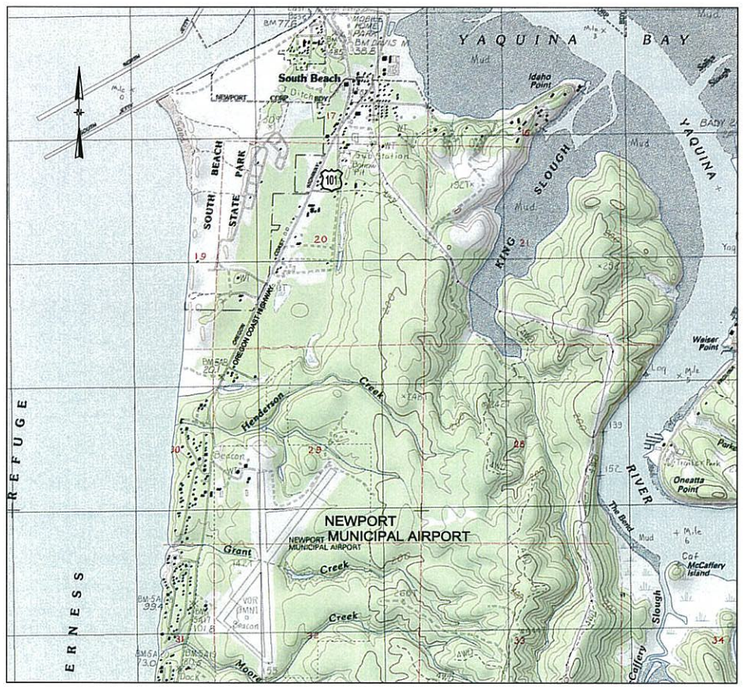
NEWPORT MUNICIPAL AIRPORT

AIRPORT LAYOUT PLAN

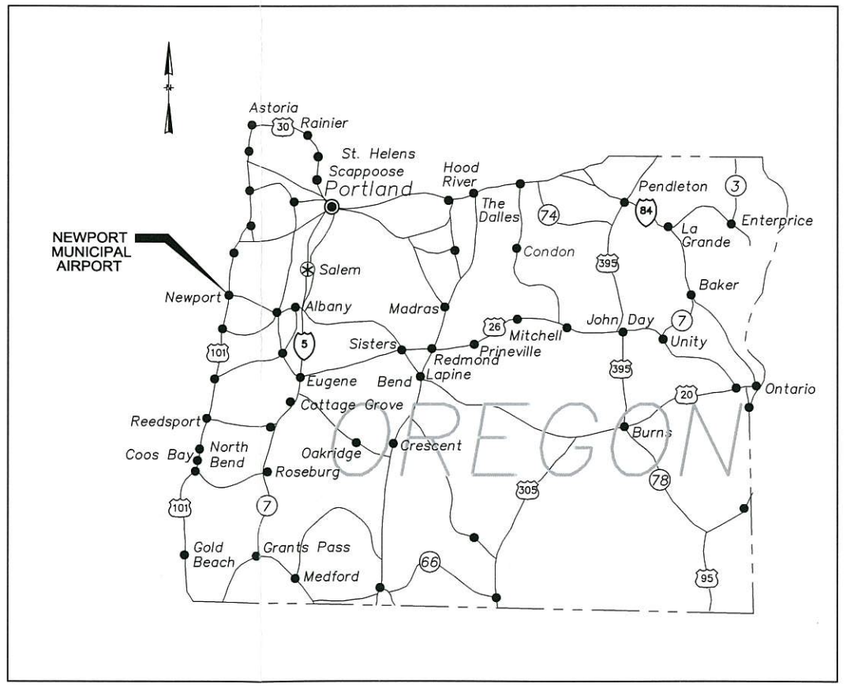
A.I.P. NO. 3-41-4100-13

SEPTEMBER 2004

VICINITY MAP



LOCATION MAP



SHEET INDEX

SHEET	DESCRIPTION
SHEET 1	COVER SHEET
SHEET 2	AIRPORT LAYOUT PLAN
SHEET 3	AIRPORT AIRSPACE PLAN
SHEET 4	INNER PORTION OF THE APPROACH SURFACE
SHEET 5	RUNWAY 16/34 & 2/20 PROTECTION ZONE PROFILES
SHEET 6	LAND USE PLAN

SECTION, TOWNSHIP, RANGE:

Coffman Associates
Airport Consultants

DATE	BY	REV#	REVISION	CK'D	APPR.

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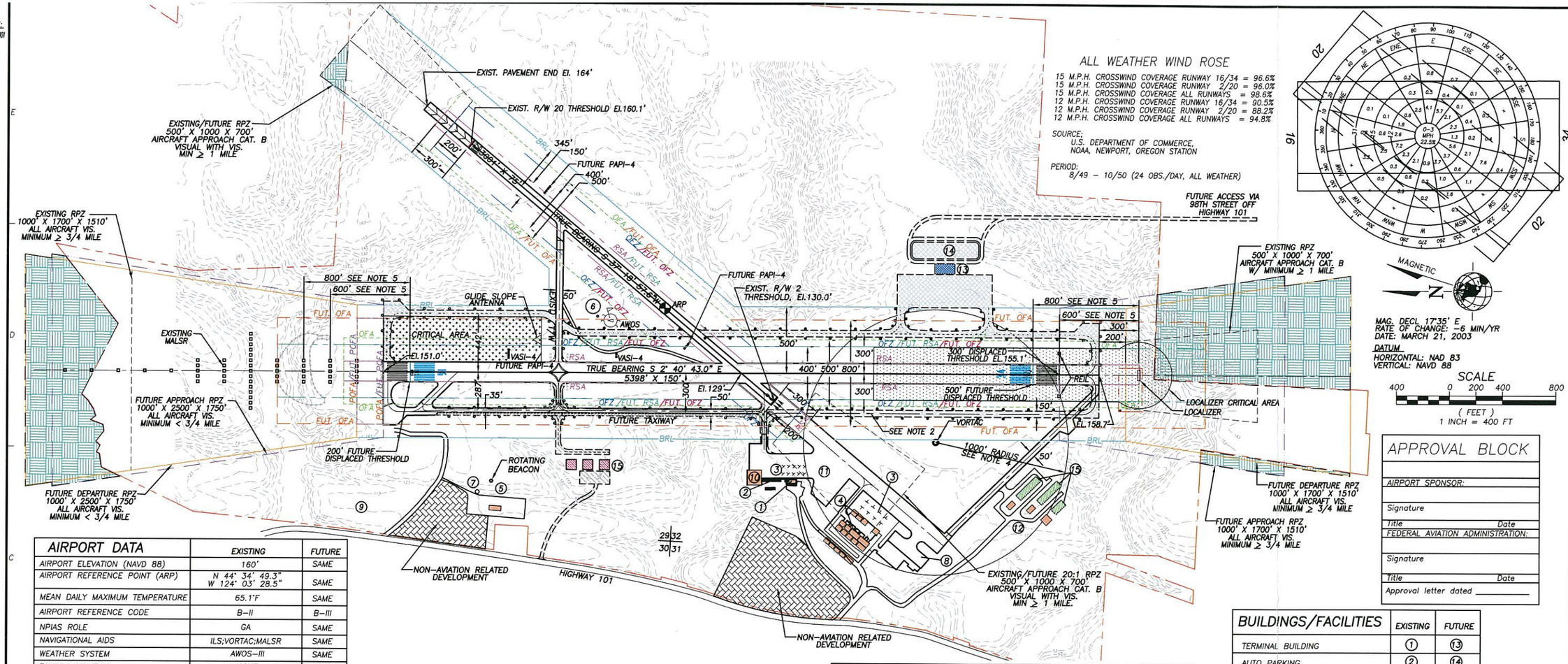
DRAWN BY: CMB
CHECKED BY: LAM
APPROVED BY: REA

DRAWING FILE NAME: 30398-AIRP-CS01.DWG

SHEET 1/6
1

PLOT DATE: 09/15/04
PLOT BY:

WG INDEX:
S-XREF-NWP-BMDY



ALL WEATHER WIND ROSE

15 M.P.H. CROSSWIND COVERAGE RUNWAY 16/34 = 96.6%
15 M.P.H. CROSSWIND COVERAGE RUNWAY 2/20 = 96.0%
15 M.P.H. CROSSWIND COVERAGE ALL RUNWAYS = 98.6%
12 M.P.H. CROSSWIND COVERAGE RUNWAY 16/34 = 90.5%
12 M.P.H. CROSSWIND COVERAGE RUNWAY 2/20 = 88.2%
12 M.P.H. CROSSWIND COVERAGE ALL RUNWAYS = 94.8%

SOURCE:
U.S. DEPARTMENT OF COMMERCE,
NOAA, NEWPORT, OREGON STATION

PERIOD:
8/49 – 10/50 (24 OBS./DAY, ALL WEATHER)

MAG. DECL 17°35' E
RATE OF CHANGE: -6 MIN/YR
DATE: MARCH 21, 2003

DATUM
HORIZONTAL: NAD 83
VERTICAL: NAVD 88

SCALE
400 0 200 400 800
(FEET)
1 INCH = 400 FT

APPROVAL BLOCK

AIRPORT SPONSOR:
Signature
Title Date
FEDERAL AVIATION ADMINISTRATION:
Signature
Title Date
Approval letter dated _____

AIRPORT DATA	EXISTING	FUTURE
AIRPORT ELEVATION (NAVD 88)	160'	SAME
AIRPORT REFERENCE POINT (ARP)	N 44° 34' 49.3" W 124° 03' 28.5"	SAME
MEAN DAILY MAXIMUM TEMPERATURE	65.1°F	SAME
AIRPORT REFERENCE CODE	B-II	B-III
NPIAS ROLE	GA	SAME
NAVIGATIONAL AIDS	ILS;VORTAC;MALSR	SAME
WEATHER SYSTEM	AWOS-III	SAME
TAXIWAY LIGHTING	NONE	MIRL
TAXIWAY MARKINGS	CENTERLINE	SAME

RUNWAY DATA	R/W 16		R/W 34		R/W 2		R/W 20	
	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE
ARC	B-II	B-III	B-II	B-III	B-II	SAME	B-II	SAME
CRITICAL AIRCRAFT	DO-32B	DHC DASH 8	DO-32B	DHC DASH 8	DO-32B	SAME	DO-32B	SAME
RUNWAY DIMENSIONS (L/W)	5398' X 150'	SAME (SEE NOTE 6)	5398' X 150'	SAME (SEE NOTE 6)	3001' x 75'	SAME	3001' x 75'	SAME
PAVEMENT TYPE	ASPHALT	SAME	ASPHALT	SAME	ASPHALT	SAME	ASPHALT	SAME
PAVEMENT DESIGN STRENGTH	75,000SWL	SAME	75,000SWL	SAME	33,000SWL	SAME	33,000SWL	SAME
RUNWAY LIGHTING	HIRL	SAME	HIRL	SAME	MIRL	SAME	MIRL	SAME
RUNWAY MARKING	PRECISION	SAME	PRECISION	SAME	BASIC	SAME	BASIC	SAME
EFFECTIVE GRADIENT (%)	.48%	SAME	.48%	SAME	1.0%	SAME	1.0%	SAME
VISUAL APPROACH AIDS	VASI,MALSF,REILS	PAPI-4,MALSR REILS	REILS,PAPI-4	SAME	NONE	SAME	NONE	SAME
INSTRUMENTAL APPROACH AIDS	ILS/VORTAC/GPS	SAME	GPS	SAME	NONE	SAME	NONE	SAME
RSA DIMENSIONS (WIDTH/ LENGTH FROM RUNWAY END)	150'/300'	400'/600' (SEE NOTE 5)	150'/300'	400'/600' (SEE NOTE 5)	150'/300'	SAME	150'/300'	SAME
OFA DIMENSIONS (WIDTH/ LENGTH FROM RUNWAY END)	500'/300'	800'/600' (SEE NOTE 5)	500'/300'	800'/600' (SEE NOTE 5)	500'/300'	SAME	500'/300'	SAME
OFZ DIMENSIONS (WIDTH/ LENGTH FROM RUNWAY END)	400'/200'	SAME	400'/200'	SAME	400'/200'	SAME	400'/200'	SAME
RUNWAY END COORDINATES NAD 83	N 44° 35' 12.63" W 124° 03' 33.74"	SAME	N 44° 34' 19.39" W 124° 03' 30.26"	SAME	N 44° 34' 43.45" W 124° 03' 34.73"	SAME	N 44° 35' 07.01" W 124° 03' 09.59"	SAME
APPROACH VIS. MINIMUMS	PRECISION	SAME	NON-PRECISION	SAME	VISUAL	SAME	VISUAL	SAME
APPROACH SLOPES FAR PART 77	50:1	50:1	34:1	34:1	20:1	20:1	20:1	20:1
APPROACH SLOPES ACTUAL	0:1	50:1	50:1	50:1	39:1	39:1	UNKNOWN	50:1
THRESHOLD DISPLACEMENT	NONE	200'	300'	500'	NONE	SAME	NONE	SAME
THRESHOLD RELOCATION	NONE	SAME	NONE	SAME	1700'	SAME	400'	SAME
DECLARED DISTANCES TORA	5398'	5398'	5398'	5398'	3001'	SAME	3001'	SAME
DECLARED DISTANCES TODA	5398'	5398'	5398'	5398'	3001'	SAME	3001'	SAME
DECLARED DISTANCES ASDA	5098'	4898'	5398'	5198'	3001'	SAME	3001'	SAME
DECLARED DISTANCES LDA	5098'	4698'	5098'	4698'	3001'	SAME	3001'	SAME

LEGEND

	EXISTING	FUTURE
AIRFIELD PAVEMENT		
ROADWAY PAVEMENT		
PAVEMENT CONSTRUCTION STAGE 1		
PAVEMENT CONSTRUCTION STAGE 2		
PAVEMENT CONSTRUCTION STAGE 3		
TAXIWAY HOLDLINE		
PAVEMENT REMOVED		
BUILDINGS		
BUILDING CONSTRUCTION STAGE 1		
BUILDING CONSTRUCTION STAGE 2		
BUILDING CONSTRUCTION STAGE 3		
BUILDING REMOVAL		
EASEMENT		
PROPERTY ACQUISITION		
PROPERTY LINE		
BUILDING RESTRICTION LINE	BRL	
R/W OBJECT FREE AREA	OFA	FUT. OFA
R/W SAFETY AREA	RSA	FUT. RSA
R/W OBJECT FREE ZONE	OFZ	FUT. OFZ
PRECISION OBJECT FREE AREA	POFA	FUT. POFA
NON-STANDARD RSA/OFA		
RUNWAY PROTECTION ZONE		
TOPOGRAPHIC CONTOUR	35	
PAPI		
RUNWAY LIGHTING		
AVIGATION EASEMENT		
AIRPORT REFERENCE POINT	ARP	

BUILDINGS/FACILITIES	EXISTING	FUTURE
TERMINAL BUILDING	①	⑬
AUTO PARKING	②	⑭
TIEDOWNS	③	
HANGARS	④	⑮
ROTATING BEACON	⑤	
WIND SOCK	⑥	
JET FUEL TANK	⑦	
COAST GUARD	⑧	
AIRCRAFT RESCUE & FIRE	⑨	
FBO HANGAR	⑩	
LARGE AIRCRAFT PARKING AREA	⑪	
HANGAR DEVELOPMENT AREA	⑫	

NOTE:
1. BUILDING RESTRICTION LINE SHOWN FOR RUNWAY 16-34 IS BASED ON A 35 FOOT HIGH BUILDING. BUILDING RESTRICTION LINE SHOWN FOR RUNWAY 2-20 IS BASED ON A 13 FOOT HIGH BUILDING.
2. RUNWAY 16-34 PARALLEL TAXIWAY EXTENSION IS DEPENDENT ON VORTAC RELOCATION.
3. NO OFZ OBJECT PENETRATION. DISPLACED THRESHOLDS WILL BE REQUIRED FOR RUNWAY 16 AND 34, IF THE RUNWAY IS UPGRADED TO A B-III.
4. STRUCTURES WITHIN 1000 FEET OF THE VOR ANTENNA, THAT ARE PARTLY OR ENTIRELY METALLIC, SUBTEND A VERTICAL ANGLE OF 1.2 DEGREES OR LESS WHEN MEASURED FROM THE GROUND ELEVATION AT THE ANTENNA SITE. STRUCTURES WITHIN 1000 FEET OF THE VOR ANTENNA THAT ARE MADE OF WOOD WITH NEGLIGIBLE METALLIC SUBTEND A VERTICAL ANGLE OF LESS THAN 2.5 DEGREES WHEN MEASURED FROM THE GROUND ELEVATION AT THE ANTENNA SITE.
5. 800 FOOT RSA/OFA DIMENSIONS WILL BE MET THROUGH THE USE OF DISPLACED THRESHOLDS AND DECLARED DISTANCES.
6. COST BENEFIT ANALYSIS SHOULD BE PERFORMED AT THE TIME OF NEXT RUNWAY OVERLAY DESIGN TO INVESTIGATE THE POSSIBILITY OF REDUCING THE RUNWAY WIDTH TO 100 FEET.

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OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT
AIRPORT LAYOUT PLAN

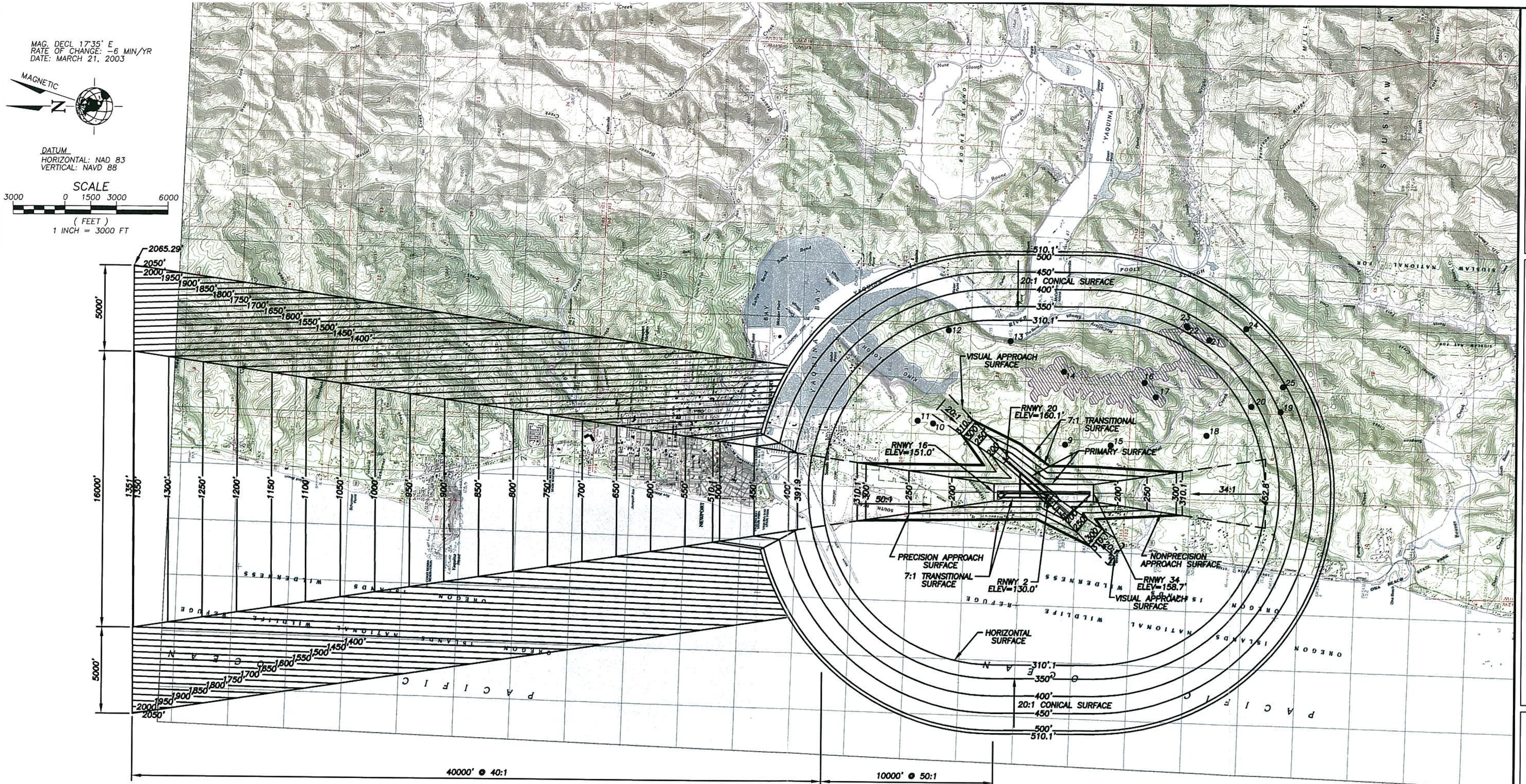
OREGON
DRAWING FILE NAME: 30295-NWP-LP01
PROJECT NO. 30295
NEWPORT
SCALE: 1"=400'

Coffman Associates
Airport Consultants

DESIGNED BY:	LAM	CHECKED BY:	REA	DATE	BY	REVISION	CK'D/APPR
DRAWN BY:	CMB	APPROVED BY:					
LAST EDIT:	08/26/04	PLOT DATE:	09/22/04				

SHEET 2/6
2

Office: SEATTLE | System: WHP-SEA-BRCY121 | User: CBONTEMPO



NOTES:

1. OBSTRUCTIONS INFORMATION LISTED WAS OBTAINED FROM NOAA AIRPORT OBSTRUCTION CHART AND AERONAUTICAL DATA SHEET, USGS QUAD MAPS, FAA 5010 FORM AND AIRPORT MANAGEMENT. OBSTRUCTION REMOVAL & SURVEY WAS PERFORMED AS PART OF AIP-10.
2. A GROWTH ALLOWANCE WAS NOT INCORPORATED INTO THE OBSTRUCTION REVIEW.
3. THE FOLLOWING HEIGHTS WERE ADDED TO THE SURFACE ELEVATION FOR CERTAIN GROUND FEATURES:
   - 10FT FOR A PRIVATE ROAD
   - 15FT FOR A PUBLIC ROAD
   - 17FT FOR AN INTERSTATE ROAD
   - 23FT FOR RAILROAD TRACKS
4. ALL ELEVATIONS ARE ON THE NAVD 88 DATUM, WITH THE EXCEPTION OF THE USGS MAP, WHICH IS NGVD 29.
5. THE CITY OF NEWPORT "AIRPORT RESTRICTED AREA" ADDRESSES ZONING RESTRICTION WITHIN THE FAR PART 77 IMAGINARY SURFACES.

LEGEND:

- ● OBSTRUCTIONS
- GROUP AND MULTIPLE OBSTRUCTIONS

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OBSTRUCTION DATA TABLE

OBSTRUCTION NO.	DESCRIPTION	ELEVATION	PART 77 SURFACE OBSTRUCTED	SURFACE ELEVATION	PENETRATION	PROPOSED DISPOSITION OF OBSTRUCTION
9	TREE	330'	HORIZONTAL SURFACE	310.1'	20'	REMOVE
10	TREE	330'	HORIZONTAL SURFACE	310.1'	20'	REMOVE
11	TREE	340'	HORIZONTAL SURFACE	310.1'	30'	REMOVE
12	TRANSMISSION TOWER	353'	HORIZONTAL SURFACE	310.1'	43'	INSTALL OBSTRUCTION LIGHT
13	TREE	318'	HORIZONTAL SURFACE	310.1'	8'	REMOVE
14	TREE	514'	HORIZONTAL SURFACE	310.1'	204'	REMOVE
15	TREE	389'	HORIZONTAL SURFACE	310.1'	79'	REMOVE
16	TREE	571'	HORIZONTAL SURFACE	310.1'	261'	REMOVE
17	TREE	511'	HORIZONTAL SURFACE	310.1'	201'	REMOVE
18	TREE	451'	HORIZONTAL SURFACE	310.1'	141'	REMOVE
19	TREE	534'	CONICAL SURFACE	402'	132'	REMOVE
20	TREE	465'	CONICAL SURFACE	333'	132'	REMOVE
21	TREE	576'	CONICAL SURFACE	367'	209'	REMOVE
22	TREE	588'	CONICAL SURFACE	363'	225'	REMOVE
23	GROUND SURFACE	VARIES	HORIZONTAL AND CONICAL SURFACE	VARIES	VARIES	NO ACTION
24	TREE	562'	CONICAL SURFACE	461'	101'	REMOVE
25	TREE	616'	CONICAL SURFACE	441'	175'	REMOVE

OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT
AIRPORT AIRSPACE PLAN

NEWPORT | OREGON

SCALE: 1"=3000' | PROJECT NO. 30295 | DRAWING FILE NAME: 30295-NWP-AS01

DESIGNED BY: LAM | CHECKED BY: REA
DRAWN BY: CMB | APPROVED BY:
LAST EDIT: 11/14/03 | PLOT DATE: 09/22/04

DATE	BY	REV#	REVISION	CK'D	APPR.

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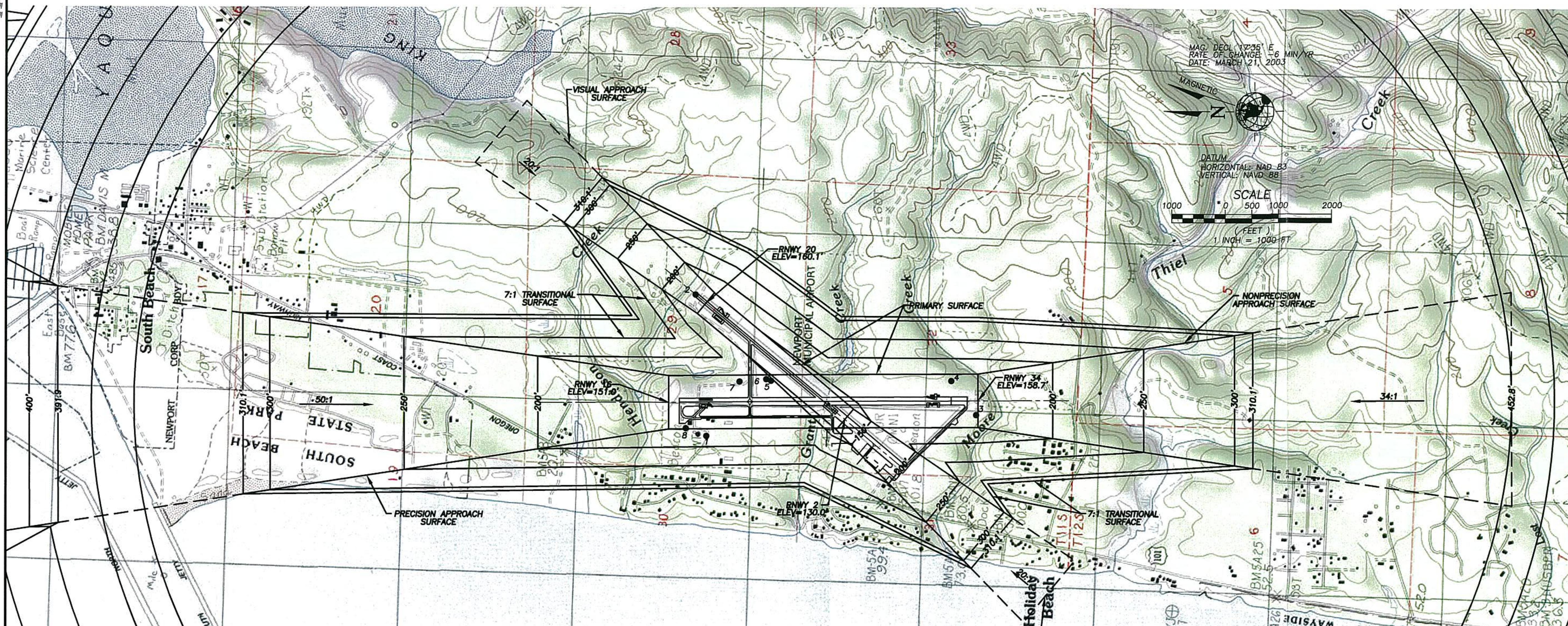
Office: SEATTLE | System: WHP-SEA-8RCY121 | User: CBONTEMPO



NOTES:

1. OBSTRUCTIONS INFORMATION LISTED WAS OBTAINED FROM NOAA AIRPORT OBSTRUCTION CHART AND AERONAUTICAL DATA SHEET, USGS QUAD MAPS, FAA 5010 FORM AND AIRPORT MANAGEMENT. OBSTRUCTION REMOVAL & SURVEY WAS PERFORMED AS PART OF AIP–10.
2. A GROWTH ALLOWANCE WAS NOT INCORPORATED INTO THE OBSTRUCTION REVIEW.
3. THE FOLLOWING HEIGHTS WERE ADDED TO THE SURFACE ELEVATION FOR CERTAIN GROUND FEATURES:
   - 10FT FOR A PRIVATE ROAD
   - 15FT FOR A PUBLIC ROAD
   - 17FT FOR AN INTERSTATE ROAD
   - 23FT FOR RAILROAD TRACKS
4. ALL ELEVATIONS ARE ON THE NAVD 88 DATUM, WITH THE EXCEPTION OF THE USGS MAP, WHICH IS NGVD 29.
5. THE CITY OF NEWPORT "AIRPORT RESTRICTED AREA" ADDRESSES ZONING RESTRICTION WITHIN THE FAR PART 77 IMAGINARY SURFACES.

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LEGEND:

● OBSTRUCTIONS

OBSTRUCTION DATA TABLE

OBSTRUCTION NO.	DESCRIPTION	ELEVATION	PART 77 SURFACE OBSTRUCTED	SURFACE ELEVATION	PENETRATION	PROPOSED DISPOSITION OF OBSTRUCTION
1	POLE	183'	7:1 TRANSITIONAL SURFACE	170'	13'	INSTALL OBSTRUCTION LIGHT
2	ROAD (N)	179'	20:1 VISUAL APPROACH SURFACE	173'	6'	ACCESS ROAD, NOT AN OBSTRUCTION
3	ROD ON POLE	173'	PRIMARY SURFACE	159'	14'	INSTALL OBSTRUCTION LIGHT
4	GROUND	161'	PRIMARY SURFACE	157'	4'	REGRADE
5	OL WSK	164'	PRIMARY SURFACE	150'	14'	FRANGIBLE NAVAID; NO ACTION
6	ROD ON OL AMOM	176'	PRIMARY SURFACE	150'	26'	FRANGIBLE NAVAID; NO ACTION
7	ROD ON OL GS	195'	PRIMARY SURFACE	150'	45'	FRANGIBLE NAVAID; NO ACTION
8	ELECTRICAL SHELTER	156'	PRIMARY SURFACE	149'	5'	LIGHTED, NO ACTION

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(503)526-0775 Fax
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OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT

INNER PORTION OF THE APPROACH SURFACE

NEWPORT — OREGON

SCALE: 1"=1000' | PROJECT NO. 30295 | DRAWING FILE NAME: 30295-NWP-IA01

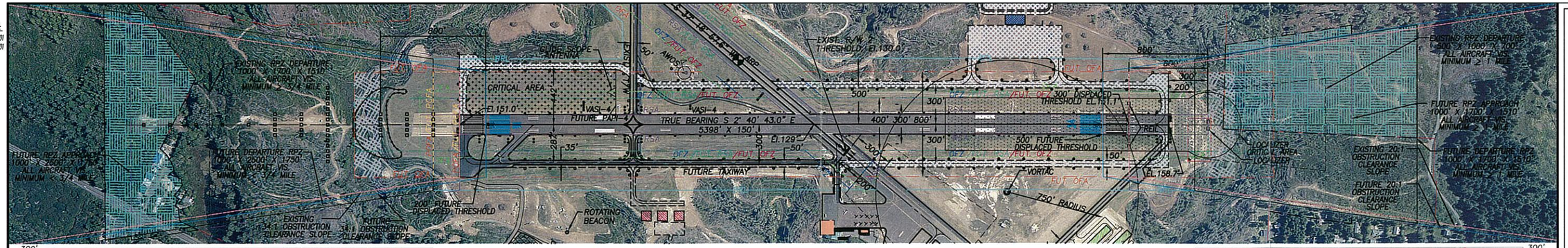
Coffman Associates Airport Consultants

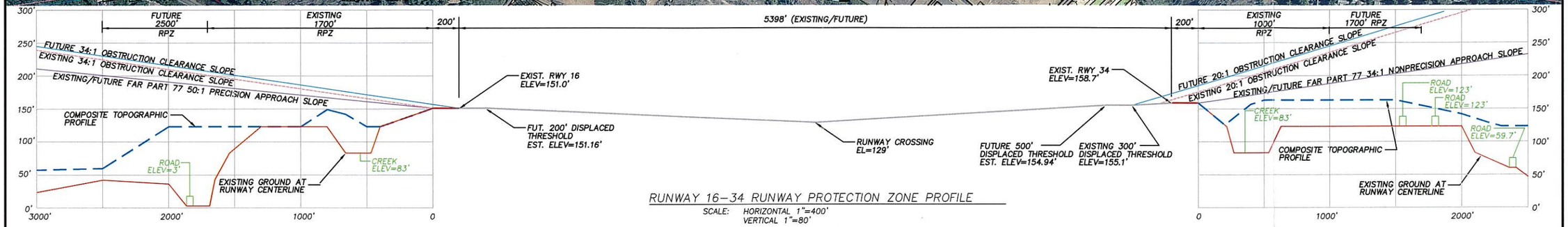
DESIGNED BY: LAM CHECKED BY: REA
DRAWN BY: CMB APPROVED BY:
LAST EDIT: 08/26/04 PLOT DATE: 09/22/04

DATE	BY	REV#	REVISION	CK'D	APPR

Office: SEATTLE | System: WHP-SEA-8RCY121 | User: CBONTEMPO

XREF INDEX:
XREF-NWP-SM01
XREF-NWP-CB01





RUNWAY 16–34 RUNWAY PROTECTION ZONE PROFILE

SCALE: HORIZONTAL 1"=400'
VERTICAL 1"=80'

NOTES:

1. OBSTRUCTIONS INFORMATION LISTED WAS OBTAINED FROM NOAA AIRPORT OBSTRUCTION CHART AND AERONAUTICAL DATA SHEET, USGS QUAD MAPS, FAA 5010 FORM AND AIRPORT MANAGEMENT. OBSTRUCTION REMOVAL & SURVEY WAS PERFORMED AS PART OF AIP–10.
2. A GROWTH ALLOWANCE WAS NOT INCORPORATED INTO THE OBSTRUCTION REVIEW.
3. THE FOLLOWING HEIGHTS WERE ADDED TO THE SURFACE ELEVATION FOR CERTAIN GROUND FEATURES:
   10FT FOR A PRIVATE ROAD
   15FT FOR A PUBLIC ROAD
   17FT FOR AN INTERSTATE ROAD
   23FT FOR RAILROAD TRACKS
4. ALL ELEVATIONS ARE ON THE NAVD 88 DATUM, WITH THE EXCEPTION OF THE USGS MAP, WHICH IS NGVD 29.
5. TREES REMAIN AN OBSTRUCTION TO THE OBSTRUCTION CLEARANCE APPROACH FOR RUNWAY 16 AND 20, THEREFORE THE TREES MUST BE REMOVED.

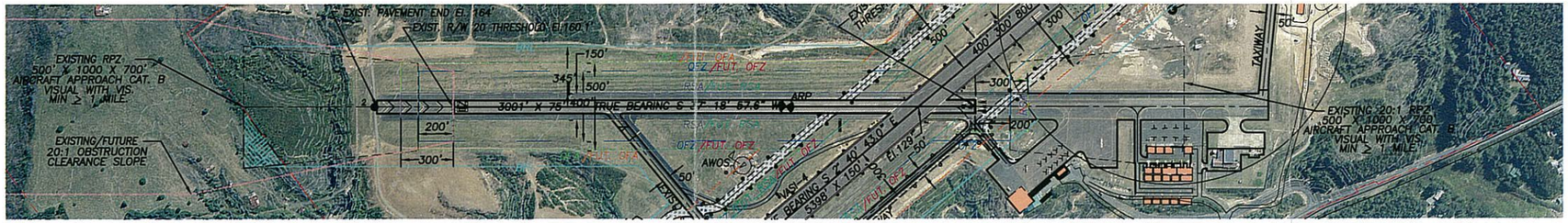
"THE PREPARATION OF THESE DOCUMENTS MAY HAVE BEEN SUPPORTED, IN PART THOUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION (PROJECT NUMBER 3-41-4100-13) AS PROVIDED UNDER TITLE 49, UNITED STATES CODE, SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

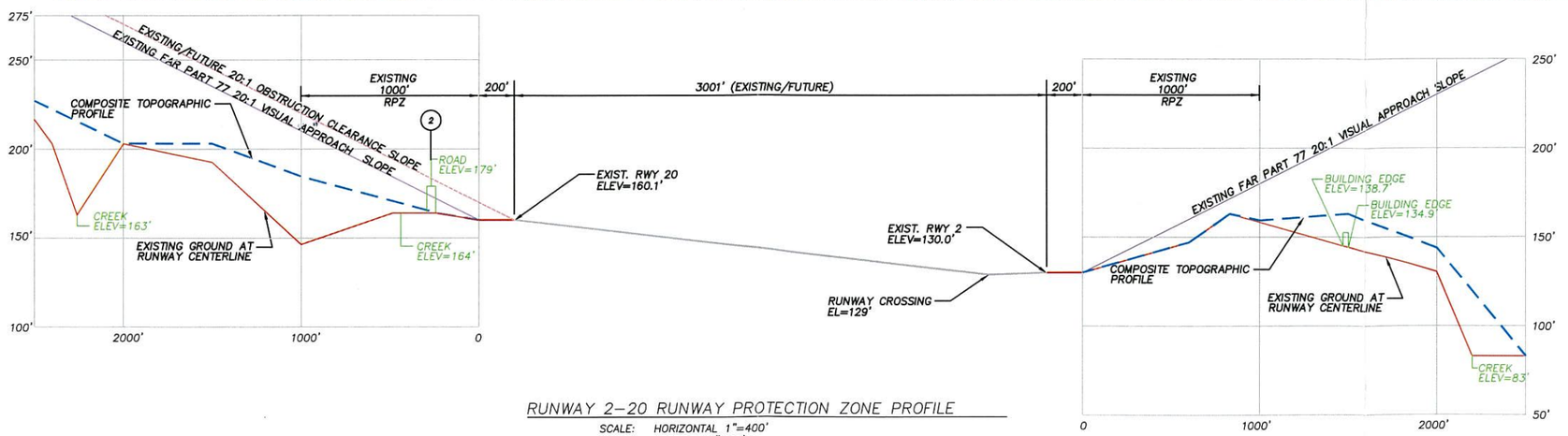
LEGEND:

● OBSTRUCTIONS

OBSTRUCTION DATA TABLE

OBSTRUCTION NO.	DESCRIPTION	ELEVATION	PART 77 SURFACE OBSTRUCTED	SURFACE ELEVATION	PENETRATION	PROPOSED DISPOSITION OF OBSTRUCTION
2	ROAD (N)	179'	20:1 VISUAL APPROACH SURFACE	173'	6'	ACCESS ROAD, NOT AN OBSTRUCTION





RUNWAY 2–20 RUNWAY PROTECTION ZONE PROFILE

SCALE: HORIZONTAL 1"=400'
VERTICAL 1"=40'

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OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT
RUNWAY 16/34 & 2/20 PROTECTION ZONE PROFILES
OREGON

DRAWING FILE NAME: 30295-nwp-pp01
PROJECT NO. 30295
NEWPORT
SCALE: 1"=300'

Coffman Associates — Airport Consultants

DESIGNED BY: LAM	CHECKED BY: REA
DRAWN BY: CMB	APPROVED BY:
LAST EDIT: 04/29/04	PLOT DATE: 09/22/04

DATE	BY	REV#	REVISION	CK'D/APPR.

SHEET 5 5/6

Office: SEATTLE | System: WHP-SEA-BRCY121 | User: CBONTEMPO

LINCOLN COUNTY ZONING DESIGNATIONS	
R-1	SINGLE FAMILY RESIDENTIAL
R-1A	SINGLE FAMILY RESIDENTIAL WITH EXCLUSIONS
T-C	TIMBER CONSERVATION
I-P	PLANNED INDUSTRIAL
RR-5	RURAL RESIDENTIAL
R-4	RESIDENTIAL
P-F	PUBLIC FACILITIES
CITY OF NEWPORT ZONING DESIGNATIONS	
P-1	PUBLIC BUILDINGS AND STRUCTURES

"THE PREPARATION OF THESE DOCUMENTS MAY HAVE BEEN SUPPORTED, IN PART THOUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION (PROJECT NUMBER 3-41-0056-12) AS PROVIDED UNDER TITLE 49, UNITED STATES CODE, SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

LEGEND	
	AIRPORT PROPERTY LINE
	100YR FLOOD PLAIN
	500YR FLOOD PLAIN
	ZONING BOUNDARY
	RUNWAY PROTECTION ZONE
	FUTURE RUNWAY PROTECTION ZONE
	URBAN GROWTH
	NOISE CONTOURS
	FUTURE PROPERTY AQUISITION

LAND USE, ZONING, HEIGHT RESTRICTIONS, & ORDINANCES		
ORDINANCE NUMBER	DATE	DESCRIPTION
1308	UNKNOWN	CITY OF NEWPORT ZONING ORDINANCE: "PUBLIC BUILDINGS AND STRUCTURES ZONE" AND "AIRPORT RESTRICTED AREA"

MAGNETIC N

SCALE
500 0 250 500 1000
(FEET)
1 INCH = 500 FT

MAG. DECL 17°35' E
RATE OF CHANGE: -6 MIN/YR
DATE: MARCH 21, 2003

DATUM
HORIZONTAL: NAD 83
VERTICAL: NAVD 88

NOTE:
1. NOISE CONTOURS ARE SHOWN FOR THE YEAR 2008. THESE CONTOURS WERE DEVELOPED BASED ON AIRCRAFT TRAFFIC FORECASTS FOR THE AIRPORT.
2. APPROACHES AND DEPARTURES ARE ON A LEFT TRAFFIC PATTERN FOR RUNWAY 34 AND A RIGHT TRAFFIC PATTERN FOR RUNWAY 16.
3. AIRPORT PROPERTY IS NOT SUBJECT TO SECTION 303 (L) OF TITTLE 49, U.S.C. OR SHPO COORDINATION.
4. NO LANDFILLS ARE LOCATED WITHIN 5 MILES OF THE AIRPORT PROPERTY.

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(425)951-4806
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OREGON DEPARTMENT OF AVIATION
NEWPORT MUNICIPAL AIRPORT
LAND USE PLAN

OREGON
NEWPORT
SCALE: 1"=500'
PROJECT NO. 30295
DRAWING FILE NAME: 30295-NWP-LU01

Coffman Associates Airport Consultants

DESIGNED BY:	LAM	CHECKED BY:	REA
DRAWN BY:	CMB	APPROVED BY:	
LAST EDIT:	04/29/04	PLOT DATE:	09/22/04

DATE	BY	REVISION	CK'D/APPR.

SHEET 6/6
6

Capital Improvement Projects

The needs defined in the Facility Requirements/Alternatives Chapter and the reviews provided by the PAC were the basis for determining the proposed improvements at Newport Municipal Airport. Improvements planned for the next 20-years are focused on expanding hangar areas. Projects are planned for both sides of the airport.

CAPITAL IMPROVEMENT PROJECTS

STAGE I

Stage I is the first five years of the planning period, 2004 to 2008. The projects in this stage include completing the southwest hangar development, widening and overlaying the existing parallel taxiway, upgrading the taxiway lighting and installing a PAPI on Runways 16, 2, and 20.

In 2004/2005, the first row of hangars in the southwest hangar development will be constructed. Property acquisitions and rezoning for Runway 16, Runway 20, and Runway 34 RPZs are shown in 2004 for budgeting purposes, but should be acquired over time as the properties become available. Obstruction lighting and removal is also planned for 2004/2005. In order to upgrade all taxiways used by aircraft allowed on Runway 16-34 to the necessary pavement strength, the parallel taxiway to Runway 16-34 will be widened and overlaid and the taxiway connecting the end of Runway 2 to the apron will be reconstructed to increase pavement strength. In 2005, the lighting on the existing 16-34 parallel taxiway will be upgraded from reflectors to Medium Intensity Taxiway Lighting (MITL) and general pavement maintenance around the airfield will occur. In 2006, the existing Visual Approach Slope Indicator (VASI) for Runway 16 will be upgraded to a 4-box Precision Approach Path Indicator (PAPI) and PAPIs will be installed on Runways 2 and 20. Apron, runway and taxiway fog sealing will be performed. General pavement maintenance around the airfield will also occur. In 2007 and 2008, the southwest hangar development will be completed.

be reconstructed to increase pavement strength. In 2005, the lighting on the existing 16-34 parallel taxiway will be upgraded from reflectors to Medium Intensity Taxiway Lighting (MITL) and general pavement maintenance around the airfield will occur. In 2006, the existing Visual Approach Slope Indicator (VASI) for Runway 16 will be upgraded to a 4-box Precision Approach Path Indicator (PAPI) and PAPIs will be installed on Runways 2 and 20. Apron, runway and taxiway fog sealing will be performed. In 2007 and 2008, the southwest hangar development will be completed.

STAGE II

Stage II is the second five years of the planning period, 2009 – 2013. This stage focuses on developing the northwest corner of the airport. The projects included in this section are a new west side access road and vehicle parking area and hangar development with associated taxiways.

First an access road will be constructed with utility services from Highway 101 to approximately 800 feet west of Runway 16-34 to serve future hangars. A vehicle parking area will be constructed at the end of the access road. Then, the associated taxiway and taxilane for the hangar development will be constructed. The taxiway and taxilane will be designed to B-II standards. Three 5,625 square foot executive hangars will be constructed. General pavement maintenance through the ODA Pavement Management Program will occur. A runway overlay for Runway 16-34 is planned, along with a runway safety area evaluation and runway threshold displacement. A cost benefit analysis will need to be performed at this time to investigate the possibility of reducing the runway width to 100 feet. Also, an ALP update is planned for the end of the Stage II planning period. This will allow for an opportunity to reflect all of the new improvements and address any new airport needs.

STAGE III

Stage III is the last ten years of the planning period, 2014 – 2023. This phase focuses on developing the east side of the airport. Projects planned for Stage III include: extension of the existing Runway 16-34 parallel taxiway, an east side parallel taxiway for Runway 16-34, a new terminal building and associated apron, and a new access road.

The first project to be completed in Stage III is the east side access road. This road will begin at 98th Street and run parallel to Runway 16-34 ending approximately 1200 feet north of the end of Runway 34. Utilities will be constructed in conjunction with the roadway. The road will circle around the new vehicle parking area. Next, work will begin to construct the extension of the existing parallel taxiway, the new east side parallel taxiway and terminal area apron. Finally, a new terminal building will be constructed. Also at the end of Stage III, a Master Plan update is scheduled in order to address the next 20 years of airport growth and development. General pavement maintenance will occur throughout the 10 year period.

PROJECT COSTS

A list of improvements and costs over the next 20-years are included in **Exhibit 5A** at the end of this chapter. All costs are estimated in 2003 dollars. Total project costs include construction, temporary flagging and signing, construction staking, testing, engineering, administration, and contingency, as applicable. Detention and water quality costs are included for new impervious surfaces. Utilities including phone, power, and water are included in all new hangar projects.

SEAL ROCK WATER DISTRICT

In conjunction with this Airport Layout Plan effort, the Seal Rock Water District sent a letter describing their role in future water utility development at the airport. A copy of the letter is provided in Appendix E.

Exhibit 5A
Newport Municipal Airport--Airport Layout Plan
Proposed Capital Improvement Projects (September 2004)

	Project Description		Total Cost	Funding Source: City	State*	FAA*	Private
Stage I (2004-2008)							
2004	Hangar Construction (Row 1: 1 building at 10,600 SF)**		$ 460,930	$ 23,047	$ 0	$ 437,884	$ 0
	Property Acquisition & Rezoning		$ 1,205,000	$ 60,250	$ 0	$ 1,144,750	$ 0
	Obstruction Lighting and Removal		$ 24,160	$ 1,208	$ 0	$ 22,952	$ 0
	Runway 16-34 Parallel Taxiway Widening and Overlay		$ 305,100	$ 15,255	$ 0	$ 289,845	$ 0
	Taxiway Reconstruction		$ 76,200	$ 3,810	$ 0	$ 72,390	$ 0
		Subtotal 2004	$ 2,071,390	$ 103,570	$ 0	$ 1,967,821	$ 0
2005	Taxiway Lighting		$ 474,000	$ 23,700	$ 0	$ 450,300	$ 0
	General Airfield Pavement Maintenance (Pavement Management Program)		$ 100,000	$ 10,000	$ 90,000	$ 0	$ 0
		Subtotal 2005	$ 574,000	$ 33,700	$ 90,000	$ 450,300	$ 0
2006	Runway 2, 20 and 16 PAPI-4		$ 231,000	$ 11,550	$ 0	$ 219,450	$ 0
	Taxiway/Apron Fog Seal (per PCI)		$ 15,000	$ 15,000	$ 0	$ 0	$ 0
		Subtotal 2006	$ 246,000	$ 26,550	$ 0	$ 219,450	$ 0
2007	Hangar Construction (Row 2: 1 building at 10,600 SF)**		$ 460,930	$ 23,047	$ 0	$ 437,884	$ 0
		Subtotal 2007	$ 460,930	$ 23,047	$ 0	$ 437,884	$ 0
2008	Hangar Construction (Row 3: 1 building at 5,300 SF)		$ 240,570	$ 240,570	$ 0	$ 0	$ 0
		Subtotal 2008	$ 240,570	$ 240,570	$ 0	$ 0	$ 0
		Subtotal Stage I	**$ 3,592,890**	**$ 427,436**	**$ 90,000**	**$ 3,075,454**	**$ 0**
Stage II (2009-2013)							
	Access Roadway Construction (west side)		$ 290,900	$ 29,090	$ 0	$ 261,810	$ 0
	Auto Parking and Utility Construction (west side)		$ 387,900	$ 387,900	$ 0	$ 0	$ 0
	Runway 16-34 Overlay***		$ 1,003,200	$ 100,320	$ 0	$ 902,880	$ 0
	Runway 16-34 Threshold Displacement****		$ 321,450	$ 32,145	$ 0	$ 289,305	$ 0
	General Airfield Pavement Maintenance (Pavement Management Program: 2011)		$ 100,000	$ 10,000	$ 90,000	$ 0	$ 0
	Taxilane Construction (west side)		$ 242,500	$ 24,250	$ 0	$ 218,250	$ 0
	Hangar Construction (west side; 3 buildings - 5,625 SF each)		$ 756,610	$ 756,610	$ 0	$ 0	$ 0
	ALP Update		$ 50,000	$ 5,000	$ 0	$ 45,000	$ 0
		Subtotal Stage II	**$ 3,152,560**	**$ 1,345,315**	**$ 90,000**	**$ 1,717,245**	**$ 0**
Stage III (2014-2023)							
	Access Roadway Construction (east side)		$ 1,414,100	$ 141,410	$ 0	$ 1,272,690	$ 0
	Runway 16-34 Parallel Taxiway Extension (2500' by 50')		$ 588,100	$ 58,810	$ 0	$ 529,290	$ 0
	Auto Parking and Utility Construction (east side)		$ 1,166,300	$ 1,166,300	$ 0	$ 0	$ 0
	General Airfield Pavement Maintenance (Pavement Management Program: 2014, 2017 & 2		$ 300,000	$ 30,000	$ 270,000	$ 0	$ 0
	Apron and Taxiway Construction (east side)		$ 6,738,500	$ 673,850	$ 0	$ 6,064,650	$ 0
	Terminal Building Construction (east side)		$ 953,100	$ 95,310	$ 0	$ 857,790	$ 0
	Master Plan Update		$ 150,000	$ 15,000	$ 0	$ 135,000	$ 0
		Subtotal Stage III	**$ 11,310,100**	**$ 2,180,680**	**$ 270,000**	**$ 8,859,420**	**$ 0**
		Cumulative Total =	**$ 18,055,550**	**$ 3,953,431**	**$ 450,000**	**$ 13,652,119**	**$ 0**

* ELIGIBILITY FOR FAA OR STATE FUNDING DOES NOT INSURE THAT FUNDS WILL BE AVAILABLE OR GRANTED FOR THE PROJECT

** FAA NON-PRIMARY ENTITLEMENT FUNDING FOR HANGAR CONSTRUCTION IS CONTINGENT UPON ALL AIRSIDE FUNDING NEEDS BEING MET.

*** COST BENEFIT ANALYSIS TO BE PERFORMED AT TIME OF RUNWAY OVERLAY DESIGN TO INVESTIGATE POSSIBIILITY OF REDUCING RUNWAY WIDTH TO 100 FEET.

**** DISPLACED THRESHOLD DISTANCE TO BE CONFIRMED BY SURVEY OF TOPOGRAHY IN RUNWAY SAFETY AREA TO ASSURE ADEQAUTE SAFETY AREA IS PROVIDED.

- ALL COST ESTIMATES ARE IN 2003 DOLLARS.
- COSTS INCLUDE CONSTRUCTION, FLAGGING/SIGNING, STAKING, TESTING, ENGINEERING, ADMINISTRATION, AND CONTINGENCIES.
- SEPTIC COSTS INCLUDED FOR ALL NEW HANGAR DEVELOPMENTS.
- RUNWAY 16-34 PARALLEL TAXIWAY EXTENSION IS DEPENDANT ON VOR RELOCATION.
- HANGAR CONSTRUCTION COSTS CAN ALSO BE FUNDED PRIVATELY.

FAA GRANT CONTRIBUTION TO HANGAR CONSTRUCTION IS
DEPENDENT UPON FUND AVAILABILITY AND STATUS OF HIGHER

Chapter Six
ENVIRONMENTAL REVIEW SUMMARY

Environmental Overview

for

Newport Municipal Airport Terminal Plan Update

Prepared for:

Oregon Department of Aviation

November 14, 2003

Prepared by:

NRPS
natural resource planning services, inc.
3030 SW Moody Avenue, Suite 105, Portland, Oregon 97201-4867

Table of Contents

NORTHWEST MOUNTAIN REGION - AIRPORTS DIVISION

Environmental Checklist

Revision #1 December 2, 2002

CONTACT THE ADO ENVIRONMENTAL SPECIALIST BEFORE USING THIS FORM

Airport: Newport Municipal Airport

Project Description: Construction of a new passenger terminal facilities on the east side of the airfield to allow for future full extension of the parallel taxiway. Development of small hangars is recommended in the southwest area, and a new hangars on the north of the terminal facilities on the west side. Construction of a stub taxiway from the existing taxiway. Construction of new access route from public Highway 101. Possible relocation of the VORTAC system to the east side of the airfield.

Proposed Start Date of Project:

Purpose & Need: To provide expansion capability for smaller executive style hangars and for the potential for a larger terminal facility for scheduled and non-scheduled passengers using the airport.

Directions: The person preparing this form should have knowledge of the environmental features of the airport and general impacts of the project. Although some responses may be obtained from the preparer's own observations, previous environmental documents or research may be cited. Some of the best sources for information are the jurisdictional federal, state and local resource agencies responsible for the impact categories. When a project involves land that has not previously been disturbed (by construction), the ADO requires a specialist review the categories of cultural resources, wetlands, and threatened and endangered species. Please contact the ADO environmental specialist if you have questions.

An electronic version of this form is available upon request.

FOR EACH YES OR NO ANSWER: PROVIDE DOCUMENTATION USED AS THE BASIS FOR THE DETERMINATION

TO PLACE AN "X" IN THE YES OR NO BOXES BELOW, PLACE THE CURSOR OVER THE BOX AND LEFT CLICK YOUR POINTING DEVICE. DO THE SAME TO UNDO A MISTAKEN ENTRY.

CONTROVERSY: Is the proposed project likely to be highly controversial on environmental grounds? ☐ Yes ☒ No

A proposed Federal action is considered highly controversial when the action is opposed on environmental grounds by a Federal, state, or local government agency, or by a substantial number of the persons affected by such action. If the action proponent has any doubt whether a given number of opposing persons is "substantial", or there is a probable risk of litigation, that doubt shall be resolved by discussion with ADO Environmental Specialist to determine if the action should be processed as a highly controversial one.

On what basis was the determination made? Reference available documentation to support analysis if applicable. The preferred master plan concept plan does not influence any properties outside of the airport boundary and it meets the needs of the aircraft owners and passengers who use the airfield terminal and hangar facilities.

NOISE:	Does the project increase noise levels over noise sensitive areas within the 65 DNL contour?	☐ Yes ☒ No
	Does the project cause the forecast of operations to exceed 90,000 annual adjusted propeller operations or 700 annual adjusted jet operations? If yes, were noise contours produced?	☐ Yes ☒ No
	On what basis was the determination made? Reference available documentation to support analysis if applicable. (e.g. ALP, Master Plan, noise contours) **See Chapter 4 Figure 4B of the Newport Municipal Airport Master Plan**	
COMPATIBLE LAND USE:	Is the proposed project reasonably consistent with plans, goals, policies, or controls that have been adopted for the area in which the airport is located?	☒ Yes ☐ No
	On what basis was the determination made? Reference available documentation to support analysis if applicable. (e.g. Master Plan, zoning ordinance, letters from local jurisdictions) **Proposed changes are consistent with local plans and policies. See attached environmental overview**	
SOCIAL IMPACT:	Are residents or businesses being relocated?	☐ Yes ☒ No
	If yes, how will those being relocated be accommodated?	
	Does the project alter surface transportation patterns or cause a degradation of level of service?	☐ Yes ☒ No
	If yes, what mitigation is planned?	
	On what basis was the determination made? Reference available documentation to support analysis if applicable. **Preferred master plan concept influences areas within the airport boundary only.**	
INDUCED SOCIO-ECONOMIC IMPACTS:	Will the project result in disruption of community? (e.g. change in business and economic activity, impact to public service demands)	☐ Yes ☒ No
	If yes, what mitigation is planned?	
	Are secondary induced impacts (such as changes in population pattern or growth, public service demands, or economic activity expected?	☐ Yes ☒ No
	If yes, what mitigation is planned?	
	On what basis was the determination made? Reference available documentation to support analysis if applicable. **Airport improvements will all be within the property boundary; no additional public service demands or change in the use of the local businesses is anticipated.**	
ENVIRONMENTAL JUSTICE	Are there disproportionately high adverse impacts on minority or low-income populations within the DNL 65 contour?	☐ Yes ☒ No
	If yes, what mitigation is planned?	
	On what basis was the determination made? Reference available documentation to support analysis. (e.g. census data, local statistics) **There are no minority or low-income populations that reside within he DNL 65 contour.**	

AIR QUALITY:	1. Will the proposed project have the potential to increase landside or airside capacity, including the capacity to handle additional surface vehicles? If no, move on to the next topic area, Water Quality. If yes, proceed to question 2 in this topic.	☐ Yes ☒ No
	2. Is the proposed project within or adjacent to a U.S. Environmental Protection Agency, defined NON-ATTAINMENT AREA? If no, go to d. below.	☐ Yes ☒ No
	a. If yes to 2 above, is the project exempt from the General Conformity regulations published in the Federal Register of November 30, 1993? If yes, go to d. below.	☐ Yes ☐ No
	b. If no to 2a, is the project accounted for in the State Implementation Plan? If yes, no further study is necessary. Move on to Water Quality.	☐ Yes ☐ No
	c. If no to 2b, an air pollutant emission inventory must be prepared to determine if the project will produce, on an annual basis, criteria pollutants exceeding the de minimis levels. This inventory analysis should include project revisions, intended to reduce the emission inventory to below de minimus levels. If project emissions cannot be kept below de minimus levels an environmental assessment must be prepared which must also address item d. below.	☐ Yes ☐ No
	d. Are there any "hot spot" surface intersections where the National Ambient Air Quality Standards (NAAQS) might be exceeded as a result of implementing the proposed project? This is usually an intersection that suffers a reduction in the Level of Service (LOS) of two levels resulting in an LOS of less than LOS C.	☐ Yes ☒ No

If yes to 2d, an intersection air quality analysis must be prepared including an analysis of how planned mitigation will reduce the project concentrations to below the NAAQS. If pollutant concentrations cannot be kept at or below the NAAQS an environmental assessment must be prepared.

If no to 2d, no further study is necessary. Move on to Water Quality.

On what basis was the determination made? Reference available documentation to support analysis if applicable.
Contacted the Oregon Department of Environmental Quality air quality personnel. See attached environmental overview.

WATER QUALITY	Will the proposed project produce water quality impacts to ground water, surface water bodies, public water supply systems, etc?	☐ Yes ☒ No

If yes, what mitigation is planned?

On what basis was the determination made? Reference available documentation to support analysis if applicable. (e.g. National Pollutant Discharge Elimination System (NPDES) permit, water quality certification)
See attached environmental overview.

SECTION 4F IMPACTS:	Will the proposed project impact DOT Section 4f resources (publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state or local significance, or land of an historic site of national, state or local significance)?	☐ Yes ☒ No

If YES, explain how such impacts will be mitigated. If the impacts cannot be mitigated, 4f applies and an environmental assessment must be prepared.

On what basis was the determination made? Reference available documentation to support analysis if applicable:
See attached environmental overview.

CULTURAL RESOURCES

For proposed projects that involve new disturbed ground or off airport increases in noise, the following apply, otherwise, move on to BIOTIC COMMUNITIES.

a. After consultation with the State Historic Preservation Officer (SHPO), is there reason to believe that:

1) significant architectural, prehistoric, historic, archeological, or paleontological resources may be lost or destroyed as a result of the project, ☐ Yes ☒ No

2) there is any Native American tribal interest in the project, or ☐ Yes ☒ No

3) the proposed project would impact properties in or eligible for inclusion in the National Register of Historic Places? ☐ Yes ☒ No

b. If the SHPO indicates the possibility of tribal interest in the project, have those tribe(s) been contacted directly by the FAA ADO personnel to discuss the project? If no, then contact the tribe(s). ☐ Yes ☒ No

c. Does the tribe(s) object to the project or suggest some form of mitigation to alleviate their concerns? ☐ Yes ☐ No

d. Have those mitigation measures been incorporated into the project to reduce or eliminate those concerns? ☐ Yes ☐ No

e. If yes to a 1., has a survey of the area to be disturbed been completed? If no, then conduct the survey. ☐ Yes ☐ No

f. Did the survey find significant architectural, prehistoric, historic, archeological, or paleontological resources that would be lost or destroyed as a result of the project? ☐ Yes ☐ No

If yes to either a 3. or f. above, 4f will apply, and an environmental assessment must be prepared.

Off airport noise impacts related to a 2 and a 3 above should be explained under NOISE.

On what basis was the determination made? Reference available documentation to support analysis if applicable. (e.g. survey results, letters from SHPO)
A cultural survey will have to be conducted prior to any ground disturbing activities. There is a potential for possible burial grounds in the vicinity of the airport. Tribes will be consulted by the FAA prior to the approval and implementation of any of the construction projects. See attached environmental overview.

BIOTIC COMMUNITIES

Will the proposed project impact plant communities and/or cause the displacement of wildlife? ☐ Yes ☒ No

If YES, explain how such impacts will be accommodated.

On what basis was the determination made? Available documentation to support analysis if applicable (e.g. letters from state/federal agencies)
Most of the area proposed for construction has been rough graded or otherwise disturbed in the past. See attached environmental overview.

ENDANGERED AND THREATENED SPECIES	a. Does the proposed project have the potential to impact federal and state listed endangered or threatened species or their habitat?	☐ Yes ☒ No
	b. Has the United States Fish and Wildlife Service (USFWS) or National Marine Fishery Service (NMFS) been contacted to acquire lists of endangered or threatened species that may be impacted by the project? If, no, then contact the services to get the lists, if any.	☐ Yes ☐ No
	c. Are there listed species in the area?	☐ Yes ☒ No
	d. Are the critical habitats of listed species adversely impacted?	☐ Yes ☒ No
	If yes to either c. or d., then a biological assessment must be prepared. An environmental assessment may also need to be prepared.	
	On what basis was the determination made? Reference available documentation to support analysis if applicable: **The National Marine Fisheries Service, U.S. Fish and Wildlife Service and the Oregon Natural Heritage Information Center were contacted to request known species from the project vicinity. A BA will be required prior to any approval of construction projects that affect the ground surface. See attached environmental overview.**	
ESSENTIAL FISH HABITAT (EFH)	Does the proposed project have the potential to impact fish habitat protected under the Magnuson-Stevens Act (ID, OR, WA)?	☐ Yes ☒ No
	If yes, has an Essential Fish Habitat assessment been prepared and consulted upon with the National Marine Fisheries Service?	☐ Yes ☐ No
	Are the habitats of listed species adversely impacted?	☐ Yes ☒ No
	If yes, what conservation measures must be incorporated into the project design?	
	On what basis was the determination made? Reference Available documentation to support analysis if applicable: **There is no essential fish habitat (i.e., streams or waterways) on or near the property affected by the access road, hangars, and apron upgrades. See attached environmental overview.**	
MIGRATORY BIRD ACT	Does the proposed project have the potential to adversely impact birds protected by the migratory bird treaty act?	☐ Yes ☒ No
	If yes, are the habitats of listed species adversely impacted?	☐ Yes ☒ No
	If yes, what conservation measures have been incorporated into the project design?	
	On what basis was the determination made? Reference Available documentation to support analysis if applicable: **See attached environmental overview.**	
WETLANDS	Has the proposed project been surveyed for wetlands?	☒ Yes ☐ No
	Will the proposed project impact wetlands? Has the U.S. Army Corps of Engineers (Corps) concurred on the wetland delineation?	☐ Yes ☒ No
	If YES, explain how such impacts will be mitigated?	

On what basis was the determination made? Reference Available documentation to support analysis if applicable: (e.g. 404 permit, consultation with the Corps, wetland delineation report and Corps verification report)
Most of the area that would be used for the construction projects have been rough graded. There would be no wetlands affected if the areas for development have all been graded in the past. If an area proposed for development is shown to contain vegetation and or wetlands, a site specific wetland survey will be conducted prior to construction. See attached environmental overview.

FLOODPLAINS	Will the proposed project impact floodplains?	☐ Yes ☒ No

On what basis was the determination made? Reference Available documentation to support analysis if applicable: (e.g. 404 permit, consultation with the Corps, floodplain delineation report)
See the attached environmental overview.

COASTAL ZONE MANAGEMENT PROGRAM	Is the proposed project consistent with the approved state Coastal Zone Management (CZM) Program Plan?	☒ Yes ☐ No

If no, then the project sponsor and FAA will need to consult with the state and Federal CZM offices and document the outcome in an environmental assessment.

On what basis was the determination made? Reference Available documentation to support analysis if applicable: (e.g. state CZM plan)
Project site is not in area governed by State CZM planning. See attached environmental overview.

COASTAL BARRIERS DO NOT APPLY TO THE NORTHWEST MOUNTAIN REGION

WILD AND SCENIC RIVERS	Would the proposed project affect any portion of the free-flowing characteristics of a Wild and Scenic River or a Study River, or any adjacent areas that are part of such rivers, listed on the Wild and Scenic Rivers Inventory?	☐ Yes ☒ No

If Yes, explain how such impacts will be mitigated.

On what basis was the determination made? Reference available documentation to support analysis if applicable:
See response to Floodplain, no major rivers exist in or near airport property.

FARMLANDS	Will the proposed project impact prime or unique farmlands? Has the Natural Resources Conservation Service (NRCS) been contacted to determine if the proposed project will impact prime or unique farmlands?	☐ Yes ☒ No

If there are prime or unique farmlands impacted, has the Farmland Protection Policy Act form AD-1006 process be completed and project adjustments been made the preferred alternative, if necessary?

On what basis was the determination made? Reference available documentation to support analysis if applicable: (e.g. Farmland Impact Rating Form)
The site has been used as an airport since it was constructed by the Civil Aeronautics Administration in 1943 and there are no prime or unique farmlands within the airport property. See attached environmental overview.

ENERGY SUPPLY AND NATURAL RESOURCES	Will the proposed project impact energy supply of natural resources in a detrimental manner?	☐ Yes ☒ No

If YES, explain how such impacts will be mitigated.

On what basis was the determination made? Reference available documentation to support analysis if applicable:
See attached environmental overview.

LIGHT EMISSIONS	Will the proposed project produce light emission impacts?	☐ Yes ☒ No
	If YES, how will such impacts be mitigated?	
	On what basis was the determination made? Reference available documentation to support analysis if applicable: **See attached environmental overview.**	
SOLID WASTE IMPACT	Will the proposed project produce solid waste impacts?	☐ Yes ☒ No
	If YES, how will such impacts be mitigated?	
	On what basis was the determination made? Reference available documentation to support analysis if applicable: **Additional hangar facilities may result in a slight increase in garbage and refuse that would be deposited in the on-site refuse containers. Should the implementation of the master plan result in major increase in solid waste, the capacity of the on-site containers should be examined to ensure the containers are adequate. See attached environmental overview.**	
CONSTRUCTION IMPACTS	Will the proposed project produce construction impacts, such as increases in localized noise levels, reduce localized air quality, produce erosion or pollutant runoff, or disrupt local traffic patterns?	☒ Yes ☐ No
	If YES, explain how such impacts will be mitigated? **Mitigation may vary depending on if it is fugitive dust from earthmoving or erosion from grading in relatively steeper terrain or temporary slowing of traffic during the construction of the intersection of the new road with the existing one.** **On what basis was the determination made?** Reference available documentation to support analysis if applicable: **See attached environmental overview**	
HAZARDOUS MATERIALS	Is there reason to believe the proposed project will be constructed in an area that contains hazardous materials?	☐ Yes ☒ No
	If yes, explain how such impacts will be mitigated.	
	On what basis was the determination made? Reference available documentation to support analysis if applicable: **See attached environmental overview.**	
CUMULATIVE IMPACTS	When considered together with other past, present, and reasonably foreseeable future development projects on or off the airport, federal or non-federal, would the proposed project produce a significant cumulative effect on any of the environmental impact categories above? **No** SEE ATTACHMENT #1 TO THIS CHECKLIST FOR FURTHER CONSIDERATIONS RELATED TO THIS TOPIC.	

On what basis was the determination made? Reference available documentation to support analysis if applicable: **There needs to be some impacts to resources in order for any cumulative impact to occur. At this time, there is very low potential for impacts to any resource as the ground disturbing activities would be minimal even with the entire build-out of the preferred master plan concept. Should a construction project be identified (i.e. new hangars, and taxiways to serve them) more on clearance surveys should be conducted for cultural resources, vegetative communities and habitat for endangered species and an evaluation of the need for water quality treatment should be completed. These studies can then be used to ascertain the possibility of a cumulative effect with any other project impacts in the region.**

INTRODUCTION

Any project requiring a Federal decision, including funding or other regulatory approval, must be evaluated under the standards of the National Environmental Policy Act (NEPA) using guidelines established by the appropriate agency. In the Airports Program, federal actions that require environmental processing generally involve the approval of specific projects at specific airports. The recommended taxiway, apron and access road construction will require Federal Aviation Administration (FAA) approval, and will rely on FAA funding to construct the project. Therefore, the project must be evaluated based upon the standards outlined in the *FAA Environmental Handbook,* Order 5050.4A. The project may be evaluated on one of three levels: Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement. Categorical exclusions are used for a specific list of low impact projects, as well as projects that can be shown to have no significant environmental impact. Environmental Assessments generally are used to convey more detailed information on specific issues or environmental elements and determine the need for more extensive review. Environmental Impact Statements are prepared for projects that are perceived to have a significant adverse environmental impact that may or may not be lessened through mitigation.

According to the *FAA Environmental Handbook,* paragraph 23, "Categorical Exclusions," the new construction may be eligible to be categorically excluded if it does not create off-site impacts. The specific reference is as follows (emphasis added):

> *23. a. (1) Runway, **taxiway,** apron, or loading ramp **construction** or repair work including extension, strengthening, reconstruction, resurfacing, marking, grooving, fillets and jet blast facilities, and new heliports on existing airports, **except where such action will create environmental impacts off airport property.***

Paragraph 22, "Actions Normally Requiring an Environmental Assessment" also provides guidance on the possible need for an EA under certain conditions, even if a proposed action is listed in Paragraph 23.

> *22. a. (8) An airport development action that falls within the scope of paragraph 24 or which involves any of the following:*
>
> *(a) Use of section 4(f) land.*
>
> *(b) Effect on property included in or eligible for inclusion in the National Register of Historic Places or other property of state or local historical, architectural, archeological, or cultural significance.*

(c) Land acquisition for conversion of farmland, scoring over 160 on Form AD-1006, protected under the Farmland Protection Policy Act (FPPA) to nonagricultural use through Federal financial assistance or through conveyance of government land.

(d) Wetlands, coastal zones, or floodplains.

(e) Endangered or threatened species.

The purpose of this document is to show that there are no off-airport impacts and that there is no involvement of any of the five environmental concerns as noted in Paragraph 22, FAA 5050.4A. The resource agencies have been consulted throughout the planning process and during the preparation of this impact assessment. Records of scoping notices and correspondence are included as Appendix A. This environmental overview examines the potential for impacts that could result from implementation of the preferred master plan concept that has been developed by Oregon Department of Aviation in association with the project advisory committee and the general public in an ongoing planning process since 2002.

PROJECT DESCRIPTION

Location. Newport Municipal Airport (Figure 1, Appendix B) is a General Utility category general aviation airport providing a vital service to the residents of the City of Newport and Lincoln County, Oregon. The airport is owned by the City of Newport and is comprised of approximately 696 acres in Sections 29 and 32, Township 11 South, Range 11 West, Willamette Meridian. The 1991 Newport Municipal Airport Master Plan and Inventory/Forecasts Chapter of the Airport Layout Plan Report (W&H Pacific 2003) provides additional statistics and information about the airport history, land use, environs, topography and meteorology (City of Newport, 1991).

Proposed Action. The preferred master plan concept (Figure 2, Appendix B) provides for the potential relocation of the VORTAC to the east side of the airfield. The plan is not dependent on the relocation of the navigational aid facility; however, the full extension of the parallel taxiway on the west side may not be possible without VORTAC relocation. The construction of a full-length parallel taxiway on the east side depends on the need to construct new passenger terminal runway. The roadway access into this area is recommended from 98th Street, which connects with Highway 101. Continuing development of small hangars is recommended in the southwest area, and a new area for hangar development is recommended north of current facilities on the west side. This area would be accessed with a stub taxiway to be aligned with the existing connecting taxiway. The hangars would be offset from the runway approximately 650 feet, although the setback would depend on final building height elevations (to clear F.A.R. Part 77 surfaces). A new access road would be developed from Highway 101 (Figure 2, Appendix B).

INVENTORY

I. Social Impacts

Authority: Uniform Relocation Assistance and Real Property Acquisition Policies of 1970 and Lincoln County and City of Newport Ordinances and Codes.

These impacts are often associated with the relocation of residents or businesses or other community disruptions. The airport property is zoned for public buildings and structures and the airfield is surrounded by open space that is planned for industrial as well as some light industrial uses as described in the 1991 Newport Municipal Airport Master Plan. The lands to the south of the airport are zoned for residential and high density residential within the Wolf Tree Resort., which has commercial tourist appeal. The Master Plan describes the potential for conflict with this use; however, there is no proposal to build new facilities in the southern portion of the airport property and no lands outside the airport boundary would be affected. It appears that the airport planning area has sufficient land area that few if any relocation of existing residences or businesses would be needed; therefore, no social impacts would occur.

II. Induced Socio-economic Impacts

Authority: Lincoln County and City of Newport Ordinances and Codes.

The likelihood of significant induced socio-economic impacts is extremely low. These impacts, where they occur, include shifts in patterns of population movement and growth, increases in public services demand, and major changes in business and economic activity. The preferred concept plan does not include significant increase in noise, land use or direct social impacts. Only then would there be greater induced socio-economic impacts. Again, there would have to be significant direct impacts to result in significant induced impacts.

III. Environmental Justice

Authority: Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

The potential for displacement of minority or low-income populations at a higher percentage than the general population is low. The principal areas of analysis to determine potential environmental justice impacts to the racial groups are guided by the following three concepts from the USDOT, *Environmental Justice – The Facts*, July 3, 2002.

1. Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects including social and economic effects on minority and low income populations,

2. Ensure the full and fair participation by residents in the affected community, and

3. Prevent the denial or, reduction in, or significant delay in the receipt of benefits by minority and low income populations

The preferred concept does not affect residents of the Newport community; therefore, mitigation for minority or low-income populations is not necessary. Additionally, the master plan project included several public meetings and open houses as well as other media outreach (newsletters, meetings with neighborhood groups) where citizens were asked to assist the planners in identifying alternatives and to decide on a preferred master plan concept.

IV. Water Quality

Authority: Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977; 1982 Airport Act.

Grant Creek, an intermittent waterway, drains east to west across the airport property. The creek is piped underneath the runway and taxiway in the center of the airport property. There are no other hydrographic basins or surface water features within the airport property. Since the airport lies on an elevated fill pad on the bluff above Highway 101, the Oregon coast Highway, most of the drainage is towards the west. The surface water that does not drain through Grant Creek culvert primarily infiltrates into the sandy soil. Since infiltration is relatively high, there is no single point of discharge from paved surfaces into the creek.

Pesticides may be used to control pests and weeds throughout the airport property. This ongoing lawn and landscaping maintenance also requires that water quality standards (OAR 340-41) be upheld.

There is some potential for water quality degradation due to storm water runoff from office buildings, parking lots and other non-regulated activities since storm water discharges from site areas not associated with industrial activity are not subject to SWPCP monitoring requirements.

V. Air Quality

Authority: Section 176 Clean Air Act Amendments of 1977; 1982 Airport Act.

FAA is responsible for assuring that Federal airport actions conform to state Plans for controlling area-wide air pollution impacts. Oregon is a state that does not have applicable indirect source review (ISR) requirements, so the need for air quality analysis is assessed based on the activity levels of the facility. No air quality analysis is needed if the levels of activity forecast in the time frame of the proposed action are less than 180,000 operations forecast annually. Since Newport Municipal is a general aviation airport the number of annual operations forecasted between the years 2003 and 2013 is less than this threshold.

VI. Section 4F

Authority: Section 4(f) of the Department of Transportation Act 1966.

Section 4(f) of the DOT Act aims to protect key public lands including federal, state or local public parks, recreation areas, wildlife or waterfowl refuges, or historic sites from impacts associated with transportation projects.

Newport Airport is owned by the City of Newport. There is no public recreation or park land within the airport boundaries. No 4(f) lands would be affected by implementation of any projects within the proposed 2003 Master Plan concept.

VII. Historic, Architectural, Archaeological and Cultural Resources

Authority: National Historic Preservation Act of 1966, as amended and Archeological and Historic Preservation Act of 1974.

The State of Oregon Historic Preservation Officer and State archaeologist were consulted regarding the potential for cultural resources and tribal interest in the airport master plan project (see Appendix A correspondence). There have been no previous cultural surveys conducted at the Newport airport facility. The project area lies in an area of high potential for buried cultural sites. The State archaeologist recommends that a survey should be conducted to determine if there are any cultural resources within the airport terminal upgrade area and where other land disturbing activities are proposed. There are no properties that are eligible for the National Historic Site Register or National Historic Landmarks within the Newport area.

The Confederated Tribes of Siletz and Confederated Tribes of Grande Ronde and perhaps other may have interest in the Newport region of the region coast. Coordination with the tribes may be initiated by the FAA. Prior to any ground disturbing activities, the tribes will be consulted and asked to comment on the general concept and any conditions they would seek prior to implementing the preferred alternative.

VIII. Biotic Communities

Authority: ODFW, USFWS

This section includes discussion of the following aspects of the biotic communities: wildlife habitat types and structure; vegetation including noxious or invasive plant species and control; wildlife use and potential wildlife hazards; and sensitivity of the biotic communities relative to the region's natural resource goals and policies.

Most of the area proposed for the additional hangars and the aprons and stub taxiway has been subjected to clearing and grading. The are no open surface waters or wetlands (Grant Creek is within a culvert across most of airport property) anywhere within the airport property boundary and sensitive species, while they may occur in the vicinity, are not

prevalent on airport property (see Endangered and Threatened Species section). Local wildlife habitats include the coastal woodland and grass/forb plant communities.

Although, no development is planned outside of the airport property, the aprons and new access road would require additional site clearing and grading which could result in invasive plant species and limitations to food, cover, movement or reproduction for small mammals.

Invasive plant species removal and control, coastal habitat restoration, reseeding as soon as appropriate to prevent erosion and other mitigation measures would be used to minimize construction or long-term effects. These activities would allow the Newport Municipal Airport to better meet the region's natural resource goals and policies.

IX. Endangered and Threatened Species

Authority: Section 7 Endangered Species Act, as amended in 1978, 1979, and 1982.

The proposed taxiway addition and aprons would require an environmental finding and funding from the FAA. Section 7 of the Endangered Species Act (ESA) of 1973 as amended, directs federal departments to ensure that actions authorized, funded and/or conducted by them are not likely to jeopardize the continued existence of any federally proposed or listed species, or result in destruction, degradation or adverse modification of designated critical habitat for such species.

Section 7(C) of the ESA requires that federal agencies contact the U.S. Fish and Wildlife Service (USFWS) and/or NOAA Fisheries prior to any construction activity to determine if any proposed or listed Endangered, Threatened or Sensitive (ETS) species under their respective jurisdictions may occur in the construction project area. A Biological Assessment (BA) must be prepared if any of the construction activities would impact

The current USFWS list includes theThreatened Stellar Sea Lion (*Eumetopias jubatus)*, a marine mammal as well as five birds: Marbled Murrelet (*Brachyramphus marmoratus)*, Western snowy plover (*Charadrius alexandrinus nivosus*), Bald eagle (*Haliaeetus leucocephalus*), brown pelican (*Pelicanus occidentalis*), and northern spotted owl (*Strix occidentalis caurina*). The USFWS also list Coho salmon Oregon coast (*Oncorhynchus kisutch*) and the Oregon silverspot butterfly (*Speyeria zerene hippolyta)* as Threatened within this project vicinity. Marbled murrelet, Western snowy plover, Northern spotted owl and Oregon Silverspot butterfly are all listed as Threatened and critical habitat has been desginated for the species. One candidate species occurs along the Oregon coast, the steelhead (*Oncorhynchus mykiss).*

If a proposed project may affect only candidate or species of concern, FAA is not required to perform a Biological Assessment or evaluation or consult with the Service. The species of concern are numerous for the Oregon Coast and include mammals, birds, amphibians, fish, invertebrates and plants. Mammals that may occur in or near the Newport Municipal Airport include: white-footed vole (*Arborimus albipes)*, red tree vole (*Arborimus*

longicaulus), Pacific western big-eared bat (*Corynorhinus [=Plecotus] townsendii townsendii)*, silver-haired bat (*Lasionycteris noctivagans)*, Pacific fisher (*Martes pennanti pacifica)*, long-eared myotis (*Myotis evotis)*, fringed myotis (*Myotis thysanodes)*, long-legged myotis (*Myotis volans)*, and yuma myotis (*Myotis yumanensis)*. Birds species from the area include: band tailed pigeon (*Columba fasciata*), olive-sided flycatcher (*Contopus cooperi [= borealis])*, mountain quail (*Oreortyx pictus)*, and purple martin (*Progne subis)*. Amphibians include: tailed frog (*Ascaphus truei)*, Northern red-legged frog (*Rana aurora aurora*), and Southern torrent salamander (*Rhyacotriton variegates)*. Fish species of concern include: green sturgeon (*Acipenser medirostris)*, river lamprey (*Lampetra ayresi)*, Pacific lamprey (*Lampetra tridentate)*, and coastal cutthroat trout (*Oncorhynchus clarki clarki)*. Insects include: caddisfly (*Lepania cascada)*, inusular blue butterfly (*Plebeius saepiolus insulanas)*, Roth's blind ground beetle (*Pterpstichus rothi)*. Two plants, the Queen of the forest (*Filipendula occidentalis)* and a moss (*Limbella fryei)* are also listed as species of concern. The USFWS advises project proponents to consider the potential effect of any construction project on these species in order to prevent future conflicts.

The Oregon Natural Heritage Information Center (ONHIC) provided a list that includes the threatened Coho salmon and the candidate species steelhead. A requested list from NOAA Fisheries has not been received at this time, but it is certain to contain the same anadromous fish and commercial marine species as on the USFWS and ONHIC lists (See Appendix A, Agency Correspondence).

The aquatic listed species would not be affected by the airport master plan construction projects. Listed birds, mammals and plants each have unique life requirements that should be examined in light of the potential for adverse effects during the construction of any airport feature such as the access road, aprons and taxiway, hangar or terminal building. Prior to conducting any land disturbing activities, the Services should be consulted as to the need for a Biological Assessment or "no effects" letter analysis.

X. Essential Fish Habitat

Authority: Section 305 Magnuson-Stevens Act of 1996, as amended.

Under Section 305 of the Magnuson-Stevens Act, federal agencies that authorize, fund, or undertake any action that may adversely affect any essential fish habitat (EFH) are required to consult with NOAA Fisheries for recommendations on measures necessary to conserve or enhance EFH. Statutorily defined, EFH is those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated on the basis of information indicating that certain aquatic habitats or conditions are necessary to sustain the fishery. Although NOAA Fisheries was consulted regarding this master plan update, it is unlikely that the habitats within the project study area are designated as EFH. Simply, there are no creeks or streams passing through the area. The area is sufficiently removed from the coastal waters of Oregon. When NOAA Fisheries response is received it will be forwarded to the FAA for inclusion in this report.

XI. Migratory Birds

Authority: Migratory Bird Treaty Act of 1918, as amended.

Migratory birds are protected under this federal law, which specifically prohibits pursuing, hunting, taking, capturing, killing, or attempting to take, capture or kill, any migratory birds or any part, nest, or eggs of any such bird. For general aviation airports, it is typically upheld by taking measures to exclude (or at least not attract) migratory birds from the airport operations areas. Measures must be taken to limit the open ponded areas or types of landscape vegetation that would be an attractant to the birds as they migrate. The Wolf Tree Resort has been identified as a potential attractant for birds and when evaluated in 1991, it was determined that it presented negligible risk to the airport operations in terms of increasing the risk of bird strike. For purposes of this report, it is assumed that, with no major additional structures as a part of this master plan update, the conclusions from the earlier study remain true (Newport Municipal Airport Master Plan, 1991).

XII. Wetlands

Authority: Executive Order 11990, Protection of Wetlands, Section 404 Clean Water Act.

The airport study area lies within the Newport National Wetlands Inventory (NWI) quadrangle. There are no wetlands or waterways on the airport property; therefore, no filling of wetlands would be necessary to construct the new access road and the aprons and taxiway.

XIII. Floodplains

Authority: Executive Order 11988, Floodplain Management; DOT Order 5650.2 Floodplain Management and Protection.

The intent of Executive Order 11988 is to mandate federal agencies to try to avoid flood loss and impact on human health and welfare by identifying and avoiding development within the 100-year floodplain, where practicable. The Order defines floodplains as "the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore including at a minimum that area subject to a one percent or greater chance of flooding in any given year"; i.e. the area that would be inundated by a 100-year flood.

Grant Creek that runs under the airport is within a pipe and there are no other surface waterways in or near the airport boundary. The 100-year flood elevation is to the west of U.S. Highway 101 and at a much lower elevation than the airfield (see Appendix B, Figure 2 - Land Use Plan). All of the proposed airport improvements would occur above the 100-year flood elevation and in the opposite direction from the coast.

XIV. Wild and Scenic Rivers

Authority: Wild and Scenic Rivers Act.

There are no rivers with a wild or scenic designation within the Newport Municipal Airport vicinity. Waterways near the airport are creeks and intermittent drainages (see Appendix B – Land Use Plan). The nearest major waterway to the airport is Yaquina Bay, at Newport, which is not designated or nominated for wild and/or scenic designation.

XV. Farmlands

Authority: Farmland Protection Policy Act (FPPA), P.L. 97 98.

This section relates to the degree to which the lands within the airport study area qualify as protected agricultural lands, prime or unique farmlands. The Farmland Protection Policy Act (FPPA), P.L. 97 98, authorizes the U.S. Department of Agriculture (USDA) to develop criteria for identifying the effects of Federal programs on the conversion of farmland to nonagricultural uses. Federal agencies are directed to use the developed criteria to identify and take into account the adverse effects of Federal programs on the preservation of farmland, to consider appropriate alternative actions which could lessen adverse effects, and to assure that such Federal programs, to the extent practicable, are compatible with state, units of local government, and private programs and policies to protect farmland.

Guidelines developed by the USDA became effective August 6, 1984 and apply to Federal activities or responsibilities that involve undertaking, financing or assisting construction or improvement projects, or acquiring, managing, or disposing of Federal lands and facilities. For Airports Program actions, this includes proposed Airport Improvement Program projects and requests for conveyances of government land. The guidelines do not cover permitting or licensing programs for activities on private or nonfederal lands. Airport Layout Plan (ALP) approval, involving only development shown on an ALP which is not to be federally funded, even if farmland is involved, is exempt from FPPA. Some categorically excluded actions on prime or unique farmlands would still require coordination under the FPPA.

The area used for the airport is not suitable as farmland even though the soils are. The Newport Municipal Airport has been operating since 1943; therefore, the FPPA does not apply and no formal coordination with the Natural Resource Conservation Service (NRCS) is required because the land was purchased prior to August 6, 1984 for purposes of being converted. For those lands outside of the airport boundary that may be acquired for future development, the prime or unique farmland designation should be confirmed and NRCS should be consulted.

VI. Energy Supply and Natural Resources

Authority: None specifically.

FAA guidelines identify two categories of energy requirements associated with an action that may require assessment:

- Those that relate to changed demands for stationary facilities (e.g. airfield lighting and terminal building heating).

- Those that involve the movement of air and ground vehicles. Increased consumptions of fuel by aircraft need only be examined if average ground movement or run-up times are increased substantially without offsetting efficiencies in operational procedures or if the action includes a change in flight patterns, such as from noise abatement procedures, which adds noticeably to flight times. Ground vehicles' fuel consumption shall be examined only if the action would add appreciably to access time or if there would be a substantial change in movement patterns for on-airport service or other vehicles.

The proposed master plan concept would not relocate existing stationary facilities. Flight patterns would not be modified; however, ground movement could change depending on the use of the stub taxiway and the hangars. The master plan additions would not cause an increase in access time or movement patterns for airport services or other vehicles.

The action would require use of rock, gravel, asphalt and concrete to create the access road, taxiway and aprons. The exact amount and source of these construction materials is not certain. Construction equipment uses diesel fuel and petroleum lubricants.

XVII. Light Emissions

Authority: None specifically.

The FAA regulates lighting that is used on an airport for navigation and directional information. There are also requirements for minimization of light and glare that could affect a pilot's ability to see or understand airport lighting. Most on-airport lighting is contained on-site and does not spill over into the surrounding community. The taxiway would be equipped with reflectors on the taxiway edge for operation. Reflectors generally are limited in the distance they are visible off-airport. Aircraft using the taxiway at night would be using lights to make the taxiway more visible. These lights would be focused on the pavement and likely would not stray off-airport during turning movements.

The project likely would be constructed during daylight hours. Because of requirements for lighting on and around airports, any construction lighting would be focused on the work site and not in such a way as to distract auto drivers or pilots.

XVIII. Solid Waste

Authority: RCRA, City of Newport Sanitation and Disposal.

Because of the danger inherent in bird strikes, FAA Order 5200.5, "FAA Guidance Concerning Sanitary Landfills on or Near Airports", stipulates that sanitary landfills are considered incompatible if located "within 1,500 meters (approximately 4,921 feet) of all runways planned to be use by piston-type aircraft and within 3,000 meters (approximately 9,843 feet) of all runways planned to be used by turbojet aircraft."

Solid waste collection and disposal activities must be conducted at sufficient distance from the existing runways and taxiways to avoid interference with runway operations. The only solid waste disposal site operating in Lincoln County is located near Agate Beach. No sanitary landfills are planned in the vicinity of Newport Municipal Airport (Newport Municipal Master Plan 1991).

XIX. Hazardous Materials

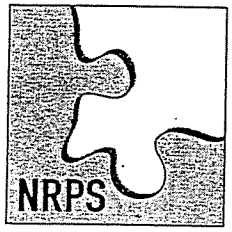
Authority: CERCLA; SARA; RCRA; TRIS; UST/AST.

Potential pollutants are associated with the airport industrial areas operations. Potential pollutants include a variety of fuels and used oils, washing detergent, and oils and grease, herbicides and pesticides, paints, thinners and solvents. The controls and containment catch basins and filters for these fuels and chemicals are part of the airport's operations and maintenance procedures that each operator must agree to follow as a general rule.

XX. Storm Water Permits, SPCC and SWPCP Plans

Authority: Section 402, Clean Water Act (OAR 340-044-0050)

Storm water runoff quantity, quality and handling can be a primary issue at airports. The existing storm water system is a series of small ditches, culverts and swales designed to rapidly drain water from the airport surfaces. There are two 48-inch pipes that run underneath the runway and convey drainage from the ground and paved surfaces below the runways and taxiways. In order to maintain adequate storm water control, the soil infiltration rates should be checked prior to adding any additional paved or impervious surfaces within the airport properties. As well, if additional taxiway and aprons or roadways are planned for construction, quantity and quality of the potential storm water runoff should be evaluated. There may be a need to pre-treat storm water prior to discharge in order to maintain water quality and to meet the State and federal water quality standards.



Appendix A

Agency Correspondence

APPENDIX A – AGENCY CORRESPONDENCE

Scoping Letters and Responses

- Agency Mailing List
- Scoping Comments

Endangered Species List Requests and Responses

- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Oregon Natural Heritage Information Center

Cultural Resource Requests and Response

Clearinghouse A95 Mailing List

Oregon DEQ
811 SW Sixth Avenue
Portland, OR 97204
(503) 229-5696/(503) 229-5630

Mary Potter
Habitat Conservation Division
Oregon Department of Fish and Wildlife
P.O. Box 59
Portland, OR 97207
(503) 229-5400

Bill Thomas
Oregon DLCD
1175 Court St. NE
Salem, OR 97310
(503) 378-4928

Loree Willnow
Oregon Division of State Lands
775 Summer St. NE
Salem, OR 97310
(503) 378-3805

Marilyn Almero
Oregon State Parks Department
525 Trade St. SE, Suite 301
Salem, OR 97310
(503) 378-6378

James M. Hamrick
Historic Preservation
Oregon State Parks Department
525 Trade St. SE, Suite 301
Salem, OR 97310
(503) 378-5002

Dave Stere
Oregon Department of Forestry
2600 State St.
Salem, OR 97310
(503) 378-2510

Bill Fujii
Oregon Water Resources Department
158 12th St
Salem, OR 97310-0210
(503) 378-8455 ext. 254

Don Hull
Oregon Department of Geology and Mineral Industries
910 State Office Building
Portland, OR 97201
(503) 229-5580
(Reported staff limitations does not allow for review)

INTERGOVERNMENTAL REVIEW OF PROPOSED AIRPORT OR AVIATION PROJECTS FOR WHICH FEDERAL AID HAS BEEN REQUESTED

OREGON DEPARTMENT OF AVIATION
3040 25th Street SE
Salem, OR 97302-1125
(503) 378-4880 (phone), (503) 373-1688 (fax)
Attn: Gary W. Viehdorfer

STATE AGENCY REVIEW

Project Name: 2002 Multiple Airport Layout Plan and Report South project – Bandon State, Brookings and Newport Municipal Airports

Date Sent: 9/12/2001 Return Date: 9/28/2001

To Agency Addressed: If you intend to comment, but cannot respond by the return date, please notify us immediately. If no response is received by due date, it will be assumed that you have no comment.

PROGRAM REVIEW AND COMMENT

TO OREGON DEPARTMENT OF AVIATION: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

[ ] It has no adverse effect.

[ ] We have no comment.

[ ] Effects, although measurable, would be acceptable.

[ ] It has adverse effects. (Explain in Remarks Section.)

[X] We are interested, but require more information to evaluate the proposal. (Explain in Remarks Section.)

[ ] Additional comments for project improvement. (Attach if necessary.)

****

REMARKS

Agency: John Lilly DIVISION OF STATE LANDS
Address: 775 Summer St NE Salem 97301-1279
By: Email: john.lilly@dsl.state.or.us
Telephone: 503-378-3805 X287 Date: 9/17/01

INTERGOVERNMENTAL REVIEW OF PROPOSED AIRPORT OR AVIATION PROJECTS FOR WHICH FEDERAL AID HAS BEEN REQUESTED

OREGON DEPARTMENT OF AVIATION
3040 25th Street SE
Salem, OR 97302-1125
(503) 378-4880 (phone), (503) 373-1688 (fax)
Attn: Gary W. Viehdorfer

STATE AGENCY REVIEW

Project Name: 2002 Multiple Airport Layout Plan and Report South project – Bandon State, Brookings and Newport Municipal Airports

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[ ] We are interested, but require more information to evaluate the proposal. (Explain in Remarks Section.)

[ ] Additional comments for project improvement. (Attach if necessary.)

****

REMARKS

Agency: OREGON DEPT OF FORESTRY

Address: 2600 STATE ST SALEM, OREGON 97310

By: ~~David Norman~~ Email: dmorman@odf.state.or.us

Telephone: 503-945-7413 Date:

INTERGOVERNMENTAL REVIEW OF PROPOSED AIRPORT OR AVIATION PROJECTS FOR WHICH FEDERAL AID HAS BEEN REQUESTED

OREGON DEPARTMENT OF AVIATION
3040 25th Street SE
Salem, OR 97302-1125
(503) 378-4880 (phone), (503) 373-1688 (fax)
Attn: Gary W. Viehdorfer

STATE AGENCY REVIEW

Project Name: 2002 Multiple Airport Layout Plan and Report South project – Bandon State, Brookings and Newport Municipal Airports

Date Sent: 9/12/2001 Return Date: 9/28/2001

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PROGRAM REVIEW AND COMMENT

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[ ] We have no comment.

[ ] Effects, although measurable, would be acceptable.

[ ] It has adverse effects. (Explain in Remarks Section.)

[X] We are interested, but require more information to evaluate the proposal. (Explain in Remarks Section.)

[ ] Additional comments for project improvement. (Attach if necessary.)

****

REMARKS

RE: BANDON STATE ONLY –
ANY PROPOSED CLEARING AND/OR EXCAVATION WILL NEED TO CONSIDER IMPACTS TO WETLANDS, RIPARIAN AND WILDLIFE HABITAT & THREATENED, ENDANGED & SESITIVE SPECIES

IMPACT CONSIDERATIO

Agency: OREGON DEPARTMENT FISH AND WILDLIFE

Address: PO BOX 5430, CHARLESTON, OR 97420

By: JOHN TOMAN Email: John.V.Toman@state.or.us

Telephone: 541-888-5515 Date: 9/20/01

INTERGOVERNMENTAL REVIEW OF PROPOSED AIRPORT OR AVIATION PROJECTS FOR WHICH FEDERAL AID HAS BEEN REQUESTED

OREGON DEPARTMENT OF AVIATION
3040 25th Street SE
Salem, OR 97302-1125
(503) 378-4880 (phone), (503) 373-1688 (fax)
Attn: Gary W. Viehdorfer

STATE AGENCY REVIEW

Project Name: 2002 Multiple Airport Layout Plan and Report South project – Bandon State, Brookings and Newport Municipal Airports

Date Sent: 9/12/2001 Return Date: 9/28/2001

To Agency Addressed: If you intend to comment, but cannot respond by the return date, please notify us immediately. If no response is received by due date, it will be assumed that you have no comment.

PROGRAM REVIEW AND COMMENT

TO OREGON DEPARTMENT OF AVIATION: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

[X] It has no ~~adverse~~ effect.

[ ] We have no comment.

[ ] Effects, although measurable, would be acceptable.

[ ] It has adverse effects. (Explain in Remarks Section.)

[ ] We are interested, but require more information to evaluate the proposal. (Explain in Remarks Section.)

[ ] Additional comments for project improvement. (Attach if necessary.)

****

REMARKS

Any physical work on these sites will require further review under Section 106.

Agency: State Historic Preservation Office

Address: 1115 Commercial St NE, Salem 97301

By: [signature] Email:

Telephone: 503.378.4168 X233 Date: OCT 1st 2001

3030 SW Moody Avenue, Suite 105
Portland, Oregon 97201-4867
www.nrpsi.com

Phone: 503.222.5005
Fax: 503.222.6050
Email: info@nrpsi.com

natural resource planning services, inc.

November 7, 2003

RECEIVED
NOV 14 2003
STATE HISTORIC
PRESERVATION OFFICE

Christine Curran, Review and Compliance Specialist
State Historic Preservation Office
1115 Commercial Street N.E.
Suite 2
Salem, Oregon 97301-1012

Re: Newport Municipal Airport Terminal Update Project

Dear Ms. Curran:

We are seeking information on behalf of the Oregon Department of Aviation regarding occurrences of historic, archaeological, and traditional cultural sites in and near the project area described below. The information will be used to prepare NEPA environmental documentation required for a ten-year periodic review and update of the master plan including the evaluation of potential locations and significance of historic, archaeological, or traditional cultural resources.

The project is located in Lincoln County, Township 11 South, Range 11 West, Sections 29 and 32, W.M two miles south of the city of Newport and east of Highway 101. This project updates the 1991 Newport Municipal Master Plan. This environmental clearance is needed for the 2003 Master Plan that W&H Pacific and Coffman Associates, Inc. are preparing in order to forecast airport aviation facility requirements. As such Federal Aviation Administration requires that the project is categorically excluded from NEPA other than a periodic check key resource agencies as to the status and disposition of the existing resources in the planning area.

The preferred Master Plan Concept indicates new taxiway and apron as well as improvements to the access roads and parking, the terminal building and hangars may be required to provide services to support the needs for the next ten years of airport operations (see attached Master Plan Concept). Project activities may include limited clearing and grading, paving, compacting, excavating, and other activities associated with hangars and buildings, taxiway and access road improvements. The Vortac will need to be relocated in a site sufficiently distant from the runway and taxiway a shown on the concept plan.

Please provide any information you have on eligible cultural resources within the study area, i.e., ½ mile around and including the Newport Airport. Also please provide the names of any tribal interests from that area. If you need further information to complete our data request, please call me or send an email message as soon as possible. If you concur with NRPS that the potential for occurrences of historic, archaeological, and traditional cultural sites in or near the study area is extremely low, please send written concurrence of such.

Sincerely,

NRPS

Nancy Olmsted

enclosure

NOV 17 2003

According to our records There have been no previous cultural resource surveys conducted near the Newport airport facilities. The project area lies in an area of high potential for buried cultural sites & a survey should be conducted if future land disturbing activities are proposed.

For tribal interests in the area you should contact the Commission on Indian Services [503-986-1067]. They are the official state organization that provides information on Tribal Areas of interest. I know your project will be of interest to The Confederated Tribes of Siletz & Grand Ronde but there may be others as well.

Dennis Griffin

Historic Preservation
Oregon State Parks & Recreation
1115 Commercial St. NE Ste #2
Salem, Oregon 97301-1012

U.S. Fish and Wildlife Service
Oregon Fish and Wildlife Office
2600 S.E. 98th Avenue
Portland, OR 97266
Office phone: 503-231-6179
FAX Number: 503-231-6195
Attn: Stacy Sroufe
Chris Allen
Angie Hernandez

SPECIES LIST REQUEST FORM

Note: The U.S. Fish and Wildlife Service provides species list only for actions carried out, funded or authorized by federal agencies. Please contact the Oregon Natural Heritage Program at 503-731-3070 to request species list for non-federal actions.

Entity Requesting Species List: Natural Resource Planning Services, Inc.

Name: Michael R. Wallace
Address (agency or company name and mailing address):
Natural Resource Planning Services, Inc.
3030 SW Moody Avenue
Suite 105
Portland, Oregon 97201

Phone Number: (503) 222-5005 Fax: (503) 222-6050

Proposed Project Name:
Newport Municipal Airport Terminal Plan Update

Proposed Project Description:
The Newport Municipal Airport is performing an update of the Terminal Plan for the facility. As part of the update to the Terminal Plan, an Environmental Checklist must be performed to update any environmental concerns that could be present at or in the vicinity of the airport. Newport Municipal Airport is in the City of Newport, Oregon in Lincoln County.

County: Lincoln County

Action Agency (Primary Federal Nexus): FAA

Name of Contact at Action Agency: Cayla Morgan

Address and Phone:
SEA- 632 ENVIRONMENTALIST
SEATTLE AIRPORTS DISTRICT OFFICE
1601 LIND AVENUE SW, STE 250
RENTON, WA 98055-4056

(425) 227-2653
cayla.morgan@faa.gov

Describe Federal Connection to Proposed Project:
Federal Dollars (Federal Aviation Administration [FAA]) will be used to fund the project. The project is being implemented by the Oregon Department of Aviation (ODA) to meet federal regulations at the Newport Municipal Airport.

Location (e.g., Township, Range, Section or Lat/Long) (Include Map both detailed and General):

Township: 11S Range: 11W Section: 29 and 32

NRPS

3030 SW Moody Avenue, Suite 105
Portland, Oregon 97201-4867
www.nrpsi.com

Phone: 503.222.5005
Fax: 503.222.6050
Email: info@nrpsi.com

natural resource planning services, inc

October 10, 2003

Mr. Ben Meyer
National Marine Fisheries Service
Oregon Habitat Conservation Branch
525 NE Oregon Street Suite 500
Portland, Oregon
(503) 231-2202

Mr. Meyer:

The Newport Municipal Airport is performing an update of the Terminal Plan for the facility. As part of the update to the Terminal Plan, an Environmental Checklist must be performed to update any environmental concerns that could be present at or in the vicinity of the airport. Newport Municipal Airport is in the City of Newport, Oregon in Lincoln County.

Federal funds (Federal Aviation Administration [FAA]) will be used to finance this project. This constitutes the federal nexus.

The project is located within Township 11S, Range 11W, Sections 29 and 32.

I am requesting a list of proposed, threatened, and endangered species for this area, as NRPS, Inc. is preparing the Environmental Checklist for this project. Thank you for your assistance.

Regards,

Michael R. Wallace
Biologist
Natural Resource Planning Services, Inc.
3030 SW Moody Ave. Suite 105
Portland, OR 97201-4867
mike@nrpsi.com
Phone: 503-222-5005
Cell: 503-309-4574
Fax: 503-222-6050
www.nrpsi.com

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
525 NE Oregon Street
PORTLAND, OREGON 97232-2737

Refer to:
OHB2003-0231-SL

November 19, 2003

Michael R. Wallace
Natural Resource Planning Services, Inc.
3030 SW Moody Avenue, Suite 105
Portland, OR 97201-4867

Re: Species List Request for the Newport Municipal Airport, City of Newport, Yaquina River Basin, Lincoln County, Oregon

Dear Ms. Fairbanks:

On October 14, 2003, the National Marine Fisheries Service (NOAA Fisheries) received your letter requesting a list of endangered, threatened candidate species for a proposed action at the Newport Municipal Airport, city of Newport, Lincoln County, Oregon. A list of all anadromous salmonid fishes in Oregon under NOAA Fisheries' jurisdiction that are listed as endangered, threatened, or as a candidate species for listing under the Endangered Species Act (ESA) is enclosed (Enclosure 1). One listed anadromous fish species, Oregon Coast coho salmon (*Oncorhynchus kisutch*), may be present in the proposed action area.

This letter constitutes the required notification of the presence of a federally-listed threatened or endangered species or critical habitat under NOAA Fisheries' jurisdiction in the area that may be affected by the proposed project (Appendix A to Part 330, section C.13(5)(I)). Please contact the U.S. Fish and Wildlife Service regarding the presence of species falling under its jurisdiction.

The Pacific Fisheries Management Council, which was established under the Magnuson-Stevens Fishery Conservation and Management Act, has described and identified essential fish habitat (EFH) in each of its fisheries management plans. EFH includes "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity." All aquatic habitat in Oregon that was historically accessible to groundfish, coastal pelagic species, and coho and chinook salmon is designated EFH (Enclosure 2.).

Please refer to section 7 of the ESA and its implementing regulations (50 CFR Part 402) for information on interagency consultation. Additional information on listed species' distribution, copies of Federal Register documents designating listed species status, and links to various ESA consultation policies and tools may be found on our web site at: *www.nwr.noaa.gov*.

Please direct any questions regarding this letter to Robert Anderson of my staff in the Oregon Habitat Branch at 503.231.2226.

Sincerely,

Michael P. Tehan
Oregon State Director
Habitat Conservation Division

Enclosures (2)

Endangered, Threatened and Candidate Pacific Salmon Under NOAA Fisheries' Jurisdiction in Oregon
Species with designated EFH in the estuarine EFH composite in the state of Oregon

Enclosure 1

Endangered, Threatened, and Candidate Pacific Salmon
Under NOAA Fisheries' Jurisdiction in Oregon

Evolutionarily Significant Unit	Final Rule E = Endangered T = Threatened C = Candidate	Critical habitat (Final Rule)	Protective Regulations (Final Rule)
Upper Columbia River Spring Chinook Salmon	E: March 24, 1999; 64 FR 14308	N/A	ESA section 9 applies
Snake River Fall Chinook Salmon	T: April 22, 1992; 57 FR 14653[1]	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653
Snake River Spring/Summer Chinook Salmon	T: April 22, 1992; 57 FR 14653	October 25, 1999; 64 FR 57399	April 22, 1992; 57 FR 14653
Upper Willamette River Chinook Salmon	T: March 24, 1999; 64 FR 14308	N/A	July 10, 2000; 65 FR 42422
Lower Columbia River Chinook Salmon	T: March 24, 1999; 64 FR 14308	N/A	July 10, 2000; 65 FR 42422
Snake River Basin Steelhead	T: August 18, 1997; 62 FR 43937	N/A	July 10, 2000; 65 FR 42422
Middle Columbia River Steelhead	T: March 25, 1999; 64 FR 14517	N/A	July 10, 2000; 65 FR 42422
Upper Willamette River Steelhead	T: March 25, 1999; 64 FR 14517	N/A	July 10, 2000; 65 FR 42422
Lower Columbia River Steelhead	T: March 19, 1998; 63 FR 13347	N/A	July 10, 2000; 65 FR 42422
Oregon Coast Steelhead	C: March 19, 1998; 63 FR 13347	N/A	N/A
Upper Columbia River Steelhead	E: August 18, 1997; 62 FR 43937	N/A	ESA section 9 applies
Oregon Coast Coho Salmon	T: August 10, 1998; 63 FR 42587	N/A	July 10, 2000; 65 FR 42422
S. Oregon/Northern California Coasts Coho Salmon	T: May 6, 1997; 62 FR 24588	May 5, 1999; 64 FR 24049	July 18, 1997; 62 FR 38479
Lower Columbia River/SW Washington Coho Salmon	C: July 25, 1995; 60 FR 38011	N/A	N/A
Columbia River Chum Salmon	T: March 25, 1999; 64 FR 14508	N/A	July 10, 2000; 65 FR 42422
Snake River Sockeye Salmon	E: November 20, 1991; 56 FR 58619	December 28, 1993; 58 FR 68543	ESA section 9 applies

Enclosure 2

Species with Designated EFH in the Estuarine EFH Composite in the State of Oregon

Groundfish Species	
Leopard Shark (southern OR only)	*Triakis semifasciata*
Soupfin Shark	*Galeorhinus zyopterus*
Spiny Dogfish	*Squalus acanthias*
California Skate	*Raja inornata*
Spotted Ratfish	*Hydrolagus colliei*
Lingcod	*Ophiodon elongatus*
Cabezon	*Scorpaenichthys marmoratus*
Kelp Greenling	*Hexagrammos decagrammus*
Pacific Cod	*Gadus macrocephalus*
Pacific Whiting (Hake)	*Merluccius productus*
Black Rockfish	*Sebastes maliger*
Bocaccio	*Sebastes paucispinis*
Brown Rockfish	*Sebastes auriculatus*
Copper Rockfish	*Sebastes caurinus*
Quillback Rockfish	*Sebastes maliger*
English Sole	*Pleuronectes vetulus*
Pacific Sanddab	*Citharichthys sordidus*
Rex Sole	*Glyptocephalus zachirus*
Rock Sole	*Lepidopsetta bilineata*
Starry Flounder	*Platichthys stellatus*
Coastal Pelagic Species	
Pacific Sardine	*Sardinops sagax*
Pacific (Chub) Mackerel	*Scomber japonicus*
Northern Anchovy	*Engraulis mordax*
Jack Mackerel	*Trachurus symmetricus*
California Market Squid	*Loligo opalescens*
Pacific Salmon Species	
Chinook Salmon	*Oncorhyncus tshawytcha*
Coho Salmon	*Oncorhyncus kisutch*

OREGON NATURAL HERITAGE INFORMATION CENTER

Institute for Natural Resource

OREGON STATE UNIVERSITY
1322 SE Morrison Street
Portland, Oregon 97214-2423

October 28, 2003

Mike R. Wallace
Natural Resource Planning Services, Inc.
3030 SW Moody Avenue, Suite 105
Portland, OR 97201-4867

Dear Mr. Wallace:

Thank you for requesting information from the Oregon Natural Heritage Information Center (ORNHIC). We have conducted a data system search for rare, threatened and endangered plant and animal records for your Newport Municipal Airport Project in Township 11 South, Range 11 West, Sections 29 and 32, W.M.

Twenty-one (21) records were noted within a two-mile radius of your project and are included on the enclosed computer printout. A key to the fields is also included.

Please remember that the lack of rare element information from a given area does not mean that there are no significant elements there, only that there is no information known to us from the site. To assure that there are no important elements present, you should inventory the site, at the appropriate season.

Please note that at this time ORNHIC does not have comprehensive computerized records available for all anadromous fish in Oregon. I have listed below the species that may be present within the waterways contained in the project area. I have also included their listing by the National Marine Fisheries Service (NMFS). For more information on anadromous fish you may wish to contact NMFS at: 525 NE Oregon Street; Portland, Oregon 97232-2737. Please also note that the U.S. Fish and Wildlife Service now has jurisdiction over coastal cutthroat trout.

Coho salmon (Oregon Coastal Runs)	*Oncorhynchus kisutch*	Threatened
Steelhead (Oregon Coast)	*Oncorhynchus mykiss*	Candidate

This data is confidential and for the specific purposes of your project and is **not to be distributed.**

If you need additional information or have any questions, please do not hesitate to contact me.

Sincerely,

Cliff Alton
Conservation Information Assistant

encl.: invoice (H-102803-CWA5)
computer printout and data key

NAME: GAVIA IMMER
COMMON NAME: COMMON LOON
EO-CODE: ABNBA01030*006 LAST OBS: 1986- FED STATUS:
COUNTY(s): LINCOLN FIRST OBS: 1986 STATE STATUS:
QUAD NAMES: NEWPORT SOUTH LAT: 443725N ORNHP TRACK: N
PHYSIOGRAPHIC PROV: CR LONG: 1240240W PRECISION: M
T-R-S: 011S011W 17 QUADCODE: 4412451 MINELEV (Feet): 0
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY
DESCRIPTION:
EO-DATA: WINTERING & FEEDING AREA. LAIMONS OSIS, ODFW BIOLOGIST OBSERVED 7-9 LOONS ON THE BAY FROM JANUARY TO APRIL 1986
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: OSIS, LAIMONS. ODFW BIOLOGIST. 1986. PERSONAL COMMUNICATION WITH DATA BASE

NAME: PELECANUS OCCIDENTALIS CALIFORNICUS
COMMON NAME:
EO-CODE: ABNFC01021*006 LAST OBS: 1985- FED STATUS: (LE)
COUNTY(s): LINCOLN FIRST OBS: 1975 STATE STATUS:
QUAD NAMES: NEWPORT SOUTH LAT: 443710N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240415W PRECISION: M
T-R-S: 011S011W 18 QUADCODE: 4412451 MINELEV (Feet): 0
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY
DESCRIPTION: LARGE DROWNED RIVER MOUTH ESTUARY.
EO-DATA: MAJOR STAGING AREA IN THE FALL MIGRATION. SOME USE IN THE SUMMER AS A FEEDING AREA.
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: SNOW, D & L OSIS. ODFW. 1986. PERSONAL COMMUNICATION WITH DATA BASE.

NAME: HALIAEETUS LEUCOCEPHALUS
COMMON NAME: BALD EAGLE
EO-CODE: ABNKC10010*181 LAST OBS: 2000 FED STATUS: (PS:LT,PDL
COUNTY(s): LINCOLN FIRST OBS: 1978 STATE STATUS: LT
QUAD NAMES: NEWPORT SOUTH LAT: 443608N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240130W PRECISION: S
T-R-S: 011S011W 21,28 QUADCODE: 4412451 MINELEV (Feet): 150
T-R-S COMMENTS: SE4 SEC 21; SE4 SEC 28
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY
DESCRIPTION:
EO-DATA: SEE ANNUAL OBSERVATIONS
EOTYPE: BREEDING SITE
COMMENTS: ISAACS AND ANTHONY NESTS 155, 154, 260, 754. NEST 155 NO LONGER EXISTS.
ANNUAL OBSERVATION: 2000-2 FLEDGED
1999-BREEDING FAILURE
1998-2 FLEDGED
1997-BREEDING FAILURE

1996-1 FLEDGED
1995-2 FLEDGED
1994-2 FLEDGED
1993-2 FLEDGED
1992-2 FLEDGED
1991-2 FLEDGED
1990-BREEDING FAILURE
1989-BREEDING FAILURE
1988-NESTING FAILURE
1987-1 FLEDGED
1986-2 FLEDGED
1985-2 FLEDGED
1984-BREEDING FAILURE
1983-1 FLEDGED
1982-BREEDING FAILURE
1981-1 FLEDGED
1980-BREEDING FAILURE
1979-2 FLEDGED
1978-NESTING FAILURE

OWNER: PRIVATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: ISAACS & ANTHONY. 2000. BALD EAGLE NEST LOCATIONS AND HISTORY OF USE IN OR & WA PORTION OF THE COLUMBIA RIVER RECOVERY ZONE 1971-2000.

NAME: CHARADRIUS ALEXANDRINUS NIVOSUS
COMMON NAME: WESTERN SNOWY PLOVER
EO-CODE: ABNNB03031*011 LAST OBS: 1980- FED STATUS: PS:LT
COUNTY(s): LINCOLN FIRST OBS: 1967 STATE STATUS: LT
QUAD NAMES: NEWPORT SOUTH LAT: 443723N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240240W PRECISION: M
T-R-S: 011S011W 17 QUADCODE: 4412451 MINELEV (Feet): 0
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY; SOUTH BEACH-NEWPORT AREA
DESCRIPTION: SAND DUNES; NEST SITES HAVE MEAN OF 28% COVER OF WHICH 26% IS DRIFTWOOD, <1% VEGETATION, OVER 1/2 OF VEGETATION IS AMMOPHILA ARENARIA
EO-DATA: STEADY DECLINE IN ABUNDANCE FROM 1967-79 WITH HIGH OF 35 IN 1968. 1978-8 NEST; 1979-2 NESTS; 5 ADULTS/YOUNG PRESENT DURING NESTING SEASON 1980, NONE FOUND 1981, 1982, 1984, 1985, 1987, 1988. NOT SURVEYED IN 1983.
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER: STATE; PRIVATE
MANAGED AREA: SOUTH BEACH STATE PARK
MANAGE COMM:
PROT COMM:
BEST SOURCE: BRUCE, 1983. WINTER COAST & NEST RESULTS. ACE. 1977. ENVIRONMENTAL EVALUATION: NORTH JETTY. MARSHALL, D. 1989.

NAME: PROGNE SUBIS
COMMON NAME: PURPLE MARTIN
EO-CODE: ABPAU01010*104 LAST OBS: 1998-08-26 FED STATUS: SOC
COUNTY(s): LINCOLN FIRST OBS: 1998-05-27 STATE STATUS: SC
QUAD NAMES: NEWPORT NORTH LAT: 443726N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240235W PRECISION: S
T-R-S: 011S011W 8 QUADCODE: 4412461 MINELEV (Feet): 15
T-R-S COMMENTS: SE4/SE4
EO-RANK/COMM: :
DIRECTIONS: FROM THE MAIN PARKING LOT AT THE HATFIELD MARINA SCIENCE CENTER, LOOK N TO PILINGS E OF THE DOCK FOR THE RV WECOMA; 13 BOXES ON PILINGS. ALSO 5 BOXES ARE W OF THE DOCK FOR THE WECOMA

DESCRIPTION:
EO-DATA: 1998: 13 PAIRS NESTING IN BOXES.
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER: PRIVATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: HORVATH, E. 1999. DISTRIBUTION, ABUNDANCE, AND NEST SITE CHARACTERISTICS OF PURPLE MARTINS IN OREGON. UNPUBLISHED REPORT FOR ODFW.

NAME: PROGNE SUBIS
COMMON NAME: PURPLE MARTIN
EO-CODE: ABPAU01010*105 LAST OBS: 1998-07-31 FED STATUS: SOC
COUNTY(s): LINCOLN FIRST OBS: 1998-05-30 STATE STATUS: SC
QUAD NAMES: NEWPORT SOUTH LAT: 443658N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240129W PRECISION: S
T-R-S: 011S011W 16 QUADCODE: 4412451 MINELEV (Feet): 15
T-R-S COMMENTS: SE4
EO-RANK/COMM: :
DIRECTIONS: FROM THE NE TIP OF IDAHO POINT LOOK N TOWARD THE LARGE BLUE LNG TANK ACROSS BAY. 3 PILINGS ABOUT 500M OUT IN THE BAY HAVE 1 BOX EACH.
DESCRIPTION:
EO-DATA: 1998: 1 PAIR.
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER: PRIVATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: HORVATH, E. 1999. DISTRIBUTION, ABUNDANCE, AND NEST SITE CHARACTERISTICS OF PURPLE MARTINS IN OREGON. UNPUBLISHED REPORT FOR ODFW.

NAME: PROGNE SUBIS
COMMON NAME: PURPLE MARTIN
EO-CODE: ABPAU01010*106 LAST OBS: 1998-08-14 FED STATUS: SOC
COUNTY(s): LINCOLN FIRST OBS: 1998-06-07 STATE STATUS: SC
QUAD NAMES: NEWPORT SOUTH LAT: 443632N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240033W PRECISION: S
T-R-S: 011S011W 22 QUADCODE: 4412451 MINELEV (Feet): 15
T-R-S COMMENTS: NW4/NE4
EO-RANK/COMM: :
DIRECTIONS: ON YAQUINA BAY ROAD UPRIVER OF NEWPORT, THE MARTINS ARE NESTING IN BOXES ON PILINGS IN THE BAY AT A HOUSE ON THE BAY SIDE OF THE ROAD AT MILEPOST 4.
DESCRIPTION:
EO-DATA: 1998: 4 PAIRS.
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER: PRIVATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: HORVATH, E. 1999. DISTRIBUTION, ABUNDANCE, AND NEST SITE CHARACTERISTICS OF PURPLE MARTINS IN OREGON. UNPUBLISHED REPORT FOR ODFW.

NAME: ACIPENSER MEDIROSTRIS
COMMON NAME: GREEN STURGEON
EO-CODE: AFCAA01030*003 LAST OBS: FED STATUS: SOC
COUNTY(s): LINCOLN FIRST OBS: STATE STATUS:

QUAD NAMES: NEWPORT NORTH
NEWPORT SOUTH
TOLEDO SOUTH
LAT: 443450N
ORNHP TRACK: N
PHYSIOGRAPHIC PROV: CR
T-R-S: 001N010W
011S010W
LONG: 1240045W
QUADCODE: 4412461
4412451
4412358
PRECISION:
MINELEV (Feet):
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY AND ESTUARY, NORTHWEST COAST OF OREGON. NEAR THE TOWN OF NEWPORT.
DESCRIPTION:
EO-DATA: NO COLLECTION INFORMATION AVAILABLE. JUVENILE AND ADULT GREEN STURGEON CONSIDERED COMMON IN YAQUINA BAY AND ESTUARY.
EOTYPE: YEAR-ROUND - fish
COMMENTS: GREEN STURGEON NOT ABUNDANT IN ANY PACIFIC COAST ESTUARY. LITTLE IS KNOWN ABOUT ITS LIFE HISTORY. THIS SPECIES MORE MARINE ORIENTED THAN WHITE STURGEON AND SPENDS LIMITED AMOUNT OF TIME IN FRESHWATER (EXCEPT PERHAPS EARLY JUVENILES AND SPAWNING ADULTS). B91NOA010RUS.
ANNUAL OBSERVATION:
OWNER: STATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: DISTRIBUTION AND ABUNDANCE OF FISHES & INVERTEBRATES IN WEST COAST ESTUARIES. VOL. 2. SPECIES LIFE HISTORY SUMMARIES. US DEPT. OF COMMERCE. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

NAME: ONCORHYNCHUS KETA POP 4
COMMON NAME: CHUM SALMON - PACIFIC COAST RUNS
EO-CODE: AFCHA02024*007
LAST OBS: 2000-PRE
FED STATUS:
COUNTY(s): LINCOLN
FIRST OBS:
STATE STATUS: SC
QUAD NAMES: EDDYVILLE
ELK CITY
TOLEDO NORTH
TOLEDO SOUTH
NEWPORT NORTH
NEWPORT SOUTH
LAT:
ORNHP TRACK: Y
PHYSIOGRAPHIC PROV:
T-R-S:
LONG:
QUADCODE: 4412367
4412357
4412368
4412358
4412461
4412451
PRECISION: M
MINELEV (Feet):
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY AND RIVER & TRIBUTARY
DESCRIPTION:
EO-DATA: ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE
EOTYPE: REARING & MIGRATION - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF CHUM IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 2000 ODFW GEOGRAPHIC RESOURCES DATA; BUCKMAN, BOB; SPANGLER, JOHN.

NAME: ONCORHYNCHUS KISUTCH POP 3
COMMON NAME: COHO SALMON (OREGON COASTAL RUNS)
EO-CODE: AFCHA02033*583
LAST OBS: 1996-PRE
FED STATUS: LT

COUNTY(s): LINCOLN
QUAD NAMES: NEWPORT SOUTH
PHYSIOGRAPHIC PROV: CR
T-R-S:
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: THIEL CREEK
DESCRIPTION:
EO-DATA: ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE.
EOTYPE: SPAWNING & REARING - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF COHO IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.
ANNUAL OBSERVATION:
OWNER: PRIVATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 1999 ODFW GEOGRAPHIC RESOURCES DATA.

FIRST OBS:
LAT:
LONG:
QUADCODE: 4412451
STATE STATUS: SC
ORNHP TRACK: Y
PRECISION: M
MINELEV (Feet):

NAME: ONCORHYNCHUS KISUTCH POP 3
COMMON NAME: COHO SALMON (OREGON COASTAL RUNS)
EO-CODE: AFCHA02033*584
COUNTY(s): LINCOLN
QUAD NAMES: NORTONS
EDDYVILLE
TOLEDO NORTH
HARLAN
ELK CITY
TOLEDO SOUTH
NEWPORT SOUTH
NEWPORT NORTH
PHYSIOGRAPHIC PROV: CR
T-R-S:
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY, YAQUINA RIVER & TRIBUTARIES
DESCRIPTION:
EO-DATA: ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE.
EOTYPE: REARING & MIGRATION - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF COHO IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.
ANNUAL OBSERVATION:
OWNER: PRIVATE & STATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 2000 ODFW GEOGRAPHIC RESOURCES DATA; BUCKMAN, BOB; SPANGLER, JOHN.

LAST OBS: 2000-PRE
FIRST OBS:
LAT:
LONG:
QUADCODE: 4412366
4412367
4412368
4412356
4412357
4412358
4412451
4412461
FED STATUS: LT
STATE STATUS: SC
ORNHP TRACK: Y
PRECISION: M
MINELEV (Feet):

NAME: ONCORHYNCHUS MYKISS POP 31
COMMON NAME: STEELHEAD - OREGON COAST WINTER RUN
EO-CODE: AFCHA02136*364

LAST OBS: 1996-PRE
FED STATUS: C

COUNTY(s): LINCOLN
QUAD NAMES: NEWPORT SOUTH
PHYSIOGRAPHIC PROV:
T-R-S:
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: THIEL CREEK
DESCRIPTION:
EO-DATA: WINTER RUN; ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE
EOTYPE: SPAWNING & REARING - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 1999 ODFW GEOGRAPHIC RESOURCES DATA.

FIRST OBS:
LAT:
LONG:
QUADCODE: 4412451

STATE STATUS: SV
ORNHP TRACK: Y
PRECISION: M
MINELEV (Feet):

NAME: ONCORHYNCHUS MYKISS POP 31
COMMON NAME: STEELHEAD - OREGON COAST WINTER RUN
EO-CODE: AFCHA02136*365
COUNTY(s): LINCOLN
QUAD NAMES: NEWPORT SOUTH
PHYSIOGRAPHIC PROV:
T-R-S:
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: GRANT CREEK
DESCRIPTION:
EO-DATA: WINTER RUN; ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE
EOTYPE: SPAWNING & REARING - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 1999 ODFW GEOGRAPHIC RESOURCES DATA.

LAST OBS: 1996-PRE
FIRST OBS:
LAT:
LONG:
QUADCODE: 4412451

FED STATUS: C
STATE STATUS: SV
ORNHP TRACK: Y
PRECISION: M
MINELEV (Feet):

NAME: ONCORHYNCHUS MYKISS POP 31
COMMON NAME: STEELHEAD - OREGON COAST WINTER RUN
EO-CODE: AFCHA02136*366
COUNTY(s): LINCOLN
QUAD NAMES: NEWPORT SOUTH
PHYSIOGRAPHIC PROV:
T-R-S:
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: HENDERSON CREEK
DESCRIPTION:
EO-DATA: WINTER RUN; ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE
EOTYPE: SPAWNING & REARING - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR

LAST OBS: 1996-PRE
FIRST OBS:
LAT:
LONG:
QUADCODE: 4412451

FED STATUS: C
STATE STATUS: SV
ORNHP TRACK: Y
PRECISION: M
MINELEV (Feet):

REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.

ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 1999 ODFW GEOGRAPHIC RESOURCES DATA.

NAME: ONCORHYNCHUS MYKISS POP 31
COMMON NAME: STEELHEAD - OREGON COAST WINTER RUN
EO-CODE: AFCHA02136*369 LAST OBS: 2000-PRE FED STATUS: C
COUNTY(s): LINCOLN FIRST OBS: STATE STATUS: SV
QUAD NAMES: NORTONS LAT: ORNHP TRACK: Y
EDDYVILLE
TOLEDO NORTH
NEWPORT NORTH
NEWPORT SOUTH
TOLEDO SOUTH
ELK CITY
HARLAN
PHYSIOGRAPHIC PROV: LONG: PRECISION: M
T-R-S: QUADCODE: 4412366 MINELEV (Feet):
4412367
4412368
4412461
4412451
4412358
4412357
4412356
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: YAQUINA BAY AND TRIBUTARIES
DESCRIPTION:
EO-DATA: WINTER RUN; ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE
EOTYPE: REARING & MIGRATION - fish
COMMENTS: DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 1999. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.

ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: 2000 ODFW GEOGRAPHIC RESOURCES DATA; BUCKMAN, BOB; SPANGLER, JOHN.

NAME: MYOTIS THYSANODES
COMMON NAME: FRINGED BAT
EO-CODE: AMACC01090*005 LAST OBS: 1982-08-23 FED STATUS: SOC
COUNTY(s): LINCOLN FIRST OBS: 1982 STATE STATUS: SV
QUAD NAMES: TIDEWATER LAT: 442905N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1235800W PRECISION: G
T-R-S: 012S011W 36 QUADCODE: 4412348 MINELEV (Feet): 4000
T-R-S COMMENTS:
EO-RANK/COMM: B :
DIRECTIONS: DRIFT CREEK WATERSHED.
DESCRIPTION: IN IMMATURE CONIFEROUS FOREST.
EO-DATA: 1 FEMALE MIST NETTED BY PERKINS IN 1982.
EOTYPE:

COMMENTS:
ANNUAL OBSERVATION:
OWNER: FEDERAL
MANAGED AREA: DRIFT CREEK WILDERNESS AREA
WALDPORT RANGER DISTRICT
SIUSLAW NATIONAL FOREST
MANAGE COMM:
PROT COMM: DRIFT CREEK WA-?
BEST SOURCE: PERKINS, MARK. 1982. NW OREGON BAT SURVEY.

NAME: LYGUS OREGONAE
COMMON NAME: OREGON PLANT BUG
EO-CODE: IIHEM91010*003 LAST OBS: 1994 FED STATUS:
COUNTY(s): LINCOLN FIRST OBS: 1994 STATE STATUS:
QUAD NAMES: NEWPORT NORTH LAT: 443800N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240345W PRECISION: G
T-R-S: 011S011W 7 QUADCODE: 4412461 MINELEV (Feet): 20
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: NEWPORT
DESCRIPTION: SAND DUNES NEAR THE BEACH; HOST PLANT IS AMBROSIA CHAMISSONIS.
EO-DATA: 1994: SPECIES OBSERVED.
EOTYPE:
COMMENTS: OBSERVER: MICHAEL SCHWARTZ
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: SCHWARTZ, MICHAEL, ENTOMOLOGIST

NAME: SPEYERIA ZERENE HIPPOLYTA
COMMON NAME: OREGON SILVERSPOT BUTTERFLY
EO-CODE: IILEPJ6087*007 LAST OBS: 1895-08-18 FED STATUS: LT
COUNTY(s): LINCOLN FIRST OBS: 1895 STATE STATUS:
QUAD NAMES: NEWPORT NORTH LAT: 443800N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240345W PRECISION: G
T-R-S: 011S011W 07 QUADCODE: 4412461 MINELEV (Feet): 40
T-R-S COMMENTS:
EO-RANK/COMM: X :
DIRECTIONS: NEWPORT
DESCRIPTION:
EO-DATA: COLLECTED AUGUST 18, 1895, COLLECTOR UNKNOWN. SPECIMEN IN OSU COLLECTION. HISTORIC COLLECTION - POPULATION NOW EXTINCT
EOTYPE:
COMMENTS:
ANNUAL OBSERVATION:
OWNER: PRIVATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: MCCORKLE, D. 1980. ECOLOGICAL INVESTIGATION REPORT: OREGON SILVERSPOT BUTTERFLY - FOREST SERVICE. USDA

NAME: CORDYLANTHUS MARITIMUS SSP PALUSTRIS
COMMON NAME: SALT-MARSH BIRD'S-BEAK
EO-CODE: PDSCROJOC3*019 LAST OBS: 1990-08-29 FED STATUS:
COUNTY(s): LINCOLN FIRST OBS: 1990 STATE STATUS: LE
QUAD NAMES: NEWPORT SOUTH LAT: 443717N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240225W PRECISION: S
T-R-S: 011S011W 16 QUADCODE: 4412451 MINELEV (Feet): 0
T-R-S COMMENTS: NW4NW4 SEC 16
EO-RANK/COMM: :

DIRECTIONS: SW OF OSU HATFIELD MARINE SCIENCE CENTER, NEWPORT. 20 METERS WEST OF ASPHALT ESTUARY WALK IN A BAND EXTENDING LENGTH OF WALK IN PATCHES
DESCRIPTION: LOW SALT MARSH SILT OVER A LAYER OF SAND. ASSOICATED SPECIES: JAUMEA CARNOSA, DISTICHLIS SPICATA, SALICORNIA VIRGINICA, PLANTAGO MARITIMA, GLAUX MARITIMA, AND GRINDELIA INTEGRIFOLIA.
EO-DATA: APPROX. 2000 INDIVIDUAL PLANTS. 40% FLOWER, AND IN FRUIT. IN PATCHES OF 10 M X 300 M. 100% ARE MATURE ANNUALS.
EOTYPE:
COMMENTS: 90 ODA SIGHTING REPORT; MASSEY AND MINGO REPORTERS. COLLECTION #1304
ANNUAL OBSERVATION: 1990-2000
OWNER: STATE?
MANAGED AREA:
MANAGE COMM:
PROT COMM: DISTURBANCE CAUSED BY VISITORS WALKING AND PERHAPS TRAMPLING
BEST SOURCE: MASSEY, SUSAN; KENDRA MINGO

NAME: CORDYLANTHUS MARITIMUS SSP PALUSTRIS
COMMON NAME: SALT-MARSH BIRD'S-BEAK
EO-CODE: PDSCROJOC3*020 LAST OBS: 1990-08-29 FED STATUS:
COUNTY(s): LINCOLN FIRST OBS: 1990 STATE STATUS: LE
QUAD NAMES: NEWPORT SOUTH LAT: 443705N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240240W PRECISION: S
T-R-S: 011S011W 17 QUADCODE: 4412451 MINELEV (Feet): 0
T-R-S COMMENTS: NE4
EO-RANK/COMM: :
DIRECTIONS: S OF OSU MARINE SCIENCE CENTER. DRIVE ACROSS YAQUINA BAY BRIDGE SOUTH, AND TAKE ROAD TO MARINE SCIENCE CENTER. DO NOT DRIVE TO MARINE SCIENCE CENTER, INSTEAD TAKE RIGHT HAND FORK IN ROAD TOWARDS SOUTH BEACH. PLANTS ARE IN SALT MARSH BOUNDARY, SMALL BAY THAT WAS PREVIOUSLY DIKED OFF. DIKE IS NOW BREACHED.
DESCRIPTION: ASSOCIATED WITH SALICORNIA VIRGINICA, JAUMEA CARINOSA, DISTICHLIS SPICATA, DESCHAMPSIA CAESPITOSA, TRIGLOCHIN, GLAUX MARITIMA, PLANTAGO MARITIMA. SALT MARSH WITH SANDY SOILS.
EO-DATA: 2000 PLANTS. 40% FLOWER, 60% FRUIT. IN 10-100 M2. ALL MATURE PLANTS. IN OPEN LIGHT WITH INUNDATED AND SATURATED MOISTURE.
EOTYPE:
COMMENTS: 91 ODA SIGHTING REPORT; MASSEY AND MINGO REPORTERS
ANNUAL OBSERVATION: 1990-2000
OWNER: STATE
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE: MASSEY, SUSAN; KENDRA MINGO

NAME: CAREX BREVICAULIS
COMMON NAME: SHORT-STEMMED SEDGE
EO-CODE: PMCYP03200*010 LAST OBS: 1995-04-16 FED STATUS:
COUNTY(s): LINCOLN FIRST OBS: 1995-04-16 STATE STATUS:
QUAD NAMES: NEWPORT SOUTH LAT: 443540N ORNHP TRACK: Y
PHYSIOGRAPHIC PROV: CR LONG: 1240352W PRECISION: M
T-R-S: 011S011W 30 QUADCODE: 4412451 MINELEV (Feet):
T-R-S COMMENTS:
EO-RANK/COMM: :
DIRECTIONS: NEWPORT. SOUTH SHORE HOUSING DEVELOPMENT ADJ TO AND S OF SOUTH BEACH STATE PARK.
DESCRIPTION: STABILIZED SAND DUNE AT THE COAST; LOW-LYING SANDY AREAS, WITH PINUS CONTORTA.
EO-DATA: HERBARIUM COLLECTION.
EOTYPE:
COMMENTS: 1997 CAREX WORKING GROUP REPORT.
ANNUAL OBSERVATION:
OWNER:
MANAGED AREA:
MANAGE COMM:
PROT COMM:
BEST SOURCE:

21 Records listed.

KEY TO PRINTOUT

NAME AND COMMON NAME: The scientific and common name of the species.

EO-CODE (element occurrence code): Unique Heritage Program code for this occurrence. The first 10 characters are the code for the species, and the last 3 are the occurrence number.

COUNTY(S): County name(s)

QUAD NAMES: Name of the USGS 7.5' topographic quadrangle map(s) where the record is mapped.

PHYSIOGRAPHIC PROVINCE: Code for physiographic province.

BM = Ochoco, Blue and Wallowa Mts. **BR** =Basin and Range **CR** = Coast Range
CB = Columbia Basin **EC** = East slope of the Cascades **KM** = Klamath Mountains
SP = Snake River Plains **WC** = West slope and crest of the Cascades **WV** = Willamette Valley

T-R-S: Township, Range and Section, with township first, range second and section third (a space appears between range and section). 004S029E 32 = Township 4S, Range 29E, Section 32. Fractional townships and ranges are further defined in the T-R COMMENTS field.

T-R-S COMMENTS: Comments relating to township, range or section(s), e.g. SE4NE4 or SENE=SE ¼ of the NE ¼.

LASTOBS: Last reported sighting date, in the form YYYY-MM-DD

FIRSTOBS: First reported sighting date for this occurrence in the form YYYY-MM-DD

LAT: latitude, North - in the form DDMMSS **LONG:** longitude, West - in the form DDDMMSS

QUADCODE: Heritage Program code for the USGS 7.5' topo map.

FEDERAL STATUS:

U.S. Fish and Wildlife Service or National Marine Fisheries Service status:

LE = listed endangered **LT** = listed threatened **SOC** = species of concern
PE = proposed endangered **PT** = proposed threatened **C** = candidate for listing with enough data available for listing

STATE STATUS:

For animals, Oregon Department of Fish and Wildlife status:

LE=listed endangered **PE**=proposed endangered **PT**=proposed threatened
SC or **C**=sensitive-critical **SV** or **V**=sensitive-vulnerable **SP** or **P**=sensitive peripheral or naturally rare
SU or **U**=sensitive-undetermined

For plants, Oregon Department of Agriculture status:

LE=listed endangered **LT**=listed threatened **C**=candidate

ORNHP EOTRACK: We currently obtain locational information for only those elements marked with Y(es). Those species marked with N(o) or W(atch) have incomplete data since we do not currently actively track them.

PRECISION: Second (S) = exact location; Minute (M) = location known to nearest 1.5 miles; General (G) = location known to nearest 5 miles.

MINELEV: Minimum elevation, in feet (-1111=not determined).

EO-RANK/COMM: Relative quality of this occurrence (A=best site, B=good population or site, C=fair or small population, D=marginal or destroyed occurrence)

DIRECTIONS: Site name and direction to site

DESCRIPTION: Habitat information, e.g. aspect, slope, soils, associated species, community type, etc.

EO-DATA: Species and population biology - numbers, age, nesting success, vigor, phenology, disease, etc.

EOTYPE: For animals, type of occurrence (e.g. roost, nest, etc.)

COMMENTS: Miscellaneous comments

ANNUAL OBSERVATIONS: Summary of yearly observations

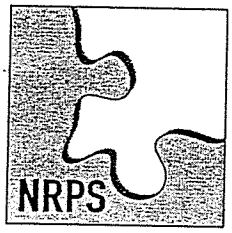
OWNER: federal, state, private, etc.

MANAGED AREA: BLM district, USFS Forest, Private Preserve, etc.

MANAGE COMM: Comments on how the site is managed.

PROT COMM (Protection Comments): Comments regarding protectibility and threats.

BEST SOURCE: Best source of information for this occurrence.



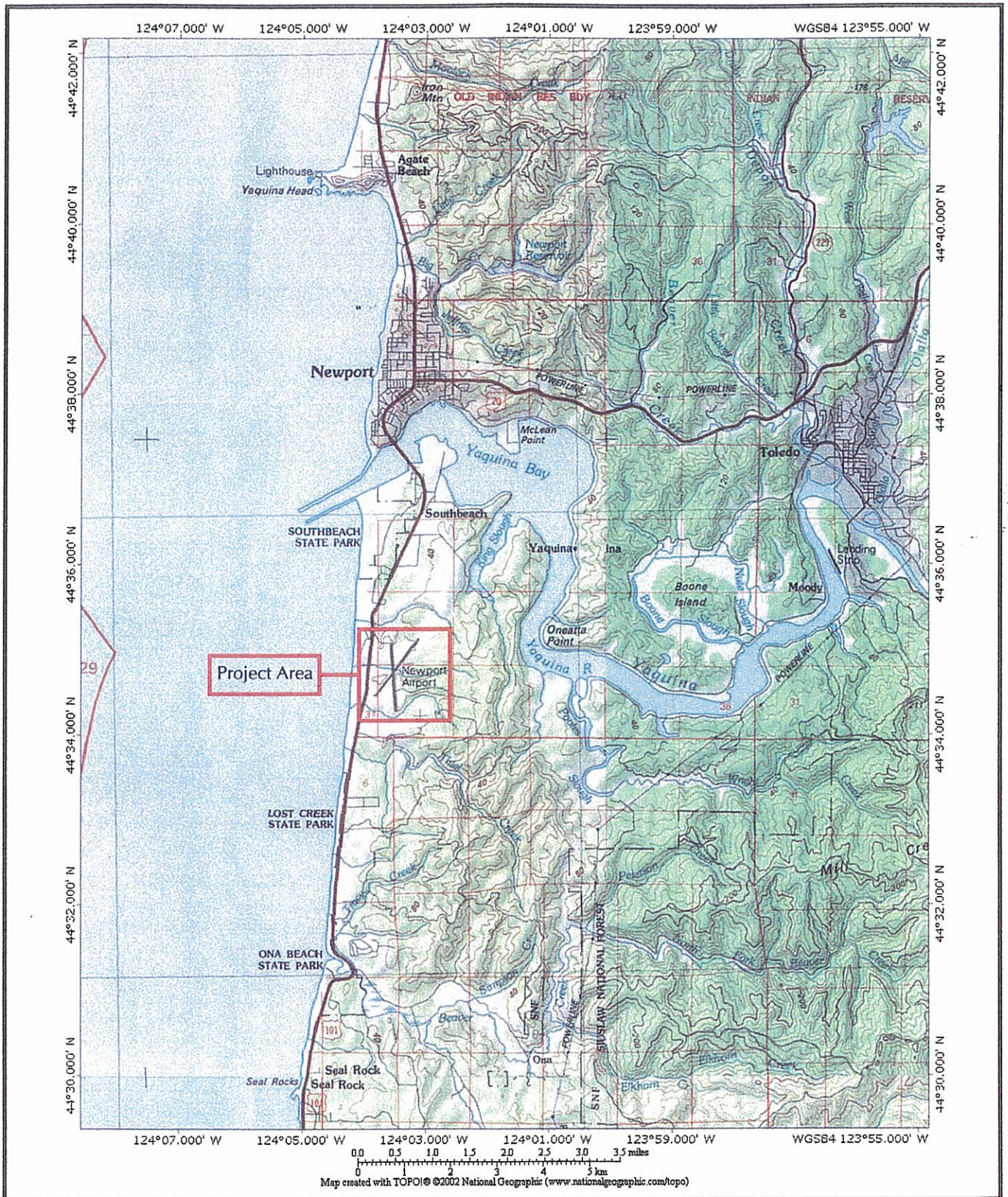
Appendix B

Figures

APPENDIX B - FIGURES

Figure 1 – Project Vicinity

Figure 2 - Preferred Master Plan Concept



Project Vicinity Map

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

Figure 1

02MP14-9/8/03

CREEK

JOHNSON

LOW POINT
ELEV. 105.85'

SEGMENTED CIRCLE AND
LIGHTED WIND CONE

HIGH POINT
ELEV. 123.03'

EXISTING 60'X 3600' RUNWAY

N 02°13'40"W (TRUE)

EXISTING 25' X 3800' TAXIWAY

OFA
OFZ
RSA
REIL
OL
ARP

240'
200'
125'
450'
225'
300'

EXISTING RPZ
500'X1000'X700'
AIRCRAFT APPROACH CAT.B
VISUAL WITH VIS. MIN ≥ 1 MILE

EXISTING RPZ
500'X1000'X700'
AIRCRAFT APPROACH CAT.B
VISUAL WITH VIS. MIN 1 MILE ≥

EXISTING
NON-AERONAUTICAL

APRON

AUTO

BUILDING SETBACK

ACCESS ROAD

U.S. HIGHWAY 101 (OREGON COAST HIGHWAY)

LEGEND

- Taxiway/Apron Pavement
- Hangar
- Access Road/Parking

NORTH

0 400 800

SCALE IN FEET

MAG. DECL 16°48' E
RATE OF CHANGE: -5 MIN/YR
DATE: MAY 2003

DATUM
HORIZONTAL: NAD 27
VERTICAL: NAVD 88

OREGON DEPARTMENT OF AVIATION

Appendix A

Glossary of Terms

Appendix A
GLOSSARY OF TERMS

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

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

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

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

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

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

AIRCRAFT APPROACH CATEGORY: a grouping of aircraft based on 1.3 times the stall speed in their landing configuration at their maximum certificated landing weight. The categories are as follows:

- *Category A:* Speed less than 91 knots.
- *Category B:* Speed 91 knots or more, but less than 121 knots.
- *Category C:* Speed 121 knots or more, but less than 141 knots.
- *Category D:* Speed 141 knots or more, but less than 166 knots.
- *Category E:* Speed greater than 166 knots.

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

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

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

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

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

ALERT AREA: see special-use airspace.

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

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

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

AUTOMATIC DIRECTION FINDER (ADF): an aircraft radio navigation system which senses and indicates the direction to a non-directional radio beacon (NDB) ground transmitter.

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

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

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

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

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

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

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

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

a predetermined circling instrument approach under IFR.

CLASS A AIRSPACE: see Controlled Airspace.

CLASS B AIRSPACE: see Controlled Airspace.

CLASS C AIRSPACE: see Controlled Airspace.

CLASS D AIRSPACE: see Controlled Airspace.

CLASS E AIRSPACE: see Controlled Airspace.

CLASS G AIRSPACE: see Controlled Airspace.

CLEAR ZONE: see Runway Protection Zone.

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

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

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

- *CLASS A:* generally, the airspace from 18,000 feet mean sea level (MSL) up to but not including flight level FL600. All persons must operate their aircraft under IFR.

- *CLASS B:* generally, the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports. The configuration of Class B airspace is unique to each airport, but typically consists of two or more layers of air space and is designed to contain all published instrument approach procedures to the airport. An air traffic control clearance is required for all aircraft to operate in the area.

- *CLASS C:* generally, the airspace from the surface to 4,000 feet above the air port elevation (charted as MSL) surrounding those airports that have an operational control tower and radar approach control and are served by a qualifying number of IFR operations or passenger enplanements. Although individually tailored for each airport, Class C airspace typically consists of a surface area with a five nautical mile (nm) radius and an outer area with a 10 nautical mile radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Two-way radio communication is required for all aircraft.

- *CLASS D:* generally, that airspace from the surface to 2,500 feet above the air port elevation (charted as MSL) surrounding those airport that have an operational control tower. Class D air space is individually tailored and configured to encompass published instrument approach procedures. Unless otherwise authorized, all

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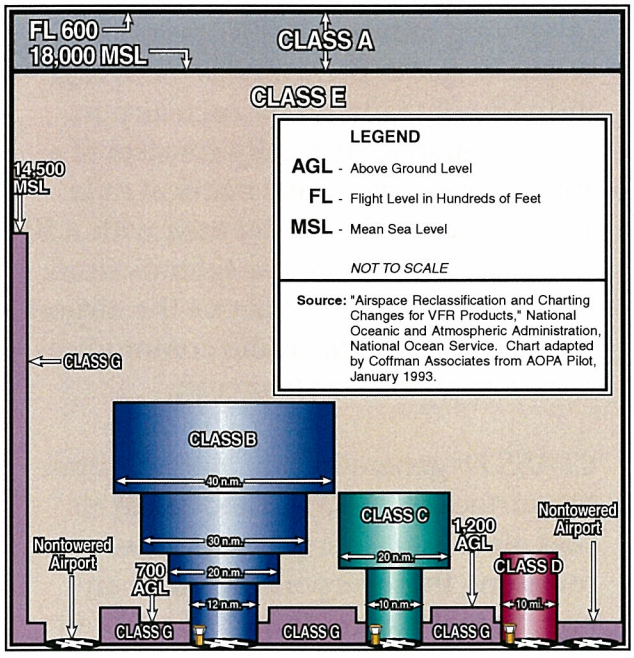
persons must establish two-way radio communication.

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

- *CLASS G:* generally, that airspace not classified as Class A, B, C, D, or E. Class G airspace is uncontrolled for all aircraft. Class G airspace extends from the surface to the overlying Class E airspace.



CONTROLLED FIRING AREA: see special-use airspace.

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

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

- *TAKEOFF RUNWAY AVAILABLE (TORA):* The runway length declared available and suitable for the ground run of an airplane taking off;

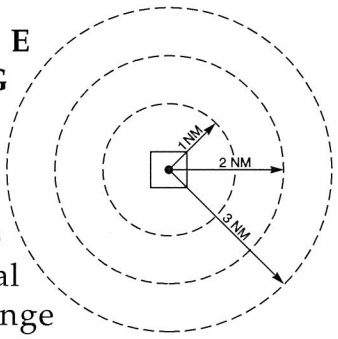
- *TAKEOFF DISTANCE AVAILABLE (TODA):* The TORA plus the length of any remaining runway and/or clear way beyond the far end of the TORA;

- *ACCELERATE-STOP DISTANCE AVAILABLE (ASDA):* The runway plus stopway length declared available for the acceleration and deceleration of an aircraft aborting a takeoff; and

- *LANDING DISTANCE AVAILABLE (LDA):* The runway length declared available and suitable for landing.

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

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



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distance of an aircraft from the DME navigational aid.

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

DOWNWIND LEG: A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg. Also see "traffic pattern."

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

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

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

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

FRANGIBLE NAVAID: a navigational aid which retains its structural integrity and stiffness up to a designated maximum load, but on impact from a greater load, breaks, distorts, or yields in such a manner as to present the minimum hazard to aircraft.

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

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

1. Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS; or

2. Visual ground aids, such as VASI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

GLOBAL POSITIONING SYSTEM: See "GPS."

GPS - GLOBAL POSITIONING SYSTEM: A system of 24 satellites

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

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

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

INSTRUMENT APPROACH: A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

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

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

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

LANDING DISTANCE AVAILABLE (LDA): see declared distances.

LOCAL TRAFFIC: aircraft operating in the traffic pattern or within sight of the tower, or aircraft known to be departing or arriving from the local practice areas, or aircraft executing practice instrument approach procedures. Typically, this includes touch-and-go training operations.

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

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

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

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

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

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

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

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

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

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

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

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

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

OBJECT FREE AREA (OFA): an area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

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

OPERATION: a take-off or a landing.

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

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

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

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

- *CATEGORY III (CAT III):* a precision approach which provides for approaches with minima less than Category II.

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

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

PROHIBITED AREA: see special-use airspace.

REMOTE COMMUNICATIONS OUTLET (RCO): an unstaffed transmitter receiver/facility remotely controlled by air traffic personnel. RCOs serve flight service stations (FSSs). RCOs were established to provide ground-to-ground communications between air traffic control specialists and pilots at satellite airports for delivering enroute clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times.

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

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

RESTRICTED AREA: see special-use airspace.

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

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

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

RUNWAY END IDENTIFIER LIGHTS (REIL): Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.

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

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

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

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

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

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

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

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

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

- *ALERT AREA:* airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.

- *CONTROLLED FIRING AREA:* airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons or property on the ground.

- *MILITARY OPERATIONS AREA (MOA):* designated airspace with defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from instrument flight rule (IFR) traffic and to identify for visual flight rule (VFR) traffic where these activities are conducted.

- *PROHIBITED AREA:* designated airspace within which the flight of aircraft is prohibited.

- *RESTRICTED AREA:* airspace designated under Federal Aviation Regulation (FAR) 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use. When not in use by the using agency, IFR/VFR operations can be authorized by the controlling air traffic control facility.

- *WARNING AREA:* airspace which may contain hazards to nonparticipating aircraft.

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

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

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

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

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

TAKEOFF RUNWAY AVAILABLE (TORA): see declared distances.

TAKEOFF DISTANCE AVAILABLE (TODA): see declared distances.

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

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

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

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

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

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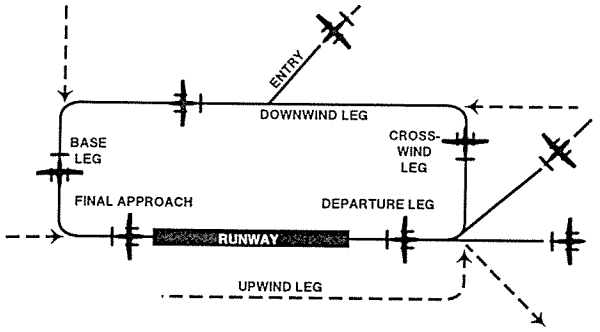
TOUCH-AND-GO: an operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. A touch-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

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

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

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

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

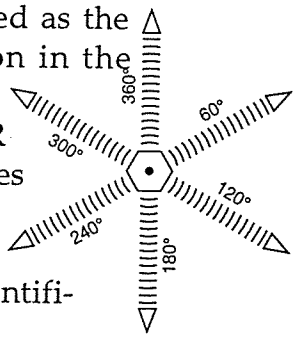


UNICOM: A nongovernment communication facility which may provide airport information at certain airports. Locations and frequencies of UNICOM's are shown on aeronautical charts and publications.

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

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

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



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

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

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

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

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

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

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

WARNING AREA: see special-use airspace.

ABBREVIATIONS

AC: advisory circular

ADF: automatic direction finder

ADG: airplane design group

AFSS: automated flight service station

AGL: above ground level

AIA: annual instrument approach

AIP: Airport Improvement Program

AIR-21: Wendell H. Ford Aviation Investment and Reform Act for the 21st Century

ALS: approach lighting system

ALSF-1: standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT I configuration)

ALSF-2: standard 2,400-foot high intensity approach light ing system with sequenced flashers (CAT II configuration)

APV: instrument approach procedure with vertical guidance

ARC: airport reference code

ARFF: aircraft rescue and firefighting

ARP: airport reference point

ARTCC: air route traffic control center

ASDA: accelerate-stop distance available

ASR: airport surveillance radar

ASOS: automated surface observation station

ATCT: airport traffic control tower

ATIS: automated terminal information service

AVGAS: aviation gasoline - typically 100 low lead (100LL)

AWOS: automated weather observation station

BRL: building restriction line

CFR: Code of Federal Regulations

CIP: capital improvement program

DME: distance measuring equipment

DNL: day-night noise level

DWL:	runway weight bearing capacity for aircraft with dual-wheel type landing gear
DTWL:	runway weight bearing capacity for aircraft with dual-tandem type landing gear
FAA:	Federal Aviation Administration
FAR:	Federal Aviation Regulation
FBO:	fixed base operator
FY:	fiscal year
GPS:	global positioning system
GS:	glide slope
HIRL:	high intensity runway edge lighting
IFR:	instrument flight rules (FAR Part 91)
ILS:	instrument landing system
IM:	inner marker
LDA:	localizer type directional aid
LDA:	landing distance available
LIRL:	low intensity runway edge lighting
LMM:	compass locator at middle marker
LOC:	ILS localizer
LOM:	compass locator at ILS outer marker
LORAN:	long range navigation
MALS:	medium intensity approach lighting system
MALSR:	medium intensity approach lighting system with runway alignment indicator lights
MIRL:	medium intensity runway edge lighting
MITL:	medium intensity taxiway edge lighting
MLS:	microwave landing system
MM:	middle marker
MOA:	military operations area
MSL:	mean sea level
NAVAID:	navigational aid
NDB:	nondirectional radio beacon
NM:	nautical mile (6,076 .1 feet)
NPIAS:	National Plan of Integrated Airport Systems
NPRM:	notice of proposed rulemaking

ODALS:	omnidirectional approach lighting system
OFA:	object free area
OFZ:	obstacle free zone
OM:	outer marker
PAC:	planning advisory committee
PAPI:	precision approach path indicator
PFC:	porous friction course
PFC:	passenger facility charge
PCL:	pilot-controlled lighting
PIW:	public information workshop
PLASI:	pulsating visual approach slope indicator
POFA:	precision object free area
PVASI:	pulsating/steady visual approach slope indicator
RCO:	remote communications outlet
REIL:	runway end identifier lighting
RNAV:	area navigation
RPZ:	runway protection zone
RTR:	remote transmitter/ receiver
RVR:	runway visibility range
RVZ:	runway visibility zone
SALS:	short approach lighting system
SASP:	state aviation system plan
SEL:	sound exposure level
SID:	standard instrument departure
SM:	statute mile (5,280 feet)
SRE:	snow removal equipment
SSALF:	simplified short approach lighting system with sequenced flashers
SSALR:	simplified short approach lighting system with runway alignment indicator lights
STAR:	standard terminal arrival route
SWL:	runway weight bearing capacity for aircraft with single-wheel type landing gear
STWL:	runway weight bearing capacity for aircraft with single-wheel tandem type landing gear
TACAN:	tactical air navigational aid
TDZ:	touchdown zone

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

Appendix B

Oregon Department of Aviation Zoning Information

MODEL PUBLIC USE AIRPORT ZONE

.010. Purpose. The purpose of the Public Use Airport zone is to encourage and support the continued operation and vitality of [public use airports] [name of specific airport(s)] in the [city] [county] by allowing certain airport-related commercial and recreational uses in accordance with state law. [ORS 836.600] **[NOTE: where the jurisdiction contains just one or a couple airports listed in OAR 738-090-0030(1), it may want to identify the airport(s) by name; otherwise, it should use "public use airports"]**

.020 Application. This zoning district applies to all publicly owned airports in the [city] [county], other than towered airports, that were registered, licensed or otherwise recognized by the Oregon Department of Transportation on or before December 31, 1994 and that, in 1994, were the base for three or more aircraft. It also applies to those privately owned public use airports in the [city] [county] identified by rule by the Department of Transportation as providing important links in air traffic in Oregon, or providing essential safety or emergency services, or being of economic importance to the county where the airport is located. [ORS 836.610(1); see also OAR 738-090-0030(1)] **[NOTE: this section reflects state law. Some jurisdictions like to include this type of provision in their zoning ordinances, while others do not. It's use is optional. Local governments choosing to include this section may wish to substitute the names of the affected airports.]**

.030 Conformance with Airport Overlay Zones. All uses, activities, facilities and structures allowed in the Public Use Airport Zone shall comply with the requirements of the Public Use Airport Safety and Compatibility Overlay Zone. In the event of a conflict between the requirements of this zone and those of the Public Use Airport Safety and Compatibility Overlay Zone, the requirements of the overlay zone shall control. [ORS 836.619; OAR 660-013-0070, 0080]

.040 Definitions.

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

B. Airport sponsor. The owner, manager, person or entity designated to represent the interests of an airport. [OAR 660-013-0020]

.050. Uses Permitted Outright. The following uses and activities are permitted outright in the Public Use Airport zone:

A. Customary and usual aviation-related activities, including but not limited to takeoffs and landings; aircraft hangars and tie-downs; construction and maintenance of airport facilities; fixed based operator facilities; a residence for an airport caretaker or security officer; and other activities incidental to the normal operation of an airport. Except as provided in this ordinance, "customary and usual aviation-related activities" do not include residential, commercial, industrial, manufacturing and other uses.

B. Air passenger and air freight services and facilities, at levels consistent with the classification and needs identified in the Oregon Department of Aviation Airport System Plan.

C. Emergency medical flight services, including activities, aircraft, accessory structures, and other facilities necessary to support emergency transportation for medical purposes. Emergency medical flight services do not include hospitals, medical offices, medical labs, medical equipment sales, and other similar uses.

D. Law enforcement and firefighting activities, including aircraft and ground-based activities, facilities and accessory structures necessary to support federal, state or local law enforcement or land management agencies engaged in law enforcement or firefighting activities. Law enforcement and firefighting activities include transport of personnel, aerial observation, and transport of equipment, water, fire retardant and supplies.

E. Search and rescue operations, including aircraft and ground based activities that promote the orderly and efficient conduct of search or rescue related activities.

F. Flight instruction, including activities, facilities, and accessory structures located at airport sites that provide education and training directly related to aeronautical activities. Flight instruction includes ground training and aeronautic skills training, but does not include schools for flight attendants, ticket agents or similar personnel.

G. Aircraft service, maintenance and training, including activities, facilities and accessory structures provided to teach aircraft service and maintenance skills and to maintain, service, refuel or repair aircraft or aircraft components. "Aircraft service, maintenance and training" includes the construction and assembly of aircraft and aircraft components for personal use, but does not include activities, structures or facilities for the manufacturing of aircraft or aircraft-related products for sale to the public.

H. Aircraft rental, including activities, facilities and accessory structures that support the provision of aircraft for rent or lease to the public.

I. Aircraft sales and the sale of aeronautic equipment and supplies, including activities, facilities and accessory structures for the storage, display, demonstration and sales of aircraft and aeronautic equipment and supplies to the public but not including activities, facilities or structures for the manufacturing of aircraft or aircraft-related products for sale to the public..

J. Crop dusting activities, including activities, facilities and structures accessory to crop dusting operations. Crop dusting activities include, but are not limited to, aerial application of chemicals, seed, fertilizer, defoliant and other chemicals or

products used in a commercial agricultural, forestry or rangeland management setting.

K. Agricultural and Forestry Activities, including activities, facilities and accessory structures that qualify as a "farm use" as defined in ORS 215.203 or "farming practice" as defined in ORS 30.930.

L. **[NOTE: Other uses, such as commercial or manufacturing uses, may be added to this list if they are consistent with applicable provisions of the acknowledged comprehensive plan and if the uses do not create a safety hazard or otherwise limit approved airport uses. For example, inside an urban growth boundary, commercial or manufacturing uses may be allowed. Outside an urban growth boundary, other uses are permitted only if authorized by a goal exception.]** [ORS 836.616; OAR 660-013-0100, 0110]

.060 Uses Permitted Subject to the Acceptance of the Airport Sponsor. The following uses and activities and their associated facilities and accessory structures are permitted in the Public Use Airport Zone upon demonstration of acceptance by the airport sponsor. [ORS 836.616(2)(j); OAR 660-013-0100(8)]

A. Aeronautic recreational and sporting activities, including activities, facilities and accessory structures at airports that support recreational usage of aircraft and sporting activities that require the use of aircraft or other devices used and intended for use in flight. Aeronautic recreation and sporting activities authorized under this paragraph include, but are not limited to, fly-ins; glider flights; hot air ballooning; ultralight aircraft flights; displays of aircraft; aeronautic flight skills contests; and gyrocopter flights, but do not include flights carrying parachutists or parachute drops (including all forms of skydiving). **[NOTE: Federally funded airports may need the concurrence of the FAA to preclude some kinds of aeronautic recreational and sporting activities.]**

B. Flights carrying parachutists, and parachute drops (including all forms of skydiving) onto an airport, but only upon demonstration that the parachutist business has secured approval to use a drop zone that is at least 10 contiguous acres. The configuration of the drop zone shall roughly approximate a square or a circle and may contain structures, trees, or other obstacles only if the remainder of the drop zone provides adequate areas for parachutists to land safely. **[NOTE: where evidence of missed landings and dropped equipment supports the need for a larger area, a larger drop zone may be required.]**

[NOTE: Where there is only one airport within the jurisdiction, the city or county may tailor the provisions of this subsection to the interests of the airport sponsor. For example, if the airport sponsor does not want to allow skydiving or ultralight activity, those provisions can be deleted from the ordinance.]

.070 Uses Permitted Under Prescribed Conditions. The following uses and activities and their associated facilities are permitted in the Public Use Airport Zone upon demonstration of compliance with the standards of this subsection.

A. **[NOTE: Other uses may be included here, subject to such conditions or standards prescribed by the local government, provided that they are consistent with applicable provisions of the acknowledged comprehensive plan and that the uses do not create a safety hazard or otherwise limit approved airport uses.]** [ORS 836.616(3); OAR 660-013-0110]

.080 **[NOTE: This model ordinance does not include standards addressing setbacks or other dimensional requirements, access, parking, landscaping, and the like. While not required by statute, a local government may wish to include such provisions in its Public Use Airport Zone.]**

MODEL PUBLIC USE AIRPORT SAFETY AND COMPATIBILITY OVERLAY ZONE
(For Public Use Airports with Instrument Approaches)[1]

.010 Purpose. The purpose of this overlay zone is to encourage and support the continued operation and vitality of public use airports with instrument approaches by establishing compatibility and safety standards to promote air navigational safety at such public use airports and to reduce potential safety hazards for persons living, working or recreating near such public use airports. [ORS 836.600; ORS 836.619; OAR 660-013-0070; OAR 660-013-0080]

.020 Definitions. [ORS 836.605; ORS 836.623(6); OAR 660-013-0020; OAR 660-013-0070(1)(a), (b); OAR 660-013-0080(1)(a)]

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

Airport Direct Impact Area. The area located within 5,000 feet of an airport runway, excluding lands within the runway protection zone and approach surface.

Airport Elevation. The highest point of an airport's usable runway, measured in feet above mean sea level.

Airport Imaginary Surfaces. Imaginary areas in space and on the ground that are established in relation to the airport and its runways. Imaginary areas are defined by the primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface.

Airport Noise Impact Boundary. Areas located within 1,500 feet of an airport runway or within established noise contour boundaries exceeding 55 Ldn.

Airport Secondary Impact Area. The area located between 5,000 and 10,000 feet from an airport runway.

Airport Sponsor. The owner, manager, or other person or entity designated to represent the interests of an airport.

Approach Surface. A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface.
(A) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
(1) 2,000 feet for a utility runway having a nonprecision instrument approach;

[1] NOTE: This overlay zone would apply to all airports, including towered airports, identified in OAR 738-090-0030(1) that use nonprecision or precision instrument approach procedures.

(2) 3,500 feet for a nonprecision instrument runway, other than utility, having visibility minimums greater than three-fourths statute mile;
(3) 4,000 feet for a nonprecision instrument runway, other than utility, having visibility minimums at or below three-fourths statute mile; and
(4) 16,000 feet for precision instrument runways.
(B) The approach surface extends for a horizontal distance of
(1) 5,000 feet at a slope of 20 feet outward for each foot upward for all utility runways;
(2) 10,000 feet at a slope of 34 feet outward for each foot upward for all nonprecision instrument runways, other than utility; and
(3) 10,000 feet at a slope of 50 feet outward for each one foot upward, with an additional 40,000 feet at slope of 40 feet outward for each one foot upward, for precision instrument runways.
(C) The outer width of an approach surface will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

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

Department of Aviation. The Oregon Department of Aviation, formerly the Aeronautics Division of the Oregon Department of Transportation.

FAA. The Federal Aviation Administration.

FAA's Technical Representative. As used in this ordinance, the federal agency providing the FAA with expertise on wildlife and bird strike hazards as they relate to airports. This may include, but is not limited to, the USDA-APHIS-Wildlife Services.

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

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

Nonprecision Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach has been approved, or planned, and for which no precision approach facilities are planned or indicated on an FAA-approved airport layout plan or other FAA planning document.

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

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.

Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities that provide both horizontal and vertical guidance, such as an Instrument Landing System (ILS) or Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA-approved airport layout plan or other FAA planning document.

Primary Surface. A surface longitudinally centered on a runway. When a runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. When a runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:
(A) 500 feet for utility runways having nonprecision instrument approaches,
(B) 500 feet for other than utility runways having nonprecision instrument approaches with visibility minimums greater than three-fourths statute mile, and
(C) 1,000 feet for nonprecision instrument runways with visibility minimums at or below three-fourths statute mile, and for precision instrument runways.

Public Assembly Facility. A permanent or temporary structure or facility, place or activity where concentrations 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 such as parking lots or bus stops.

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

Runway Protection Zone (RPZ). An area off the runway end used to enhance the protection of people and property on the ground. 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. The RPZ extends from each end of the primary surface for a horizontal distance of:
(A) 1,000 feet for utility runways.
(B) 1,700 feet for other than utility runways having nonprecision instrument approaches.
(C) 2,500 feet for precision instrument runways.
[NOTE: the outer width of the RPZ is specified by airport type in OAR 660, Division 13, Exhibit 4]

Significant. As it relates to bird strike hazards, "significant" means a level of increased flight activity by birds across an approach surface or runway that is more than incidental or occasional, considering the existing ambient level of flight activity by birds in the vicinity.

Structure. Any constructed or erected object which requires 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.

Transitional Surface. Those surfaces that extend upward and outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to the point of intersection with the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.

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.

Water Impoundment. Includes wastewater treatment settling ponds, surface mining ponds, detention and retention ponds, artificial lakes and ponds, and similar water features. A new water impoundment includes an expansion of an existing water impoundment except where such expansion was previously authorized by land use action approved prior to the effective date of this ordinance.

.030 Imaginary Surface and Noise Impact Boundary Delineation. The airport elevation, the airport noise impact boundary, and the location and dimensions of the runway, primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface shall be delineated for each airport subject to this overlay zone and shall be made part of the Official Zoning Map. **[NOTE: Airports utilizing best management practices should include direct and secondary impact boundaries in this list.]** All lands, waters and airspace, or portions thereof, that are located within these boundaries or surfaces shall be subject to the requirements of this overlay zone. [ORS 836.619; OAR 660-013-0040(8); OAR 660-013-0070(1); OAR 660-013-0080(1)]

.040 Notice of Land Use and Permit Applications within Overlay Zone Area. Except as otherwise provided herein, written notice of applications for land use or limited land use decisions, including comprehensive plan or zoning amendments, in an area within this overlay zone, shall be provided to the airport sponsor and the Department of Aviation in the same manner as notice is provided to property owners entitled by law to written notice of land use or limited land use applications. [ORS 836.623(1); OAR 738-100-010; ORS 215.416(6); ORS 227.175(6)]

A. Notice shall be provided to the airport sponsor and the Department of Aviation when the property, or a portion thereof, that is subject to the land use or limited land use application is located within 10,000 feet of the sides or ends of a runway:

B. Notice of land use and limited land use applications shall be provided within the following timelines.

1. Notice of land use or limited land use applications involving public hearings shall be provided prior to the public hearing at the same time that written notice of such applications is provided to property owners entitled to such notice.

2. Notice of land use or limited land use applications not involving public hearings shall be provided at least 20 days prior to entry of the initial decision on the land use or limited land use application.

C. Notice of the decision on a land use or limited land use application shall be provided to the airport sponsor and the Department of Aviation within the same timelines that such notice is provided to parties to a land use or limited land use proceeding.

D. Notices required under Paragraphs A-C of this section need not be provided to the airport sponsor or the Department of Aviation where the land use or limited land use application meets all of the following criteria:

1. Would only allow structures of less than 35 feet in height;

2. Involves property located entirely outside the approach surface;

3. Does not involve industrial, mining or similar uses that emit smoke, dust or steam; sanitary landfills or water impoundments; or radio, radiotelephone, television or similar transmission facilities or electrical transmission lines; and

4. Does not involve wetland mitigation, enhancement, restoration or creation.

.050 Height Limitations on Allowed Uses in Underlying Zones. All uses permitted by the underlying zone shall comply with the height limitations in this Section. When height limitations of the underlying zone are more restrictive than those of this overlay zone, the underlying zone height limitations shall control. [ORS 836.619; OAR 660-013-0070]

A. Except as provided in subsections B and C of this Section, no structure or tree, plant or other object of natural growth shall penetrate an airport imaginary surface. [ORS 836.619; OAR 660-013-0070(1)]

B. For areas within airport imaginary surfaces but outside the approach and transition surfaces, where the terrain is at higher elevations than the airport runway surfaces such that existing structures and permitted development penetrate or would penetrate the airport imaginary surfaces, a local government may authorize structures up to 35 feet in height.

C. Other height exceptions or variances may be permitted when supported in writing by the airport sponsor, the Department of Aviation and the FAA. Applications for height variances shall follow the procedures for other variances and shall be subject to such conditions and terms as recommended by the Department of Aviation and the FAA.

.060 Procedures. An applicant seeking a land use or limited land use approval in an area within this overlay zone shall provide the following information in addition to any other information required in the permit application: **[NOTE: where uses otherwise allowed outright become "limited" under this ordinance, the local government needs to identify the applicable administrative review process.]**

A. A map or drawing showing the location of the property in relation to the airport imaginary surfaces. The Planning Department shall provide the applicant with appropriate base maps upon which to locate the property.

B. 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.

C. If a height variance is requested, letters of support from the airport sponsor, the Department of Aviation and the FAA.

.070 Land Use Compatibility Requirements. **[Option 1 – Minimum Requirements]** Applications for land use or building permits for properties within the boundaries of this overlay zone shall comply with the requirements of this chapter as provided herein. [ORS 836.619; OAR 660-013-0080]

A. Noise. Within airport noise impact boundaries, land uses shall be established consistent with the levels identified in OAR 660, Division 13, Exhibit 5. A declaration of anticipated noise levels shall be attached to any subdivision or partition approval or other land use approval or building permit affecting land within airport noise impact boundaries. In areas where the noise level is anticipated to be at or above 55 Ldn, prior to issuance of a building permit for construction of a noise sensitive land use (real property normally used for sleeping or as a school, church, hospital, public library or similar use), the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design that will achieve an indoor noise level equal to or less than 55 Ldn. [OAR 340-035-0045(1)(d), (4)] **[NOTE: FAA Order 5100.38A, Chapter 7 provides that interior noise levels should not exceed 45 decibels in all habitable zones.]**

B. Outdoor lighting. No new or expanded industrial, commercial or recreational use shall project lighting directly onto an existing runway or taxiway or into existing airport approach surfaces except where necessary for safe and convenient air travel. Lighting for these uses shall incorporate shielding in their designs to reflect light away from airport approach surfaces. No use shall imitate airport lighting or impede the ability of pilots to distinguish between airport lighting and other lighting.

C. Glare. No glare producing material, including but not limited to unpainted metal or reflective glass, shall be used on the exterior of structures located within an approach surface or on nearby lands where glare could impede a pilot's vision.

D. Industrial emissions. No new industrial, mining or similar use, or expansion of an existing industrial, mining or similar use, shall, as part of its regular operations, cause emissions of smoke, dust or steam that could obscure visibility within airport approach surfaces, except upon demonstration, supported by substantial evidence, that mitigation measures imposed as approval conditions will reduce the potential for safety risk or incompatibility with airport operations to an insignificant level. The review authority shall impose such conditions as necessary to ensure that the use does not obscure visibility.

E. Communications Facilities and Electrical Interference. Proposals for the location of new or expanded radio, radiotelephone, and television transmission facilities and electrical transmission lines within this overlay zone shall be coordinated with the Department of Aviation and the FAA prior to approval. **[NOTE: See the additional safeguards set out in the Best Management Practices**

alternative below. The Department of Aviation highly recommends those safeguards.]

F. Use prohibitions in RPZ. Notwithstanding the underlying zoning, the following uses are prohibited in the RPZ.

1. New residential development.

2. Public assembly facilities.

G. Landfills. No new sanitary landfills shall be permitted within 10,000 feet of any airport runway. Expansions of existing landfill facilities within these distances shall be permitted only upon demonstration that the landfills are designed and will operate so as not to increase the likelihood of bird/aircraft collisions. Timely notice of any proposed expansion shall be provided to the airport sponsor, the Department of Aviation and the FAA, and any approval shall be accompanied by such conditions as are necessary to ensure that an increase in bird/aircraft collisions is not likely to result.

OR

.070 Land Use Compatibility Requirements. **[Option 2 – Best Management Practices]** Applications for land use or building permits for properties within the boundaries of this overlay zone shall comply with the requirements of this chapter as provided herein. [ORS 836.619; ORS 836.623(1); OAR 660-013-0080]

A. Noise. Within airport noise impact boundaries, land uses shall be established consistent with the levels identified in OAR 660, Division 13, Exhibit 5. A declaration of anticipated noise levels shall be attached to any subdivision or partition approval or other land use approval or building permit affecting land within airport noise impact boundaries. In areas where the noise level is anticipated to be at or above 55 Ldn, prior to issuance of a building permit for construction of a noise sensitive land use (real property normally used for sleeping or as a school, church, hospital, public library or similar use), the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design that will achieve an indoor noise level equal to or less than 55 Ldn. **[NOTE: FAA Order 5100.38A, Chapter 7 provides that interior noise levels should not exceed 45 decibels in all habitable zones.]**

B. Outdoor lighting. No new or expanded industrial, commercial or recreational use shall project lighting directly onto an existing runway or taxiway or into existing airport approach surfaces except where necessary for safe and convenient air travel. Lighting for these uses shall incorporate shielding in their designs to reflect light away from airport approach surfaces. No use shall imitate airport lighting or impede the ability of pilots to distinguish between airport lighting and other lighting.

C. Glare. No glare producing material, including but not limited to unpainted metal or reflective glass, shall be used on the exterior of structures located within an approach surface or on nearby lands where glare could impede a pilot's vision.

D. Industrial emissions. No new industrial, mining or similar use, or expansion of an existing industrial, mining or similar use, shall, as part of its regular operations, cause emissions of smoke, dust or steam that could obscure visibility within airport approach surfaces, except upon demonstration, supported by substantial evidence, that mitigation measures imposed as approval conditions will reduce the potential for safety risk or incompatibility with airport operations to an insignificant level. The review authority shall impose such conditions as necessary to ensure that the use does not obscure visibility.

E. Communications Facilities and Electrical Interference. No use shall cause or create electrical interference with navigational signals or radio communications between an airport and aircraft. Proposals for the location of new or expanded radio, radiotelephone, and television transmission facilities and electrical transmission lines within this overlay zone shall be coordinated with the Department of Aviation and the FAA prior to approval. Approval of cellular and other telephone or radiocommunication towers on leased property located within airport imaginary surfaces shall be conditioned to require their removal within 90 days following the expiration of the lease agreement. A bond or other security shall be required to ensure this result.

F. Limitations and Restrictions on Allowed Uses in the RPZ, Approach Surface, and Airport Direct and Secondary Impact Areas. The land uses identified in Table 1, and their accessory uses, are permitted, permitted under limited circumstances, or prohibited in the manner therein described. In the event of conflict with the underlying zone, the more restrictive provisions shall control. As used in this section, a limited use means a use that is allowed subject to special standards specific to that use.

TABLE 1

Location	Public Airport	Residential	Commercial	Industrial	Institutional	Farm Use	Roads/ Parking	Utilities	Parks/Open Space	Golf Courses	Athletic Fields	Sanitary Landfills	Water Treatment Plants	Mining	Water Impoundment	Wetland
RPZ [1]	L [2]	N	N	N	N	P [3]	L [4]	L [5]	L [6]	L [7]	N	N	N	N	N	N
Approach Surface [8]	L [9]	L [10]	L [9]	L [9]	L [9]	P [3]	P	L [5]	P	L [7,9]	L [9]	N	N	L [11]	N/L [12]	L
Direct Impact Area	P	L [14]	L [15]	P	L [15]	P [3]	P	L [5]	P	L [7]	L [14]	N	N	L [11]	L [16]	L
Secondary Impact Area	P	P	P	P	P	P [3]	P	L [5]	P	L [7]	P	N	N	L [11]	L [16]	L

P = Use is Permitted
L = Use is Allowed Under Limited Circumstances (See Footnotes)
N = Use is Not Allowed

Table 1 Footnotes:

1. No structures shall be allowed within the Runway Protection Zone. Exceptions shall be made only for structures accessory to airport operations whose location within the RPZ has been approved by the Federal Aviation Administration.
2. In the RPZ, public airport uses are restricted to those uses and facilities that require location in the RPZ.
3. Farming practices that minimize wildlife attractants are encouraged.
4. Roads and parking areas are permitted in the RPZ only upon demonstration that there are no practicable alternatives. Lights, guardrails and related accessory structures are prohibited. Cost may be considered in determining whether practicable alternatives exist.
5. In the RPZ, utilities, powerlines and pipelines must be underground. In approach surfaces and in airport direct and secondary impact areas, the proposed height of utilities shall be coordinated with the airport sponsor and the Department of Aviation.
6. Public assembly facilities are prohibited within the RPZ.
7. Golf courses may be permitted only upon demonstration, supported by substantial evidence, that management techniques will be utilized to reduce existing wildlife attractants and avoid the creation of new wildlife attractants. Such techniques shall be required as conditions of approval. Structures are not permitted within the RPZ. For purposes of this Chapter, tee markers, tee signs, pin cups and pins are not considered to be structures.
8. Within 10,000 feet from the end of the primary surface of a nonprecision instrument runway, and within 50,000 feet from the end of the primary surface of a precision instrument runway.
9. Public assembly facilities may be allowed in an approach surface only if the potential danger to public safety is minimal. In determining whether a proposed use is appropriate, consideration shall be given to: proximity to the RPZ; density of people per acre; frequency of use; level of activity at the airport; and other factors relevant to public safety. In general, high density uses should not be permitted within airport approach surfaces, and non-residential structures should be located outside approach surfaces unless no practicable alternatives exist.
10. Residential densities within approach surfaces should not exceed the following densities: (1) within 500 feet of the outer edge of the RPZ, 1 unit/acre; (2) within 500 to 1,500 feet of the outer edge of the RPZ, 2 units/acre; (3) within 1,500 to 3,000 feet of the outer edge of the RPZ, 4 units/acre.
11. Mining operations involving the creation or expansion of water impoundments shall comply with the requirements of this Chapter regulating water impoundments.
12. Water impoundments are prohibited within 5,000 feet from the end of a runway. See Section .080 regulating water impoundments beyond 5,000 feet from the edge or end of a runway.
13. Wetland mitigation required for projects located within an approach surface or airport direct or secondary impact area shall be authorized only upon demonstration, supported by substantial evidence, that it is impracticable to provide mitigation outside of these areas. Proposals for wetland mitigation shall be coordinated with the airport sponsor, the Department of Aviation, the FAA, and wetland permitting agencies prior to the issuance of required permits. Wetland mitigation shall be designed and located to avoid creating a wildlife hazard or increasing hazardous movements of birds across runways and approach surfaces. Conditions shall be imposed as are appropriate and necessary to prevent in perpetuity an increase in hazardous bird movements across runways and approach surfaces.

See Section .090 for best management practices for airports located near significant wetlands or wildlife habitat areas.

14. Within the transition surface, residential uses and athletic fields are not permitted.
15. Within the transition surface, overnight accommodations, such as hotels, motels, hospitals and dormitories, are not permitted.
16. See Section .080 prohibiting or regulating water impoundments beyond 5,000 feet from the edge or end of a runway.

.080 Water Impoundments within Approach Surfaces and Airport Direct and Secondary Impact Boundaries. Any use or activity that would result in the establishment or expansion of a water impoundment shall comply with the requirements of this section. (ORS 836.623(2); OAR 660-013-0080(1)(f)]

A. No new or expanded water impoundments of one-quarter acre in size or larger are permitted:

1. Within an approach surface and within 5,000 feet from the end of a runway; or

2. On land owned by the airport sponsor that is necessary for airport operations.

OR **[for airports where it can be demonstrated with substantial evidence that new water impoundments would result in a significant increase in hazardous movements of birds across runways or approach surfaces, taking into consideration mitigation measures or conditions that could reduce safety risks and incompatibility] [ORS 836.623(2)(b), (c); ORS 836.623(4), (5)]**

A. No new or expanded water impoundments of one-quarter acre in size or larger are permitted within 5,000 feet from the end or edge of a runway.

B. The establishment of a new water impoundment one-quarter acre in size or larger between 5,000 and 10,000 feet of a runway outside an approach surface and between 5,000 feet and 40,000 feet within an approach corridor for an airport with an instrument approach may be permitted only upon determination that such water impoundment, with reasonable and practicable mitigation measures, is not likely to result in a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces. **[NOTE: FAA Part 77 discourages water impoundments within 50,000 feet of a runway within an approach surface.]** [ORS 836.623(2)(c); OAR 660, Division 13, Exhibit 1, Section 3(b)(C);]

1. Process. An application for approval of a new water impoundment shall be considered utilizing the review process applied to applications for conditional use permits. In addition to the parties required by law to be mailed written notice of the public hearing on the application, written

notice of the hearing shall be mailed to the airport sponsor, the Seattle Airports District Office of the FAA, the FAA's technical representative, and the Oregon Department of Aviation.

a. Prior to filing its application, the applicant shall coordinate with the airport sponsor, the Department of Aviation, and the FAA (Seattle Airports District Office) and FAA's technical representative regarding the proposed water impoundment, its short and long term potential to significantly increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces, and proposed mitigation.

(1) For water impoundments individually or cumulatively exceeding five (5) acres in size on the subject property, the applicant shall prepare a draft bird strike study as provided in subsection .2 of this section. The airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative shall have 45 days to review the study draft. Their comments shall be included and addressed in a final bird strike study.

(2). For water impoundments that do not individually or cumulatively exceed five (5) acres in size on the subject property, the bird strike study requirements in subsection 2 of this section may be reduced or waived upon agreement by the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative if the applicant can demonstrate, to the satisfaction of the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative that the proposed water impoundment, with appropriate short and long term mitigation, will not result in a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces. As used herein, "appropriate mitigation" means small scale measures of proven reliability that can be applied in perpetuity and that the applicant has the financial resources to support.

b. An application shall not be deemed complete for land use review purposes until the applicant has filed with the Director the final bird strike study addressing comments from the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative. When no bird strike study is required, the application shall not be deemed complete until the applicant has filed with the Director correspondence or other proof

demonstrating agreement among the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative that no bird strike study is required.

2. Bird Strike Study. A bird strike study required under this section shall contain at least the following information:

   a. A description of the proposed project, its location in relation to the airport, and the bird strike study area, which shall include at least the project site, the airport property, all lands within 10,000 feet from the end or edge of the airport runway, and other surrounding habitat areas which form the local bird ecosystem.

   b. A description of bird feeding, watering and roosting habitats in the bird strike study area, including discussion of feeding behavior and food sources and identification of loafing, watering, roosting and nesting area locations.

   c. A description of existing and planned airport operations and air traffic patterns and any available history of bird strike incidents.

   d. Wildlife surveys and documentation of existing bird species, populations, activities and flight patterns in the bird strike study area. The surveys shall address bird species and their composition; bird population estimates and densities per unit area; feeding behavior; food sources; seasonal use patterns; frequency of occurrence; location of loafing, roosting and nesting areas; and analysis of the relation of bird flight movements to airport traffic patterns and navigational safety. The airport sponsor shall provide approach and departure air space information up to five statutory miles from the airport.

   e. An evaluation of the anticipated effects of the proposal on the population density, behavior patterns, movements and species composition of birds within the bird strike study area and of the impact of these effects on air navigation and safety considering possible mitigation.

   f. Identification and evaluation of proposed and alternative short and long term mitigation measures that would prevent a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways and approach surfaces that otherwise might result from the proposed use. The evaluation shall discuss the proven reliability of proposed measures, their effectiveness over both the short and long term, their costs, and the applicant's financial ability to assure their perpetual

implementation, *i.e.* ongoing implementation for as long as a potential bird strike hazard persists.

g. Such other information as is recommended by the FAA's technical representative or is required to demonstrate compliance with the requirements of subsection .3 of this section.

3. Required Findings. The determination whether a proposed new water impoundment, with reasonable and practicable mitigation measures, is likely to significantly increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces shall be based upon the proposal's potential, both in the short term and in the long term, to significantly increase bird strike hazards to air navigation, and the appropriateness, effectiveness and affordability of proposed mitigation measures or other conditions needed to reduce bird strike hazards. In determining compliance with this standard, the findings shall address each of the following factors:

a. The demonstrated overall effectiveness and reliability of proposed measures and conditions, in both the short and long term and under similar circumstances and conditions, to avoid a significant increase in bird strike hazards to air navigation. Experimental measures or measures not based on accepted technology and industry practices shall be considered ineffective, inappropriate and of unproven reliability.

b. The economic, social and environmental impacts of proposed measures to the neighboring community and the affected natural environment.

c. The applicant's ability to pay for necessary short and long-term mitigation measures, including fallback measures that may be required if initially proposed mitigation measures prove ineffective, and to assure the perpetual implementation of those measures for as long as a potential bird strike hazard persists. An applicant's failure to demonstrate its financial ability to assure the perpetual implementation of necessary and appropriate measures shall render those measures unreasonable and impracticable for purposes of the application.

d. The applicant's ability to accurately monitor the effectiveness of mitigation over time.

e. The potential impacts to navigational safety and air travel if the applicant cannot perform necessary mitigation measures or maintain those measures in perpetuity, or if those measures prove

to be ineffective at avoiding a significant increase in bird strike hazards to air navigation.

f. The applicant's reclamation plan.

4. Mitigation Measures and Approval Conditions. A decision approving an application shall require, as conditions of approval, all measures and conditions deemed appropriate and necessary to prevent in perpetuity a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways and approach surfaces.

a. Only customary measures based on accepted technology and industry practice may be considered and imposed as approval conditions.

b. Serious consideration shall be given to all measures and conditions recommended by the Department of Aviation and the FAA and FAA's technical representative. Generally, such measures and conditions shall be attached to a decision approving an application unless findings are adopted, supported by substantial evidence, demonstrating why such measures and conditions are not necessary to reduce bird hazard impacts resulting from the water impoundment to an insignificant level.

c. A decision to approve shall require from the applicant a performance bond or other form of secure financial support. Such bond or security shall be in an amount sufficient to assure perpetual implementation of appropriate and necessary mitigation measures for as long as a potential bird strike hazard persists.

d. A decision to approve shall require appropriate monitoring of the effectiveness of mitigation over time. Upon request, monitoring data and reports shall be made available to the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative. The decision shall allow for modifications to approval conditions should existing mitigation measures prove ineffective at preventing a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways and approach surfaces. Modifications to approval conditions shall be considered utilizing the review process applied to applications for conditional use permits.

5. Exemptions. The requirements of this section shall not apply to:

a. Storm water management basins established by an airport identified under ORS 836.610(1).

b. Seaplane landing areas within airports identified under ORS 836.610(1).

.090 Wetland Mitigation, Creation, Enhancement and Restoration within Approach Surfaces and Airport Direct and Secondary Impact Boundaries.

A. Notwithstanding the requirements of Section .080, wetland mitigation, creation, enhancement or restoration projects located within areas regulated under Section .080 shall be allowed upon demonstration of compliance with this requirements of this Section.

B. Wetland mitigation, creation, enhancement or restoration projects existing or approved on the effective date of this ordinance and located within areas regulated under Section .080 are recognized as lawfully existing uses.

C. To help avoid increasing safety hazards to air navigation near public use airports, the establishment of wetland mitigation banks in the vicinity of such airports but outside approach surfaces and areas regulated under Section .080 is encouraged.

D Applications to expand wetland mitigation projects in existence as of the effective date of this ordinance, and new wetland mitigation projects, that are proposed within areas regulated under Section .080 shall be considered utilizing the review process applied to applications for conditional use permits and shall be permitted upon demonstration that:

1. It is not practicable to provide off-site mitigation; or

2. The affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water discharge, and the area proposed for mitigation is located outside an approach surface.

E. Wetland mitigation permitted under subsection D. of this Section shall be designed and located to avoid creating a wildlife hazard or increasing hazardous movements of birds across runways or approach surfaces.

F. Applications to create, enhance or restore wetlands that are proposed to be located within approach surfaces or within areas regulated under Section .080, and that would result in the creation of a new water impoundment or the expansion of an existing water impoundment, shall be considered utilizing the review process applied to applications for conditional use permits and shall be permitted upon demonstration that:

1. The affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water discharge; and

2. The wetland creation, enhancement or restoration is designed and will be maintained in perpetuity in a manner that will not increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces.

G. Proposals for new or expanded wetland mitigation, creation, enhancement or restoration projects regulated under this Section shall be coordinated with the airport sponsor, the Department of Aviation, the FAA and FAA's technical representative, the Oregon Department of Fish & Wildlife (ODFW), the Oregon Division of State Lands (DSL), the US Fish & Wildlife Service (USFWS), and the US Army Corps of Engineers (Corps) as part of the permit application.

H. A decision approving an application under this Section shall require, as conditions of approval, measures and conditions deemed appropriate and necessary to prevent in perpetuity an increase in hazardous bird movements across runways and approach surfaces.

.100 Nonconforming Uses.

A. These regulations shall not be construed to require the removal, lowering or alteration of any structure not conforming to these regulations. These regulations shall not require any change in the construction, alteration or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this overlay zone.

B. Notwithstanding subsection A. of this section, the owner of any existing structure that has an adverse effect on air navigational safety as determined by the Department of Aviation shall install or allow the installation of obstruction markers as deemed necessary by the Department of Aviation, so that the structures become more visible to pilots.

C. No land use or limited land use approval or other permit shall be granted that would allow a nonconforming use or structure to become a greater hazard to air navigation than it was on the effective date of this overlay zone.

.110 Avigation Easement. Within this overlay zone, the owners of properties that are the subjects of applications for land use or limited land use decisions, for building permits for new residential, commercial, industrial, institutional or recreational buildings or structures intended for inhabitation or occupancy by humans or animals, or for expansions of such buildings or structures by the lesser of 50% or 1000 square feet, shall, as a condition of obtaining such approval or permits, dedicate an avigation easement to the airport sponsor. The avigation easement shall be in a form acceptable to the airport

sponsor and shall be signed and recorded in the deed records of the County. The avigation easement shall allow unobstructed passage for aircraft and ensure safety and use of the airport for the public. Property owners or their representatives are responsible for providing the recorded instrument prior to issuance of building permits.

Runway Protection Zone

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

(a) The RPZ extends from each end of the primary surface, as defined in Attachment 1, Section 10, for a horizontal distance of:

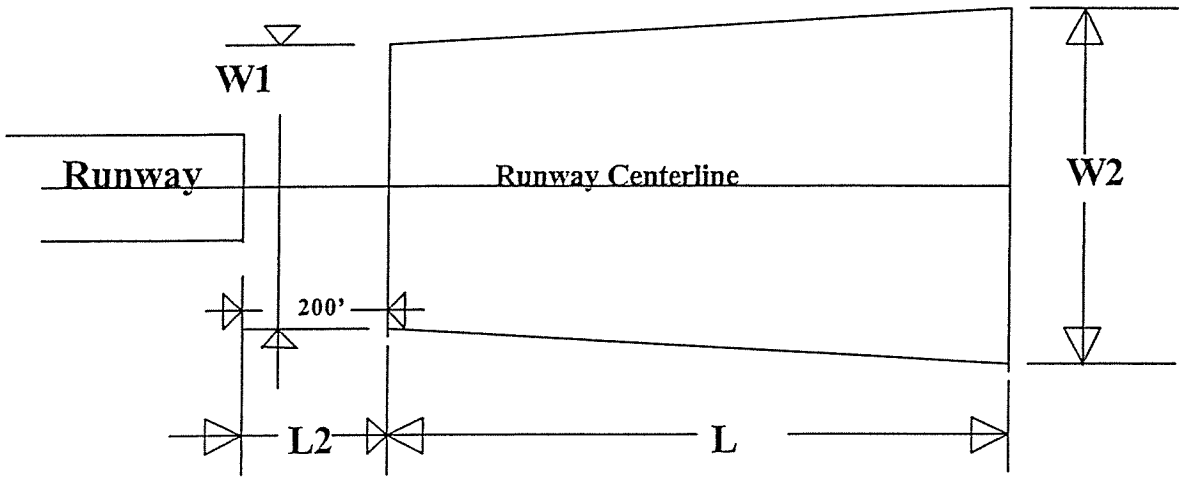
(A) 1,000 feet for all utility and visual runways.

(B) 1,700 feet for all non-precision instrument runways other than utility;

(C) 2,500 feet for all precision instrument runways.

Exhibit # 4

Runway Protection Zone (RPZ) Dimensions



L2= 200 feet for paved runways; 0' for unpaved runways.

Visibility Approach Minimums 1/	Facilities Expected To Serve	Dimensions			
		Length L Feet (meters)	Inner Width W1 Feet (meters)	Outer Width W2 Feet (meters)	RPZ Acres
Visual and Not Lower Than 1-mile (1600 m)	Small Aircraft Exclusively	1,000 (300)	250 (75)	450 (135)	8.035
	Aircraft Approach Categories A&B	1,000 (300)	500 (150)	700 (210)	13.770
	Aircraft Approach Categories C&D	1,700 (510)	500 (150)	1,010 (303)	29.465
Not Lower than 3/4-mile (1200m)	All Aircraft	1,700 (510)	1,000 (300)	1,510 (453)	48.978
Lower than 3/4-mile (1,200m)	All Aircraft	2,500 (750)	1,000 (300)	1,750 (525)	78.914

1/ The RPZ dimensional standards are for the runway end with the specified approach visibility minimums.

Aircraft Approach Categories:

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.

Exhibit #4

Noise Compatability

LAND USES	YEARLY DAY-NIGHT AVERAGE SOUND LEVEL (DNL) IN DECIBELS				
RESIDENTIAL	55-65	65-70	70-75	75-80	80+
Residential, other than mobile homes, transient lodgings	Y	N[1]	N[1]	N	N
Mobile Home Parks / Mobile homes	Y	N	N	N	N
Transient lodgings (models, hotels)	Y	N[1]	N[1]	N	N
PUBLIC USE					
Schools	Y	N[1]	N[1]	N	N
Churches, auditoriums, concert halls, hospitals, nursing homes	Y	25	30	N	N
Governmental services	Y	Y	25	30	N
Transportation/Parking	Y	Y	Y[2]	Y[3]	Y[4]
COMMERCIAL					
Offices-business and professional	Y	Y	25	30	N
Wholesale/retail-materials, hardware and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]
Retail trade-general	Y	Y	25	30	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]
Communications	Y	Y	25	30	N
MANUFACTURING					
Manufacturing-general	Y	Y	Y[2]	Y[3]	Y[4]
Photographic and optical	Y	Y	25	30	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y
RECREATIONAL					
Outdoor sports arenas/spectator sports	Y	Y[5]	Y[5]	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N
Nature exhibits and zoos	Y	N	N	N	N
Amusement parks, resorts, camps	Y	Y	Y	N	N
Golf courses, riding stables, water recreation	Y	Y	25	30	N

Exhibit # 5

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

NOTES

1. Where the community determines 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. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

5. Land use compatible provided special sound reinforcement systems area installed.

6. Residential Buildings require an NLR of 25 dB.

7. Residential Buildings require an NLR of 30 dB.

8. Residential Buildings not permitted.

Source: F.A.R. Part 150, Appendix A, Table 1.

Exhibit #5

Public Use Airport Overlay Zone

1. Airport Approach Zone means the land that underlies the approach surface, excluding the Runway Protection Zone.

2. Airport Imaginary Surfaces means surfaces established with relation to the airport and to each runway based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway shall be determined by the most precise approach existing or planned for that runway end.

3. Approach Surface means a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.
(a) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
(A) 1,250 feet for that end of a utility runway with only visual approaches.
(B) 1,500 feet for that end of a runway other than a utility runway with only visual approaches.
(C) 2,000 feet for that end of a utility runway with a non-precision instrument approach.
(D) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater than three-fourths statute mile.
(E) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile.
(F) 16,000 feet for precision instrument runways.
(b) The approach surface extends for a horizontal distance of:
(A) 5,000 feet at a slope of 20 to 1 for all utility and visual runways.
(B) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility.
(C) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
(c) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

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

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

Exhibit #1

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

7. Transitional Surface means those surfaces which extend upward and outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to the point of intersection with the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces, which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

8. Non Precision instrument runway means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach procedure has been approved, or planned, and for which no precision approach facilities are planned, or indicated on an FAA planning document.

9. Precision instrument runway means a runway having an existing instrument approach procedure utilizing an instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR), It also means a runway for which a precision approach system is planned and is so indicated by an FAA approved airport layout plan or any other FAA planning document.

10. Runway Protection Zone (RPZ) means an area off the runway end to enhance the protection of people and property on the ground. The dimensions of the RPZ for Public-use airports shall be as depicted in attachment # 4 of these rules.

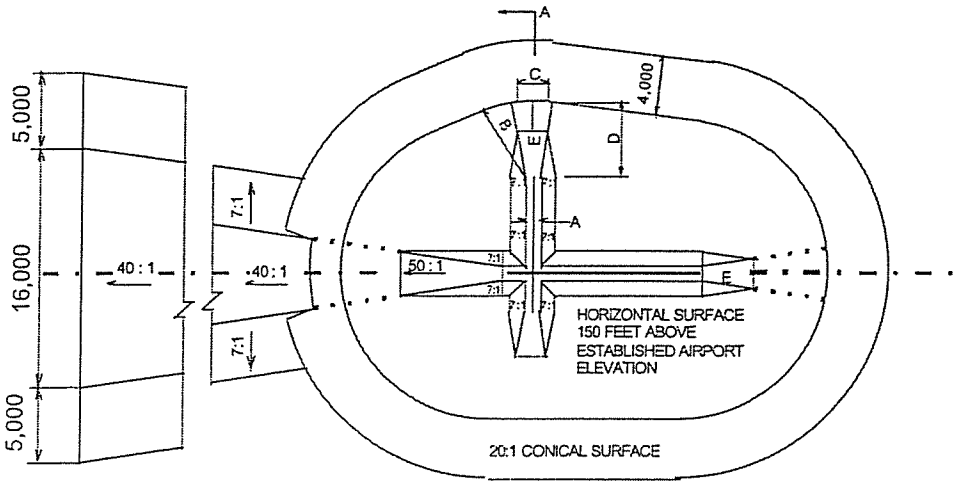
11. Utility runway means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 maximum gross weight and less.

Exhibit #1

12. Visual runway means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, or by any planning documentsubmitted to the FAA by competent authority.

Exhibit # 1

PUBLIC USE AIRPORT OVERLAY ZONE



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1000	1000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
					C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A- UTILITY RUNWAYS
B- RUNWAYS LARGER THAN UTILITY
C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

Exhibit # 1

Appendix C

Design Requirements

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B	
Airplane Design Group II	
Airplane wingspan	78.99 feet
Primary runway end approach visibility minimums are not lower than 3/4 mile	
Other runway end approach visibility minimums are not lower than 3/4 mile	
Airplane undercarriage width (1.15 x main gear track)	9.00 feet
Airport elevation	160 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:	
VFR operations with no intervening taxiway	700 feet
VFR operations with one intervening taxiway	700 feet
VFR operations with two intervening taxiways	700 feet
IFR approach and departure with approach to near threshold	2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:	
VFR operations	2500 feet
IFR departures	2500 feet
IFR approach and departure with approach to near threshold	2500 feet
IFR approach and departure with approach to far threshold	2500 feet plus 100 feet for each 500 feet of threshold stagger.
IFR approaches	3400 feet
Runway centerline to parallel taxiway/taxilane centerline . 239.5	240 feet
Runway centerline to edge of aircraft parking 250.0	250 feet
Runway width	75 feet
Runway shoulder width	10 feet
Runway blast pad width	95 feet
Runway blast pad length	150 feet
Runway safety area width	150 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater	300 feet
Runway object free area width	500 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater	300 feet
Clearway width	500 feet
Stopway width	75 feet
Obstacle free zone (OFZ):	
Runway OFZ width	400 feet
Runway OFZ length beyond each runway end	200 feet
Inner-approach OFZ width	400 feet
Inner-approach OFZ length beyond approach light system	200 feet
Inner-approach OFZ slope from 200 feet beyond threshold	50:1
Inner-transitional OFZ slope	0:1
Runway protection zone at the primary runway end:	
Width 200 feet from runway end	1000 feet
Width 1900 feet from runway end	1510 feet

Length		1700 feet
Runway protection zone at other runway end:		
Width 200 feet from runway end		1000 feet
Width 1900 feet from runway end		1510 feet
Length		1700 feet
Departure runway protection zone:		
Width 200 feet from the far end of TORA		500 feet
Width 1200 feet from the far end of TORA		700 feet
Length		1000 feet
Threshold surface at primary runway end:		
Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		20:1
Threshold surface at other runway end:		
Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		20:1
Taxiway centerline to parallel taxiway/taxilane centerline	104.8	105 feet
Taxiway centerline to fixed or movable object	65.3	65.5 feet
Taxilane centerline to parallel taxilane centerline	96.9	97 feet
Taxilane centerline to fixed or movable object	57.4	57.5 feet
Taxiway width	24.0	35 feet
Taxiway shoulder width		10 feet
Taxiway safety area width	79.0	79 feet
Taxiway object free area width	130.6	131 feet
Taxilane object free area width	114.8	115 feet
Taxiway edge safety margin		7.5 feet
Taxiway wingtip clearance	25.8	26 feet
Taxilane wingtip clearance	17.9	18 feet

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

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B	
Airplane Design Group II	
Airplane wingspan	78.99 feet
Primary runway end approach visibility minimums are not lower than CAT I	
Other runway end approach visibility minimums are not lower than 3/4 mile	
Airplane undercarriage width (1.15 x main gear track)	9.00 feet
Airport elevation	160 feet
Airplane tail height	24.02 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane	Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:		
VFR operations with no intervening taxiway		700 feet
VFR operations with one intervening taxiway		700 feet
VFR operations with two intervening taxiways		705 feet
IFR approach and departure with approach to near threshold		2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:		
VFR operations		2500 feet
IFR departures		2500 feet
IFR approach and departure with approach to near threshold		2500 feet
IFR approach and departure with approach to far threshold		2500 feet plus 100 feet for each 500 feet of threshold stagger.
IFR approaches		3400 feet
Runway centerline to parallel taxiway/taxilane centerline	239.5	300 feet
Runway centerline to edge of aircraft parking	400.0	400 feet
Runway width		100 feet
Runway shoulder width		10 feet
Runway blast pad width		120 feet
Runway blast pad length		150 feet
Runway safety area width		300 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater		600 feet
Runway object free area width		800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater		600 feet
Clearway width		500 feet
Stopway width		100 feet
Obstacle free zone (OFZ):		
Runway OFZ width		400 feet
Runway OFZ length beyond each runway end		200 feet
Inner-approach OFZ width		400 feet
Inner-approach OFZ length beyond approach light system		200 feet
Inner-approach OFZ slope from 200 feet beyond threshold		50:1
Inner-transitional OFZ height H	53.1	53.1 feet
Inner-transitional OFZ slope		6:1
Runway protection zone at the primary runway end:		

Width 200 feet from runway end		1000 feet
Width 2700 feet from runway end		1750 feet
Length		2500 feet

Runway protection zone at other runway end:

Width 200 feet from runway end		1000 feet
Width 1900 feet from runway end		1510 feet
Length		1700 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA		500 feet
Width 1200 feet from the far end of TORA		700 feet
Length		1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		34:1

Threshold surface at other runway end:

Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		20:1

Taxiway centerline to parallel taxiway/taxilane centerline	104.8	105 feet
Taxiway centerline to fixed or movable object	65.3	65.5 feet
Taxilane centerline to parallel taxilane centerline	96.9	97 feet
Taxilane centerline to fixed or movable object	57.4	57.5 feet
Taxiway width	24.0	35 feet
Taxiway shoulder width		10 feet
Taxiway safety area width	79.0	79 feet
Taxiway object free area width	130.6	131 feet
Taxilane object free area width	114.8	115 feet
Taxiway edge safety margin		7.5 feet
Taxiway wingtip clearance	25.8	26 feet
Taxilane wingtip clearance	17.9	18 feet

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

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B	
Airplane Design Group III	
Airplane wingspan	117.99 feet
Primary runway end approach visibility minimums are not lower than CAT I	
Other runway end approach visibility minimums are not lower than CAT I	
Airplane wheelbase is 60 feet or more	
Airplane undercarriage width (1.15 x main gear track)	9.00 feet
Airport elevation	160 feet
Airplane tail height	24.02 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane	Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:		
VFR operations with no intervening taxiway		700 feet
VFR operations with one intervening taxiway		700 feet
VFR operations with two intervening taxiways		852 feet
IFR approach and departure with approach to near threshold		2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:		
VFR operations		2500 feet
IFR departures		2500 feet
IFR approach and departure with approach to near threshold		2500 feet
IFR approach and departure with approach to far threshold		2500 feet plus 100 feet for each 500 feet of threshold stagger.
IFR approaches		3400 feet
Runway centerline to parallel taxiway/taxilane centerline	259.0	350 feet
Runway centerline to edge of aircraft parking	400.0	400 feet
Runway width		100 feet
Runway shoulder width		20 feet
Runway blast pad width		140 feet
Runway blast pad length		200 feet
Runway safety area width		400 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater		800 feet
Runway object free area width		800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater		800 feet
Clearway width		500 feet
Stopway width		100 feet
Obstacle free zone (OFZ):		
Runway OFZ width		400 feet
Runway OFZ length beyond each runway end		200 feet
Inner-approach OFZ width		400 feet
Inner-approach OFZ length beyond approach light system		200 feet
Inner-approach OFZ slope from 200 feet beyond threshold		50:1
Inner-transitional OFZ height H	49.4	49.4 feet
Inner-transitional OFZ slope		6:1
Runway protection zone at the primary runway end:		

Width 200 feet from runway end		1000 feet
Width 2700 feet from runway end		1750 feet
Length		2500 feet

Runway protection zone at other runway end:

Width 200 feet from runway end		1000 feet
Width 2700 feet from runway end		1750 feet
Length		2500 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA		500 feet
Width 1200 feet from the far end of TORA		700 feet
Length		1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		34:1

Threshold surface at other runway end:

Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		34:1

Taxiway centerline to parallel taxiway/taxilane centerline	151.6	152 feet
Taxiway centerline to fixed or movable object	92.6	93 feet
Taxilane centerline to parallel taxilane centerline	139.8	140 feet
Taxilane centerline to fixed or movable object	80.8	81 feet
Taxiway width	39.0	60 feet
Taxiway shoulder width		20 feet
Taxiway safety area width	118.0	118 feet
Taxiway object free area width	185.2	186 feet
Taxilane object free area width	161.6	162 feet
Taxiway edge safety margin		15 feet
Taxiway wingtip clearance	33.6	34 feet
Taxilane wingtip clearance	21.8	22 feet

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

AIRPORT AND RUNWAY DATA

Airport elevation	160 feet
Mean daily maximum temperature of the hottest month	65.10 F.
Maximum difference in runway centerline elevation	30 feet
Length of haul for airplanes of more than 60,000 pounds	1000 miles
Wet and slippery runways	

RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN

Small airplanes with approach speeds of less than 30 knots	300 feet
Small airplanes with approach speeds of less than 50 knots	810 feet
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes	2300 feet
95 percent of these small airplanes	2830 feet
100 percent of these small airplanes	3360 feet
Small airplanes with 10 or more passenger seats	3860 feet
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load	5250 feet
75 percent of these large airplanes at 90 percent useful load	6640 feet
100 percent of these large airplanes at 60 percent useful load	5460 feet
100 percent of these large airplanes at 90 percent useful load	7030 feet
Airplanes of more than 60,000 pounds	Approximately 6020 feet

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

Appendix D

PCI Results

RESULTS

Using the data collected during the visual inspection, the MicroPAVER software calculated a Pavement Condition Index (PCI) for each pavement section inspected by averaging the PCIs for each sample unit inspected in the section. Using each section's PCI, a Pavement Condition Rating (PCR) was assigned. The PCIs from this inspection are shown in Table 1. This table also contains PCIs from past inspections as well as projected PCIs for 2006 and 2011. The projections were based on pavement deterioration models developed by MicroPAVER using the inspection data from other pavements in the same airport category as your airport, and with the same surface type and use. The Branch Report in Appendix 1 summarizes current pavement condition by branch while the Section Report in Appendix 2 lists pavement condition by section. The current PCR is shown graphically in Figure NE-3.

Table 1. Past, Present and Future Pavement Condition Indices.

Branch	Section	Inspections				Forecast	
		1988[1]	1995	1999	2001	2006	2011
A01NE	01	80	77	77	77	63	49
	02	---	79	78	72	65	58
	03	80	84	84	82	68	54
	04		72	68	63	49	39
	05	---	---	99	97	84	70
	06	---	88	88	88	75	60
A02NE	01	---	---	100	100	87	73
AH16NE	01	95	99	99	99	87	73
AH34NE	01	33	98[2]	98	97	90	83
R02NE	01	---	---	75	59	33	8
	02	64	98[2]	98	98	89	81
R16NE	01A	---	73	73	64	33	8
	01B	---	73	73	59	33	8
	01C	---	73	73	64	33	8
	02A	88	85	84	79	73	48
	02B	88	85	84	71	41	15
	02C	88	85	84	76	71	41
	03A	71	73	73	67	58	50
	03B	71	73	73	62	53	46
	03C	71	73	73	68	59	51
T01NE	01	---	97	97	97	84	73
T02NE	01	---	97	96	94	81	71
	02	---	100	100	93	87	84
T03NE	01	---	---	---	100	86	75
TANE	01	96	100	99	100[2]	86	75
	02	98	95	95	100[2]	86	75
TBNE	01	100	96	96	92	80	70

[1] Inspection completed by others.
[2] Increase in PCI due to maintenance or rehabilitation.

Table 1. Past, Present and Future Pavement Condition Indices - continued.

Branch	Section	Inspections				Forecast	
		1988[1]	1995	1999	2001	2006	2011
TCNE	01	---	96	96	97[2]	84	73
	02	30	95[2]	94	100[2]	89	87
TDNE	01	88	90	89	86	75	66
TENE	01	33	98[2]	98	98	88	86
	02	42	99[2]	99	99	88	87
	03	66	84	72	72	55	52

[1] Inspection completed by others.
[2] Increase in PCI due to maintenance or rehabilitation.

Section PCIs at the airport range from a low of 59 (a PCR of "Good") to a high of 100 (a PCR of "Excellent"). The average PCI for all airport pavements is 84, corresponding to an overall PCR of "Very Good". Figure NE-4 shows how much pavement area is associated with each Pavement Condition Rating category and also shows pavement condition distribution from the inspections conducted in 1999 and 1995. The primary distresses observed during the inspection were longitudinal and transverse cracking and weathering and raveling with isolated occurrences of alligator cracking, block cracking, depressions, oil spillage, patching and rutting.

A graphical representation of the projected PCIs listed in Table 1 is shown in Figure NE-5.

RECOMMENDATIONS

Data collected during the visual condition survey were used by the MicroPAVER software to generate the Network Maintenance Report contained in Appendix 3. This report identifies, for each pavement section, the recommended localized maintenance activities that should be completed to repair the defects observed during the visual inspection. The repair quantities identified in the report were extrapolated to cover the entire pavement section, based on the inspected sample units. If the repair activities identified are completed, the rate of deterioration will be slowed.

The localized maintenance activities to be applied are selected by the MicroPAVER software based on the Maintenance & Repair (M&R) policy established for the Oregon aviation system. The report results indicate that, over the entire airport, the following quantities of localized maintenance are needed:

- 6,010 linear feet of asphalt concrete crack sealing.
- 36 square feet of asphalt concrete shallow patching.

The MicroPAVER software can also identify and schedule recommended global maintenance activities (applied over an entire section) such as fog seals, slurry seals and other surface treatments, as well as major rehabilitation activities such as asphalt concrete overlays and complete reconstruction. MicroPAVER schedules global

Appendix E

Seal Rock Water District Letter

December 18, 2002

Mr. Rainse E. Anderson, PE
Aviation Services Director
W & H Pacific
9755 S.W. Barnes Road, Suite 300
Portland, OR 97225

RE: City of Newport Airport Expansion Plans

Dear Mr. Anderson:

Thank you for the presentation at the Newport City Council Chambers on Tuesday, December 17, 2002.

As I mentioned to you after the presentation, the Seal Rock Water District is responsible for providing water to the airport and any additional construction which may occur to the airport over time. The Seal Rock Water District is composed of primarily of low-income residents and retired residents, with a very small commercial base. The District is facing a large capital construction project that will not increase the extremely high water rates already paid by those served by the District, but also will result in a significant one-time charge estimated at $1,000 for each lot within the District.

The Seal Rock Water District has made the determination that any costs for capital improvements for commercial interests and development must be paid by those interests. Dedicated revenue bonds may be available to assist in such development, depending on the credit and financial ability of the commercial interest(s) at the time of construction.

The Seal Rock Water District supports the plans for the expansion of the Newport airport and for the additional economic development. However, the District cannot afford to provide the significant infrastructure improvements that might, or might not, be needed. Whether there are hotels, a golf course, etc. is strictly a matter of conjecture (and hope!), but certainly not anytime in the near future.

However, it makes little sense to develop a 20 year Master Plan without considering such possibilities. To that end, the Seal Rock Water District offers the following options, in no particular priority:

1. A water tower at Idaho Point in South Beach can be constructed through a combination of grants (through the airport) and revenue bonds guaranteed by the airport. Once constructed, the facility would be a Seal Rock Water District facility. Other interests include a potential convention center, manufacturing facilities, and other commercial development within the South Beach area, some of which may be directly connected with the airport. The advantage of such a facility would be, depending on the size of construction, adequate storage for potential interruptible water supplies and significant

water pressure for fire protection. Any determination of total size would need to be covered in the Master Plan so that proper sizing of the facility and connecting lines would be financed at the time of construction. Specifically, it makes little sense to build a 250,000 gallon facility if the long term need is for 750,000 gallons.

2. Addition of booster stations on the existing pipeline, and any extensions, to provide higher water pressure. This doesn't address the future development discussed above, but such costs are borne by the developer at the time of the development either through fees, grants, revenue bonds or a combination, depending on the size of the improvements.
3. Use fire sprinklers in all future construction and, when remodeling, add fire sprinklers to existing structures. The advantage is that there is less water pressure needed to protect the facilities and it results in lower insurance premiums. It also might be less expensive than some other options.

There may be other options that become available in the future.

If you have any questions, or need any clarification, please feel free to contact me at (541) 563-3143 or Mr. John Garcia, Chair, at (541) 867-6597.

Sincerely,

Glen Morris
Commissioner
Seal Rock Water District

cc. John Garcia, Chair

Appendix F

FAA Comments & Responses

U.S. Department
of Transportation

**Federal Aviation
Administration**

Seattle Airports District Office
1601 Lind Avenue, S. W., Ste 250
Renton, Washington 98055-4056

August 12, 2004

Mr. Charles Riordan
Senior Aviation Planner
Oregon Dept. of Aviation
3040 25th Street SE.
Salem, OR 97310

Dear Mr. Riordan:

Airport Layout Plan (ALP) Final Review Comments
Newport Municipal Airport
AIP No. 3-41-4100-13

The coordination for review within the Federal Aviation Administration (FAA) has been completed on the draft Airport Layout Plan set of drawings for the proposed improvements at Newport Municipal Airport. Our review comments, previously sent to you on June 10, 2004, are again provided herein.

Also, an aeronautical study (no. 2004-ANM-367-NRA) was conducted on the proposed development to determine its effect on the safe and efficient utilization of the navigable airspace by aircraft. There were no objections based on that evaluation, but there were additional review comments arising from the coordination with other FAA divisions. Airway Facilities provided comments (see page 3) which were echoed by Air Traffic.

The Airport Layout Plan report will be accepted upon receipt of two copies of the final document. The FAA will approve the ALP and drawings related to Federal Aviation Regulation (FAR) Part 77 once our comments are reflected on the final drawings, with proposed development subject to environmental approval, where applicable. Please send us 3 sets of prints, signed and dated by the airport sponsor, plus 1 set of mylars (unsigned), and the ALP CADD files on disk, when they are finalized. We will return one 1 approved set to the sponsor. Please call me at (425) 227-2652 if I can be of further assistance.

Sincerely,

Don M. Larson
Airport Planner

Enclosures

cc:
Dennis Reno, Airport Supervisor
Rainse Anderson, W&H Pacific

SEA641:DMLARSON:dml:8/12/04:X2652:FILE:Oregon-13:Mc:Newport

FINAL FAA REVIEW COMMENTS
DRAFT AIRPORT LAYOUT PLAN (ALP) SET
NEWPORT MUNICIPAL AIRPORT

Sheet 1 – COVER SHEET

1. The month of submittal for final approval (which will probably be at least August, 2004) should be used. *Revised to September 2004.*

Sheet 2 – AIRPORT LAYOUT PLAN

2. At such time as either the pavement or the edge lighting on Runway 16-34 is due for a major rehab, a cost comparison will have to be made between narrowing the runway vs. the cost of relocating the lighting system. The design standard runway width for airplane design group II (ADG-II) is 75', and 100' for ADG-III. For purposes of the ALP drawings, it is advisable to plan for narrowing Runway 16-34 to 100' at some point during the planning period. Show narrowing to 100' on the drawing, and note for "Future" in the Runway Data table. *A cost benefit analysis should be performed at the time of the next runway improvement project design to investigate the possibility of reducing the runway width to 100 feet. A note was added to the ALP and the CIP to address this issue.*

3. As shown, a future upgrade from airport reference code (ARC) B-II to ARC B-III will require 800' of runway safety area (RSA) before and beyond the declared landing distance available (LDA) and beyond the accelerate-stop distance available (ASDA). As the terrain drops off precipitously just beyond the ends of both runway-end existing 600' RSA's, it is unlikely that the required additional 200' on each end can be attained at reasonable cost through construction. Therefore, it is recommended that the increased RSA lengths be planned on the ALP through a future 200' displaced threshold on Runway 16, a 500' displaced threshold (an increase of 200') on Runway 34, and the use of declared distances (the future ASDA and LDA shown for Runway 16-34 in the Declared Distances table correctly account for this action). *Future displaced thresholds have been added for both runway ends to accommodate RSA and OFA future lengths.*

4. Along the future extension of the west side parallel taxiway, add "See Note 2". *Added.*

5. Show the radius critical area for the VORTAC as 1,000' (not 750'), per FAA Order 6820.10, VOR, VOR/DME, and VORTAC Siting Criteria. *The critical area radius for the VORTAC was revised to 1000 feet.*

6. The "Existing/Future" runway protection zone label for Runway 16 should be re-labeled "Future". Based on the current approach minima for the instrument landing system (ILS), an "Existing" RPZ of 1000' x 1700' x 1510' should be shown and labeled "Vis. Min. ≥ ¾ Mi." (i.e., visibility minima not lower than ¾ mile). If the minima are not to be increased in the future, this smaller-only RPZ could be shown as "Existing/Future". *Lower than ¾ mile visibility minima are to be accommodated in the future, therefore, the existing RPZ was revised as noted above.*

7. The "Existing/Future" runway protection zone label for Runway 34 should be re-labeled "Future". Based on the current approach minima for Runway 34, an "Existing" RPZ of 500' x 1700' x 1010' should be shown and labeled "Vis. Min. ≥ 1 Mi." (i.e., visibility minima not lower than 1 mile). If the minima are not to be increased in the future, this smaller-only RPZ could be shown as "Existing/Future". *Greater than or equal to ¾ mile visibility minima are to be accommodated in the future, therefore, the existing RPZ was revised to 500' x 1000' x 700' for Approach Category B aircraft..*

8. Runway 2-20 is not correctly aligned on the wind rose with the azimuth or the drawing (the true bearing is off a few degrees). *The alignment was modified to line up correctly.*

9. All runway end elevations should be shown to the nearest tenth of a foot, per AC 150/5300-13, para. 503.b. *Elevations are now shown to the nearest tenth of a foot per AVN website elevations (as directed by Don Larson).*

10. **On the Airport Data table**

a. For Airport Reference Point, change to:

N 44° 34' 49.3" W 124° 03' 28.5" (listed coordinates do not plot correctly) *Listed coorsdinates were changed as requested.*

b. For Navigational Aids, delete "AWOS-3" (not a navaid). *Delete from Navaids.*

11. **On the Runway Data table**

a. For Runway Width, Future, 16 and 34, change to "100'" (see comment no. 2). *Future runway width was not modified per recommendation that the width be evaluated at the time of the next major runway improvement project.*

b. For Instrument Approach Aids, Existing, 16 and 34, add "GPS". *Added.*

c. For both RSA and OFA Dimensions, Future, 16 and 34, change to "600'" and refer to a note (also to be added) that the 800' RSA will be met in part through the use of declared distances (see comment no. 3). *Dimension was changed and a note was added.*

d. As specified in Advisory Circular 150/5300-13, Airport Design, show runway end coordinates to the nearest .01 second accuracy, as follows:

Runway 16 - **N 44° 35' 12.63" W 124° 3' 33.74"**
Runway 34 - **N 44° 34' 19.39" W 124° 3' 30.26"**
Runway 02 - **N 44° 34' 43.45" W 124° 3' 34.73"**
Runway 20 - **N 44° 35' 7.01" W 124° 3' 9.59"** *Runway end coordinates were revised as noted.*

e. For Threshold Displacement, Future, Runway 16, change to "200'"; and for Runway 34, change to "500'". *Changed as noted.*

f. For Declared Distances, Existing and Future, 16 and 34, all TORA should be "5398'".*TORA revised to 5398'.*

Sheet 5 – RUNWAY 16/34 & 2/20 PROTECTION ZONE PROFILES

12. On both runway profiles, indicate the actual profiles of the runway; at a minimum, the intersection elevation of 129', as shown on the plan views. *Actual profiles of the runway are not available, but the intersection elevation has been shown as requested.*

ALL DRAWINGS

13. Revisions must be made where appropriate for consistency with the above comments.*Additional revisions were made to other plans as appropriate.*

NEW COMMENTS (POST-COORDINATION)

14. Airway Facilities provided the following comments: (1) The hangars designated #15 are very close to the VOR, and will require careful coordination, and possible non-metallic materials in order to avoid VOR impacts. The sponsor should file a Notice of Proposed Construction early in the design stage when a decision is made to pursue construction. (2) The AWOS should have a 500 foot radius protection zone shown, in which proposed buildings must be analyzed for impact on wind measurements. (3) No VOR relocation is planned, and if needed, would need to be funded by the sponsor. *1) Noted. 2) Noted. 3) Future VOR was removed.*