

# Appendix C.2 Historical, Architectural, Archaeological, and Cultural Resources

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Oregon SHPO Concurrence Letter

Archaeological and Historical Resources Technical Memorandum

Section 106 Coordination Letters



# Oregon SHPO Concurrence Letter





# Oregon

Theodore R. Kulongoski, Governor

## Parks and Recreation Department

State Historic Preservation Office

725 Summer St NE, Ste C

Salem, OR 97301-1266

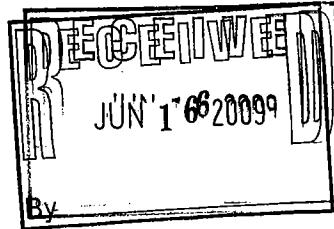
(503) 986-0671

Fax (503) 986-0793

[www.oregonheritage.org](http://www.oregonheritage.org)

6/12/2009

Ms. Cayla Morgan  
FAA Seattle Airports Dist Office  
1601 Lind Ave SW Ste 250  
Renton, WA 98055-4056



RE: SHPO Case No. 09-1083  
Hillsboro Airport Parallel Runway 12L/30R Proj  
1N 2W, Hillsboro, Washington County

Dear Cayla:

Our office recently received your report about the project referenced above. I have reviewed your report and agree that the project will have no effect on any known cultural resources. No further archaeological research is needed with this project.

Please be aware, however, that if during development activities you or your staff encounters any cultural material (i.e., historic or prehistoric), all activities should cease immediately and an archaeologist should be contacted to evaluate the discovery. Under state law (ORS 358.905-955) it is a Class B misdemeanor to impact an archaeological site on public or private land in Oregon. Impacts to Native American graves and cultural items are considered a Class C felony (ORS 97.740-760). If you have any questions regarding any future discovery or my letter, feel free to contact our office at your convenience.

Matt Diederich, MAIS

SHPO Archaeologist

(503) 986-0577

[Matthew.Diederich@state.or.us](mailto:Matthew.Diederich@state.or.us)





**Archaeological and Historical Resources  
Technical Memorandum**





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*Final*

**Hillsboro Airport  
Parallel Runway Project 12L/30R  
Archaeological and Historical Resources  
Technical Memorandum**

Prepared for  
**Port of Portland**

June 2009

Prepared by  
**Albert C. Oetting, PhD, RPA, and Tama K. Tochiwara, MA**  
**Heritage Research Associates, Inc.**

and  
**CH2MHILL**



# Summary

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Heritage Research Associates, Inc. gathered archaeological and historical background data for the proposed Parallel Runway 12L/30R at Hillsboro Airport (HIO), Hillsboro, Oregon. Systematic surveys of the defined Areas of Potential Effect (APE) were conducted to assess the likely presence of archaeological materials and the presence of potentially significant above-ground historical resources. The Area of Potential Effect (APE) is defined as the area of significant noise impact which is within the 65 DNL contour for the 2015 Proposed Action Alternative because historic buildings could be adversely affected by increases in noise levels. The APE also includes the area of potential ground disturbance which could affect archaeological resources, referred to as the archaeological study area (Exhibit 1).

## Existing Conditions

The APE consists of industrial airport use surrounded by a mix of light residential and agriculture properties. No properties on or potentially eligible for the National Register of Historic Places are located within the APE. All of the land within the archaeological study area consists of open agricultural fields. Several archaeological investigations have been conducted in the vicinity of HIO, including three previous surveys on airport property. Archaeological sites have been recorded within one mile of HIO, but no prehistoric or historical archaeological materials have been identified on airport property.

## Recommendations

A systematic pedestrian survey of the 170-acre archaeological study area was conducted by walking parallel transects at 20-meter intervals. Ground visibility varied, ranging from 5 percent to 40 percent in most areas. Heritage Research Associates Archaeologist Albert C. Oetting directed the field survey, assisted by Kendra Carlisle and Aimee Leavitt. No prehistoric or historical archaeological artifacts, features, or sites were observed during the survey. A reconnaissance level windshield survey of the APE was conducted by Heritage Research Associates Historic Preservation Specialist Tara K. Tochiara. No historic resources that would be adversely affected by the proposed action were observed.

The research and field observations conducted in this study indicate that a “No Properties Affected” determination by the Federal Aviation Administration (FAA) in consultation with the Oregon State Historic Preservation Office (SHPO) would be appropriate. No further archaeological or historical investigations are recommended for the surveyed APE. No subsurface archaeological investigations are recommended, given past disturbances to the land and negative results of previous discovery probes.

If archaeological resources are encountered during construction of the HIO Parallel Runway Project 12L/30R, all earth disturbance in the vicinity of the find should be halted immediately, in accordance with state and federal laws. A qualified archaeologist should be consulted to investigate and evaluate the discovery, and to recommend subsequent courses of action in consultation with the Port of Portland, FAA, Oregon SHPO, and the appropriate tribes.



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## **Exhibits** (included at the end of the memorandum)

- 1 Location of Area of Potential Effects for the Proposed Parallel Runway 12L/30R Project
- 2 Hillsboro Airport Parallel Runway Area, View South along Runway 2/20
- 3 Edge of Agricultural Field (Left) and RSA (Right), View South along Runway 12/30
- 4 Portion of Perimeter Fence on South Side of NW Airport Road, with the Surveyed Outside Parcel Visible Beyond the Fence
- 5 Charlie Pad Location
- 6 Survey Archaeologists Following Stubble Rows in Field
- 7 Rock Embedded in Surface Probably Shattered by Agricultural/Construction Activities
- 8 Historic Resource Analysis



# Acronyms and Abbreviations

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APE	Area of Potential Effect
CFR	Code of Federal Regulations
DLC	Donation Land Claim
EA	Environmental Assessment
FAA	Federal Aviation Administration
GLO	General Land Office
HBC	Hudson's Bay Company
HIO	Hillsboro Airport
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NWC	North West Company
ORS	Oregon Revised Statutes
Port	Port of Portland
RSA	Runway Safety Area
SHPO	State Historic Preservation Office





# Glossary

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**DNL.** DNL is the abbreviation for “level of noise day and night.” DNL is the most frequently used metric in noise compatibility planning. DNL has been adopted by the federal government as the primary metric for noise compatibility planning purposes. DNL 65 represents the level of significant noise exposure under Federal guidelines.



# Archaeological and Historical Resources

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The Port of Portland (Port), which owns and operates Hillsboro Airport (HIO), is preparing a National Environmental Policy Act (NEPA) Environmental Assessment (EA) in conformance with Federal Aviation Administration (FAA) NEPA requirements for airport actions for the proposed Parallel Runway 12L/30R Project at HIO in the city of Hillsboro, Washington County, Oregon. This project proposes to construct the following features on mostly undeveloped airport property:

- **Parallel Runway 12L/30R.** This new runway would be 3,600 feet long and 60 feet wide. These dimensions are consistent with the runway's intended use by piston-engine propeller-driven airplanes.
- **Taxiway D.** This taxiway would parallel the new runway on the east at a distance of 240 feet and would extend to the southeast, where it would connect to the extension of Taxiway C.
- **Relocated Charlie Helipad.** The relocated Charlie Helipad would be parallel to and 500 feet east of Runway 12L/30R. The relocated pad would be 1,500 feet long, the same length as the current pad. The relocated Charlie Helipad would be centered at about the mid point of the new parallel runway.

This technical memorandum provides background data on archaeological and historical resources in the vicinity of HIO and reports the results of systematic field surveys conducted to identify archaeological resources and above-ground historical resources. Archaeological resources are the material remnants of past human life or activities; these resources may include artifacts (individual items such as complete or broken arrowheads or bottles at least 50 years old) and features (e.g., fire hearths, foundations) that may co-occur at locations identified as archaeological sites. Above-ground historical resources are standing buildings or other structures that are at least 50 years old.

The Area of Potential Effect (APE) is defined as the area of significant noise impact which is within the 65 DNL contour for the 2015 Proposed Action Alternative because historic buildings could be adversely affected by increases in noise levels. The APE also includes the area of potential ground disturbance which could affect archaeological resources (Exhibit 1). Heritage Research Associates, Inc. conducted the cultural resources investigations necessary for preparation of the EA. This technical memorandum was prepared by Albert C. Oetting and Tama K. Tochiara, Heritage Research Associates. Section 1 reviews the federal regulations that require the identification and assessment of archaeological and historical resources within the project APE. It also provides background information on the physical and cultural setting of the APE. Section 2 describes the existing conditions in these areas. Section 3 discusses the potential effects of the project on archaeological resources and on above-ground historical resources.

# 1. Regulatory Setting, Background, and Methodology

This section reviews the federal regulations that require the identification and assessment of archaeological and above-ground historical resources within the project area. It also provides background information on the physical and cultural setting of the project area and a summary of previous cultural resources investigations in and near this area. The methods employed in the archaeological field survey and those used for the historical resources survey are summarized.

## 1.1 Regulatory Setting

Cultural resources that may be affected by a proposed project requiring FAA approval are protected under federal and state regulations. This section identifies the applicable regulations and thresholds of significance.

### 1.1.1 Applicable Regulations and Standards

These archaeological and historical studies were undertaken as part of the NEPA EA process and comply with Section 106 of the National Historic Preservation Act (NHPA) and other applicable federal and state regulations. An airport action, such as the proposed Parallel Runway 12L/30R, that requires FAA approval, permits, and/or funding is a federal undertaking under Section 106 of the NHPA. Section 106 requires federal agencies to identify cultural resources listed in or eligible for listing in the National Register of Historic Places (NRHP) and to assess the effects that their undertakings may have on those resources (as implemented through 36 Code of Federal Regulations [CFR] Part 800).

### 1.1.2 Threshold of Significance

Individual resources considered under Section 106 are assessed for NRHP eligibility using the National Register Criteria for Evaluation (36 CFR Section 60.4). Resources identified as eligible for the NRHP are referred to as “historic properties” and are defined as buildings, sites (including archaeological sites), districts, structures, and objects significant in American history, archaeology, architecture, engineering, or culture, and worthy of preservation. A significant impact could occur if consultation with the Oregon State Historic Preservation Office (SHPO) or a tribe results in a “Finding of Adverse Effect”, although this finding does not automatically result in a significant impact.

## 1.2 Background

This section provides background information on the physical and cultural setting of HIO. It also summarizes previous archaeological research in the vicinity of the project area.

### 1.2.1 Physical Setting

Hillsboro is on the northwestern margin of the Willamette Valley physiographic province (Orr et al., 1992), in the Tualatin River drainage. While hydrologically part of the Willamette River basin, this part of the valley is isolated from the main stem of the river and valley by the Chehalem Mountains to the south and the Tualatin Mountains to the north and east. It is on the western margin of the Portland Basin and, demographically, is part of the Portland metropolitan area. The Tualatin River has headwaters on the eastern slopes of the Coast Range

and many tributaries from the Chehalem and Tualatin mountains flow as creeks across the broad flat river valley into the river.

The Hillsboro area was repeatedly under as much as an estimated 100 feet of water during the Missoula flood episodes of the late Pleistocene (between about 15,500 and 13,000 years ago), as floodwaters surging down the Columbia River backed up into the Willamette Valley (Orr et al., 1992). The pooling water resulted in the deposition of gravels, sands, and silts that blanketed the valley floor with sediments that developed into the fertile silt loam soils found today.

The broad valley floor along the Tualatin River was named the Tualatin Plains by nineteenth century Euro-American trappers and emigrants. The surrounding uplands were forested, but the valley floor was covered by prairie grasslands with scattered clumps of oaks, and narrow riparian woodland strips and marshy zones bordering the streams and rivers. As John Work (Hudson's Bay Company trapper) described the "Faladin" Plains in 1834:

*The country on getting out of the woods has a beautiful appearance. It is a continuation of plains which commence here and continue on to the Southward, separated by narrow strips of timber.... The soil is a rich blackish mould with grass & other plants, among which are considerable quantities of strawberry plants, now well furnished with fine fruit. Not a stone & scarcely a shrub to interrupt the progress of the plough... (Work, 1923, original spelling)*

Agricultural and urban developments over the last 160 years have altered the vegetation of the airport region, but the likely original plant communities can be partially reconstructed by examining soil types. The soils in the archeological resources APE are silt loams of the Amity, Dayton, and Woodburn series. These silt loams are poorly to moderately well drained soils on broad valley bottom terraces formed in old alluvium (Green, 1982). Natural vegetation for these silt loams reflects the prairie grasslands described by Work and others in the 1830s and 1840s. The grasslands included dry areas with a variety of native grasses, forbs, and low shrubs (e.g., danthonia [*Danthonia californica*], fescue [*Festuca* spp.], needlegrass [*Stipa* spp.], sunflower [*Eriophyllum lanatum*], strawberry [*Fragaria* spp.], wild rose [*Rosa* spp.], poison oak [*Rhus diversiloba*]), and patchy moister areas with wet meadow and marshy species (e.g., camas [*Camassia quamash*] and sedges [*Carex* spp., *Eleocharis* spp.]) (Franklin and Dyrness, 1972; Green, 1982). Scattered clumps of Oregon white oak (*Quercus garryana*) dotted the grasslands. The airport vicinity was prairie grassland that probably had some small moist meadow patches (GLO 1852). The riparian woodlands along creeks and other drainages included Oregon white ash (*Fraxinus latifolia*), black cottonwood (*Populus trichocarpa*), Douglas-fir (*Pseudotsuga menziesii*), and many understory trees and shrubs. Native fauna included deer (*Odocoileus hemionus* and *O. virginianus*), elk (*Cervus elaphus*), many smaller mammals (Verts and Carraway, 1998), and a variety of resident and migratory birds.

The climate of the region is mild and moist. Average annual precipitation at Hillsboro is about 38 inches (WRCC, 2008), generally falling as rain in the fall and winter, although some snow usually occurs as well. Average minimum and maximum temperatures in January are 33°F and 45°F, with a record low of -10°F. Average temperatures in July are 52°F and 81°F, with a record high of 108°F.

### 1.2.2 Cultural Setting

The Kalapuya Indians occupied the Willamette Valley, including the Tualatin Plains, when European and American trappers and explorers first entered western Oregon (Toepel and

Beckham, 1981; Zenk, 1990). The following brief sketch of the Kalapuya way of life, focusing on settlement, subsistence, and group mobility, is abstracted from Zenk (1976, 1990). Little archaeological research has been conducted in the Tualatin region, but data from other parts of the valley and the Portland Basin (e.g., Aikens, 1975, 1993; Cheatham, 1988; Minor and Toepel, 1981; Minor et al., 1980; Pettigrew, 1980, 1990; Toepel, 1985) are likely relevant for the northern valley as well. More complete discussions of regional archaeology and ethnography may be found in the sources mentioned above.

### **1.2.2.1 Archaeological Context**

Cultural chronologies generally used for the Willamette Valley cover all of the Holocene and divide the regional archaeology into five broad periods: Paleo-Indian, Early Archaic, Middle Archaic, Late Archaic, and Historic (Minor and Toepel, 1981; Pettigrew, 1990). The earliest Paleo-Indian evidence (prior to 10,000 years before present [BP]) is a few isolated fluted projectile points scattered across western Oregon. These artifacts are considered to be equivalent in age with the well-dated fluted point complexes of the Southwest and Great Plains, but whether the way of life of these various groups was similar remains to be determined.

The Archaic Stage (Willey and Phillips, 1958), subdivided into early, middle, and late periods, is a broad time span characterized by groups with hunting and gathering economies that made use of broad resource bases obtained with tool kits that became more complex through time. Hearth and oven features with radiocarbon ages between 7,700 BP (uncorrected radiocarbon years BP) and 9,800 BP (O'Neill et al., 2004; Peterson, 1989) indicate people were using the southern valley by the Early Archaic period (10,000-6,000 BP). Charred camas bulbs in similar oven features with ages greater than 7,000 BP (Cheatham, 1988; O'Neill et al., 2004) demonstrate the early use of this important plant resource. Large leaf-shaped projectile points are diagnostic of this period, and have been found in the earliest levels of Cascadia Cave in the mountains east of the central valley and in the lower levels of other sites in the region.

The number of sites attributed to the Middle Archaic (6,000-2,000 BP) and the variety of site settings indicate an increasing population and regular use of many resources (Toepel, 1985). Broad-necked projectile points are typical of this period. Ground stone tools are more common in Middle Archaic site components and attest to the increased importance of plant resources to regional subsistence. Hundreds of camas roasting ovens dating to this period have been documented in the southern and central valley (Connolly et al., 1998; O'Neill et al., 2004). The only archaeological evidence for a residential structure in the Willamette Valley, found in the southern valley near Coburg, also dates to this period, with radiocarbon ages of 2,800 BP (White, 1975).

The Late Archaic period (2,000-200 BP) continued the development and refinement of Middle Archaic cultural patterns as regional population increased (Minor and Toepel, 1981). Small, narrow-necked projectile points, reflecting bow and arrow technology, dominate artifact assemblages of this period. Settlement and subsistence practices characteristic of the ethnographic Kalapuya were clearly established during this time. A broad range of plant resources, dominated by camas, was exploited, with hunting as an important ancillary pursuit. Clusters of camas processing and occupation sites suggest long-term, cyclical use of specific locations, possibly by family-based groups (Bowden, 1997). Shell ornaments and other artifacts, found at sites such as the Fuller and Fanning mounds on the South Yamhill River, denote increasing trade and exchange with the Oregon coast and Columbia River regions.

The Historic period (ca. AD 1750-1855) reflects the brief, tumultuous time between the first influx of Euro-American trade goods, the spread of European epidemic diseases, and the arrival and settlement of ever-increasing numbers of Euro-Americans, culminating in the treaties of 1855. Devastated by successive epidemics, the surviving Kalapuya people were moved to reservations (primarily the Grand Ronde Reservation) as part of their treaty with the federal government. Few archaeological sites of this period are known, and they are generally identified by the presence of Euro-American manufactured items, such as the glass beads and brass metal items recovered at the Fuller and Fanning sites.

### **1.2.2.2 Ethnographic Context**

The Kalapuya consisted of several small autonomous groups, generally referred to as bands, who spoke dialects of three closely related Penutian languages that have been grouped together as the Kalapuyan language family. There were approximately 13 dialectally distinct Kalapuya groups. Most of the available ethnographic data was collected on the Grand Ronde Reservation in the late nineteenth and early twentieth centuries, from speakers of the northern language, Tualatin-Yamhill (Zenk, 1976, 1990).

The Kalapuya were an inland people who used the varied resources of the Willamette Valley but traded with people on the Oregon coast and on the Columbia River. Individual bands occupied sub-basins of Willamette River tributaries, each sub-basin offering a range of riverine, valley, and foothill habitats and resources. The Hillsboro and Tualatin Plains area was in the homeland region of the Tualatin band of the Kalapuya (Zenk, 1976, 1990). This territory extended north and west of the Willamette River (downstream from the mouth of the Yamhill River) into the foothills of the Coast Range, encompassing the drainages of the Tualatin River, Chehalem Creek, and the North Fork Yamhill River. Tualatin villages were found on the Tualatin Plains north of the Tualatin River and many villages were clustered around Wapato Lake, a shallow, marshy lake (now drained) in the upper Tualatin River drainage southwest of Hillsboro. The Tualatin shared linguistic and cultural traits with the other Kalapuya groups throughout the Willamette Valley. They also shared some cultural traits with the Chinookan Indian groups who lived to the east and north in the Portland Basin and along the lower Columbia River.

The Kalapuyan resource base was diverse and required a scheduled pattern of movement to take advantage of particular seasonal resources as they became available in different areas. Camas was a primary staple of the Kalapuyan diet, with contributions from other vegetal resources such as hazelnuts, tarweed, lupine, cattail, and various berries. For the Tualatin Kalapuya, wapato was also an extremely important crop. This marshy root crop grew in profusion around Wapato Lake and probably on the marshy margins of streams crossing the Tualatin Plains. Most Kalapuyan groups pursued some fishing and hunted a variety of birds and mammals.

Kalapuyan families were generally mobile between April and November each year, moving as needed to acquire and process foods and other resources both for immediate consumption as well as for storage. Most camps during this part of the year were small and transitory, but permanent villages were returned to each winter. Locations of several winter villages were obtained by ethnographers working with Tualatin consultants on the Grand Ronde reservation in the late nineteenth and early twentieth centuries. Several villages were located along the Tualatin River, including one near the modern location of Hillsboro (Zenk, 1976). Numerous

villages were also located around marshy Wapato Lake in the upper Tualatin River drainage southwest of Hillsboro.

The groups inhabiting the permanent winter villages were the primary sociopolitical units of the Kalapuya. Each village was politically autonomous, with authority vested in a “chief” who adjudicated disputes among village members and assisted them in times of need (Zenk, 1990). Chiefs were generally wealthy, and wealth probably also influenced social distinctions within the village. The larger linguistic entities may have been recognized on a social level, but their political significance, if any, is unclear.

The winter villages featured large, rectangular, semi-subterranean, multi-family lodges. The Tualatin Kalapuya also built gabled cedar-plank houses similar to those of the neighboring Chinookans. Structures in the summer-through-fall temporary camps, if used at all, were much smaller and simpler.

Kalapuyan groups were part of the regional trade networks, exchanging a variety of goods and foodstuffs with other Kalapuya bands as well as Chinookans, the Molala, the Klamath, and various coastal groups. Bands in the southern Willamette Valley were sometimes victimized by slave raids from some of these same groups. Inter-marriage among the Kalapuyan bands, and with their trading partners, occurred with some frequency.

### **1.2.2.3 Historical Context**

Direct contact between Oregon Native Americans and Euro-Americans began in 1792, when American Robert Gray located the mouth of the Columbia River and British Royal Navy parties under the command of George Vancouver sailed up the river into the Portland Basin (Dodds, 1986). Most interactions were limited to coastal fur trading ships until the Lewis and Clark expedition passed through the Portland Basin in 1805 and 1806. Fur trappers and adventurers soon began entering the region. Astoria was founded in 1811 by American fur entrepreneur John Jacob Astor, and the British North West Company (NWC) sent overland trapping expeditions from Canada.

Several parties explored and worked the northern Willamette Valley, including Donald McKenzie, who traveled the length of the valley in 1812. NWC trading posts were first established in 1812-1813, probably near Salem, and then near Champoeg on the bank of the Willamette River in 1813 (Hussey, 1967; Minor et al., 1980). The valley soon became a primary source of meat and other foods for Astoria (which was sold to NWC and renamed Fort George). Furs and meat from the valley continued to be important after Fort Vancouver was established by the Hudson’s Bay Company (HBC, successor to NWC) in 1825.

In 1834, the John Work HBC party traveled over the Tualatin Plains, through the Wapato Lake region, and down the Chehalem Creek drainage to the Champoeg area on the Willamette River (Work, 1923). As noted above, he was struck by the rich soils and fine pasture lands in the grassy “Faladin” plains, as well as the large size of the conifers in the neighboring wooded regions. In addition to beaver trapping, the Tualatin Plains were also being used for horse pasturing, as Work noted that 170 horses had been grazing on the plains for the preceding two months (Work, 1923). By this time, men leaving HBC employment were settling and farming in the Champoeg area. American missionaries, exploring parties, and other visitors began returning to the United States in the 1830s with stories of the moderate climate, rich soils, and



economic opportunities of the Willamette Valley. By the early 1840s American emigrants were arriving via the Oregon Trail.

In 1844, frontiersman Charles Clyman noted that about 200 “mostly American” families were already settled on the “Twallata” Plains (Camp, 1960). Joel Palmer, future Superintendent of Indian Affairs in Oregon (1853-1857), visited Oregon in 1845 and described the “Quality” Plains in terms similar to Work, also noting that “these plains are all claimed, settled, and mostly improved” (Palmer, 1906). Joseph Meek, a famous American fur trapper “mountain man” and several other retiring mountain men had settled on the eastern Tualatin Plains in late 1840, followed in 1841 and 1842 by emigrant families fresh from the Oregon Trail (Ellis and Chapman, 2000). Meek’s land claim was just north of the modern HIO. As emigrants continued to arrive, two settlement clusters arose on the plains; first referred to as East Tualatin Plains and West Tualatin Plains, these evolving communities became known respectively as Columbia (or Columbus) and Forest Grove. By the late 1840s, Columbia had been renamed Hillsborough, in honor of local pioneer David Hill, who had served in the provisional legislature and sold part of his claim to be used for the developing town (McArthur, 1974).

The United States acquired control of the Oregon and Washington region through treaty with Great Britain in 1846 and the U.S. Oregon Territory was created in 1848 (Dodds, 1986). The many American emigrants to Oregon, however, had already established a Provisional Government along American lines in 1843, with a constitution, property rights, and other laws. Meek, Hill, and many others participated in creating and serving in this government. In 1850, the U.S. Congress enacted the Donation Land Act, providing free land to Oregon emigrants. Settlers already present were able to register and legitimize their claims. Donation Land Claim (DLC) farms covered the Tualatin Plains, including all of the land now part of HIO.

Columbia River and Willamette Valley Native American groups, including the Tualatin Kalapuya, had been devastated by successive waves of European-introduced epidemic diseases. A large epidemic in the early 1830s, thought to be malaria, resulted in mortality rates as high as 90 percent (Boyd, 1990). Few families or larger groups remained intact as the influx of Euro-American emigrants increased steadily through the 1840s. Raiding and sporadic organized warfare flared throughout Oregon in the 1840s and 1850s, spurring the United States government to secure treaties after acquiring control of the Oregon territory. Treaties with many Willamette Valley groups were negotiated in 1851 and most of these provided for reservations in the Willamette Valley, including one surrounding Wapato Lake for the Tualatin (Beckham, 1977; Gibbs and Starling, 1978). These treaties, however, were not ratified by the U.S. Senate, in part due to pressure from settlers demanding that Indians be removed from the valley. In 1855, Joel Palmer, Superintendent of Indian Affairs, negotiated a new treaty with the Kalapuya bands, signed in 1855 as the Dayton Treaty and ratified by the Senate. These bands ceded their lands to the United States for specified annuities and agreed to be removed to the Grand Ronde Reservation in the foothills west of the Willamette Valley.

The community of Hillsborough (soon shortened to Hillsboro’ [McArthur, 1974]) developed as a market town hub for the surrounding farms. It became the county seat of Washington County in 1850. The Tualatin Plains and Hillsboro were connected with Portland by the Oregon Central Railroad in 1870. The line initially ran south of the community due to a dispute between the city and the railroad, but Hillsboro slowly grew to the railroad. The city was further tied to the growing Portland metropolitan area with the spread of interurban railroad lines in the early twentieth century. The Oregon Electric Railroad connected Hillsboro and Forest Grove to

Portland in 1908 and Southern Pacific (on the Oregon Central line) converted to electricity and began interurban service in 1914. These lines were soon superseded by motor vehicle improvements, but these improving modes of transportation opened the rural Tualatin Plains to suburban development, a trend that still continues.

The population of Hillsboro increased steadily through the twentieth century. After World War II, Hillsboro sought to attract companies and jobs to the city, rather than remain a suburban bedroom community. This effort has proved successful over the last 60 years, with a variety of industrial, electronics, computer, and other high technology firms developing plants in Hillsboro. The population of the city nearly doubled between 1960 and 1970, doubled again between 1970 and 1980, and doubled yet again between 1990 and 2000 (Oregon Blue Book, 2008). Hillsboro is currently the fifth largest city in the state.

Hillsboro Airport began as a private airport in 1925 (Coffman Associates et al., 2005). Dr. Elmer Smith purchased 100 acres in north Hillsboro and constructed two crossing turf runways with the assistance of the Hillsboro American Legion. The City of Hillsboro leased and then, in 1935, purchased the airport. Two larger crossing runways were constructed as WPA projects between 1933 and 1938, one 2,800 feet long (oriented northwest-southeast) and one 3,000 feet long (northeast-southwest). The federal government invested over \$600,000 in additional land and other improvements to the airport during World War II, using it as a satellite airfield for the Portland Air Base (now part of Portland International Airport). The airport remained in city control from 1945 to 1966, when the Port of Portland assumed ownership. Runway 12/30, the northwest-southeast runway, was enlarged in 1976 and 1977 to a length of 6,600 feet. Runway 2/20 is currently 4,049 feet long. Although the airport does not have scheduled commercial air service, it is heavily used for general aviation and by regional companies for business aviation. It is currently the second busiest airport in Oregon behind Portland International Airport (Port of Portland, 2008).

### **1.2.3 Previous Cultural Resources Research in the Project Vicinity**

This section summarizes the background research conducted for the archaeological and historical resources within the APE.

#### **1.2.3.1 Previous Archaeological Research in the Project Vicinity**

In preparing this report, Heritage Research Associates, Inc. consulted the archaeological site records maintained by the Oregon State Historic Preservation Office (SHPO) and the archaeological project reports filed at SHPO. The Port of Portland provided three reports of archaeological surveys conducted at or near the airport for the Port. The Port also provided a selection of aerial photographs of the airport ranging in date from 1928 to 1998. General Land Office (GLO) cadastral survey and land claim plats for Township 1 North, Range 2 West were also reviewed.

Approximately 30 archaeological investigations with reports on file at the Oregon SHPO have been conducted within 3 miles of HIO, with many of these associated with road improvement projects along the Sunset Highway (U.S. Highway 26) or roads connecting Hillsboro with this highway. Three archaeological survey projects have been conducted at the airport (Buchanan et al., 2007; Ellis and Chapman, 2000, Foutch et al., 2008). Another six projects were undertaken within about one mile. No archaeological sites have been identified within the airport property, but three prehistoric archaeological sites have been recorded along Dawson Creek east and

south of the airport (Ellis and Forgeng, 1998), and two historical period sites are recorded northeast of the airport (Ellis, 2004).

The two archaeological investigations conducted on the airport property were a surface survey with subsurface discovery shovel probes for the runway safety area (RSA) of Runway 12/30 (Ellis and Chapman, 2000) and a surface survey for an extension of Taxiway Charlie along Runway 2/20 and construction of high speed exits on a portion of Runway 12/30 (Buchanan et al., 2007). The 30-acre parcel being considered for acquisition is adjacent to the airport on the east side of NW 264th Avenue and was also the subject of a surface pedestrian survey (Foutch et al., 2008). No prehistoric or historical cultural materials were found during these three investigations. Both of the surveys conducted on current airport property concluded that the airport land has been disturbed by agricultural use over the last 160 years and by excavation, grading, and other construction associated with airport development.

Two prehistoric archaeological sites are recorded east of the south end of Runway 12/30, along the west bank of Dawson Creek. These two lithic scatter sites have been evaluated for NRHP eligibility and both were recommended *not eligible* (Ellis and Forgeng, 1998). A third prehistoric site, located farther south along Dawson Creek, has not been evaluated. The two historical period sites are small debris scatters that include broken bricks, ceramic fragments, and pieces of glass. The investigators considered these resources “unlikely to be significant” (Ellis, 2004), but they were not formally evaluated.

The 1852 GLO township plat for T1N, R2W depicts a number of natural and cultural features. Much of the land was described as “level” or “gently rolling” prairie interspersed with woodlands of fir, oak, ash, and vine maple (GLO, 1852). Watercourses such as Rock, Dawson, and McKay creeks are shown, but the former was named “Money Creek” and the latter two were unnamed. The community of “Hillsborough” is depicted in the southeast corner of the township and several roads are depicted, including a “Road to Hillsborough” that passed just south of the location of the modern airport and a “Road from Portland to Tualatin Plains” which crossed the current location of Runway 12/30. Several homestead locations are depicted, including the Belknap house near what is now the south end of Runway 12/30, and cultivated fields are shown in numerous locations. The 1862 GLO plat of land claims shows that all of the land in and near the modern airport had been taken in Donation Land Claims (GLO, 1862). Most of the modern airport is on land claimed by David A. Belknap (DLC No. 43) and Henry Sewells (DLC No. 40), with smaller portions on the John S. Griffin (DLC No. 56), William Baldra (DLC No. 58), Richard Williams (DLC No. 42), and Walter Pomeroy (DLC No. 39) claims. Rock Creek was labeled on this 1862 plat and the name “Hillsboro” was also in use by this time.

### **1.2.3.2 Previous Historic Research in the Project Vicinity**

A survey by Archaeological Investigations Northwest, “Cultural Resource Survey of the Proposed Hillsboro Airport Acquisition Locations in Hillsboro, Washington County, Oregon,” from August 2008 identified three historic resources: the Sewell Clay Works site located at Evergreen and 268th Avenue, and a house and barn circa 1920s, located at 3410 264th Avenue (recommended as not eligible for listing on the National Register of Historic Places).

The Sewell Clay Works, also known as the North Pacific Clay Works, was also identified in the Oregon SHPO database and was first recorded as part of the Washington County Cultural Resource Inventory in 1983. This historic site is located on the southeast corner of Evergreen Road and 268th Avenue and was established around 1880. There does not appear to be any

standing resources remaining associated with Sewell Clay Works. At present, a grove of oak trees surrounds the site, and the buildings that are present do not appear to be related to the historic clay works.

### **1.3 Methodology and Assumptions**

A systematic pedestrian archaeological survey of the proposed parallel runway archaeological study area was conducted to locate any surface evidence of prehistoric or historical archaeological artifacts, features, or sites (Exhibit 1). The surveyed area within the airport perimeter fence began at the edge of the RSA bordering the north side of each runway (Exhibit 2) and continued north to the fence (Exhibit 3). The area north and northeast of the north end of Runway 12/30 had been previously surveyed (Ellis and Chapman, 2000), so the current survey halted at the graveled service road running west from the north end of Runway 12/30 to the perimeter fence gate on NW 268th Avenue. The surveyed area within the fence consisted of four recently harvested grass hay crop fields. The four fields are separated by gravel service roads and the Charlie Pad, a landing strip used for helicopter training (Exhibit 4). A parcel of airport property north of the perimeter fence, at the northeast corner of NW 264th Avenue and NW Airport Road, was also surveyed (Exhibit 3).

The surveyors walked parallel transects at 20-meter intervals across the open fields (Exhibit 5). The stubble rows of the harvested crop were still visible in the fields and were used to maintain direction and transect intervals (Exhibits 2 and 6). The rows generally paralleled the runway and bordering service roads. The surveyors varied their transects slightly to locate and examine areas with the greatest mineral soil visibility.

Methodology used to identify newly discovered and previously documented above-ground historical resources in the APE included a review of the Oregon SHPO database, as well as the National Register database for listed properties. Historic maps and local histories were also consulted. The age threshold for National Register significance is 50 years, but built resources that are 45 years or older were identified and evaluated, to ensure that resources that would become 50 years old during the course of the HIO Parallel Runway Project were considered. All roads in the defined APE were driven and all properties were visually inspected to identify and assess properties that were likely to be at least 45 years old.

## **2. Existing Conditions**

Hillsboro Airport is located on the northern margin of the city of Hillsboro in the western part of the Portland metropolitan area (Exhibit 1). The historical resources were investigated for the entire APE. The study area for archaeological resources was defined as areas potentially subject to ground disturbing activities, which included the land inside the airport perimeter fence north of the existing runways (Runway 12/30 and the crossing Runway 2/20) and a portion of airport property outside of the fence (Exhibit 1).

A systematic pedestrian archaeological survey of the archaeological study area was conducted by three archaeologists. A windshield reconnaissance survey of the APE was conducted by a historic preservation specialist. The results are described below.

## 2.1 Archaeological Resources

Exhibit 1 shows the study area for archaeological resources. A portion of this area is leased for use as agricultural fields to grow grass hay crops. This crop was harvested, baled, and removed just prior to the archaeological field survey (Exhibits 2 to 6). The study area also included a weed-covered field about 150 by 300 meters (500 by 1,000 feet) in size east of the south end of NW 264th Avenue and north of NW Airport Road (Exhibit 4), and a portion of a second field, recently plowed, east of the first field and northwest of the north end of Runway 2/20.

All areas not previously surveyed within the archaeological study area were surveyed. The survey area included approximately 170 acres (Exhibit 1). This surveyed area is in sections 20, 21, 28, and 29, T1N, R2W (Willamette Meridian).

Three Heritage Research Associates archaeologists, Albert Oetting, Kendra Carlisle, and Aimee Leavitt, walked parallel transects at 20-meter intervals across the open fields of the airport property within the perimeter fence north of the runways (Exhibit 6) and one surveyor examined the outside parcel, also at 20-meter transect intervals. The stubble rows of the harvested hay crop were still visible in the fields and were used by the surveyors to maintain direction and transect intervals (Exhibits 2 and 6). These stubble rows generally paralleled the runway and bordering service roads.

Chaff from the harvested crop covered some rows, but the ground surface was exposed in other rows, so the surveyors varied their transects by 1 to 2 meters to locate and examine areas with the greatest mineral soil visibility. In locations where chaff covered the local area, the surveyors scraped the chaff aside with their boots at irregular intervals to expose the ground surface. Overall, surface visibility ranged from 5 percent to about 40 percent. The parcel outside the fence included a field covered with tall grass, weeds, and some blackberry brambles that limited visibility to 5 to 20 percent, but the adjacent plowed field segment afforded 100 percent visibility.

No prehistoric or historical archaeological artifacts, features, or sites were observed during the survey. A few items of recent manufacture (e.g., fragments of hard plastic, plastic bags, and food wrappers) were observed along the margins of the fields, but the quantity of this refuse was very low. The recent harvesting, the surrounding fences, and the restricted access likely contribute to this lack of material debris. The very flat ground surface throughout the surveyed area and the contoured margins of the fields along the Runway 12/30 RSA indicate that these fields probably have been plowed, leveled, and graded many times in the past (Exhibit 2). In the recent past, these fields have been plowed on a 7-year rotation (Nathan Grimes, HIO Operations, personal communication August, 2008). Shattered rocks and smaller angular gravels present on the ground surface also reflect this regular plowing and probable other earth-disturbing activities (Exhibit 7). For these reasons, no additional archaeological investigations are recommended for this area.

## 2.2 Historical Resources

Heritage Research Associates Historic Preservation Specialist Tama Tochiyara completed a reconnaissance level (windshield) survey of the APE on September 21, 2008, to identify any properties that were 45 years old or older. Those found were photographed and noted. The results of the on-site survey are shown in Exhibits 1 and 8.

There are 2 historic resources located within the APE specified for this project, one single family residence and one agricultural building. Neither are eligible for the National Register due to alterations to the resource or lack of distinctive architectural features and therefore, no further work is recommended.

### 3. Recommendations

Review of available records and a systematic pedestrian archaeological survey of HIO land in the archaeological study area revealed no archaeological artifacts, features, or sites. No further archaeological investigations are recommended for the surveyed area. No subsurface discovery probe investigations are recommended, given the past agricultural and airport disturbances to the area and the negative results of previous discovery shovel probes at the north end of Runway 12/30 (Ellis and Chapman, 2000). A “No Properties Affected” determination by the FAA in consultation with the Oregon SHPO would be appropriate for archaeological resources.

Likewise, the review of available records and a reconnaissance survey for above-ground historical resources in the APE did not identify any eligible historic resources. A “No Properties Affected” determination by the FAA in consultation with the Oregon SHPO would be appropriate for historic resources.

It is important to note that archaeological sites and, in particular, Indian burials are protected under Oregon state law (ORS 97.740-97.760, 358.905-358.955, and 390.235), and by federal regulations where federal funds or permits are involved (e.g., 36 CFR Part 800). Disturbance of graves is specifically prohibited, even through accidental discovery and even if reviewing agencies have concurred that a specific project is in compliance with applicable state and federal regulations. If archaeological resources are encountered during the HIO Proposed Parallel Runway 12L/30R Project, all earth disturbance in the vicinity of the find should be halted immediately, in accordance with state and federal laws, and a qualified archaeologist should be consulted to investigate and evaluate the discovery and to recommend subsequent courses of action in consultation with the Port, the FAA, the Oregon SHPO, and the appropriate tribes. If human remains are confirmed, the FAA and Port will notify the Oregon State Police, the Oregon SHPO, the Legislative Commission on Indian Services, the Confederated Tribes of the Grand Ronde Community, the Siletz Indian Tribe, and the Confederated Tribes of the Warm Springs Reservation (as required by ORS 97.745).

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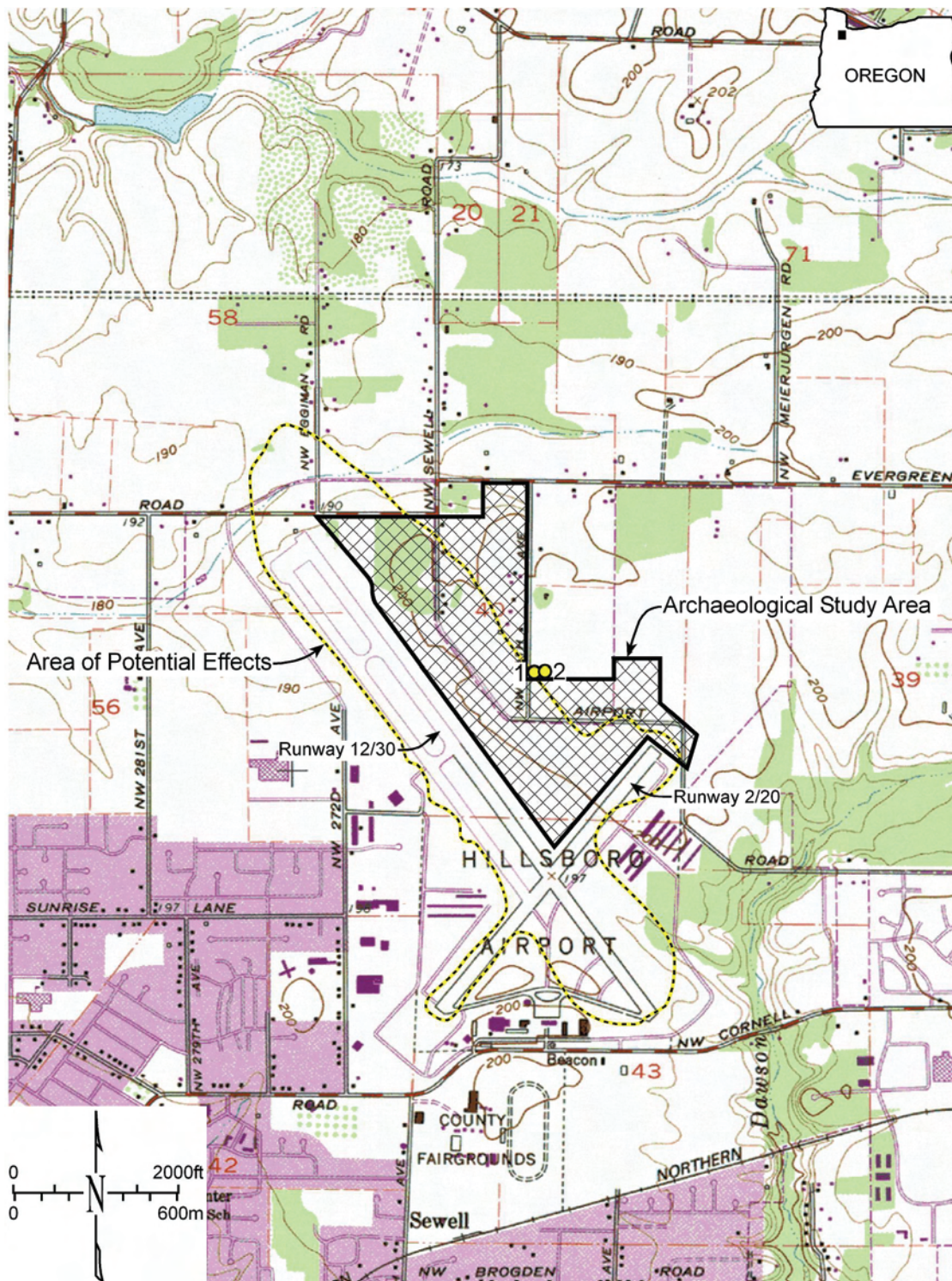


Exhibit 1. Area of Potential Effect for the Proposed Parallel Runway 12L/30R Project (Hillsboro 7.5" USGS quadrangle)





Ex

Exhibit 2. Hillsboro Airport Parallel Runway Area, View South along Runway 2/20



Exhibit 3. Edge of Agricultural Field (Left) and RSA (Right), View South along Runway 12/30





Exhibit 4. Portion of Perimeter Fence on South Side of NW Airport Road, with the Surveyed Outside Parcel Visible Beyond the Fence



Exhibit 5. Charlie Pad Location







Exhibit 6. Survey Archaeologists Following Stubble Rows in Field



Exhibit 7. Rock Embedded in Surface Probably Shattered by Agricultural/Construction Activities



**EXHIBIT 8**  
 Historic Resource Analysis

Map ID	Property Name/Address	Map/Tax Lot	Construction Date/Resource Type	National Register Status	Photograph of Resource
1	3410 NW 264th Ave	T1N R2W Section 28	c. 1920s Craftsman Style house with front gable roof with composite shingles, wood shingle siding, some wood windows with wood shutters, decorative wood brackets in front gable end, shed roof dormer.	Not eligible due to lack of distinctive architectural features	
2	3366 NW 264th Ave	T1N R2W Section 28	c. 1920s Agricultural Building, Barn with composite roof, vertical wood siding and wood windows	Not eligible due to lack of distinctive architectural features	

## Section 106 Coordination Letters







U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Seattle Airports District Office**  
1601 Lind Avenue, S.W., Suite 250  
Renton, Washington 98055-4056

May 14, 2009

Ms. Cheryle Kennedy  
Chairwoman  
Confederated Tribes of the Grand Ronde Council  
9615 Grand Ronde  
Grand Ronde, Oregon 97347

Hillsboro Airport  
Parallel Runway Project 12L/30R

Dear Ms. Kennedy:

The Federal Aviation Administration (FAA) would like to initiate consultation with you in accordance with Section 106 of the National Historic Preservation Act of 1966, and implementing regulations 36 CFR Part 800 for the aforementioned project. We are also initiating consultation in accordance with Executive Order 13175, Consultation and Coordination with Indian and Tribal Governments and FAA Order 1210.20, American Indian and Alaska Native Tribal Consultation Policy and Procedures.

An Archaeological and Historic Resources Technical Memorandum has been prepared by Heritage Research Associates, Inc. The report concludes that the proposed developments will have no effect on historic properties, and no additional investigations are recommended. Accordingly, we find that our federal undertaking will have no effect on historic properties and request your concurrence.

An Environmental Assessment (EA) is also be prepared for this project in accordance with the National Environmental Policy Act. We anticipate having a draft EA available to the public in the next couple of months.

Should you have any questions or wish to discuss aspects of the project in further detail, please do not hesitate to contact me at (425) 227-2653.

Sincerely,

*CM* Cayla D. Morgan  
Environmental Protection Specialist  
Seattle Airports District Office

Enclosure

*cc:* Renee Dowlin, Port of Portland



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Seattle Airports District Office**  
1601 Lind Avenue, S.W., Suite 250  
Renton, Washington 98055-4056

May 14, 2009

Mr. Dennis Griffin  
Oregon State Historic Preservation Office  
725 Summer Street, N.E., Suite C  
Salem, OR 97301-1266

Hillsboro Airport  
Parallel Runway Project 12L/30R

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Sincerely,

*CD* Cayla D. Morgan  
Environmental Protection Specialist  
Seattle Airports District Office

Enclosure

cc: Renee Dowlin, Port of Portland



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Seattle Airports District Office**  
1601 Lind Avenue, S.W., Suite 250  
Renton, Washington 98055-4056

May 14, 2009

Ms. Delores Pigsley  
Chairperson, Siletz Tribal Council  
P.O. Box 549  
Siletz, Oregon 97380

Hillsboro Airport  
Parallel Runway Project 12L/30R

Dear Ms. Pigsley:


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Sincerely,

 Cayla D. Morgan  
Environmental Protection Specialist  
Seattle Airports District Office

Enclosure

cc: Renee Dowlin, Port of Portland



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Seattle Airports District Office**  
1601 Lind Avenue, S.W., Suite 250  
Renton, Washington 98055-4056

May 14, 2009

Mr. Raymond Calica, Sr.  
Chairperson, Warm Springs Agency  
P.O. Box C  
1233 Veteran Street  
Portland, Oregon 97761

Hillsboro Airport  
Parallel Runway Project 12L/30R

Dear Mr. Calica:


The Federal Aviation Administration (FAA) would like to initiate consultation with you in accordance with Section 106 of the National Historic Preservation Act of 1966, and implementing regulations 36 CFR Part 800 for the aforementioned project. We are also initiating consultation in accordance with Executive Order 13175, Consultation and Coordination with Indian and Tribal Governments and FAA Order 1210.20, American Indian and Alaska Native Tribal Consultation Policy and Procedures.

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Sincerely,

 Cayla D. Morgan  
Environmental Protection Specialist  
Seattle Airports District Office

Enclosure

cc:  Renee Dowlin, Port of Portland