

CULTURAL RESOURCES REPORT COVER SHEET

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Author: Mike Shong and Dave Iversen

Title of Report: Cultural Resources Assessment for the ARCO ampm Project, 1402 S Meridian, Puyallup, Pierce County, Washington

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Quad: Puyallup Acres: 3.0

PDF of report submitted (REQUIRED) Yes

Historic Property Inventory Forms to be Approved Online? Yes No

Archaeological Site(s)/Isolate(s) Found or Amended? Yes No

TCP(s) found? Yes No

Replace a draft? Yes No

Satisfy a DAHP Archaeological Excavation Permit requirement? Yes # No

Were Human Remains Found? Yes DAHP Case # No

DAHP Archaeological Site #:

- Submission of PDFs is required.
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Cultural Resources Assessment for the ARCO ampm Project,
1402 S Meridian, Puyallup, Pierce County, Washington

Prepared for:

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Management Summary

ASM Affiliates, Inc. (ASM) contracted with Barghausen Consulting Engineers, Inc. to conduct a cultural resources assessment for a proposed ARCO ampm store and gas station in Puyallup, Pierce County, Washington. The purpose of the assessment was to evaluate the project area for its potential effects on archaeological and historic resources. ASM's efforts included literature review, field inventory, and preparation of this technical report. The project area consists of four tax parcels that includes an existing c. 1976 commercial building (formerly Jason's Restaurant) located at 1402 S Meridian Steet, just southeast of the Puyallup Fairgrounds and SR 512. The project area occupies a relatively high-risk landform for archaeological resources at the edge of the Puyallup River Valley and floodplain and toe of the adjacent uplands. Background research indicates the project area was originally part of a 148-acre homestead claim by John Meeker and later part of a 10-acre residential parcel that contained an early 20th century house and several outbuildings just southwest of the intersection of S. Meridian St. and 14th Ave. SE.

No significant cultural resources were identified during this assessment. Seven mechanical test trenches were excavated within the parking lot around the existing building. Site sediments generally consist of approximately 2.5 feet of fill over floodplain alluvium. A very small amount of structural and domestic debris was observed in several test trenches that likely relate to the former historic-period house and occupation; however, the materials are not temporally diagnostic, lack integrity of location and association were not recorded as an archaeological site. Targeted sifting of the historic-period soils did not reveal evidence of precontact or ethnohistoric land use. Based on the results of this assessment, ASM recommends the proceed under the conditions of an Inadvertent Discovery Plan (IDP).

1. Introduction

This report presents the results of a cultural resources assessment conducted by ASM Affiliates, Inc. (ASM) for the proposed ARCO ampm project in Puyallup, Pierce County, Washington. The project proponent recently acquired four tax parcels and plans to construct an ACRO gas station, carwash, and ampm convenience store. ASM's assessment consisted of review of nearby archaeological site forms, historic properties, and previous cultural resource reports on file at the Washington State Department of Archaeology and Historic Preservation (DAHP), as well as review of historic maps, aerial photos, and environmental and ethnographic literature. A subsurface survey was also completed using mechanical test trenches. This technical report is intended to document the results of the inventory in association with City of Puyallup permitting. After the introductory chapter, this report includes chapters on the archaeological context, briefly describing the environment, culture history and previous research; on research design and field methods; on field results; and conclusions and recommendations associated with the proposed project.

Project Location and Description

The ARCO ampm project is located at 1402 S. Meridian southeast of the Puyallup Fair grounds in the City of Puyallup, Pierce County, Washington (Figures 1 and 2). The project area consists of four tax parcels including Assessor Parcel Number (APN) 7730000281 and 7730000288 (Title Parcel A) and APN 7730000201 and 7730000231 (Title Parcel B) within Section 33 of Township 20 North, Range 4 East, Willamette Meridian. The proposed project will remove an existing 2,760 square foot (SF), single-story commercial building (formerly Jason's Restaurant) in Parcel A (Figure 3) and construct a 3,349 SF ARCO ampm convenience store in Parcel B and associated gas station and carwash in Parcel A (Figure 4). The latter will include two (25k and 22k) underground petroleum storage tanks and a 4,606 SF canopy structure over six new Multiple Product Dispensers (MPD). A 1,152 SF carwash structure and associated infrastructure is proposed at the south end of the property. The reconfigured 52,078 SF lot will provide limited parking spaces on the south side of the ampm store and on the north side of the carwash structure (Figure 3). Ingress and egress will occur from S. Meridian St. An existing 75 ft. wide utility easement that includes buried gas, power, telecommunication, water, sewer, and stormwater extends west through the project area from 14th Ave SE.

1. Introduction

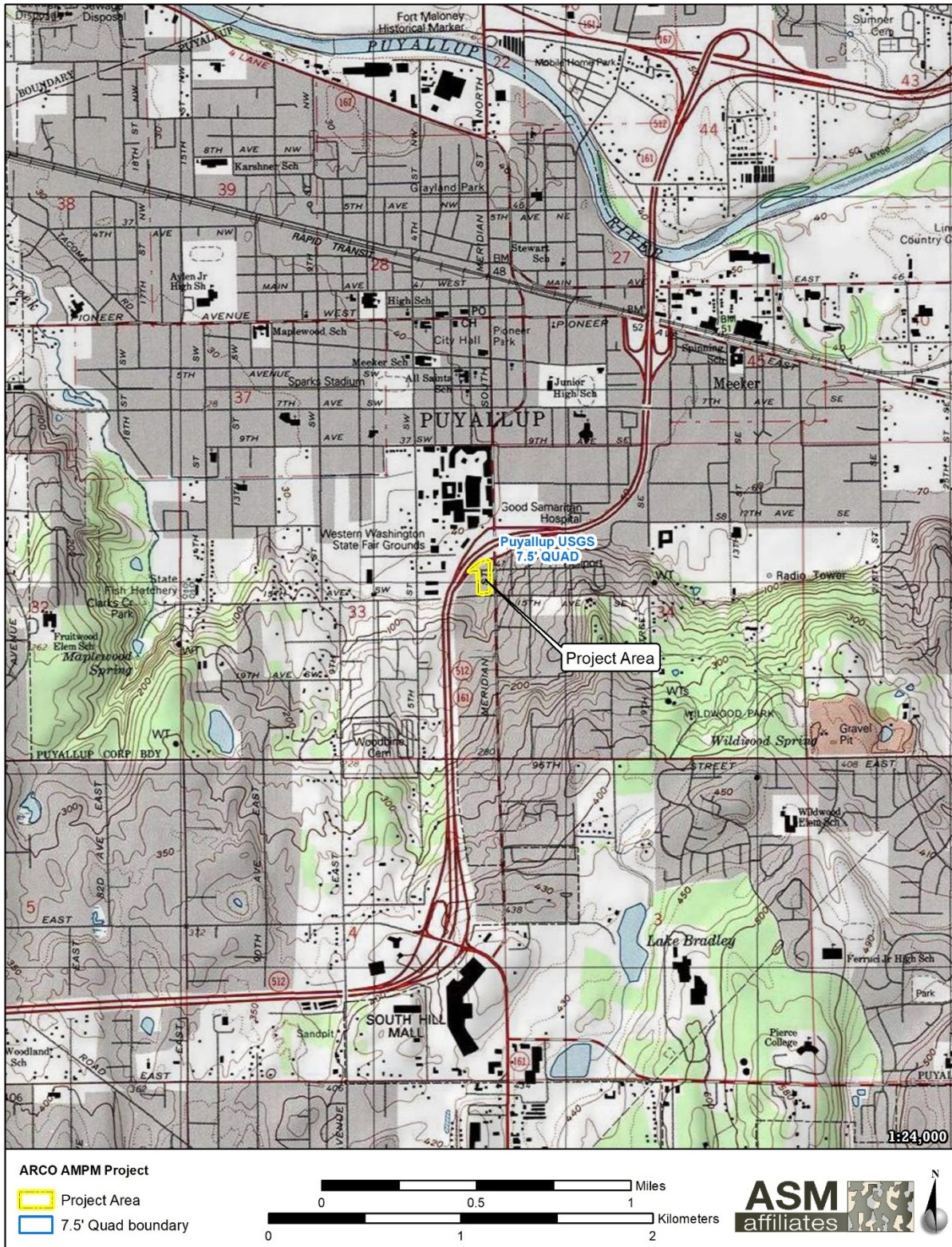


Figure 1. Project area on USGS, Puyallup Quad, Section 33, T. 20N, R. 4E.



Figure 2. Project area on modern aerial photo.

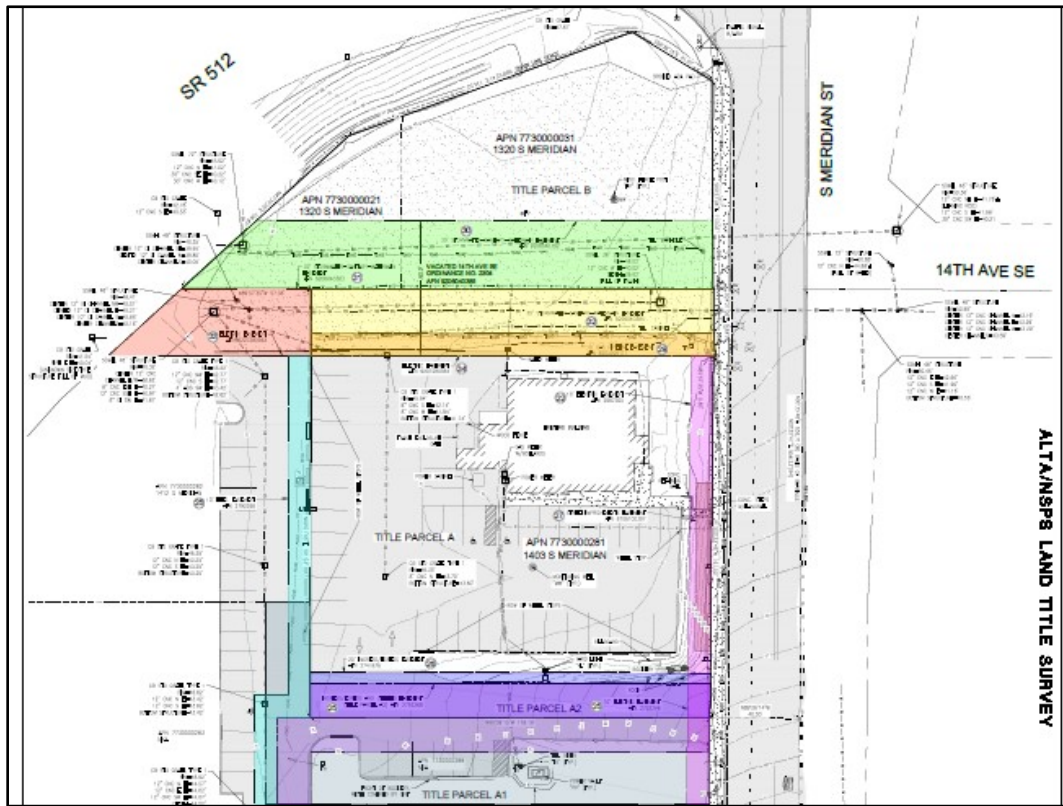


Figure 3. Existing conditions plan sheet, colored areas indicate utility easements.

1. Introduction

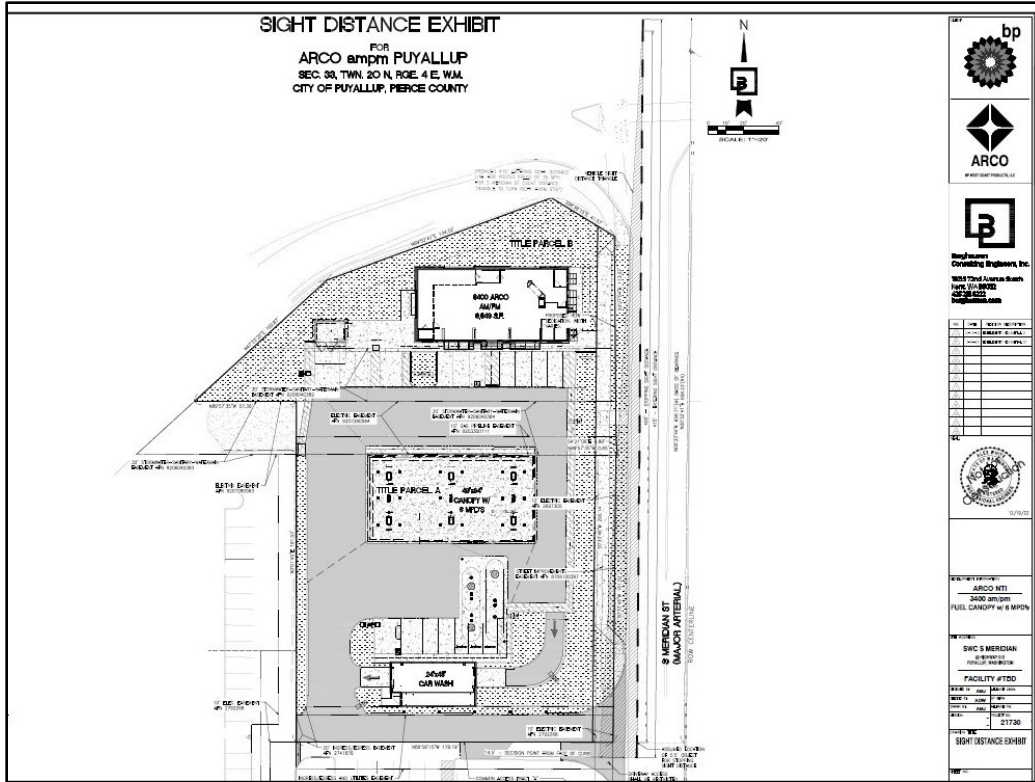


Figure 4. Proposed configuration of ARCO ampm store, gas station, and carwash.

2. Archaeological Context

This chapter reviews the environmental setting and the prehistoric, ethnohistoric, and historic cultural sequences of the project vicinity and summarizes how pertinent investigations in the general region have contributed to the current constructions of cultural history. The project area is historically resource-rich supporting numerous plant and animal species important to present and past populations. Native vegetation reflects the riverine environment and the maritime climate consisting of mild winters, cool summers, and high winter precipitation.

Environmental Setting

Environmental factors affecting human settlement and land-use practices in the project vicinity include Pleistocene glaciation followed by early Holocene climate change and catastrophic volcanic events. The Vashon Stade of the last glacial maximum reached its furthest extent in the Puget Lowland approximately 20,000 years ago. The advancing glacier cut deep troughs through bedrock and previous glacial deposits as it advanced south from British Columbia. The Puget Lobe of the Cordilleran Ice Sheet advanced and remained stationary for several millennia blocking drainage channels that previously flowed into the Puget Lowland. Much of what is now the southern Salish Sea was filled by proglacial lakes including Glacial Lake Russell and Glacial Lake Puyallup which stretched as far inland as Orting (Porter and Swanson 1998). During that period, the Puget Lowland drained south through the Black Lake Spillway and Chehalis River Valley. Proglacial lake levels steadily fell as successively lower spillways were exposed. Around 16,950 years ago, the Puget Lobe began rapidly receding northward producing dramatic changes to the landscape and local ecosystems as a marine incursion eventually replaced Glacial Lake Puyallup (Porter and Swanson 1998:210; Thorson 1981). After glacial retreat, relatively rapid sea level rise in conjunction with isostatic rebound produced further profound changes to environmental conditions. Sea level was rising relative to ground surfaces approximately 9,000 years ago; however, the surface elevation of Puget Sound was probably within 5 to 9 meters (m) (16 to 30 ft.) of its present elevation by around 5,000 years ago (Beale 1991; Eronen et al. 1987).

The Puyallup River Valley was inundated by marine waters shortly after deglaciation and persisted as an arm of the Puget Sound until about 5,600 years ago when a massive lahar swept down the northeastern flank of Mount Rainier (Dragovich et al. 1994). The event, known as the Osceola Mudflow, covered the Enumclaw Plateau and buried the ancient Green River delta near Auburn with rock and mud. The aftermath caused the rapid in-filling of the Green and Puyallup River valleys over the next several thousand years (Zehfuss et al. 2003). In the lower Puyallup Valley, the Osceola Mudflow is overlain by approximately 10-30 meters (30-100 feet) of deltaic gravels, sands, silts, clays and peat, as well as gravel- to clay-sized alluvium (Dragovich et al. 1994). This alluvium includes more recent volcanic lahar sediments including deposits from the Electron Mudflow that swept down the Puyallup River valley around 500 years ago (Dragovich et al. 1994:24). The project area lies at approximately 40 ft. above mean sea level. The Natural Resources Conservation Service (NRCS) maps project soils as Schalcar muck, composed of organic material over alluvium that formed in floodplains. These sediments are

described as muck transitioning to mucky peat that cap silty clay and fine sandy loam below approximately 30 inches (NRCS 2023).

Vegetation patterns in western Washington shifted at least three times in the past 14,000 years due to regional climate changes in the Pacific Northwest. The northern Puget Sound was characterized by a cool, dry climate between approximately 13,000 and 12,000 B.P. Vegetation at this time included grasslands within open forests of sparse lodgepole pine (*Pinus contorta*), sedges (Cyperaceae), sagebrush (*Artemisia* sp.), and an assortment of herbs (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). Regional climate warmed by approximately 12,000 B.P., and Douglas fir (*Pseudotsuga menziesii*) and western hemlock (*Tsuga heterophylla*) became integrated with the existing forest (Whitlock 1992). From approximately 12,000 to 7000 B.P., regional climate became much drier, characterized by higher summer temperatures and an increase in severity and frequency of summer droughts (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). The regional environment changed to a cooler, moist marine climate after 6000 B.P. An increase in summer precipitation and a decrease in summer temperatures accompanied an increase in the relative abundance of western red cedar (*Thuja plicata*) and western hemlock, culminating in a forest dominated by western hemlock and Douglas fir (Brubaker 1991; Whitlock 1992). Early General Land Office surveys documented stands riparian forest in the Puyallup River valley (United States Surveyor General 1865), however by the late 19th century much of the merchantable forest in the lower Puyallup Valley had been harvested and the area described as “*cut areas not restocking*” (USGS 1897), or in other words, developed or in agricultural production.

Cultural Setting

This section briefly reviews the prehistoric, ethnohistoric, and historic cultural sequence of the Jenkins Creek Park Project vicinity. This is a summary of how pertinent investigations in the general region have contributed to the understanding of past utilization of the project area.

Precontact Context

Early human settlement in the Pacific Northwest has been the subject of considerable debate. The most widely accepted current model is that humans entered the Puget Lowland shortly after glacial retreat. A small number of archaeological sites and isolated finds attest to the presence of people in western Washington by about 13,800 years before present (BP) (Waters and Stafford 2014). These people are believed to have been mobile hunters who pursued large game, particularly now-extinct species like mammoth, mastodon, and giant bison. Cultural deposits dating between ca. Cal BP 12,000-10,000 from the Bear Creek Site (45KI839) north of Lake Sammamish represent an example of the Late Pleistocene-Early Holocene transition in Western Washington. Artifacts recovered from the site include projectile points, bifaces, scrapers, cores and retouched flakes. Evaluation of the Bear Creek Site lithic assemblage indicates a cultural continuity between the Late Pleistocene and Holocene populations in the region (Kopperl 2016). Early occupation of the region is also supported by the discovery of a fluted projectile point (45KI215) estimated to be approximately 12,000 years old in a peat bog

approximately 20 miles northeast of Puyallup (Meltzer and Dunnell 1987). Another fluted Clovis point was recovered at Yukon Harbor approximately 25 miles northwest (Letourneau 2010).

The earliest archaeological evidence of Holocene exploitation in the Puget Sound region is commonly classified as the Olcott complex. The Olcott complex began around 10,000 BP and continued to as late as ca. 4000 BP, although the chronology of this complex is poorly understood, with various classifications, terminologies, and subdivisions utilized within the literature. These sites are generally recorded on river and streams terraces, with the Olcott type site (45IS14) recorded on the South Fork of the Stillaguamish River (Kidd 1964). Large cobble tools and leaf-shaped projectile points, often heavily weathered, typically characterize Olcott sites. However, there is no consensus on the typology of Olcott tools, and similar artifacts are recorded in sites dated to the Late Holocene as well. The Buse Timber Sales Site (45SN303) documented along the South Fork of the Stillaguamish River at the current City of Granite Falls represents one of the only stereotypical Olcott complex sites firmly dated to the Early Holocene. The Olcott artifacts indicate a subsistence strategy concentrating on large game hunting and plant food gathering, while the location of Olcott sites on river and stream terraces infers a fishing element (Carlson 1990; Chatters et al. 2011; Kidd 1964; Mattson 1985; Nelson 1990). The early and middle period for the lower Puyallup Valley is poorly represented archaeologically, however changing environmental conditions profoundly influenced subsistence practices. Prior to ca 5,600 BP, the Puyallup vicinity was an embayment of the Salih Sea and not habitable. Environmental conditions changed abruptly after the Osceola Mudflow infilled the Puyallup Embayment creating a resource-rich floodplain and prairie habitat maintained by native people through regular fire-maintenance (Boyd 1999). As the climate shifted to a drier pattern and sea levels stabilized by 5000 B.P., people living in the region increasingly relied on marine intertidal resources for subsistence (Ames and Maschner 1999).

Development of marine-oriented cultures is apparent after 2500 BP (Ames and Maschner 1999). Plank houses and specialized fishing implements, including toggled harpoons, appeared in the archaeological record of the Puget Lowland during that time, and were likely accompanied by an increased reliance on and surplus storage of salmon and harvested shellfish (Ames and Maschner 1999; Nelson 1990). Large shell midden sites also appeared in the archaeological record at this time and continued into the ethnohistoric period (Ames and Maschner 1999:89), as did smaller, notched projectile points indicative of bow-and-arrow technology introduced into the region after ca. 2000 BP (Ames and Maschner 1999:200; Nelson 1990; Rorabaugh 2019, Rorabaugh and Fulkerson 2015). Archaeological sites from this later period generally consist of three primary types: residential base camps, temporary camps, and special use sites. Residential base camps are often recognized by large refuse middens located near the modern shoreline, or inland along rivers and at stream confluences. Temporary camps represent the exploitation of specific plant and animal resources by small task groups from the residential base camp. Examples of temporary camps include hunting and plant processing sites, represented by lithic debris scatters, projectile points, scraping tools, and fire-modified rock (FMR) features. Special use sites include lithic and mineral quarries, peeled cedars, or spiritual sites.

Ethnohistoric Context

The project is within the traditional territory of the Puyallup (Haeberlin and Gunther 1930; Smith 1940). The Puyallup spoke a Southern Lushootseed (tɬʷəlšucid) dialect of the regional language family. In the Lushootseed language, the Puyallup are known as the spuyaləpabš meaning “people from the bend at the bottom of the river” referring to the many dispersed villages at the mouth of the Puyallup River (puyallup-tribe.com). The Puyallup shared kinship and social ties with neighboring groups including the Duwamish, Suquamish, Muckleshoot (Stkamish and Skopamish), Nisqually, Snoqualmie, as well as Sahaptin-speaking groups living east of the Cascade Mountains (Haeberlin and Gunther 1930; Ruby and Brown 1992; Smith 1940; Suttles and Lane 1990). Based on interviews with tribal elders in the 1930s, Smith (1940) identified eleven Puyallup villages distributed along the Puyallup River between its mouth and the vicinity of South Prairie and Orting, as well as villages around Commencement Bay, on southern Vashon Island and Carr Inlet. Closest to the project area was the village *sta'xabc* located approximately 2.5 miles northeast where the Stuck (White) River enters the Puyallup River and the village *tsaqwe'qwabc*, located approximately three miles northwest where Clarks Creek meets the Puyallup River (Smith 1940:10).

The Puyallup recognized distinctions between family groups based on landscape characteristics. For example, “Saltwater Indians” lived near the mouth of the Puyallup, using both riverine and marine resources, while people living inland or upriver were referred to as “Canoe Indians” and made their living from both terrestrial and riverine resources (Smith 1940; Suttles and Lane 1990). Puyallup subsistence economies and social interactions emphasize the seasonal nature of certain resources and areas within traditional territories. Winter villages, composed of one or more plank houses where families gathered in the late fall, were typically located along waterways, such as river and creek confluences or protected shorelines. During the winter months, residents of these villages relied heavily on stored foods (e.g., smoked, or dried fish, shellfish, and berries) supplemented by local hunting and fishing forays (Suttles and Lane 1990). The Puyallup spent the winter months making and repairing tools, clothing, and other items, and engaging in religious and ceremonial activities. At the end of winter, villages split into smaller groups traveling to seasonal sites throughout their territory to fish, hunt and gather resources as they became available (Haeberlin and Gunther 1930; Smith 1940).

Salmon provided the most important food source for both upriver and downriver communities. Four species of Pacific salmon ascend the Puyallup River and its tributaries to spawn between June and November. Salmon and other resident fish were caught in dip nets, basket traps, and weirs, and with spears, gaff hooks, and hook-and-line at fishing sites located at strategic locations along marine shorelines, rapids, point bars and stream confluences (Lane and Lane 1977). Hunting was a group activity undertaken throughout the valleys, foothills, and shorelines. Both terrestrial and marine mammals were hunted using bow and arrow and harpoons, and smaller mammals and waterfowl were taken using pitfalls, nets, and traps. In addition to food, animal resources provided clothing, bedding, and tools (Gibbs 1877; Haeberlin and Gunther 1930; Smith 1941; Suttles and Lane 1990; Waterman 1973; Waterman and Greiner 1921). The Puyallup traveled via dugout canoes and on established trail networks, particularly

after the arrival the horse. Portable shelters were constructed at temporary camps when traveling to resource procurement sites in the spring, summer, and fall. Numerous types of roots, berries, bulbs, nuts, and other plants were gathered in nearby prairies and meadows for subsistence and medicinal purposes (Holm 1990; Hymes 1990).

Contact with Euro-American populations resulted in profound changes to Native communities. Smallpox and other diseases greatly reduced Native populations in the region. Land claims by Euro-Americans, as well as the establishment of reservations, removed Native people from their traditional territories, limiting access to their customary hunting and fishing areas (Suttles and Lane 1990). Under the terms of the Medicine Creek Treaty (1854) the Puyallup Indian Reservation was established on 1,280 acres encompassing the valley bottom south of Commencement Bay and east of Tacoma (Ruby and Brown 1992). The Puyallup Reservation was enlarged to 18,062 acres by executive order in 1873. The Puyallup Reservation was first home to people from all but two of the eleven villages described by Smith (1940). Some people of Nisqually, Cowlitz, White River (Muckleshoot), and Steilacoom decent also lived on the reservation, likely because of kinship ties and because their own reservations were located a considerable distance from large population centers, while the Puyallup Reservation borders the city of Tacoma (Ruby and Brown 1992). Following the implementation of the treaty, some Puyallup began to augment traditional subsistence practices with Euro-American agricultural pursuits, logging, and industrial labor (Ruby and Brown 1992). In 1856 an official government report listed the Puyallup population at 550 (Ruby and Brown 1992). Today the Puyallup Tribe of Indians has over 5,000 enrolled members (puyallup-tribe.com).

Ethnographic Place Names

The project vicinity has several ethnographically named places, or toponyms, that describe areas associated with Puyallup settlements, resource procurement. These locations represent connections between landscape and tradition that embody, define, and reinforce cultural values of Native people. In the 1920s, ethnographer T.T. Waterman, with the help of Puyallup informants, recorded several ethnohistoric place names in the project vicinity (Hilbert et al. 2001). The name *Sti'lagwats*, meaning "where wild strawberries grow" was given for the site of the City of Puyallup. The name *səxəbal?txw* meaning "dance house" was given for the site of the town of Meeker (east Puyallup) which brought people from as far as Yakima to participate in religious performances. The name *Tsqwe'yEq*, meaning "raven" is the name for Clarks Creek just over a mile west of the project area. Ravens are reported to have nested at the head of this stream (Hilbert et al. 2001).

Historic Context

The first Euro-American description of the Puyallup vicinity comes from Hudson's Bay Company employee, Dr. William Fraser Tolmie, who in August of 1833 traveled up the Puyallup River. Tolmie, who had arrived at the newly constructed Fort Nisqually a few months earlier, persuaded a Puyallup Indian named *Quilliliaish* to accompany him on a research trip to Mt. Rainier. As he traveled up the Puyallup River Valley, which he called "Poyallipa," he wrote the following in his diary: "*The Poyallipa flows rapidly and is about 10 or 12 yards broad. Its banks are*

2. Archaeological Context

high and covered with lofty cedars and pines. The water is a dirty white color, being impregnated with white clay." A diary entry described the river as having several steep banks, bordered by "dense and tangled thickets" (Price and Anderson 2002). The first Euro-American immigrants arrived in the lower Puyallup Valley by wagon train in October of 1853 and wintered that year along the banks of Clover Creek in what is now south Tacoma (Bonney 1927). The following year 22 members of the party returned to the Puyallup Valley, some of whom filed for Donation Land Claims (DLC) which granted 320 acres to single adult male citizens who had settled in Oregon Territory before 1855 (Figure 5).

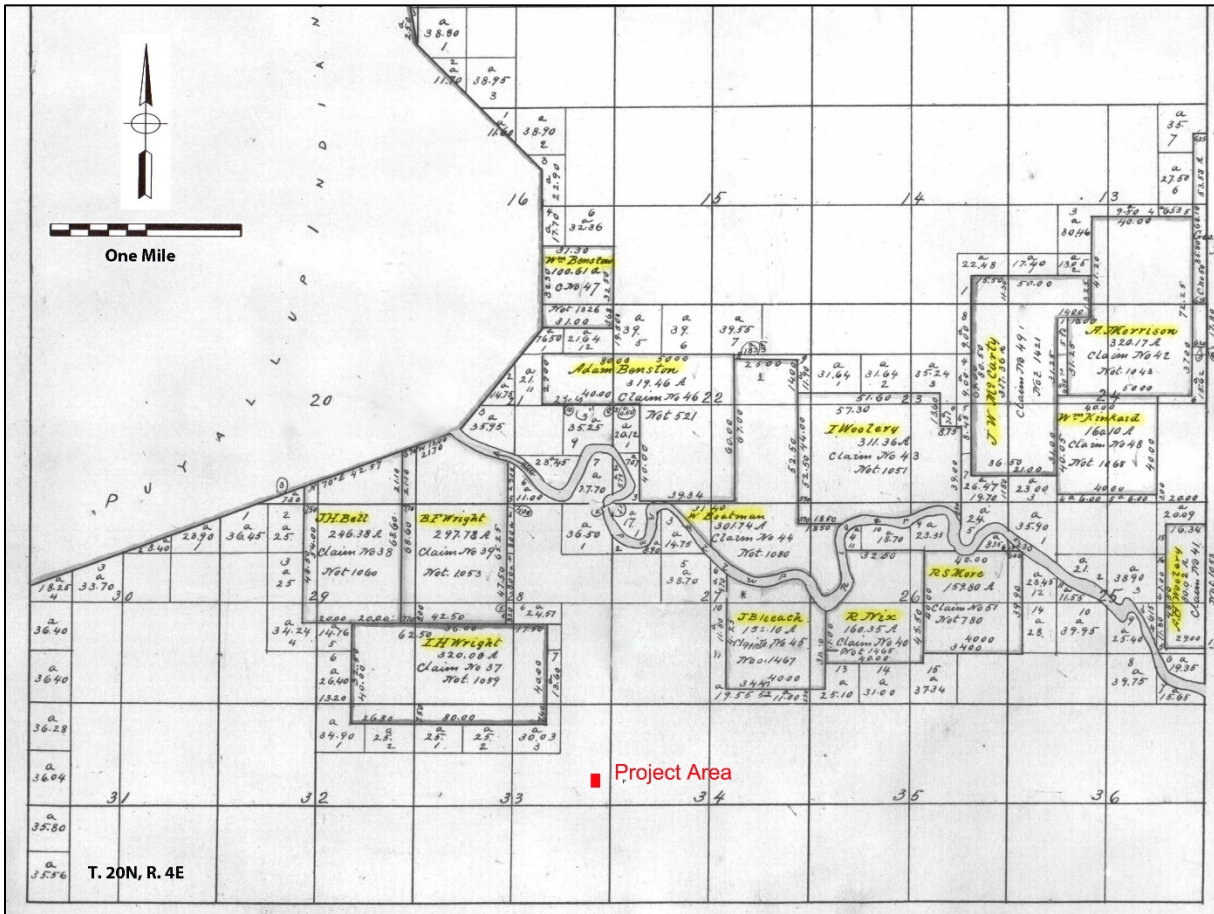


Figure 5. General Land Office Map 1865 showing Donation Land Claims near project area.

In 1864, the U. S. General Land Office (GLO) conducted the first cadastral survey of Township 20N, Range 4 East (Puyallup vicinity). The survey was conducted under direction of Henry Stevenson who mapped several natural features including the Puyallup River and Clarks Creek (Figure 6). The latter is inaccurately mapped flowing northwest across Section 33. The map shows a house and cleared field belonging to "I. Wright" in Section 29 approximately one-mile northwest of the project area. The Puyallup Indian Reservation is mapped approximately two miles northwest and a network of wagon roads connecting other DLC homesteads are shown joining the "Military Road from Steilacoom to Seattle" in Section 28 then continuing west past the Wright homestead before crossing Clarks Creek.

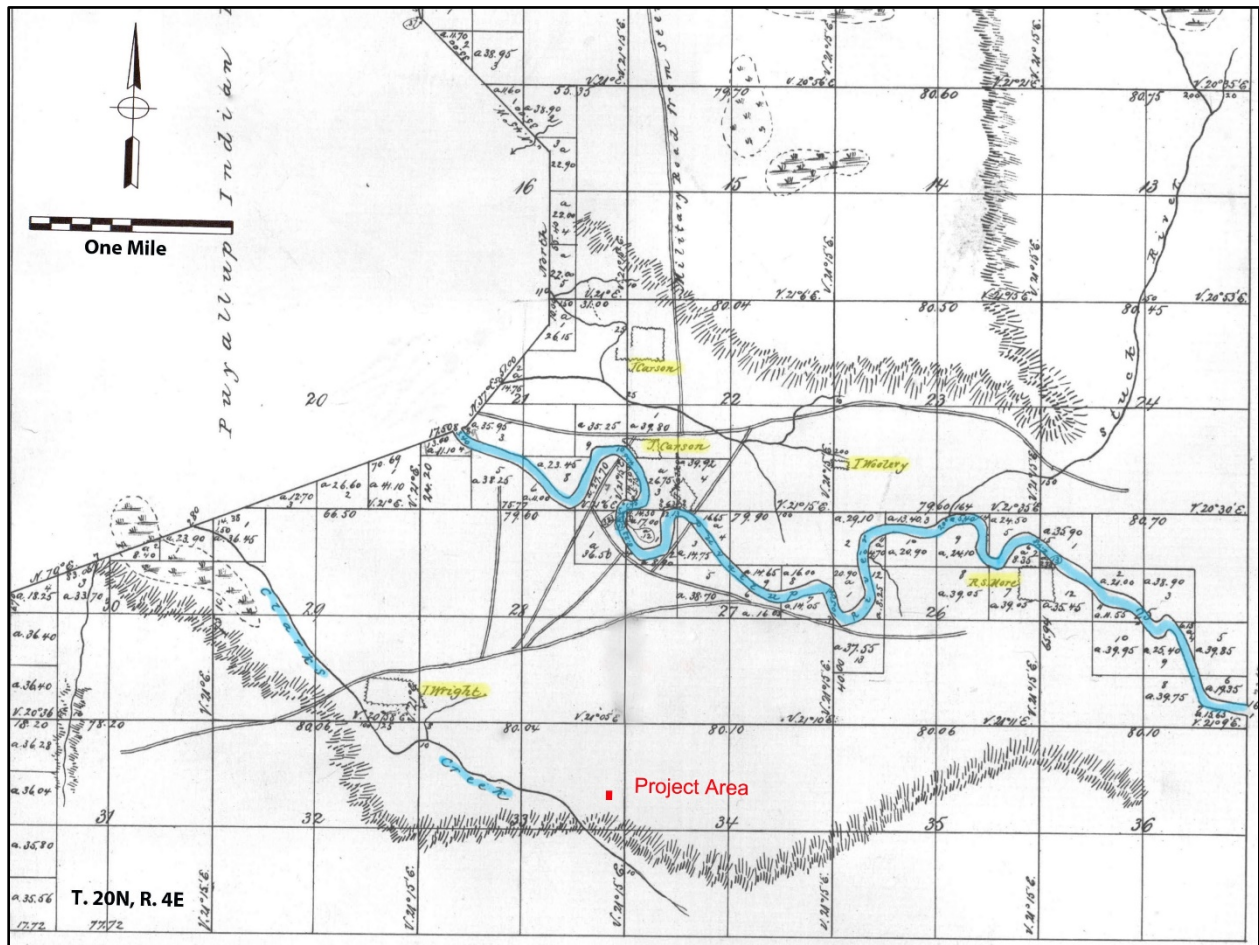


Figure 6. General Land Office Map 1865 showing roads and homesteads near the project area.

Israel and Elizabeth Wright filed a DLC in portions of Sections 32 and 33, approximately one-half mile northwest of the project area. Israel’s brother, Benjamin Wright and wife Frances filed a 300-acre DLC along the Puyallup River just north Israel and Elizabeth. John Carson arrived in the Puyallup Valley in 1853 and filed a DLC on the right (north) bank of the Puyallup River opposite the Benjamin Wright claim, approximately 1.5 north of the project area. Carson established a private ferry crossing for passengers traveling the road between Puyallup and Steilacoom (Price and Anderson 2002). In 1855, a conflict between Native people and the U.S. government prompted Euro-American settlers in the Puyallup Valley to temporarily relocate to Fort Steilacoom, and some never returned. Fort Maloney, a small protective blockhouse was constructed at the Carson homestead during the time period. The conflict lasted less than a year and by 1861 a rough military road and telegraph line was constructed into the Puyallup Valley from Fort Steilacoom.

In 1862 Congress passed the Homestead Act, granting 160 acres to individual U.S. citizens. The act encouraged additional Euro-American settlers to move to the Puyallup Valley. John Meeker and his brother Ezra, arrived in the valley with his family in 1859 and filed a Homestead Claim in Sections

27 and 28 and built a second cabin, eventually clearing his entire claim of heavily timbered land for agricultural use. In 1877, Ezra Meeker platted the first town site on 20 acres of his land claim, naming it Puyallup (Price and Anderson 2002). Additional parcels were platted by Meeker and others and by 1888, the townsite of Puyallup had grown to 80 acres in size. Large scale agriculture in the valley began in the 1866 when John Meeker grew and dried a crop of hops for an Olympia brewery turning his effort into \$185—the most crop-cash anyone in the Puyallup Valley had ever seen (Bonney 1927). Ezra Meeker quickly planted three acres of hops the following year and continued to expand until he had over 500 acres in hops production some 20 years later. Other area farmers began clearing the land and by 1884 more than 100 growers were engaged in hop production in the Puyallup Valley, harvesting more than 3,000 pounds of hops per acre. At first family members harvested the hops, but soon there was so much acreage in production that more pickers were needed. Native Americans from as far away as British Columbia soon arrived in wagons, canoes, and horseback to pick hops (Bonney 1927). John Meeker built the first hop drying kiln in the Valley, and brother Ezra built several large hop kilns along South Meridian Street and along the Puyallup River. Hops farmers became rich, building elaborate homes in the Valley and instigating rapid commercial growth. Puyallup incorporated in 1890, however the great Puyallup fire that year destroyed many of the town's buildings. The following year, less than thirty years after the first hops was planted, a massive infestation of hop lice brought the end to the hop boom, and coupled with the world-wide economic depression of 1893, ultimately ended Puyallup's great commercial growth (Bonney 1927).

Puyallup maintained modest growth through the turn of the century and into the 1920s as hop farmers used their fertile soils to grow a variety of berries and bulbs and the lumber boom spurred the construction of several lumber mills in town. Puyallup continued to diversify and by 1923 the city was experiencing the greatest building boom since incorporation. Agriculture and associated commercial businesses dominated the local economy until the early 1960s when Puyallup became a bedroom community for Tacoma (Price and Anderson 2002).

Property History

The project area is part of a 148-acre homestead claim by John Meeker (E ½ of NE ¼ Section 33) in 1874 (BLM 2023). It is unclear if Meeker ever used the project area for agricultural purposes; however, the 1897 USGS map shows the area cleared of timber and S. Meridian St. extending past the project area connecting the town of Puyallup with homesteads on the South Hill. By the early 20th century most of Puyallup was platted and subdivided in 10 acre or larger parcels. The 1915 Kroll Atlas shows the project area as part of an unowned 20-acre plat; however, a 1940 aerial image shows a house and at least one outbuilding within the project area suggesting the buildings were constructed sometime during the 1920s or 1930s. The house is part of a 10-acre farmstead with several fruit trees and agricultural fields west of the buildings (Figure 7). The house appears on aerial imagery through the 1960s; however, by 1980 aerial images show relatively current conditions. The Pierce County Assessor indicates the current single-story commercial building within the project area (formerly Jason's Restaurant) was constructed in 1976.



Figure 7. Project area shown on historic 1940 aerial image.

The project area is just south of historic State Route (SR) 512 that follows the route of several county roads that were incorporated into Secondary State Highway 5G (SSH 5G) in 1937. The

highway was renumbered to SR 512 in 1964 and gradually replaced by a freeway that was constructed between 1959 and 1973. The Puyallup section was initially built as a two-lane expressway until further funding was allocated by the state government to complete it as a four-lane freeway in 1976 (Wikipedia 2023).

Previous Research

Nine previous cultural resources studies have been conducted within approximately one mile of the project; however, none have intersected the current project area or identified significant cultural resources (Table 1). Three of these studies are related to transportation improvement and expansion projects including new parking lots, light rail stations, bridges, and new infrastructure. Two studies were completed for telecommunication projects and a reconnaissance-level survey was conducted in downtown Puyallup. The project encompassed 68 blocks and 96 historic properties were identified and inventoried including commercial and residential buildings, and institutional properties (BOLA 2007). The other studies include a survey of the Puyallup Riverfront Trail (Shong and Miss 2003), restoration of Meeker Creek channel (Kelley 2012), and a bank stabilization project along a portion of Clarks Creek (Shong and Shantry 2016). The latter investigation recoded a segment of the former Tacoma Railway and Power Company electric railway grade (45KI01406) dating between 1889 and 1919 (Shong 2016). The only other archaeological site within one mile is 45PI01582, a deposit of historic material dating to the early 1920s recorded during archaeological monitoring for the Puyallup Station improvements project (Yamamoto 2021). The Woodbine Cemetery (45PI00882) dating to 1895 is located approximately 0.75 mi southwest of the project.

Table 1. Previous Cultural Resource Studies within Approximately One Mile of the Project.

Author	Date	Project	Distance	Results
Shong and Miss	2003	Heritage Resources Investigations for the City of Puyallup Riverfront Trail-Phase 2	1 mi. NE	No significant cultural resources identified
BOLA Architecture	2007	Puyallup Historic Survey Report, Puyallup.	0.5 mi. N	Inventory of 96 historic properties in downtown
Marken et. al.	2009	Cultural Resources Survey for the Puyallup Sounder Commuter Rail Station Parking Expansion Project.	0.5 mi. NW	Two rows of cement bollards noted
Kiers, Roger	2010	Cultural Resources Survey, SR 512, SR 410 and SR 167, Portland Ave. to King County Line, Flow Map Improvements,	0.5 mi. NE	No significant cultural resources identified
Stipe, Frank	2010	Verizon Wireless Tac Bradley Park Alt. 2 Cellular Tower Cultural Resources Review	1.0 mi. S	No significant cultural resources identified
Kelley, Katherine	2012	Cultural Resources Assessment for the Meeker Creek Channel Restoration Project.	1.0 mi. NW	No significant cultural resources identified
Holschuh, Dana	2014	Archaeological Survey of the Wildwood Park Telecom (TA3289) Project, Pierce County, WA	0.8 mi. SE	No significant cultural resources identified
HRA, Inc.	2015	Puyallup Station Access Improvements Project Cultural Resources Technical Report.	0.8 mi. N	Inventory of 15 historic buildings and structures

2. Archaeological Context

Table 1. Previous Cultural Resource Studies within Approximately One Mile of the Project.

Author	Date	Project	Distance	Results
Shong and Shantry	2016	Cultural Resources Assessment for the Clarks Creek Channel and Bank Stabilization Project, Pierce County, Washington	1 mi. SW	45PI1406 recorded (segment of TR&P Co. electric railway grade)

There are 21 historic properties within approximately one-half mile of the project (Table 2). Most of these properties are buildings associated with the Puyallup fairgrounds. Few have specific dates of construction assigned to them; however, most likely date to the 1940s and 1950s based on the c. 1942 establishment of the fairgrounds. The Puyallup Fairgrounds (45PI00565) is also the site of Puyallup Assembly Center, known locally as “Camp Harmony,” where in 1942 the U.S. Wartime Civil Control Administration relocated citizens and non-citizens of Japanese ancestry following the outbreak of World War II. Both resources have been nominated to the National Register of Historic Places as well as several other properties including the Peace Lutheran Church (c. 1892), the Christ Episcopal Church (c. 1926), Meeker Mansion (1890) and a Puyallup fish hatchery constructed in 1949.

Table 2. Historic Properties within One-Half Mile of the Project.

DAHP No.	Property Name	Location in Puyallup	Date	Inventory Status
32180	House (PC-104-17a)	312 9th Avenue SE	n/a	No determination
32181	Roller Coaster	SE corner 9th Ave and 5th St SW	n/a	No determination
32185	House	309 9th Avenue SW	n/a	No determination
32195	House (PC-102-16)	1700 9th Street SW	n/a	No determination
32211	House (PC-109-2a)	218-14th Avenue SE	n/a	No determination
32212	n/a	407 14th Ave SE	1952	Determined not eligible
32253	Building (PC-116-7a)	100 block, South Meridian	n/a	No determination
32254	Hale Realty Building (PC-116-8a)	100 block, South Meridian	n/a	No determination
32258	Karshner Building (PC-116-0a)	South Meridian and Meeker Ave	n/a	No determination
32259	Building (PC-116-3a)	South Meridian and West Main	n/a	No determination
32260	Building (PC-116-9a)	100 block, South Meridian	n/a	No determination
32263	House	1829 South Meridian	n/a	No determination
665964	Single Family House	403 9th Ave SW	1915	No determination
666906	Puyallup Valley Hospital	506 13th Ave SE	1922	Determined eligible
666907	Single Family House	502 14th Ave SE	1952	Determined eligible
670535	Single Family House	612 17th Ave NW	1962	Determined not eligible
45PI00605	Christ Episcopal Church	210 5 th Street S.	1926	National Register Inventory
45PI00099	Ezra Meeker Mansion	321 Pioneer East	1890	National Register Inventory
32262, 54821 45PI00565	Western Washington Fairgrounds (Puyallup Assembly Center)	100 South Meridian	1942	National Register Inventory
45PI00626	Peace Lutheran Church	214 Pioneer Avenue	1892	Washington Heritage Register
45PI01294	Puyallup Fish Hatchery	1416 14 th St. SW	1949	National Register Inventory

3. Research Design and Field Methods

Several factors contribute to expectations concerning the likelihood of locating cultural resources within the project area. Recorded cultural resources, landform characteristics, documented land use, and previous cultural resources studies discussed in the preceding chapter all contribute to those expectations. The project is located along the margin of the lower Puyallup River valley and floodplain suggesting relatively a high-risk for encountering precontact and ethnohistoric archaeological resources. Important natural resources were once present in the project vicinity including salmon, terrestrial mammals, and plants used for dietary and medicinal purposes. Multiple volcanic lahars originating on Mt. Rainier have contributed to relatively rapid progradation of the Puyallup River delta, i.e., marine, and intertidal resources would have been closer to the project area prior to approximately 1,000 BP.

Several natural features in the project vicinity retain Native American place names indicating a profound connection to the landscape. A network of trails once connected nearby lakes, streams, prairies, and other natural features to native communities along the Puyallup River. Archaeological materials associated with precontact sites may include flaked-stone debris and lithic tools including bifaces, projectile points, scrapers, cores, and ground stone implements. These materials are often found in association with organically rich, or charcoal-stained sediments containing FMR and faunal remains including bone and shell. Ethnohistoric sites may also contain early Euro-American trade items and early historic-period items such as of dinnerware ceramics, vessel glass, square nails, gunflints, clay tobacco pipes, and glass beads. Historic-period archaeological resources would likely be related to mid-20th century domestic habitation. Evidence of historic land-use would likely be evidenced by buried structural features and debris such as concrete foundations, masonry work, nails, window glass, dimensional lumber, miscellaneous structural hardware and domestic refuse such as glass and metal food/beverage containers, dinnerware ceramics, and miscellaneous personal items. These items may be concentrated in buried discard-pits or privies.

Field Methods

ASM Archaeologist Mike Shong completed field reconnaissance on November 29, 2023. Fieldwork consisted of pedestrian survey, photographic documentation, and excavation of seven mechanical test trenches (TTs) around the existing building and outside the 75 ft. wide utility corridor (Figure 8). The trenches were spaced approximately 25 m (80 ft.) apart and measured approximately 2.5 m (8 ft.) long by 1 m (3 ft.) wide and were terminated approximately 230 cm (7.5 ft.) below the surface. When encountered, at least 0.03 m³ (1 ft.³) of native soils (A-horizon) were passed through ¼-inch (0.5 cm) mesh hardware cloth using a standard shaker-screen. Identified cultural material was reburied in the trench in which it was found. The findings of each test trench were recorded on standard forms that include information regarding soil color, texture, composition. Digital photographs were taken of each test trench, and any recovered cultural material. The subject matter of each photograph was recorded on a standard photo log. Project files and field notes are on file at the ASM Seattle Office. Appendix A of this report presents the subsurface excavation results in tabular form.



Figure 8. Modern aerial image showing existing conditions and location of test trenches.

4. Field Results

No significant cultural resources were identified during this assessment. The project area consists of the former Jason's Restaurant and associated parking lot constructed in 1976 (Figure 9). The surface of the project area is largely paved or covered with approximately 0.5 ft. of crushed gravel. Asphalt, when present, was saw-cut and left adjacent to the trench after backfilling was complete (Figure 10). Site sediments generally consist of approximately 2.5 feet of fill over floodplain alluvium. A small amount of middle to late 20th century structural and domestic debris was observed in several trenches. All of these materials were located within a mottled, dark-brown, loamy fine-sand layer (A-horizon) approximately 90 cm (36 inches) below the surface (Figure 11). The structural debris consisted sparse, fragmented concrete, red brick, terra cotta drainpipe, plastic, PVC, metal pipe, and electrical wire (Figure 12). A small amount of floral design (transfer-print) earthenware ceramics and decorative vessel glass (probably glass pitcher) was observed in TT-2 and TT-3 (Figures 13 and 14). The domestic debris is not temporally diagnostic but is likely related to the former house and occupation of the property beginning sometime after ca. 1920. Careful examination of the excavated spoil and sample sifting of the A-horizon produced few gravels and no evidence of precontact cultural activity such as charcoal staining or thermally-altered rocks.



Figure 9. Project overview showing recently closed Jason's Restaurant, view NW.

5. Conclusions and Management Recommendations



Figure 10. Project overview showing TT-7 in the SE corner of the project area.



Figure 11. Overview of TT-6 showing typical profile of sandy fill over alluvium.



Figure 12. Electrical wire in upper soil A-horizon from TT-4, 70 cmbs.



Figure 13. Glass and earthenware ceramics *in situ* from TT-3, 95 cmbs.



Figure 14. Glass and earthenware ceramics from TT-3, 95 cmbs.

The observed sediments were relatively consistent in six of the seven test trenches. In sum, site sediments are composed of approximately 75 cm (30 inches) of sandy matrix representing one or more fill events. The fill caps a dark-brown, heavily mottled, organically-rich loamy sand that likely approximates the historic-period floodplain surface based on the lack of gravels and presence of sparse historic debris. The dark-colored soil was absent in TT-1 and no soil B-horizon was observed in any of the trenches. The soil A-horizon transitions abruptly to a gray, bedded silt/sand package that continues to at least 230 cm (7.5 ft.) below the surface. Trace organics were regularly observed in the lower alluvium at TT-7 contained common woody debris throughout the trench profile. The mottling of the A-horizon combined with an abrupt lower bounding contact suggests the historic-period soils have experienced significant past disturbance related to land clearing, residential development and subsequent demolition and development of the current site. The organically-rich A-horizon overlying homogenous gray alluvium lacking redoximorphic features and pedogenic structure, suggests the floodplain at the toe of the hill was a former wetland prior to historic development.

5. Conclusions and Management Recommendations

ASM conducted a cultural resources assessment for the proposed ARCO ampm Project located at 1402 S Meridian, Puyallup, Pierce County, Washington. No significant cultural resources were identified during this assessment. A small amount of structural and domestic debris was observed in several test trenches; however, the materials are not temporally diagnostic, lack integrity of location and association and may have been imported to the site as fill. For these reasons the material was not recorded as an archaeological site. The former house and outbuildings were constructed sometime after ca. 1920, therefore no privies (that may contain archaeological data) are expected on the property.

Analysis of site sediments suggests the landform prior to historic development was likely a perennial wetland that would not have offered suitable conditions for human habitation. While Native people may have procured cedar or other water-tolerable plant species within the project area, no evidence of precontact cultural materials were observed during sample sifting at all seven test trench locations. Based on the results of the subsurface survey, ASM believes the project has a relatively moderate- to low-risk for encountering precontact, ethno-historic, or significant historic-period archaeological resources.

Based on the results of this assessment, ASM recommends the project proceed under the conditions of an Inadvertent Discovery Plan (IDP) for cultural resources that stipulate the procedures and contact protocol to follow in the unlikely event that significant cultural resources or human remains are discovered during project construction.

References Cited

Ames, Kenneth M., and Herbert D. G. Maschner

1999 *Peoples of the Northwest Coast: Their Archaeology and Prehistory*. Thames and Hudson, London.

Anderson Map Company

1907 *Plat Book of King County Washington*. Anderson Map Company, Seattle.

Baldwin, Garth, Jennifer Chambers and Keith Solmo

2016 Cultural Resources Assessment for the Milwaukee Bridge Rehabilitation Project, Puyallup, Pierce County, Washington. Prepared for Widener and Associates. Drayton Technical Report: 0214C.

Barnosky, Cathy W., Patricia M. Anderson, and Patrick J. Bartlein

1987 The Northwestern U.S. during Deglaciation: Vegetational History and Paleoclimatic Implications. In *The Geology of North America, Volume K-3: North America and Adjacent Oceans during the Last Deglaciation*, edited by W. F. Ruddiman and Herbert E. Wright, Jr., pp. 289-321. Geological Society of America, Boulder, Colorado.

Beale, Harriet

1991 *Relative Rise in Sea-Level during the Past 5,000 Years at Six Salt Marshes in Northern Puget Sound, Washington*. Shorelands and Coastal Management Program, Washington Department of Ecology, Olympia.

Beck, Charlotte, and George T. Jones

2014 Complexities of the Colonization Process: A View from the North American West. In *Paleoamerican Odyssey*, edited by Kelly E. Graf, Caroline V. Ketron, and Michael R. Waters, pp. 273-291. Texas A&M University Press, College Station.

BOLA Architecture and Planning

2007 Puyallup Historic Survey Report, Puyallup, Washington. Prepared for the City of Puyallup, Pierce County, & the Washington State Department of Archaeology and Historic Preservation by BOLA Architecture and Planning.

Bonney, W.P.

1927 *History of Pierce County, Washington*. Volume 1. Pioneer Historical Publishing Company, Chicago.

Boyd, Robert T.

1998 *The Coming of Spirit and Pestilence, Introduced Diseases and Population Decline among Northwest Coast Indians, 1774-1874*. University of Washington Press, Seattle.

1999 *Indians, Fire, and the Land in the Pacific Northwest*. Oregon State University Press, Corvallis.

References Cited

Brubaker, Linda B.

- 1991 Climate Change and the Origin of Old-Growth Douglas-Fir Forests in the Puget Sound Lowland. In *Wildlife and Vegetation of Unmanaged Douglas-Fir Forests*, edited by Leonard F. Ruggiero, Keith B. Aubry, Andrew B. Carey, and Mark F. Huff, pp. 17-24. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-285.

Bureau of Land Management

- 2022 U.S. Department of the Interior Bureau of Land Management. General Land Office Records. Electronic document <http://www.glorerecords.blm.gov/default.aspx>.

Cannon, Aubrey, and Dongya Y. Yang

- 2006 Early Storage and Sedentism on the Pacific Northwest Coast: Ancient DNA Analysis of Salmon Remains from Namu, British Columbia. *American Antiquity* 71:123-140.

Carlson, Roy L.

- 1990 Cultural Antecedents. In *Northwest Coast*, edited by Wayne Suttles, pp. 60-69. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Chatters, James C., Jason B. Cooper, Philippe D. LeTourneau, and Lara C. Rooke

- 2011 *Understanding Olcott: Data Recovery at 45SN28 and 45SN303 Snohomish County, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Cowen, Jason

- 2013 Cultural Resources Assessment for the Milwaukee Bridge Replacement Project, Puyallup, Pierce County, WA. Prepared for City of Puyallup Public Works by Cultural Resource Consultants.

Dellert, Jenny and Jennifer Gilpin

- 2016 Archaeological Monitoring Report for the Harnish Parking Structure Project, City of Puyallup, Pierce County, Washington. Prepared for Harnish Auto Family by HRA, Inc.

Dragovich, Joe D., Patrick T. Pringle, and Timothy J. Walsh

- 1994 Extent and Geometry of the Mid-Holocene Osceola Mudflow in the Puget Lowland- Implications for Holocene Sedimentation and Paleogeography. *Washington Geology* 32:3-26.

Eronen, Matti, Tuovi Kankamen, and Matsuo Tsukada

- 1987 Late Holocene Sea-level Record in a Core from the Puget Lowland, Washington. *Quaternary Research* 27:147-159.

References Cited

Gibbs, George

- 1877 Tribes of Western Washington and Northwestern Oregon. In *Contributions to North American Ethnology*, Vol. 1, pp. 157-241, Department of the Interior, Washington, D.C.

Haeberlin, H., and E. Gunther

- 1930 The Indians of Puget Sound. *University of Washington Publications in Anthropology* 4(1):1-84. Seattle.

Hilbert, Vi, Jay Miller, and Zalmay Zahir (Editors)

- 2001 *Puget Sound Geography*. Original Manuscript from Thomas T. Waterman. Lushootseed Press, Seattle.

Holm, Bill

- 1990 Art. In *Northwest Coast*, edited by Wayne Suttles, pp. 602-632. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Holmes, Brian G.

- 1964 *Washington State Highways Archaeological Site Survey Report*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

HRA, Inc.

- 2015 Puyallup Station Access Improvements Project Cultural Resources Technical Report. Prepared for Sound Transit by HRA, Inc.

Hymes, Dell

- 1990 Mythology. In *Northwest Coast*, edited by Wayne Suttles, pp. 593-601. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kidd, Robert S.

- 1964 *A Synthesis of Western Washington Prehistory from the Perspective of Three Occupational Sites*. Unpublished M.A. thesis, Department of Anthropology, University of Washington, Seattle.

Kelly, Katherine M.

- 2012 Cultural Resources Assessment for the Meeker Creek Channel Restoration Project. Prepared for City of Puyallup by Cultural Resource Consultants.

Kiers, Roger

- 2010 Cultural Resources Survey, SR 512, SR 410 and SR 167, Portland Ave. to King County Line, Flow Map Improvements, Pierce County, Washington. WSDOT Cultural Resources Program Short Report No. 10-06.

References Cited

Kiers, Roger and Craig Holstine

- 2012 Cultural Resources Discipline Report, State Route 167 Puyallup River/Meridian Street Bridge Phase, SR 167 Extension – Puyallup to SR 509 Freeway Construction Project, Pierce County, Washington. WSDOT Cultural Resources Program Report No. 12-10.

Kopperl, Robert E. (Editor)

- 2016 *Results of Data Recovery at the Bear Creek Site (45KI839) King County, Washington, Vol. 1.* Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Letourneau, Philippe D.

- 2010 A Clovis Point from the Pacific Northwest Coast. In *Current Research in the Pleistocene*. Archaeology: North America, 27:115.

Marino, Cesare

- 1990 History of Western Washington since 1846. In *Northwest Coast*, edited by Wayne Suttles, pp. 169-179. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Marken, Mitchell, Brad Brewster, Kent Hale, and Reema Shakra

- 2009 DRAFT Cultural Resources Survey for the Puyallup Sounder Commuter Rail Station Parking Expansion, Puyallup, Pierce County, Washington. Prepared for Inca Engineers by ESA.

Mattson, John L.

- 1985 *Puget Sound Prehistory: Postglacial Adaptations in the Puget Sound Basin with Archaeological Implications for a Solution to the "Cascade Problem"*. Unpublished Ph.D. dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.

Meltzer, David J., and Robert C. Dunnell

- 1987 Fluted Points from the Pacific Northwest. *Current Research in the Pleistocene*, 4:64-67.

Moss, Madonna L.

- 2011 *Northwest Coast: Archaeology as Deep History*. Society for American Archaeology, Washington, D.C.

Nelson, Charles M.

- 1990 Prehistory of the Puget Sound Region. In *Northwest Coast*, edited by Wayne Suttles, pp. 481-484. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Porter, Stephen C., and Terry W. Swanson

- 1998 Radiocarbon Age Constraints on Rates of Advance and Retreat of the Puget Lobe of the Cordilleran Ice Sheet during the Last Glaciation. *Quaternary Research* 50:205-213.

References Cited

Price, Lori and Ruth Anderson

- 2002 *Puyallup A Pioneer Paradise*. The Making of America Series, sponsored by the Ezra Meeker Historical Society. Arcadia Publishing Company, Charleston.

Rorabaugh, Adam N.

- 2019 Hunting Social Networks on the Salish Sea Before and After the Bow and Arrow. *Journal of Archaeological Science: Reports* 23:822-843.

Rorabaugh, Adam N., and Tiffany J. Fulkerson

- 2015 Timing of the Introduction of Arrow Technologies in the Salish Sea, Northwest North America. *Lithic Technology* 40 (1):21-39

Ruby, Robert H., and John A. Brown

- 1992 *A Guide to the Indian Tribes of the Pacific Northwest*. Revised. University of Oklahoma Press, Norman.

Shong, Michael and Christin J. Miss

- 2003 Heritage Resources Investigations for the City of Puyallup Riverfront Trail Project-Phase 2 (Sr 512 To East Main) Pierce County, Washington. Prepared for Perteet Engineering. NWAA Project No. WA-03-01

Smith, Marian W.

- 1940 *The Puyallup-Nisqually*. *Columbia University Contributions to Anthropology* 32. New York.

NRCS

- 2020 Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Electronic document <http://websoilsurvey.nrcs.usda.gov>.

Spier, Leslie

- 1936 *Tribal Distribution in Washington*. General Series in Anthropology No. 3. Menasha, Wisconsin.

Suttles, Wayne, and Barbara Lane

- 1990 Southern Coast Salish. In *Northwest Coast*, edited by Wayne Suttles, pp. 485-502. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Swanton, John R.

- 1979 *Indian Tribes of Washington, Oregon & Idaho*. Ye Galleon Press, Fairfield, Washington, D.C.

Thorson, Robert. M.

- 1981 *Isostatic Effects of the Last Glaciation in the Puget Lowland, Washington*. U.S. Geological Survey, Open-File Report 81-370.

References Cited

United States Geological Survey

- 1897 Tacoma Washington, 1:125,000. U.S. Geological Survey, Washington D.C.
- 1900 Land Classification Sheet. Tacoma Washington, 1:125,000. U.S. Geological Survey, Washington D.C.

United States Surveyor General

- 1864 General Land Office, Township 20 North, Range 4 East, Willamette Meridian. U.S. Surveyor General's Office, Olympia, Washington.
- 1865 General Land Office, Township 20 North, Range 4 East, Willamette Meridian. U.S. Surveyor General's Office, Olympia, Washington.

Waters, Michael R., and Thomas Wier Stafford, Jr.

- 2014 The First Americans: A Review of the Evidence for the Late-Pleistocene Peopling of the Americas. In *Paleoamerican Odyssey*, edited by Kelly E. Graf, Caroline V. Ketron, and Michael R. Waters, pp. 541-560. Texas A&M University Press, College Station.

Whitlock, Cathy

- 1992 Vegetational and Climatic History of the Pacific Northwest during the Last 20,000 Years: Implications for Understanding Present-Day Biodiversity. *Northwest Environmental Journal* 8:5-28.

Yamamoto, Christopher, Stephen Emerson, and Rebecca Stevens

- 2015 Cultural Resources Investigations for the Washington State Department of Transportation's SR 167 Tacoma to Puyallup New Freeway, Pierce County, Washington. Submitted to WSDOT. Archaeological and Historical Services Short Report DOT15-04.

Appendices

Appendix A
Subsurface Excavation Results

Appendices

TRENCH	DEPTH (CMBS)	SEDIMENT DESCRIPTION	CULTURAL MATERIAL
1	0-90	Crushed gravel over brown fine to coarse sand (Fill)	Concrete, red brick, PVC, ferrous metal pipe
	90-220	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, trace organics with depth (parent material/floodplain alluvium)	None observed
2	0-75	Crushed gravel over brown fine to coarse sand (Fill)	None observed
	75-95	Dark-brown loamy fine to coarse sand, no gravels, mottled, very weak pedogenetic structure (A-horizon)	1 fragment plain-white earthenware
	95-230	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, trace organics with depth (parent material/floodplain alluvium)	None observed
3	0-70	Crushed gravel over brown fine to coarse sand (Fill)	None observed
	70-95	Dark-brown loamy fine to coarse sand, no gravels, mottled, very weak pedogenetic structure (A-horizon)	4 fragments decorated earthenware; 3 fragments decorative vessel glass; few red brick
	100-230	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, trace organics with depth (parent material/floodplain alluvium)	None observed
4	0-70	Crushed gravel over brown fine to coarse sand (Fill)	None observed
	70-95	Dark-brown loamy fine to coarse sand, no gravels, mottled, very weak pedogenetic structure (A-horizon)	Electrical wire, few red brick fragments
	95-220	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, trace organics with depth (parent material/floodplain alluvium)	None observed
5	0-65	Asphalt over brown fine to coarse sand (Fill)	None observed
	65-85	Dark-brown loamy fine to coarse sand, no gravels, mottled, very weak pedogenetic structure (A-horizon)	None observed
	85-230	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, trace organics with depth (parent material/floodplain alluvium)	None observed
6	0-75	Asphalt over brown fine to coarse sand (Fill)	None observed
	75-90	Dark-brown loamy fine to coarse sand, no gravels, mottled, very weak pedogenetic structure (A-horizon)	PVC, ferrous metal pipe
	90-220	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, trace organics with depth (parent material/floodplain alluvium)	None observed
7	0-70	Asphalt over brown fine to coarse sand (Fill)	None observed
	70-90	Dark-brown loamy fine to coarse sand, no gravels, mottled, very weak pedogenetic structure (A-horizon)	Few red brick fragments
	90-220	Gray bedded silt and fine sand, no gravels; no pedogenic structure, no redox mottles, common woody debris with depth (parent material/floodplain alluvium)	None observed