CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: _____

Author: Kelly R. Bush and Ashley A. Yates

Title of Report: Archaeological Survey Report: 8014, 8118, 8210, and 8326 172nd Street Northeast, Arlington, Snohomish County, Washington

Date of Report: July 26, 2024

County: Snohomish Section: 25 and 26 Township: 31 N Range: 05 E

Quad: Arlington East Acres: ~32.8

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 #:

_____
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_____
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ARCHAEOLOGICAL SURVEY REPORT: 8014, 8118, 8210, AND 8326 172ND STREET NORTHEAST, ARLINGTON, SNOHOMISH COUNTY, WASHINGTON

Prepared for: MJS Investors

July 26, 2024

Prepared by:

ERCI

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CREDITS AND ACKNOWLEDGMENTS

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..... Kerry Lyste, Stillaguamish Tribe of Indians
..... Richard Young and Gene Enick, Tulalip Tribes

DAHP CONTACTS ..... Stephanie Jolivette, Local Government Archaeologist
..... Rob Whitlam, State Archaeologist
..... Guy Tasa, State Physical Anthropologist

Equinox Research and Consulting International Inc. (ERCI) would like to thank MJS Investors for retaining us for this investigation and for their commitment to the process and archaeological resources.

We extend our thanks to the representatives of the Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians, and Tulalip Tribes for their insights and timely attention to our projects.

The opinions and recommendations in this report are those of ERCI alone and do not necessarily reflect those held by any of the organizations or individuals mentioned above. Any errors or omissions are ERCI's responsibility.

MANAGEMENT SUMMARY

County	Snohomish
TRS	Township 31 N, Range 05 E, Section 25 and 26
Quad	Arlington East
Area	~32.8 acres
Lat/Long	48° 9′ 1″ N/ 122° 7′ 14″ W
UTM	Zone 10 U 565405 Easting 5333355 Northing
Elevation	333-435′
Nearest Water Body	Tex Lake
Nearest Arch Site	45SN893 – ~0.5 mile
Soils	Tokul gravelly medial loam
Geology	Glacial till
Agency/Project No.	

Parcel ID	31052600100200
Address	8014 172nd St NE Arlington, WA 98223
Structure Build Year	1997
Property Owner	Basim Virl and Diana M.
Property Owner Address	8014 172nd St NE, Arlington, WA 98223

Parcel ID	31052600102300, 31052600102200
Address	8118 172nd St NE Arlington, WA 98223
Structure Build Year	1993
Property Owner	John J. and Kelly J. Markezinis
Property Owner Address	8118 172nd St NE, Arlington, WA 98223

Parcel ID	31052600100100
Address	8210 172nd St NE Arlington, WA 98223
Structure Build Year	1914
Property Owner	Joe Stephen and Patricia Anne Matthias
Property Owner Address	13016 175th Dr SE, Snohomish, WA 98290

Parcel ID	31052500200600
Address	8326 172nd St NE Arlington, WA 98223
Structure Build Year	1997
Property Owner	Lindsay Investments LLC
Property Owner Address	242 Burke Dr, Camano Island, WA 98282

In June 2024 Rob Risinger of MJS Investors contacted Kelly R. Bush of Equinox Research and Consulting International Inc. (ERCI) to carry out an archaeological survey for 8014, 8118, 8210, and 8326 172nd Street Northeast (the Project) on approximately 32.8 acres, Arlington, Snohomish County, Washington (Section 25 and 36, Township 31 N, Range 05 E) (Figure 1–Figure 5). The properties involved are:

- 8014 172nd St NE (Snohomish County Assessor's Parcel 31052600100200)
- 8118 172nd St NE (Snohomish County Assessor's Parcels 31052600102300 and 31052600102200)
- 8210 172nd St NE (Snohomish County Assessor's Parcel 31052600100100)
- 8326 172nd St NE (Snohomish County Assessor's Parcel 31052500200600)

The Project is privately funded at present, and although the City of Arlington has not required an archaeological survey, permitting will be required. MJS Investors has requested this survey as part of feasibility planning, in anticipation of compliance requirements. Project plans are not complete, and the anticipated depth of disturbance is not yet known.

Following background research, on June 27 and 28, and July 17, 2024, ERCI undertook a pedestrian and subsurface survey program (58 subsurface shovel probes) to look for material traces of past human activity.

No Protected Cultural Resources were identified during the archaeological survey within the Project area.

The management recommendations that we are now providing are based on this survey. We recommend that:

1. As the Project is still in the planning phase, we do not know the depth of ground disturbance. An archaeologist should review the plans to see if our survey provided enough coverage for the actual ground disturbance proposed.
2. If Project plans include removing the house older than 50 years on parcel 31052600100100, a historic property inventory may be required; this should be confirmed with the lead agency when there is one.
3. The proposed Project proceed as planned, following an unanticipated discovery protocol (UDP) training given to all construction personnel by a professional archaeologist. A copy of the Unanticipated Discoveries Protocol (UDP) to be kept on site at all times.
4. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover protected archaeological objects or sediments (e.g., old bottles or cans, charcoal, bones, shell, stone, horn or antler tools or weapons), all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.
5. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

In June 2024 Rob Risinger of MJS Investors contacted Kelly R. Bush of Equinox Research and Consulting International Inc. (ERCI) to carry out an archaeological survey for 8014, 8118, 8210, and 8326 172nd Street Northeast (the Project) on approximately 32.8 acres, Arlington, Snohomish County, Washington (Section 25 and 36, Township 31 N, Range 05 E) (Figure 1–Figure 5). The properties involved are:

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This report documents ERCI's background research and archaeological survey for the Project.

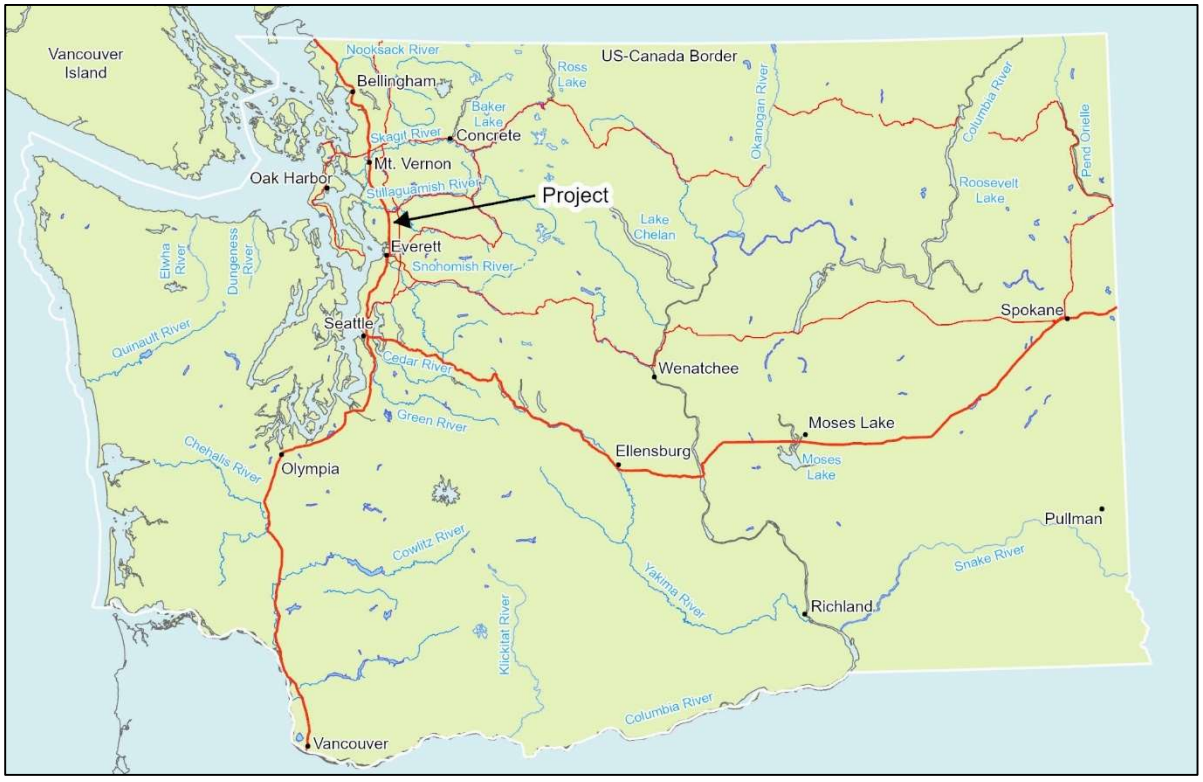

Figure 1: Regional map showing approximate Project location.

Figure 2: USGS Arlington East and Arlington West 7.5-minute quadrangle with Project area outlined in red.

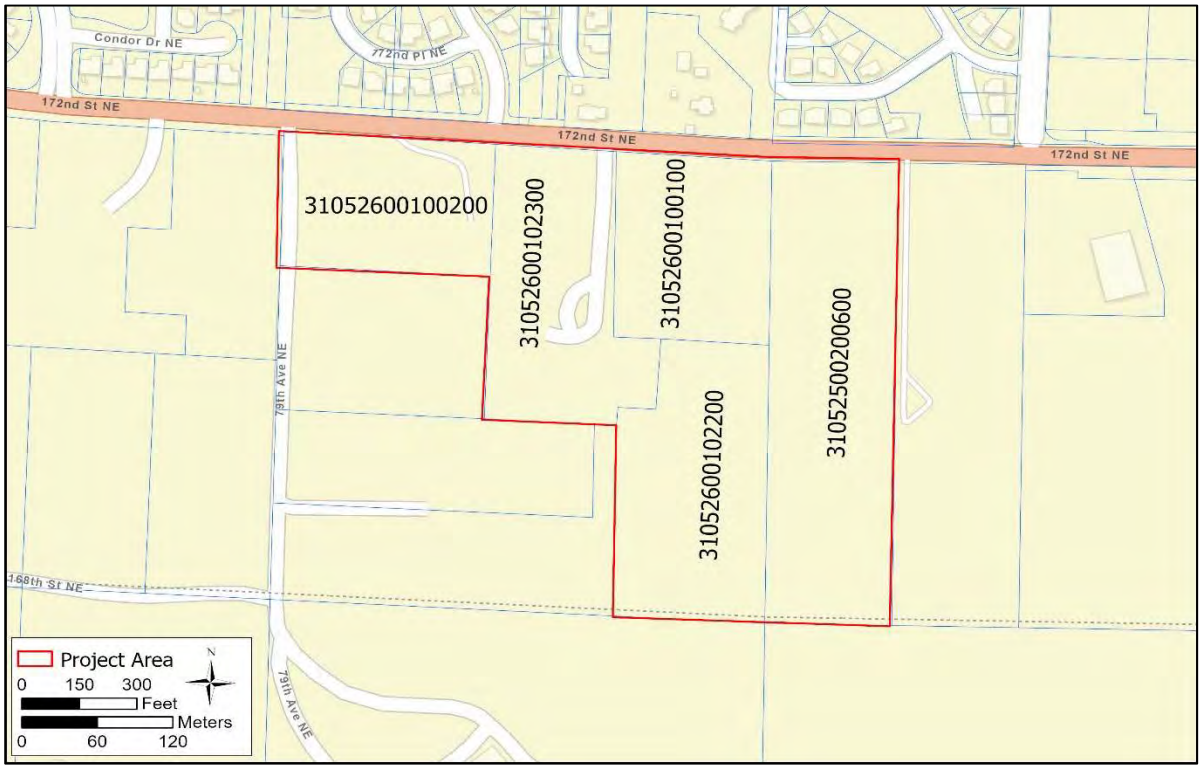

Figure 3: Snohomish County Assessor's map showing Project area outlined in red.

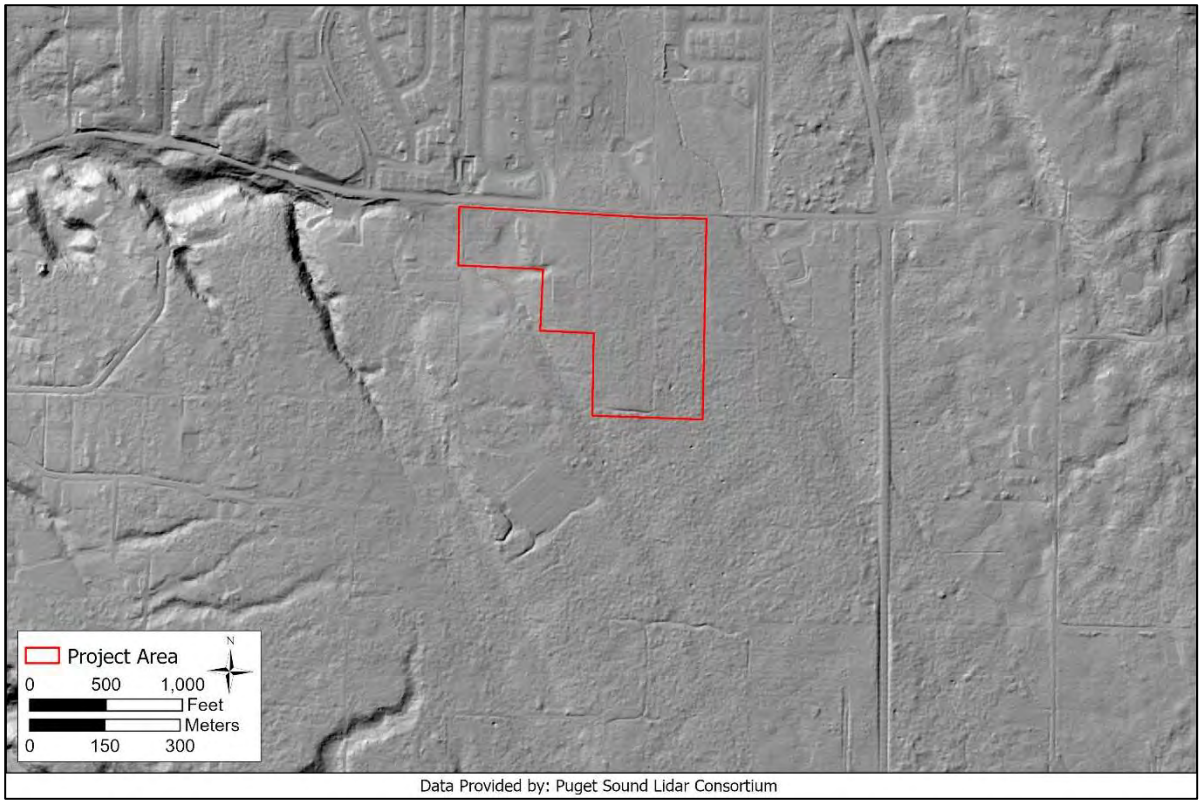

Figure 4: Lidar map with Project area outlined in red.

Figure 5: Aerial photograph with Project area outlined in red.

2.0 REGULATORY FRAMEWORK

At the time of this report, the Project is entirely privately funded, and no permitting or funding agency has required a cultural resources survey. However, it is anticipated that the Project may fall under SEPA, which requires that all major actions sponsored, funded, permitted, or approved by state or local agencies undergo planning to ensure environmental considerations such as impacts on historic and cultural resources are given due weight in decision-making. State implementing regulations are in Washington Administrative Code (WAC) Title 197 Chapter 197-11 Section 400, in which the purpose of an environmental impact statement is outlined.

Moreover, in Washington State archaeological sites are protected by several state laws, including the Revised Code of Washington (RCW) 27.53—Archaeological Sites and Resources, and RCW 27.44—Indian Graves and Records. These laws require that consideration be given to archaeological resources during construction and development activities. RCW 27.44 also strictly mandates the protection of human skeletal remains and imposes a duty to notify law enforcement in the case of inadvertent discovery.

ERCI will ensure that the report is distributed to the Tribes.

3.0 TRIBAL CONSULTATION

The Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians, and Tulalip Tribes consider the Project area within their traditional use area. The Tribes will require detailed development descriptions to adequately review the Project. When the Project acquires a lead permitting or funding agency, they will be responsible for carrying out consultation regarding this Project, including providing our report to the affected Tribes. Tribal representatives are the only people qualified to determine if Traditional Cultural Properties exist within the Project area, whether they will be affected by the undertaking, and how any suggested management strategies might work. In discussions between Kelly Bush and Tribal representatives, it is clear that the Tribes consider this area to be culturally and historically significant, and are concerned about the effects of development.

4.0 BACKGROUND

Any archaeological undertaking requires knowledge of the physical surroundings (and their evolution) and the duration and kind of human activity in any given area. From this knowledge, archaeologists are able to develop the current best method to carry out field investigations. For example, environmental factors play an important role in the location and preservation of archaeological sites. Sediments and soils are of particular interest to cultural resource managers because they can be used for reconstructing past landscapes and landscape evolution, in estimating the age of surfaces and depositional episodes, and providing physical and chemical indicators of human occupation (Holliday 1992).

4.1 Physical Environment

The Project area lies in a mixed residential and commercial area west of State Route 9. The Project area is bounded by 172nd Steet Northeast to the north, and private property to the west, east, and south. Part of 79th Avenue Northeast is inside the Project area. The Project area lies on a hilly relict glacial plateau to the east of Arlington. Elevation in the Project area ranges from 333 to 435 feet above sea level. Portage Creek is less than a mile from the Project area to the east. An unnamed seasonal stream drains the Project area; when it reaches the Arlington and Marysville flats it is artificially channelized.

Previous disturbance to the Project area includes

- Logging and associated infrastructure
- Construction and maintenance of driveways

- Clearing, construction, and maintenance of buildings and infrastructure
- Construction and maintenance of 79th Avenue Northeast.

Geology and Soils

The geology of a region is important to archaeological investigations because it lays the foundation for landforms and soil development. Like the foundation of a house, it determines the shape and subsequently the human use of the landscape above it. How water and sediment move across the surface of the earth is in a great part determined by geology. Geology, in turn, affects how people use the land. Slope, available water, and the success of vegetation are influenced by what is under the soil. Archaeologists use the geology of the Project area and the surrounding landscape to help assess both the likelihood of encountering archaeological objects and features, and the likelihood that natural deposition could have created an archaeological site in the absence of human agency.

Geomorphology of the Puget Lowland

For most of the last 2.6 million years—the Pleistocene Epoch—the Earth underwent drastic shifts in global temperature caused by periodic variations in the Earth's orbital eccentricity, axial tilt and precession. The result has been 11 ice ages, during which almost 30 percent of the world's land surface was covered by sheets of ice as much as 3 kilometers (km) thick (Porter and Swanson 1998).

As the last cold stage intensified, high-altitude valley glaciers grew in depth and extent, and through a process of coalescence formed the Cordilleran Ice Sheet, centered over the Pacific Northwest's Mountain ranges: Coast Mountains, Cascade Range, Olympic Mountains, Columbia Mountains and Rocky Mountains. Further east in North America, ice simply accumulated in place, creating the Laurentide ice sheet, centered over Hudson Bay. During the cold periods (glacials or glaciations) so much of the world's water was stored as ice that global sea level dropped by as much as 150 meters (m) (almost 500 feet). At the same time, beneath the ice, Earth's crust was depressed by the enormous weight. Thus, during the last glaciation, much of what is now the coastline was below present-day sea level. The most recent glacial period—the Fraser Glaciation—began about 25,000 years ago and ended by about 10,000. In that time the ice advanced and retreated twice in what is now the area of Puget Sound, first during the Everson Creek Stade and most recently in the Vashon Stade (Easterbrook 1986). At the height of the Vashon Stade—about 17,500 years ago—the Project area was under as much as 2 km of glacial ice (Porter and Swanson 1998:206). By about 16,500 years ago the ice was retreating—exposing the Puget Lowland and Cascade Range—and glacial meltwater carried rivers of sediment onto the lowlands, mantling the area with deep deposits that subsequent stream activity covered with alluvium in river valleys and built out deltas in Puget Sound.

As the ice sheets finally retreated the land rebounded and sea level rose. The precise timing of sea-level stabilization (eustacy) and the rate of post-glacial rebound (isostasy) varied from place to place due to a complex interplay between the underlying geology and the surficial geological processes that predominated at any given location. In the Pacific Northwest, most of the coastline has been within a few meters of present-day sea level for about the last 6,000 years (Anundsen et al. 1994), while in the northernmost parts of the Northern Hemisphere the land is still rebounding (Thorson 1980, 1989). Yet, in the Hakai Passage region of the central British Columbia coast, due to the particulars of geology and movement of the receding ice sheet, sea level has been relatively stable for most of the past 15,000 years (McLaren et al. 2014), which has implications for early human migration.

On the Salish Sea the picture is equally complex. Due to the gradual south-to-north progression of deglaciation and the relatively rapid rise of sea level in the early postglacial period, sea level in the southern Puget Sound was about 40 m below its present elevation by 8,000 years ago (Thorson 1989).

By contrast, in the northern Puget Sound at the same time, sea level was only about 10 m below its present elevation (Clague 1983; Easterbrook 1963; Kelsey et al. 2004; Thorson 1989).

Across the globe, sea level has been rising gradually since about 8,000 years ago. By about 5,000 years ago, sea level across Puget Sound was about 2 to 3 m below its present level; it reached its present-day elevation only in the last 1,500 years or so (Kelsey et al. 2004; Sherrod et al. 2000). For all these reasons, even though people have been in the region for 14,000 or more years, evidence for human occupation near the present Puget Sound coastline dates to the time since sea level stabilized at or near its present elevation. In general, evidence of earlier coastal occupation has been inundated by the encroaching sea.

Surface Geology

Surface sediment in the Project area is Pleistocene Fraser Glaciation Vashon Stade till (Qvt in Figure 6), "deposited beneath the younger recessional outwash and ablation", and described as:

> [Qvt] Referred to locally as Vashon till, consists of a non-sorted mixture of clay-silt, sand, pebbles, cobbles, and boulders (diamicton), but includes some lenses of stratified material, particularly near the base of the deposit. The deposit is generally a compact lodgment till and often referred to as hardpan [Minard 1985].

Soils

Geologists define a soil as the effect of weathering on naturally or culturally deposited sediments, which creates discernible 'horizons' within a vertical soil profile. A soil typically comprises an A horizon that contains decomposed organic material mixed with the upper portion of the so-called parent material—usually naturally occurring deposits that are exposed to weathering. The A horizon lies above one or more horizons that develop as a result of water percolating downward, carrying chemicals leached from the A and lower horizons. Soils vary from place to place across the landscape, in keeping with the type of sediments that form the parent material and the local environmental conditions. The horizons of different soil types display color variations according to the local soil chemistry. Color, coupled with the nature of the parent material are what enable soil scientists and archaeologists to distinguish one soil type from another, and, most importantly, to tell a naturally developed soil from a stratigraphic profile that results from cultural processes. A soil complex consists of areas of two or more soils, so intricately mixed or so small in size that they cannot be shown separately on the soil map. Each area of a complex contains some of each of the two or more dominant soils, and the pattern and relative proportions are about the same in all areas.

There is one soil type within the Project area: Tokul gravelly medial loam, from 0–8 percent slopes (72 in Figure 7) (Soil Survey Staff 2023a, 2023b).

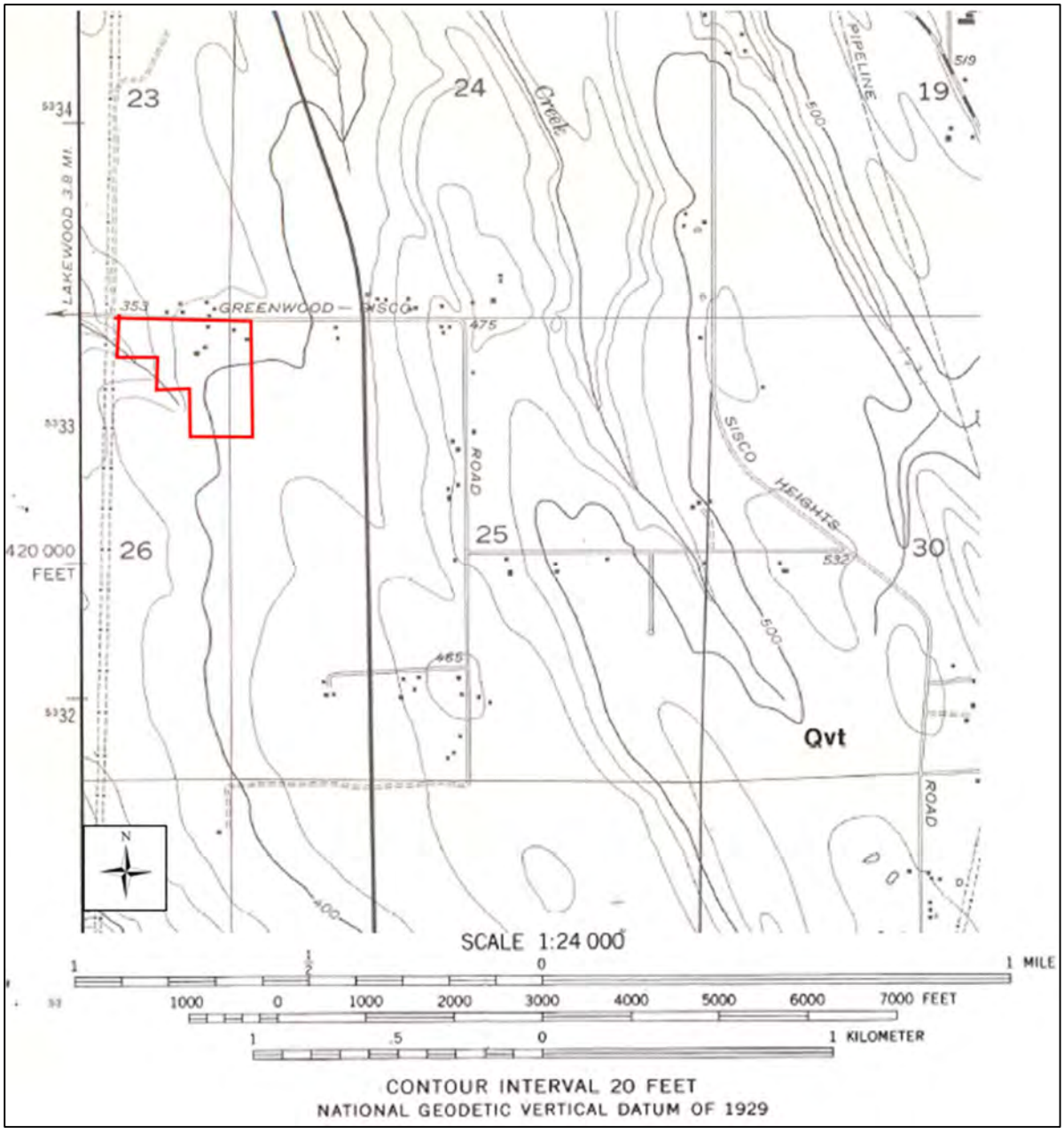

Figure 6: Map of surface geology with the Project area outlined in red (after Minard 1985).

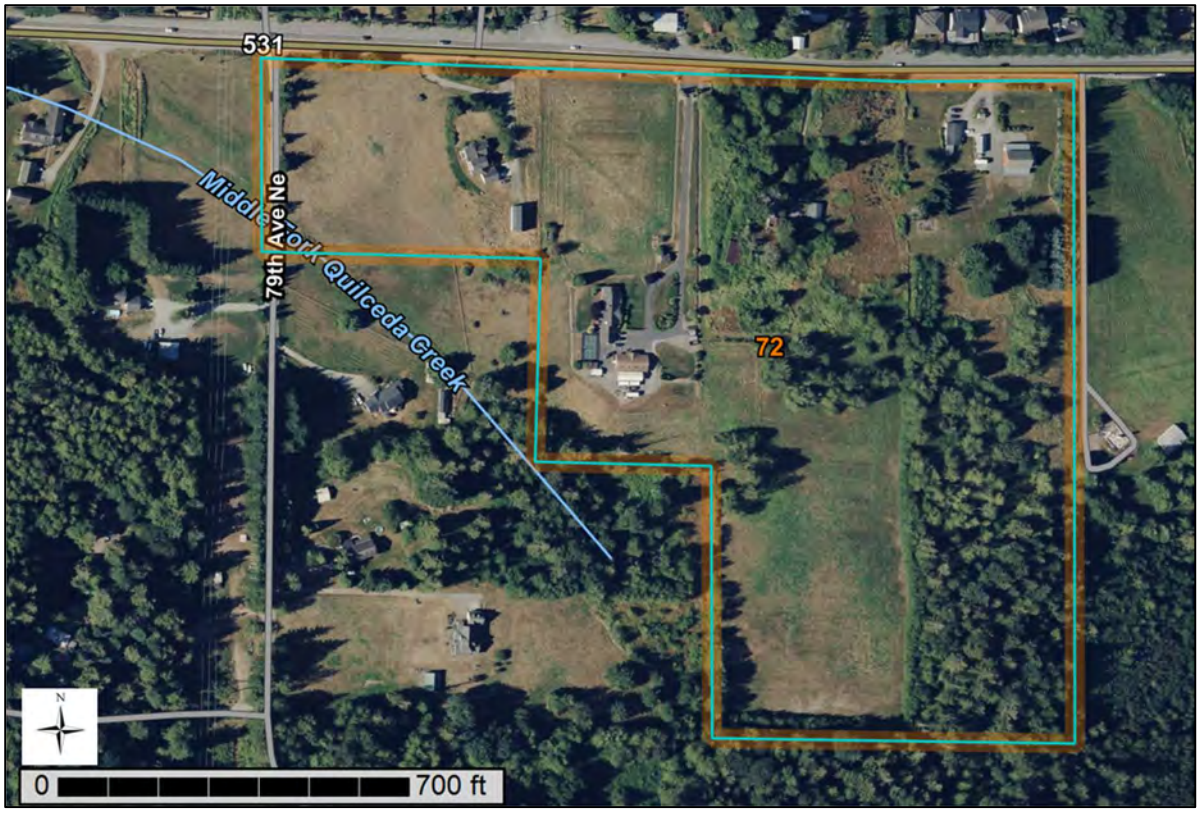

Figure 7: Map of soils with Project area outlined in orange (after Soil Survey Staff 2023a).

Tokul gravelly medial loam, from 0–8 percent slopes is distributed on hillslopes and till plains, and the parent material is volcanic ash mixed with loess over glacial till. It is moderately well drained, with a depth to the water table of about 18 to 36 inches. The surface does not pond or flood. A typical profile includes: 0 to 1 inches, slightly decomposed plant material; 1 to 2 inches, highly decomposed plant material; 2 to 6 inches, gravelly medial loam; 6 to 9 inches, gravelly medial loam; 9 to 17 inches, gravelly medial loam; 17 to 24 inches, gravelly medial loam; 24 to 33 inches, gravelly medial fine sandy loam; 33 to 62 inches, cemented material (Soil Survey Staff 2023b).

> 0 to 3 cm; forest litter consisting of leaves and twigs.
>
> 3 to 5 cm; black (10YR 2/1) decomposed litter.
>
> 5 to 15 cm; gravelly medial loam, yellowish brown (10YR 5/4) dry, dark brown (7.5YR 3/2) moist; moderate medium granular structure; soft, very friable, slightly sticky and nonplastic, weakly smeary; common very fine, fine, and medium and few coarse roots; common very fine discontinuous pores; 5 percent medium rounded concretions; 15 percent gravel; moderately acid (pH 5.8); abrupt wavy boundary
>
> 15 to 23 cm; gravelly medial loam, light brown (7.5YR 6/4) dry, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic, weakly smeary; common very fine, fine, and medium and few coarse roots; common very fine discontinuous pores; 5 percent fine and medium rounded concretions; 15 percent gravel; slightly acid (pH 6.2); clear smooth boundary
>
> 23 to 43 cm; gravelly medial loam, light yellowish brown (10YR 6/4) dry, strong brown (7.5YR 5/6) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic, weakly smeary; common very fine,

fine, and medium and few coarse roots; common very fine discontinuous pores; 5 percent fine and medium rounded concretions; 15 percent gravel; slightly acid (pH 6.2); clear smooth boundary

43 to 61 cm; gravelly medial loam, very pale brown (10YR 7/4) dry, dark yellowish brown (10YR 4/4) moist; common medium distinct yellowish brown (10YR 5/8) redoximorphic concentrations; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic, weakly smeary; few very fine, fine, medium, and coarse roots; common very fine discontinuous pores; 3 percent fine rounded concretions; 20 percent gravel and 10 percent cobbles; slightly acid (pH 6.2); abrupt smooth boundary

61 to 84 cm; gravelly medial fine sandy loam, pale yellow (2.5Y 8/4) dry, light olive brown (2.5Y 5/4) moist; common fine distinct yellowish brown (10YR 5/8) redoximorphic concentrations; massive; slightly hard, friable, slightly sticky and nonplastic; weakly smeary; few very fine, fine, medium, and coarse roots; common very fine discontinuous pores; 1 percent fine irregularly shaped concretions; 25 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); abrupt smooth boundary

84 to 157 cm; very gravelly sandy loam, light gray (2.5Y 7/2) dry, dark grayish brown (2.5Y 4/2) moist; common medium distinct yellowish brown (10YR 5/8) redoximorphic concentrations; massive; hard, extremely firm, weakly cemented, extremely hard in places; 35 percent gravel; very thin (0.55 mm) discontinuous indurated layer on surface of horizon; moderately acid (pH 6.0) [National Cooperative Soil Survey 2017].

Climate and Biota

Warm, dry summers and mild, wet winters prevail in this biogeoclimatic zone. Before the influx of immigrant settlers, the Project area and surroundings likely supported prairies and the *Tsuga heterophylla* (western hemlock) Zone (Franklin and Dyrness 1988), which includes western red cedar (*Thuja plicata*) (see also Heusser 1983; Pojar and Mackinnon 1994; Turner 1995).

Hebda and Mathewes (1984) state that *Thuja plicata* occurred in low frequencies throughout the region between 10,000 and 6,000 years before present (BP). Both cedar and hemlock began to expand following 6800 BP and likely dominated the Puget Lowland by 5000 BP. Cooling temperatures and increased rainfall also resulted in the increase of deltaic wetland and riparian habitat (Hebda 2000; Hutchings and Campbell 2005).

The area likely supported a wide variety of large and small mammals, birds, reptiles, and amphibians common to river deltas and foothill transition zones. Bear, cougar, deer and elk are the indigenous large mammals, with small mammals including otter, beaver, fox, porcupine, marten, snowshoe hare, bobcat, chipmunk and squirrel. In the nearby Portage Creek, high-value fish such as salmon and trout would have been abundant resources. Prior to immigrants arriving in this area, land mammals and plant resources would have been abundant during all seasons.

4.2 Cultural Environment

The Project area lies in a region that Native Americans had inhabited for at least 14,000 years by the time of contact with Europeans, when Salishan-speaking people occupied vast tracts in the Columbia and Fraser River basins, the inland waters of the Salish Sea, the Puget Lowland, the Cascade Range, and parts of the Pacific Coast between the Columbia River and the Olympic Peninsula. European explorers first entered the region in the late sixteenth century, with immigrant settlement beginning in the early nineteenth century and increasing after the Donation Land Claim Act of 1850 and Homestead

Act of 1862. Here we present a synopsis of the archaeological cultures, traditional Salish lifeways, and pertinent details of the time since immigrant occupation.

Archaeological cultures

Archaeological evidence of human presence in Western Washington is at least 14,000 years old in the upland areas, evidenced by finds of Clovis and other early postglacial cultural traditions, though evidence for earlier occupation on the Pacific Coast of Canada and in other areas of North America date up to 23,000 years ago (Ames and Maschner 1999; Bennett et al. 2021; Kopperl 2016; Kopperl et al. 2015; McLaren et al. 2018). Although people have been in the region all along, sea level rise in the early and middle Holocene caused river valleys in the Puget Lowlands to gradually fill up with sediment, burying any early archaeological sites in the near-stream areas. Thus, evidence for early human occupation around Puget Sound is most often found at higher elevations on landforms that retain sediments from those earlier times, and sometimes deeply buried in river valleys. In those upland areas, where sea level change has had no effect on archaeological visibility, evidence from the early Holocene is widespread, but well-dated contexts are extremely rare—most archaeological assemblages are 'dated' by their formal similarity to those recovered from dated contexts.

The earliest period in Western Washington is represented by the Lower Bear Creek Site (45KI839), near the shore of Lake Sammamish. It is a late Pleistocene-Holocene (LPH) transition site with diagnostic lithics of the western North American Paleoindian and Paleoarchaic traditions with two archaeological deposits. Peat formation and deposition persisted from about 12,900 cal BP until about 7600 cal BP; Mazama tephra serves as a time marker, at 7580 to 8030 cal BP, for deposition in the region. A more recent deposit lies above Mazama tephra and peat, accumulation of diatomaceous earth, which persisted from about 7600 cal BP until 3900 cal BP. The second deposit is a deeper LPH component below the peat. The deeper component rests on glacial sediments and is below peat and diatomaceous earth (Kopperl 2016).

In the North Cascades National Park near Marblemount and Newhalem in the Skagit River basin, the Cascade Pass site yielded artifacts and a cooking feature beneath Mazama volcanic ash, estimated to be 9,700 years old. The site is nine layers of volcanic ash from four Cascade volcanoes that are interbedded with archaeological deposits. Archaeological deposits include heating and cooking pits, flaked stone, discarded tool fragments, and quartz quarrying debris. Charcoal, burnt seeds and burnt wood also found at all deposit depths. The most recent deposit is dated 2200 and 2000 years old, exhibiting a long history of utilization of the Cascade Pass (Mierendorf et al. 2018:99). The Beech Creek Site (45LE415) in the Gifford Pinchot National Forest of southwestern Washington represents another early Holocene archaeological culture, the Stemmed Point Tradition, at 9,200 years old (Mack et al. 2010).

In the Puget Sound/Cascade regional cultural chronology, the Olcott Phase (ca. 10,000 to 7,550 years ago) succeeds the Fluted Point and Stemmed traditions. Olcott assemblages are remarkably similar to others attributed to the Old Cordilleran Tradition, well known from other parts of the Northwest Coast (Chatters et al. 2011). Typical Olcott artifacts include "Cascade" leaf-shaped bifaces, which bear distinctive edge grinding on the stem, or hafting portion, and often-heavily patinated expedient stone artifacts of medium- to coarse-grained raw material, and lacking in fine-grained silicates.

Although there are numerous sites ascribed to the Olcott Phase, securely dated components are rare, as evidenced by the few mentioned here. Thermoluminescence (TL) dating of fire-modified rock (FMR) from the Woodhaven Site (45SN417), near Granite Falls, produced median dates of 9,316 and 7,886 years ago (Kiers 2014). Two other Olcott Phase sites near Granite Falls, 45SN28 and 45SN303, yielded TL dates on FMR in the same age range, between 7,340 and 9,650 years ago (Chatters et al. 2011).

Between about 7,550 and 4,000 years ago—often termed the middle Holocene—well-dated archaeological sites are more numerous, in part due to the gradual stabilization of sea level near present elevations. The archaeological cultures are called by many names, but the Marymoor Phase and Charles Culture (or Mayne Phase in the San Juan/Gulf Islands) seem most common in the region. Many include microblade technology. Recent radiocarbon dates from calcined bone at the Marymoor Site (45KI9) range between approximately 5300 to 7000 BP (Chatters et al. 2017; Greengo and Houston 1970). Other sites in the region dated to the middle Holocene include Cattle Point (45SJ9) on San Juan Island (King 1950), the Glenrose Cannery Site (DgRr-22) near Vancouver, BC. (Matson 1976), the Milliken Site (DjRi-3) near Yale, B.C. (Borden 1960), and Pender Island (DeRt-1 and -2) in the Gulf Islands, the northern extension of the San Juan Islands (Carlson and Hobler 1993) and the more recent deposits at the Cascade Pass Site (45CH221) (Mierendorf et al. 2018).

Beginning roughly 5,000 years ago western red cedar became more prevalent in the coastal forests, and archaeological evidence reveals the intensification of its use by the people living on the Salish Sea. Specifically, in the Locarno Beach Phase (3,300–3,500 to 2,500 years ago) and the succeeding Marpole Phase, the woodworking triad of the antler wedge, polished nephrite adze bit and hand maul formed an increasingly prominent part of coastal culture-rich shell deposits (Hebda and Mathewes 1984). In addition, evidence for large post and plank houses and food storage comes to the fore (Matson 2010). Artifact assemblages from this time also illustrate increasing social complexity in the form of personal adornment—e.g., finely made nephrite and jadeite labrets—refinements in procurement technology—e.g., ground slate knives, toggling harpoons and fishing paraphernalia—and ascribed status in the form of status symbols interred with infants and very young children, and cranial deformation. These archaeological manifestations comprise the climax Northwest Coast cultural pattern that was encountered when Europeans first visited the region. Among the best known archaeological sites in the region, the Ozette site (2,500 to 500 years ago) (e.g., Daugherty and Fryxell 1967) and the Hoko River site (3,000 to 1,700) (Croes 1995) on the Olympic Peninsula preserved botanical material in addition to the other artifacts common in most Northwest Coast culture-rich shell deposits, thus revealing a breadth of material culture similar to that known ethnographically, and underscoring the material and social complexity of the regional cultures that existed in the late precontact period.

Finally, the complex interplay of post-glacial geological processes meant that salmon streams were constantly disrupted by cycles of erosion and deposition, which precluded establishment of nearshore marine resources and climax salmon runs between the time of deglaciation and that of sea-level stabilization, which began around 5,000 years ago and ended approximately 1,500 years ago (Fladmark 1975). Thus, prior to about 5,000 years ago, without the abundant, predictable salmon runs, which affect entire river systems and the people who exploit them, the entire region would have been populated by more mobile foragers (Grier et al. 2009; Moss et al. 2007). Since that time, the rich resources available in the maritime and riverine environments encouraged a less mobile lifestyle for some people. We see larger residential villages, increasingly dense populations and complex cultures that existed at the time of European contact (Butler and Campbell 2004; Taylor et al. 2011).

Specific archaeological findings for the Project area and surroundings are discussed in Section 4.3.

Salish Ethnography and Ethnohistory

The Project area has been home to people since time immemorial. Ethnographic accounts, the historic record and the oral histories of the people who lived provide stories of the lives and deaths of the area's original inhabitants. The published material for the overall Coast Salish tribal area is primarily written by early and mid-twentieth century ethnographers and archaeologists educated in universities. These ethnographies are precious, but they are one snapshot from one researcher based on interviews with select informants. They are extremely filtered and limited. It is also easy to read these accounts and think that the descendants of the informants too lived in the past, however modern-day tribal

communities are vibrant active neighbors and partners in cultural resource management and protection. Their cultures are alive. It is within this context that we provide a brief summary of the published work of these researchers with the understanding that they are limited in scope and content.

A detailed description of central Puget Sound cultures is beyond the scope of this report. Instead, we present a broad overview of their traditional lifeways, including what is known of the precontact cultures, using knowledge gained from ethnography, ethnohistory, and the historic record. For in-depth descriptions of traditional Salish culture, readers are directed to the following references: Adamson (1969), Allen (1976), Amoss (1977a, 1977b, 1978, 1981), Belcher (1986), Bierwert (1990, 1993, 1999), Blukis Onat and Hollenbeck (1981), Boyd (1994, 1999), Bruseth (1926), Collins (1950, 1952, 1974a, 1974b [1946]), Curtis (1913), Dewhirst (1976), Eells and Castile (1985), Elmendorf (1971), Guilmet et al. (1991), Gunther (1928, 1945), Haeberlin (1924), Haberlin and Gunther (1930), Harmon (1998), Harris (1994), Howay (1918), Jorgensen (1969), Kew (1972, 1990), Mansfield (1993), B. Miller (1993, 1995, 1997, 1998, 2001), Miller and Boxberger (1994), Mooney (1976), Moss (1986), M. Smith (1941, 1950, 1956), Snyder (1954, 1980, 1981), Spier (1935, 1936), Stewart (1973, 1977, 1979, 1984, 1996), Suttles (1957, 1958, 1960, 1974 [1951], 1987, 1990a, b), Suttles and Lane (1990), Taylor (1953, 1984), Tollefson (1989, 1992), Tollefson et al. (1996), Tweddell (1974 [1953]), United States (1859), United States Court of Claims (1933), Waterman (1920), and Waterman et al. (2001).

Salish social life

The peoples of the greater Snohomish River and Stillaguamish River watersheds, like other groups around Puget Sound, followed seasonal mobility patterns dictated by the time of year resources became available, generally occupying a permanent village in the winter, and traveling throughout the rest of the year to temporary camps at known fishing, hunting, and gathering locations. Territory boundaries were flexible, often crossed by marriage, kin groups, and resource acquisition areas shared between friendly tribes (Dover and Fitzpatrick 2015; Miss and Campbell 1991). Winter villages were permanent habitation sites with some occupants residing there year-round. Two or more extended families lived together in a winter house, and during the spring, summer, and fall when individual families left the winter village for their temporary gathering and hunting camps, they would often join with relatives or friends from other villages (Haeberlin and Gunther 1930). Resident families were generally related through the father's line, though there were men who moved to live with their wife's family (Tweddell 1974). Marriages were exogamous, to expand the social and economic resources of the group and strengthen ties with friendly tribes (Miss and Campbell 1991).

Longhouses in the winter villages were constructed of cedar planks over posts and beams. The planks forming the walls were tied to the post, while roof planks were loose so they could be removed to allow sunlight into the house during the day or to act as a chimney for cooking-fire smoke (Bruseth 1926; Dover and Fitzpatrick 2015). Unlike other Puget Sound tribes who tied the wall planks vertically, the Stillaguamish tied them horizontally; however, they did use the swinging entrance doors of the other tribes. The interior poles were often carved (Haeberlin and Gunther 1930). Woven cattail mats covered the floors and walls, and were used as bedding, while beds and storage shelves lined the walls. Baskets were hung from hooks on the poles and dried fish was hung from the roof support pole. Each longhouse was home to up to 30 people (Blukis Onat and Hollenbeck 1981). Winter houses were one to two hundred feet long, often built on Puget Sound or rivers and streams facing the water.

Summer houses constructed for the gathering and hunting camps were often simpler and made of materials that were easily transported. The Snoqualmie people made square mat-covered houses with gable roofs (Haeberlin and Gunther 1930:18). Four poles with forked ends were at each corner, the forked ends held up horizontal poles that made the roof. One side of the house was left open, unless there was bad weather, and the roof and other sides were covered with mats (Haeberlin and Gunther 1930:18). A temporary house, called *g.ʷɛlai'txʷ*, made of cattail mats tied to wood poles, could be up to

30 feet long and usually housed one family, though if more than one family resided together the house would be built larger to accommodate them (Haeberlin and Gunther 1930:19). Figure 8 is an example of the summer square house style made by the Skokomish, a tribe in the south Puget Sound.

Figure 8: Example of a seasonal house, "Mat House—Skokomish" (1912) by Edward S. Curtis (Northwestern University Library 2003a).

Each village had a potlatch house unless economic circumstances prevented a village from building one. Potlatches were held at remarkable occasions, like when a young person received the name of an ancestor, when the salmon runs began, when a death occurred, when a body was reburied, or after successful hunts. There was a potlatch house at the village of *hēbō'lb* near present-day Everett and one at the largest village, *tc'iɬ!ā'qs*, at Priest Point (Haeberlin and Gunther 1930).

The peoples of the greater Snohomish River watershed had friendly relations with the tribes east of the Cascades, including the Chelan and Wenatchee, and would trade and intermarry with them. The Snoqualmie Valley hosted one of the principal regional east–west trade routes across the Cascade Mountains, which facilitated frequent interactions between the Salish Sea and Interior Salish groups across the Cascade Divide. Trading parties from the east journeyed through this area on their way to Puget Sound (Haeberlin and Gunther 1930:11; Teit 1928:110, 121). The Stillaguamish shared hunting areas with the eastern tribes under the condition that they stayed within certain boundaries and did not take too much game (Bruseth 1926).

Fish and Fishing

Fish are central to the culture of the central Puget Sound today and to their ancestors. Salmon was a primary staple in the diet and were most bountiful in the fall and early winter when they traveled up streams to spawn. Winter villages were often at or near important salmon fishing locations. Salmon were caught in a variety of ways, including using weirs, nets, traps, lines, or spears, depending on the number of fish and location within the river or stream. Smelt, herring, flounder, and trout were sought after, and the peoples of the greater Snohomish River watershed fished for sturgeon, cod, and skates. Smelt and herring were prized for their oil, which could be drained and stored (Haeberlin and Gunther

1930). Weirs placed across small streams, or large circular nets tied between two canoes were used to catch large numbers of salmon during spawning. As weirs were labor- and time-intensive to construct, they were often used year after year and repaired as needed. Flounder and trout were caught with long lines or nets, while smelt and herring were caught with rakes made of cedar and ironwood pegs; sturgeon were speared. Fish were dried or smoked to store the meat for winter.

Marine resources such as clams, barnacles, oysters, and crabs also contributed a great deal to peoples subsistence. They were collected from large clam beds along the coast and on the islands (Tweddell 1974). Fishing and processing of the catch, as well as associated feasting, played a large and complex role in the culture of the traditional people of this area. Each part of the process was subject to cultural and religious influence. Success in fishing is related to guardian spirit power, not just for the act of fishing, but also for acquiring materials and building fishing equipment, including canoes, gear, traps, and weirs. Acquiring and maintaining gear to catch and process fish is regarded as equally as important as the ritual paraphernalia to bless the canoes and catch (AFSC 1970).

Gathering and Processing

The daily lives of the traditional people of the central Puget Sound revolved around food gathering, preparation, preserving and presentation. The abundant resources of the riverine and marine environment rewarded hard work. Foods were collected based on seasonal availability and complex social constructs developed to allow for maximum collection efficiency, redistribution, and healthy alliances within and between groups. Women, through the centuries, devised ingenious methods of gathering, preparing, and preserving food. They learned when the edibles were mature and ripe for harvesting, and they developed tools and techniques for the work. They learned which woods to use, and which kinds of fire best suited their needs; they designed and made their own cooking utensils and equipment (Batdorf 1980:4).

Plant resources comprised the bulk of the diet of peoples in the greater Snohomish River watershed. Roots of the brake fern, wood fern, dandelion, wild sunflower, cattail, and wild carrot were collected, along with wild potatoes and bulbs of the camas and wild tiger lily. Wild strawberries, blackberries, elderberries, salal berries, thimbleberries, gooseberries, huckleberries, blueberries, blackcaps, and salmonberries were collected in the summer, along with acorns and hazelnuts. Most of the food gathered in the spring and summer months was processed for storage, to be consumed during the winter when food was scarce (Haeberlin and Gunther 1930). For the Stillaguamish, these resources were especially plentiful in the Kent Prairie near Arlington and the Sauk Prairie on the Sauk River north of Darrington, which they shared with the Sauk. Other groups were known to travel to Kent Prairie as well—using a trail from Quilceda Creek to the prairie and the Sauk coming down the North Fork Stillaguamish River (Bruseth 1926). These prairies were regularly burned to promote the growth of berry and other harvestable plants (Blukis Onat and Hollenbeck 1981).

Among the plant resources, the cedar tree was also an integral part of traditional life that provided material for clothing, houses, transportation, and tools as well as spirit power and central stability for the traditional peoples of the Sound. “They held the supernatural cedar in high esteem, for, like the bountiful salmon of the seas, the ubiquitous tree of the forest gave of itself to sustain and enrich their lives” (Stewart 1984:19). In the more contemporary response of Salishan people to the new needs of their peoples, the cedar is once again central to maintaining identity.

> The Northwest Coast people are again a positive force in the land, facing up to governments, industry and the business world – and themselves. Many are grasping the tools of education to enable them to compete…and many are focusing on the old art forms. The cedar tree is often central to that art, providing, as in the past, the raw material they need: wood, bark, roots and withes [Stewart 1984:19].

The cedar tree was part of every moment of life in traditional culture and continues to be paramount to the cultural activities of tribal members today. The respect for and importance of this tree is ubiquitous today in ceremonial life, where clothing, regalia, ritual items, firewood, functional items and indeed the buildings used for ceremonies are still made of cedar. Administrative buildings incorporate cedar, as it is still considered a cornerstone of cultural identity (Stewart 1984).

Hunting

Mammals and birds were the primary prey. Birds were successfully hunted in coastal marshlands and other wetlands. Following the traditional philosophy, much of the creature was used. Skin or fur for clothing, flesh for food, sinew and other soft tissue for various uses, bone for tools, weapons, and other functional devices such as straws. Many parts of animals and birds are also used in ceremony (Eells and Castille 1985).

Deer, elk, beaver, bear, mountain goat, wildcat, groundhog, cougar, and birds were hunted using traps, snares, nets, and sometimes bow and arrow. For those who would travel there, the Sultan Basin, north of present-day Sultan, was a popular area for elk hunting in the late summer, while mountain goat was hunted near Index (Tweddell 1974). Stillaguamish hunted mountain goat and elk in the mountains, especially near the headwaters of the South Fork Stillaguamish River. Snares set up on mountain-goat trails could last years (Bruseth 1926). Birds, especially ducks, were caught in large nets or snares. As with all other food, the majority of the meat was dried or smoked to be saved for the lean winter months (Tweddell 1974).

Material Culture

In addition to the archaeological collections and oral histories, much of what we know of traditional Coast Salish material culture derives from ethnographic collections residing in local, regional, and international museums, from the observations of ethnographers and historians, and photographs taken in the nineteenth and early twentieth centuries. However, all these sources of information have been defined by preservation biases. These biases are found in the greater preservation potential of stone and hardy materials, the interpretations made by archaeologists and ethnographers for what they found, and what they deemed important to collect or record. Much is known about stone tools due to how easily they preserve and how important they were to early archaeologists and ethnographers, and it is only the development of a more recent and broader focus on plant and other perishable materials that has provided a similar depth of knowledge.

Stone implements (lithics) were made of local or exotic stone depending on what stone types were available within a group's use area. Exotic stone was traded for or acquired if tribal members had access to distant quarries. The stone was then flaked or ground to fashion a wide variety of tools. Knives, spear, dart and arrow tips were usually flaked and then hafted to wood or bone for hunting and processing game and plant materials. Mauls, wedges, adzes, and chisels were used for woodworking and other tasks (Eells and Castille 1985). Stone mauls and spear points were polished by placing them in a fire of fir needles then dousing it with water. Wedges made of elk horn and yew were used in conjunction with the mauls for chopping trees. Fishing barbs, toggling harpoon, combs, pins, needles, and many other items were fashioned from animal bone, horn, antler, teeth, and shell (Haeberlin and Gunther 1930).

Salish groups relied heavily on plants to create functional, decorative, and ceremonial objects. For example, western red cedar provided wood for longhouses, canoes, and storage containers, as well as bark that, when shredded, could be woven to make clothing, capes, and head coverings. Sails made of woven cattails were occasionally used with canoes (Haeberlin and Gunther 1930). Cedar and spruce root were used along with other fiber to make baskets like those shown in Figure 9, for use when

foraging or cooking, some so tightly woven that they were waterproof. Plants and trees were also used to construct elaborate fish traps and weirs (Bruseth 1926; Haeberlin and Gunther 1930).

Figure 9: Examples of the kind of baskets made by Coast Salish people, "Puget Sound Baskets" (1912) by Edward S. Curtis (Northwestern University Library 2003b).

Like many Salish groups, the peoples of the greater Snohomish River and Stillaguamish River watersheds wove blankets of dog and mountain goat wool, often using alder bark and hemlock to dye the wool pink (Figure 10). Feathers and fireweed were also incorporated into the blankets after being pounded soft. The woolly dogs were kept by women who were weavers, and were valuable possessions, as blankets were given as gifts at potlatch (Haeberlin and Gunther 1930; Tweddell 1974). Some clothing was made from bear and buckskin, especially men's garments. Women wore cedar skirts and small cedar bark caps in summer and added buckskin shirts and leggings in winter. Among the many uses for marine shell, clam shell disc beads—"shell money"—were used for trade and as ear and nose adornments (Haeberlin and Gunther 1930:29).

Summary

This overview has barely sketched traditional lifeways. The Salish People thrived for millennia and developed a rich and complex culture within an environment that supported a large population prior to European contact and the devastation of disease and political oppression. Despite these hardships the peoples of the region have resiliency and continue to fight for renewed political and economic power, at the same time working to preserve and maintain traditional cultural knowledge and beliefs.

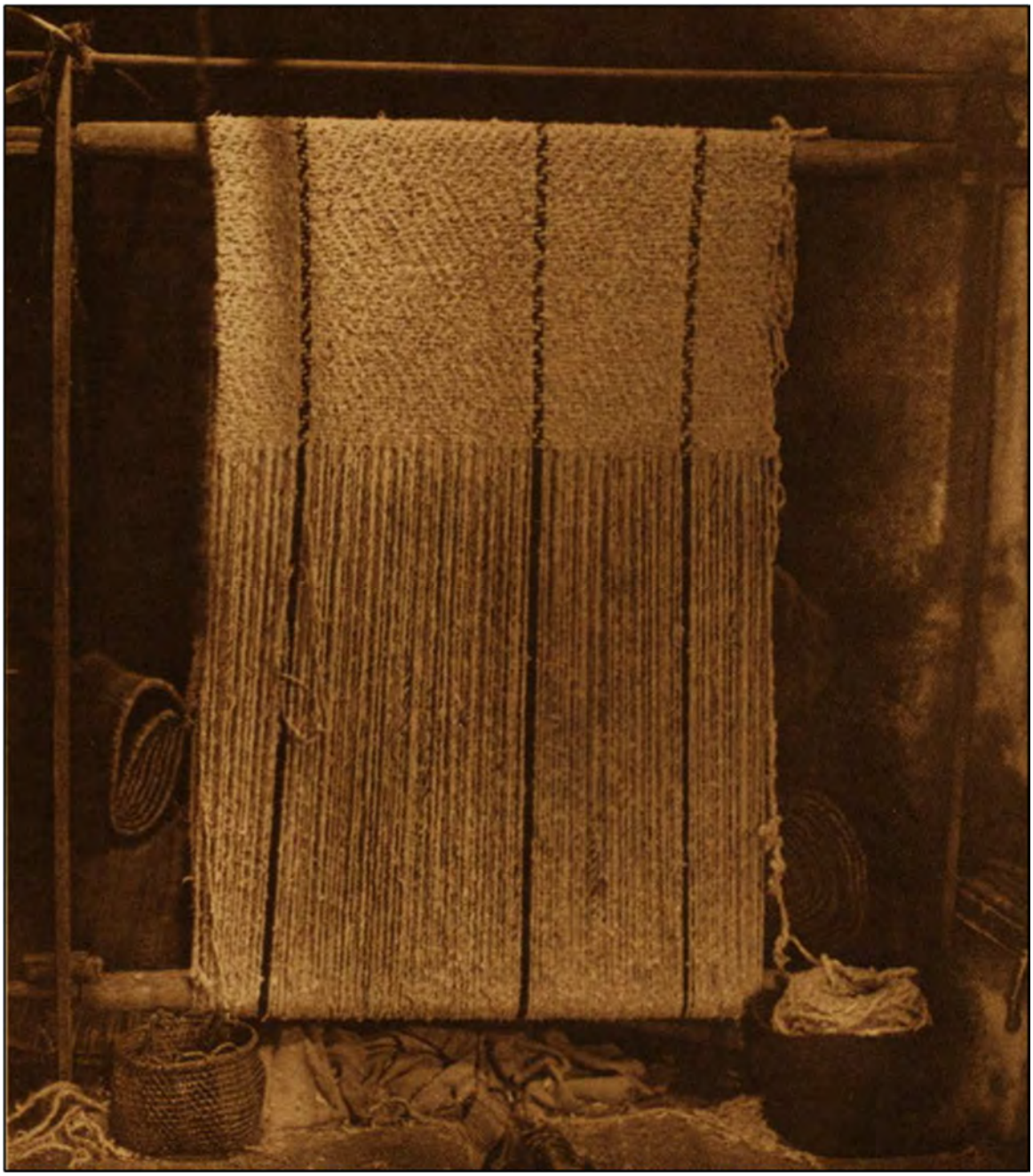

Figure 10: Example of the kind of weaving done by Salish people, "Goat-hair Blanket—Cowichan" (1912) by Edward S. Curtis (Northwestern University Library 2003c).

Exploration and Immigration

The first documented exploration of the Pacific Northwest was a Spanish expedition in 1592, led by Greek-born Apostolus Valerianos, more commonly known as Juan de Fuca, after whom the entrance to the Salish Sea is named. Between 47° and 48° north latitude—after entering a "broad Inlet of the Sea" de Fuca traveled for "twentie dayes … passed divers Ilands … went on Land in divers places, and … saw some people on Land, clad in Beasts skins" (Purchas 1906 [1625]:416).

Some of the earliest English-language records of this region come from George Vancouver's exploration of the Salish Sea. On June 4, 1792, he went ashore in the vicinity of Tulalip, near today's Everett, Washington, and claimed for King George III the coast south to 39° 20' N, which had been his first landfall. Vancouver was convinced of the historical justification of his claim and his maps all show British Territory from about 39° north latitude northward (Hayes 1999:85). The southern portion of the Salish Sea is named after Vancouver's lieutenant, Peter Puget.

Beginning in the late eighteenth century, introduced diseases took an enormous toll on Northwest Coast Native American populations. Estimates of mortality range from 30 to 90 percent, with the higher estimate being the more likely result of several successive catastrophic episodes of, especially, smallpox (Boyd 1994:28–29, 1998; Campbell 1991).

The Hudson's Bay Company

The first Europeans to stay for any length of time in the Puget Sound area were traders, trappers and explorers associated with the Hudson's Bay Company (HBC). From the 1820s through to the 1860s, HBC employees regularly traveled and traded around the Puget Sound (Harmon 1998:28–29). Tribes around Puget Sound took benefit from trading and bartering with HBC, and many were hired as guides. Fort Nisqually was established in 1833 at the southern end of Puget Sound, the first European settlement on Puget Sound (Bagley 1915). Using the Naches, Snoqualmie, and Yakima passes through the Cascades, even the Yakima people traded with HBC at Fort Nisqually and Fort Langley, to the north. The influence of HBC in the Puget Sound was felt by native people and immigrants alike (Suttles and Lane 1990:499–500).

Fort Nisqually was handed over to the US in 1846 after a treaty between Great Britain and the United States had ostensibly settled the dispute over the Oregon Country; however, that treaty was vague as to possession of the islands that straddled the new boundary—including San Juan Island. The HBC took advantage of the confusion, built a log trading post on San Juan Island, and for several years traded with the resident Native American population for fish, which they salted and transported in barrels that they made on site (Bailey-Cummings and Cummings 1987).

At Garrison Bay, the HBC also began a new venture, Bellevue Farm, which was a salmon fishing station and sheep ranch. In 1859 a dispute led to HBC officials demanding the arrest of an American settler. The United States responded by sending sixty-six soldiers to set up a garrison at the southern tip of the island. The British countered with warships and more soldiers. By September 1859 there were three warships with numerous guns and roughly two thousand men on the British side, and nearly five hundred Americans, although fewer cannons. A joint military presence was negotiated (McDonald 1990). In 1860 the HBC charter expired, and British claims to land south of the 49th parallel were laid to rest.

The Wilkes Expedition

The United States Exploring Expedition led by Charles Wilkes was conducted in 1841 at a time when the territories of the Northwest were under contention by British and American interests. In 1845, 31 members of the Michael T. Simmons party cut a wagon trail that became the northern branch of the Oregon Trail at present-day Tumwater. Known as the end of the Oregon Trail or Cowlitz Trail, Tumwater is the oldest permanent American settlement on Puget Sound (Stevenson 1977; 1986:158). The discovery of gold in the Fraser River in 1858 brought more immigrants (Jeffcott 1995). Settlers arrived at Alki Point in 1851 and proceeded to lay claims along the waterfront that became the commercial center of Seattle by the 1860s.

The Donation Land Claim Act of 1850

The pace of immigrant settlement was encouraged by the US 31st Congress, with the 1850 passage of Statute 496, an unnamed Act known by various names, most commonly as the Donation Land Claim Act, which legitimized a practice originally set in motion by the territorial Provisional Government in 1843 (Robbins 2022). The Act was

> to create the Office of Surveyor–General of the Public Lands in [the] Oregon [Territory], and to provide for the Survey, and to make Donations to Settlers of the said Public Lands. … granted to every white settler or occupant of the public lands, American half-breed Indians included ... three hundred and twenty acres of land, if a single man, and if a married man ... the quantity of one section, or six hundred and forty acres, one half to himself and the other half to his wife, to be held by her in her own right ... [US Statute 496, September 27, 1850]

The law explicitly excluded African Americans and Hawaiians. Prior to its enactment Territorial Delegate Samuel Thurston had told Congress that extinguishing Indian title was the "first prerequisite step" to settling Oregon's land question, so Congress had earlier authorized commissioners to negotiate treaties with that would, among other things, remove Native Americans from their land (Robbins 2022).

Treaties, allotments, assimilation and reorganization

What followed were the 1854 Treaty of Medicine Creek, the 1855 Treaties of Point Elliott, Point No Point, Neah Bay, Yakama, and Walla Walla, and the Quinault Treaty of 1856, by which the American government promised Native American tribes continued resource procurement rights, 'land reservations' (for some, but not all of the tribes), and a one-time payment. Once the treaties were in place, settlement and commercial exploitation of previously tribal lands proceeded almost unfettered. In addition, several subsequent acts of federal legislation created the circumstances that would hasten the already severe breakdown of Tribal lifeways that followed European-introduced disease pandemic in the 1770s that killed nearly 90% of the region's original inhabitants (Boyd 1994).

With the purpose of encouraging Tribal members to adopt the ways of the dominant culture—to assimilate them—the Dawes Act of 1887 provided "for the allotment of lands in severalty to Indians." The most charitable reading of this act was that it was intended to break the tradition of tribal communalism that most immigrants believed was an obstacle to their 'progress' and assimilation into US society; more accurately it as a continuation of efforts ultimately to take even the Reserve lands from the original inhabitants. Those who wished to take part were given either a portion of the reservation on which they lived, or, if their tribe had no reservation, a plot of land in or near their traditional use areas. In both cases the individual was granted US citizenship. Regardless of the reason, fragmentation and fissioning of traditional communities was the inevitable result, which was made worse by provisions of the legislation that enabled eventual sale of the land to non-tribal people. In the 47 years between its enactment and its dismantling, the Dawes Act was responsible for reducing the acreage under Native title from 138 million to just 48 million (Newcomb 2018).

The disastrous effects of the Dawes Act did not go unnoticed. As part of F.D. Roosevelt's New Deal in the 1930s, the Indian Reorganization Act (IRA) (1934) was intended to redress some of the worst effects of the efforts at assimilation. It was:

> [a]n Act to conserve and develop Indian lands and resources; to extend to Indians the right to form business and other organizations; to establish a credit system for Indians; to grant certain rights of home rule to Indians; to provide for vocational education for Indians; and for other purposes.

Although the IRA also restored rights to land and minerals, it was a temporary and controversial measure and by the end of WWII the federal government was back asserting their dominance including

the continued abusive practice of removing children from their families and placing them in 'Residential Schools,' where they were forced to speak only English and taught only Euro-American history and culture. Only in the 1970s was this system dismantled, but the loss of cultural memory that it brought about was and is devastating, to say nothing of the intergenerational persistence of accumulated trauma it visited on the children who were subjected to this practice (see, e.g., Brave Heart and DeBruyn 1998).

Industry and infrastructure

Several large-scale commercial undertakings underpinned and dominated economic development and fueled immigration in the region during the nineteenth and early twentieth centuries: construction of transcontinental railroads, logging and sawmilling, mining, and hydroelectric power projects. The Northern Pacific Railway was the first transcontinental route to Puget Sound, completed in 1883 with its terminus at Tacoma. 1893 saw completion of the Great Northern Railway, which terminated in Seattle and was the only privately funded such railway in US history. These railways and their local spurs promoted economic growth and prompted the founding and development of small, coastal sawmill towns throughout the region. Timber harvested locally, or rafted by sea and river, was milled and loaded on trains for transport to the east.

Arlington

Non-Indigenous exploration of the area around Arlington began in the 1850s. At the time, the Treaty of Point Elliot of 1855 changed the social and political landscape of the area. Members of the Stillaguamish tribe, spelled *Stoluck-wa-mish* in the Treaty of Point Elliott, were present for and party to the signing. However, "no separate reservation was established for the *Stoluck-wa-mish* River Tribe. Some moved to the Tulalip Reservation, but the majority remained in the aboriginal area along the Stillaguamish River" (Boser 2023). By 1856, the U.S. Army established a trail through the area, but it was heavily forested, and immigrants were slow to move there. It was not until 1887 that the area had its first store, and soon after its first hotel. Nels K. Tvete and Nils C. Johnson established the store at Stillaguamish River forks and the area grew to become Arlington. Lee Rogers and Al Dinsmore, two loggers, owned the hotel, built near the store. The hotel and store mainly served area loggers (Oakley 2007a).

Among those who contributed to the early development of Arlington were Robert Kinnear and Robert A. Rogers (Rodgers), each of whom owned portions of the Project area (Figure 11). Robert Kinnear was born in Ceres, Scotland, on May 21, 1852 (Ancestry.com 2024a). Kinnear immigrated to the United States and married Mary Donaldson; he worked as a mechanic (Ancestry.com 2024a; Find a Grave 2024). In 1894, Kinnear purchased 160 acres in Section 25, Township 31 North, Range 05 E, including a portion of the Project area (Bureau of Land Management [BLM] General Land Office [GLO] 2024a). Robert A. Rogers was born in Illinois on May 12, 1860 (Ancestry.com 2024b). Rogers married Katherine and worked as a carpenter (Ancestry.com 2024b). In 1891, Rogers purchased 160 acres in Section 26, Township 31 North Range 05 E, including a portion of the Project area (BLM GLO 2024b).

Into the late 1800s, the areas that would become known as Arlington and Haller City competed for dominance. Haller City—along "the on the riverbank with Arlington on higher ground to the south"—initially grew quicker than Arlington, but Arlington gained the advantage in 1890 when a railroad depot was established there (City of Arlington 2024a; Interstate Publishing Company 1906:360). The first business to start in the Arlington area was the *Stillaguamish Star* newspaper, beginning in August 1890 (Interstate Publishing Company 1906:360). By the next year, Arlington had an express office, a warehouse, a post office, a hotel, and three miles of streets. Arlington's development was not hindered by the Panic of 1893–1896 (Interstate Publishing Company 1909:361). In 1893, Arlington's estimated population of roughly 500 residents enjoyed the developing area, which had come to include a bank, shingle mills, general stores, a creamery and hotels (Cameron et al. 2005:117; Oakley 2007a).

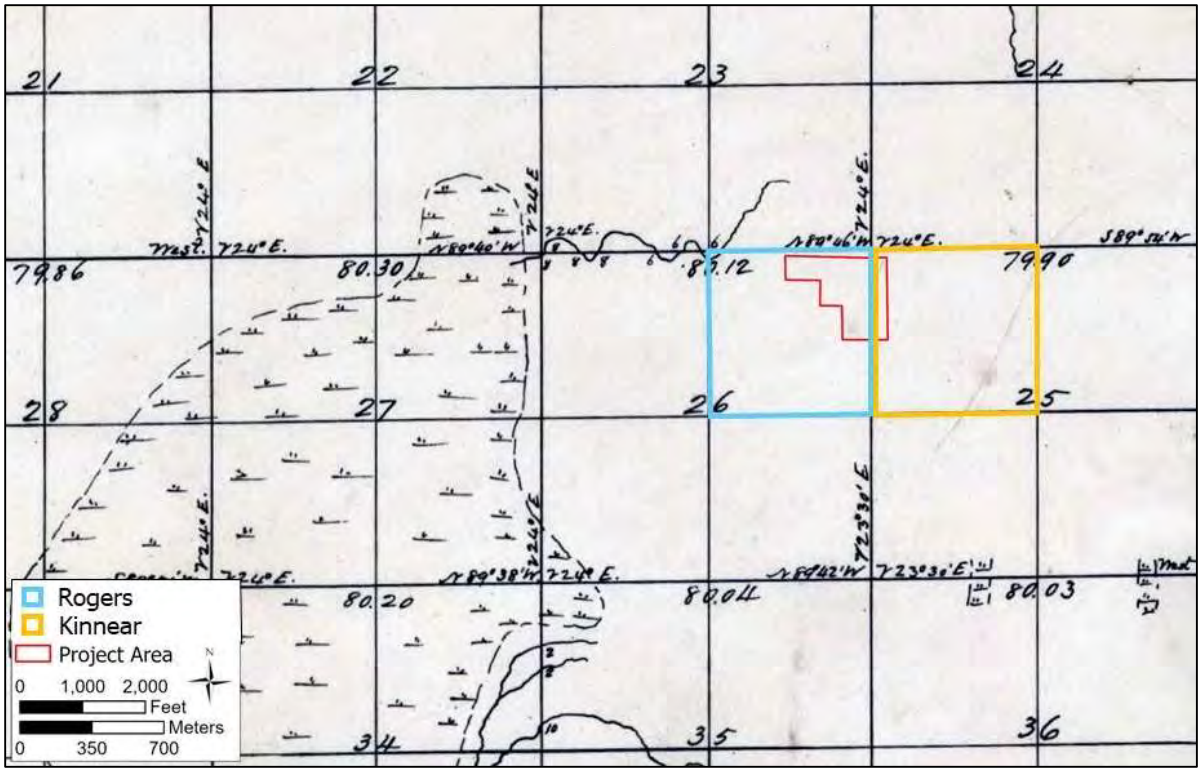

Figure 11: General Land Office map from 1875 showing early land ownership in Project vicinity.

From the late 1800s through the early 1900s, Arlington's economy was dominated by dairies, shingle mills, and logging operations (Cameron et al. 2005:130). As Arlington began to surpass Haller City in commerce and population, businesses were moved closer to Arlington (Cameron et al. 2005:117). Arlington area residents had provided a 200-foot flagpole for the World's Fair in Chicago in 1893 (Oakley 2007a; William 1926:574). By 1900, Arlington's population was 852 (Interstate Publishing Company 1909:361). In 1901, the Arlington Cooperative Association was started by local dairymen to provide a market for dairy products (Oakley 2007c). By 1903, Arlington had incorporated, and was then distinct from Haller City (Oakley 2010).

In 1904, the town also erected the same 200-foot flagpole at the St. Louis World's Fair (Oakley 2007a; William 1926:574). The town was bustling, with the Northern Pacific Railroad coming to town three times a week, and the arrival of the Sunset Telephone Company to provide telephone services through the area (Oakley 2007a). In 1905, Neil Brown, Thomas Moran, and Nels K. Tvete organized and incorporated the Arlington Water, Light & Power Company (City of Arlington 2024b; Oakley 2007b; Whitfield 1926:538).

By 1908, mills surrounding Arlington were producing 375,000 board feet of lumber and 18 million shingles monthly (Cameron et al. 2005:144). The population had grown quickly to 2,000 in 1908 and Arlington had its own school system serving over 400 students. In the same year, Arlington dairies produced over 7,500 pounds of butter a month (Cameron et al. 2005:144).

When the United States declared war on the German Empire in April 1917, residents from Arlington were among the first in Snohomish County to ship out. Servicemen from Arlington were part of the 5th Artillery Company that left on August 1, 1917 (Cameron et al. 2005:175). Arlington residents participated in Red Cross campaigns and exceeded their quota by over 500 percent. In 1918, a wartime

parade in Arlington attracted a crowd of approximately 6,000 spectators who gathered around to hear one of the organizations proclaim, "We Want Peace and Will Fight For it" (Cameron et al. 2005:179).

The Great Depression hit the area hard, however, and by the 1930s mill closures had led to high rates of unemployment. In response, the Arlington Commercial Club leased acreage from M. Birckenmeier to help the Civil Works Administration's (CWA) federal relief programs (Oakley 2007a). Arlington also built an airport with funding from the federal Emergency Relief Administration, which succeeded the CWA. The project was expected to provide work for 50–60 people. The first airplane landed there on June 3, 1934. Soon, the airport was used for aviator practice and airshows. In 1935, the city was promoting its use as a military base (Cameron et al. 2005:253).

In 1940, the U.S. Navy announced that it would be taking over the Arlington airport as an auxiliary Naval Air Station. During World War II, the Army used the airport briefly as an adjunct to Paine Field (Cameron et al. 2005:266). When the airfield returned to Navy use in 1943, it grew to a total of 1,162 acres, complete with two 5,000-foot runways, 33 buildings capable of housing 850 people, and 116 officer barracks (Cameron et al. 2005:273, 275). The Arlington Naval Auxiliary Air Station is now listed on the National Register of Historic Places (Boswell and Heideman 2011).

In the years after World War II, Arlington continued to develop as a typical example of small-town America. Logging and agriculture remained prominent industries, but many dairy farmers moved toward the Skagit River Valley (Oakley 2007a). In the 1950s, the Arlington Cooperative Association plant in Arlington came under the control of Darigold, which had accumulated several dairy associations at the time. Darigold continued to operate the facility for a few years, but the plant closed in the 1950s (Oakley 2007c). Then in 1969, Interstate 5 was completed, providing easy access to Arlington from larger cities such as Everett and Seattle (Oakley 2007a). In 1970, Arlington's population was only 2,261 (Cameron et al. 2005:297). Arlington experienced continued residential growth in the 1980s because of increases in the cost of living in the larger cities such as Everett and Seattle (Oakley 2007a).

In 1974, the Stillaguamish Tribe of Indians petitioned the Secretary of the Interior for federal acknowledgement and recognition as an Indian Tribe. By 1976, the Tribe gained federal status (Boser 2023). During the 1970s and 1980s, the Stillaguamish Tribe, championed by Tribal member Lew Goodridge, constructed a fish hatchery and rearing ponds on Harvey Creek north of Arlington. The Snohomish County Public Works Department and the Western Washington Indian Employment and Training Program provided labor for constructing the rearing ponds in 1987 (*The Arlington Times* 1987). Upon his retirement, Goodridge stated that the "growth of a strong cooperative relationship between the Stillaguamish and Tulalip tribes and the Washington Department of Fisheries [w]as the most important development during his tenure as fisheries manager" (*The Arlington Times* 1988).

In 2007, Arlington had a population of approximately 15,000 (Oakley 2007a). In 2014, 64 acres of Stillaguamish Tribe land was federally recognized as a reservation (Boser 2023). Arlington continues to be popular today as a bedroom community for people who work in Everett and Seattle.

Edgecomb

Edgecomb is a neighborhood of the Arlington area, between the Arlington Municipal airport and State Route 9, north of 172nd Street Northeast. A stump house, created by Gustav Erik Vilhem (Pettersson) Lennstrom from hollowed out a large cedar tree stump, drew visitors around the turn of the century. Lennstrom added a roof, window, door, and ventilation pipes for the woodstove inside. Around 1901, famed Northwest photographer Darius Kinsey came to Edgecomb to photograph it. After Lennstrom's passing, the land was sold at least twice, but what to do with the stump house was still a topic of discussion. Ultimately, it was disassembled with the intention of reassembling it elsewhere someday

for display. Unfortunately, by the 1930s, the untreated wood began to disintegrate, and its remains were incinerated (Blecha 2010). Darius Kinsey's photographs and postcard collections are all that is left.

Smokey Point

Smokey Point was originally known as Rex's Corner, at the intersection of Smokey Point Boulevard (Old Highway 99) and Edgecomb Road (172nd Street Northeast), in west Arlington near Interstate 5. (BOLA 2013:39). In the 1930s, Rex's Corner contained one restaurant, a small tavern, and a gas station (Barnier 2004). In 1946, Mr. Rex sold the property to Eric and Pearl Shurstad, who renamed the restaurant the Smokey Point Café (BOLA 2013:39). The Shurstads reportedly renamed it after one of their favorite restaurants in their hometown, Minneapolis, Minnesota. The café was well known for its barbeque dinners and for the plumes of smoke that the open barbeque generated. The area lovingly adopted the name Smokey Point as a result (Barnier 2004; BOLA 2013:39). The same day that Interstate 5 opened in 1958, the Shurstad's closed the café. The property remained vacant until it was demolished (Bola 2013:39). The City of Arlington annexed Smokey Point in 1999 (City of Arlington 2024a). In 2012, "the Arlington–Smokey Point Chamber of Commerce began holding an annual barbecue cook-off as a fundraiser inspired by the corner's history" (BOLA 2013:39).

4.3 Previous Archaeology

Franz Boas was the first archaeologist to work in the Pacific Northwest, and was notably the leader of the Jesup North Pacific Expedition, of which Harlan I. Smith (1900, 1903, 1907) was also a part. After the expedition, Smith continued to do extensive work in Washington and Canada. From this point to the 1970s, archaeology in the Pacific Northwest was driven by academic interest in precontact peoples, and by public interest in antiquity that, in part, museum collections satisfied. Archaeologists used a mix of excavation, survey, and the ethnographic record to find sites and make inferences about past cultures. The American Antiquities Act of 1906 and the National Historic Preservation Act of 1966, as amended, made federal agencies and those undertaking federally funded projects consider their impact on archaeological sites and historic structures; this was the beginning of public-sector archaeology. It was not until the creation of the Environmental Protection Agency, the passing of the National Environmental Policy Act, and litigation involving them, which mandated environmental reviews for federally funded projects. It was really at that time that cultural resource surveys became more common. Since that time a variety of regulations and policies here in Washington State have broadened the scope of archaeological and architectural survey. This burgeoning industry is now known as cultural resource management (CRM). As part of the report preparation, and to aid in planning, cultural resource managers review background research to inform past land use of an area and therefore what evidence of past use is near or within a project area. Knowing the location and type of previously recorded archaeological or historic sites, and the risk of encountering sites are invaluable information to the archaeologist and project proponents alike.

For general overviews of the archaeology and cultural resources of the Pacific Northwest, see Ames (1995, 2003, 2005a, 2005b), Ames and Maschner (1999), Borden (1950, 1951, 1975), Butler and Campbell (2004), Carlson (1990), Matson and Coupland (1995), Matson et al. (2003), Meltzer (2004), and Smith and Fowkes (1901). The central Puget Sound has been the focus of much archaeological work due in part to the rapid growth of Seattle. In addition to those cited in the next two sections, more recent archaeological overviews can be found in Blukis Onat and Kiers (2007a, 2007b), Lewarch and Larson (2003), Lewarch et al. (2005, 2006), Mattson (1989), Miss and Campbell (1991), Mitchell (1990), Nelson (1990), Stein (1984), and Stein and Phillips (2002).]

Previously Recorded Archaeological Sites

Records of three archaeological sites within about one mile of the Project area are on file at the Washington State Department of Archaeology and Historic Preservation (DAHP). A short description of the sites is summarized in Table 1.

Table 1: Previously recorded archaeological sites within one mile of the Project area.

Site #	Type	Distance (Miles)	Author, Year	NRHP Eligibility
45SN893	Historic Debris Scatter	~0.5	Koch-Michael and Henley 2023	Not Eligible
45SN720	Historic Isolate	~1	Needham 2019	Not Eligible
45SN26	Precontact Lithic Material	~1	M. and K. 1961, Obermayr 1991, Larsen 2024	Survey/ Inventory

Previous Cultural Resource Reports

There are ten reports on file with DAHP from previous cultural resource surveys within one mile of the Project area; they are listed below in Table 2, along with annotations for those that included subsurface investigation such as shovel probes (SP), machine tests (MT) or monitoring, and if a site was identified.

Table 2: Previous cultural resource reports on file with DAHP.

Author	Title	Date
Goetz Stutzman	*Cultural Resources Survey for the City of Arlington SR 531 and 67th Avenue NE Intersection Improvement Project, Snohomish County, Washington, HRA, Inc., Report No. 425CIS.* **Pedestrian and subsurface survey. No protected cultural resources.**	1995
Hartmann	*Site Name: Hammette #82967 Arlington, Washington Snohomish County, Western Shore Heritage Services.* **No subsurface investigations. Pedestrian survey. No protected cultural resources.**	2001
Piper and Smith	*Phase 2 Cultural Resources Assessment for the Sedro Woolley-Horse Ranch Transmission Line Upgrade. Skagit County and Snohomish County, Washington, NWAA.* **529 SPs and pedestrian survey. SK00404, SK00405, SN00406, SK00407, SK00408, SN00483, SN00484, SN00485, SN00486 and 45SK409.**	2009
Nelson and Troost	*Cultural Resource Survey of the State Route 9-State Route 531 Intersection Improvement Project, Snohomish County, Washington, Cascadia Archaeology.* **77 SPs and pedestrian survey. No protected cultural resources.**	2010
Baldwin and Chambers	*Cultural Resources Assessment for the SR 92 Plat Project, Arlington, Snohomish County, Washington, Drayton Archaeology* **23 SPs and pedestrian survey. No protected cultural resources.**	2015
Emerson	*Cultural Resources Survey for the Washington State Department of Transportation's Edgecomb Creek Fish Passage Project, Snohomish County, Washington, Archaeological and Historical Services Eastern Washington University.* **12 SPs and pedestrian survey. No protected cultural resources.**	2016

Author	Title	Date
Berger	*Cultural Resources Assessment for the Snohomish County PUD No. 1 Arlington Remote Pole Yard Project, Arlington, Snohomish County, Washington, CRC, Report No. 1604M-2.* **76 SPs and pedestrian survey. No protected cultural resources.**	2016
Arthur	*Cultural Resources Survey for the Centennial Park Project, 172nd Street SE and 67th Avenue NE, Arlington, Snohomish County, Washington, Caldera Archaeology, Report No. 0819B.* **40 SPs and pedestrian survey. No protected cultural resources.**	2019
Berger	*Cultural Resources Assessment for the NorthPoint Cascade Industrial Center Project, Arlington and Marysville, Snohomish County, Washington, CRC, Report No. 2006G-2* **3 positive SPs. 859 negative SPs. 862 SPs and pedestrian survey. 45SN773, 45SN774, 45SN775, 45SN776, 45SN777, 45SN778, 45SN779 and 45SN780.**	2021
Schneider et al.	*State Route 531 - 43rd Avenue Northeast to 67th Avenue Northeast Widening Project, Snohomish County, Washington – Cultural Resources Assessment, ESA.* **49 SPs and pedestrian survey. No protected cultural resources.**	2024

National Register of Historic Places Properties

The record of one National Register property within three miles of the Project area is on file with DAHP.

45SK162—*Naval Auxiliary Air Station, Arlington* was built in 1934 and expanded throughout World War II. It was used to train pilots and for commercial air until it was converted into a naval base for the war. The base was deactivated in 1946 and the City of Arlington purchased it in 1959. Currently 160 businesses sit on part of the station while the rest is abandoned. The period of significance is from 1942 to 1946 (Boswell and Heideman 2011).

Previous Cemetery Reports

The record of one cemetery within two miles of the Project area is on file with DAHP.

45SN543—*Arlington Municipal Cemetery* is an active gravesite. It was platted as Harwood Cemetery in 1903. The city took control over the cemetery in 1999 and the name changed (DAHP 2010).

State Heritage Barn Register

Records of two barns on the Washington State Barn Register within three miles of the Project area are on file with DAHP. A short description is provided below.

45SN585—*Maude McCaully-Boland Farm* started in 1883 when Mathew McCaully claimed the homestead. His daughter, Maude, may have built the barn on the property around 1920 after he passed away. The house dates to 1934. Currently, Bellanovas coffee operates the farm as a coffee roastery (Maddy 2010).

45SN670—*Anderson Acres* began at least around 1930 as that is when the barn is constructed. Almost all of the buildings date to pre-1949 except for the house which dates between 1949 and 1950. The farm was used to raise dairy cows but now stores hay (Anderson 2015).

Archaeological Expectations

According to the DAHP predictive model the Project area is in a moderately low-risk to moderate-risk area. The closest site is a historic debris scatter approximately half a mile from the Project area, and the closest precontact site is about one mile from the Project area. Numerous surveys within one mile have conducted both pedestrian and subsurface survey.

The Project area is less than a mile from Portage Creek; there is a moderate probability of encountering a range of precontact, protohistoric, and historic Native American cultural resources related to travel between resources. Precontact artifacts or features might include those related to travel, hunting and processing of land animals or temporary encampments.

Based on the first land claims there is potential to encounter historic cultural resources during subsurface testing. We would expect to encounter isolated historic artifacts associated with agriculture, logging, or residential use. Historic artifacts are older than 50 years and may include refuse such as glass bottles, cans, nails, and ceramics relating to agriculture or residential use.

5.0 METHODS

This section provides details on the archival research and fieldwork methods that Equinox Research and Consulting International Inc. (ERCI) employed in support of the Project. The research undertaken for the Project uses best-practice archaeological survey techniques to record the presence or absence of moderate to large archaeological sites, with the expectation that we may also find isolated artifacts or features, or small artifact scatters. When sites or isolated artifacts are discovered ERCI records them on DAHP forms in accordance with the *Washington State Standards for Cultural Resources Reporting*.

5.1 Archival Research

ERCI researchers

- Reviewed site forms and reports of previous archaeology on file at DAHP
- Reviewed other archaeological reports and related documents on file at the ERCI offices in Mount Vernon
- Reviewed published information on the precontact, traditional Native American and historic land use in and around the Project area
- Reviewed the County Assessor's records
- Reviewed General Land Office maps.

5.2 Fieldwork

Fieldwork entailed a meandering pedestrian surface survey and subsurface shovel probes (SP). The pedestrian survey was carried out in conjunction with subsurface survey, while finding SP locations, and moving between SPs. The technicians zig-zagged slowly up their individual transects, pausing at alternating changes of direction to look backwards at trees and the ground surface. While surveying, in addition to the possibility of surface artifacts, archaeologists were watching for culturally modified trees and surface features such as cache pits, cultural depressions, wood building foundations and rock cairns

SPs consisted of cylindrical pits dug by hand using round-nosed shovels, approximately 50 centimeters (cm) in diameter, ranging up to 100 cm deep; beyond the reach of shovels, bucket augering was used in approximately 10% of SPs. The bucket auger had a 10 cm diameter. All excavated sediments were passed through ¼-inch mesh hardware cloth shaker screens.

SPs were abandoned before reaching the maximum possible depth due to, among other factors, large cobbles or boulders, large roots or groundwater, or extremely dense sediments (hardpan) was reached. All excavated sediments were passed through ¼-inch mesh hardware cloth shaker screens.

SP location overview photographs were taken, along with photographs of their sedimentary profiles. Once documentation was complete SPs were backfilled with the excavated sediments and the surface restored to its original grade. No samples were removed from the Project area. Sediments encountered were characterized and recorded on paper, and activities photographed using digital cameras or phones. SP and other locations were obtained using a Global Positioning System (GPS) high-accuracy receiver. Sedimentary matrix and shovel probe descriptions and photo logs are provided in the appendices. Field notes, digital photographs and GIS shape files are stored at ERCI's offices in Mount Vernon, Washington.

SP locations were determined using a mixed strategy judgmentally based on slope, topography, utilities, and dense vegetation, and systematically at intervals ranging from 40 meters apart to 60 meters apart depending on the landscape of the parcel.

Any artifacts recovered were described and photographed, then returned to the same SP from which they came. Fragments of animal skeletal remains were immediately photographed and digital images transmitted electronically to Alyson M. Rollins, MA, ERCI's biological anthropologist, who confirmed whether or not the remains were human.

Human Remains

If human remains were encountered this is the procedure ERCI would have followed:

Any skeletal material encountered will be photographed and immediately sent to Alyson M. Rollins, MA, ERCI's biological anthropologist, who will confirm whether or not the remains are human. If determined human, those photographs will only be used for initial identification and will be immediately deleted by all parties once identification is complete.

Following RCW 27.44, Indian Graves and Records, if ERCI's survey encounters human skeletal remains all activity will cease that may cause further disturbance to those remains. The area of the find will be secured and protected from further disturbance until the State provides notice to proceed. The finding of human skeletal remains will be reported to the county medical examiner/coroner and local law enforcement in the most expeditious manner possible. The remains will not be touched, moved, or further disturbed. The county medical examiner/coroner will assume jurisdiction over the human skeletal remains and make a determination of whether those remains are forensic or non-forensic. If the county medical examiner/coroner determines the remains are non-forensic, then they will report that finding to the Department of Archaeology and Historic Preservation (DAHP) who will then take jurisdiction over the remains. The DAHP will notify any appropriate cemeteries and all affected tribes of the find. The State Physical Anthropologist will make a determination of whether the remains are Indian or Non-Indian and report that finding to any appropriate cemeteries and the affected tribes. The DAHP will then handle all consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

6.0 RESULTS

On June 27 and 28, and July 17, 2024, ERCI conducted pedestrian and subsurface survey in the Project area. The weather was alternately cold and rainy and warm and sunny. The field crew consisted of Grace A. Berlin, BA, Isabella R. Conover, BA, Fiona L. Koehnen-Hots, BA, Rachel E. Pinkman, MA, Isabella L. Pipp, MA, and Ashley A. Yates. **No protected cultural resources were encountered.**

6.1 Pedestrian Survey

The Project area comprises five parcels, each with its own structures and independent landscaping (Figure 12–Figure 14). Pedestrian survey results are described separately for each parcel, below.

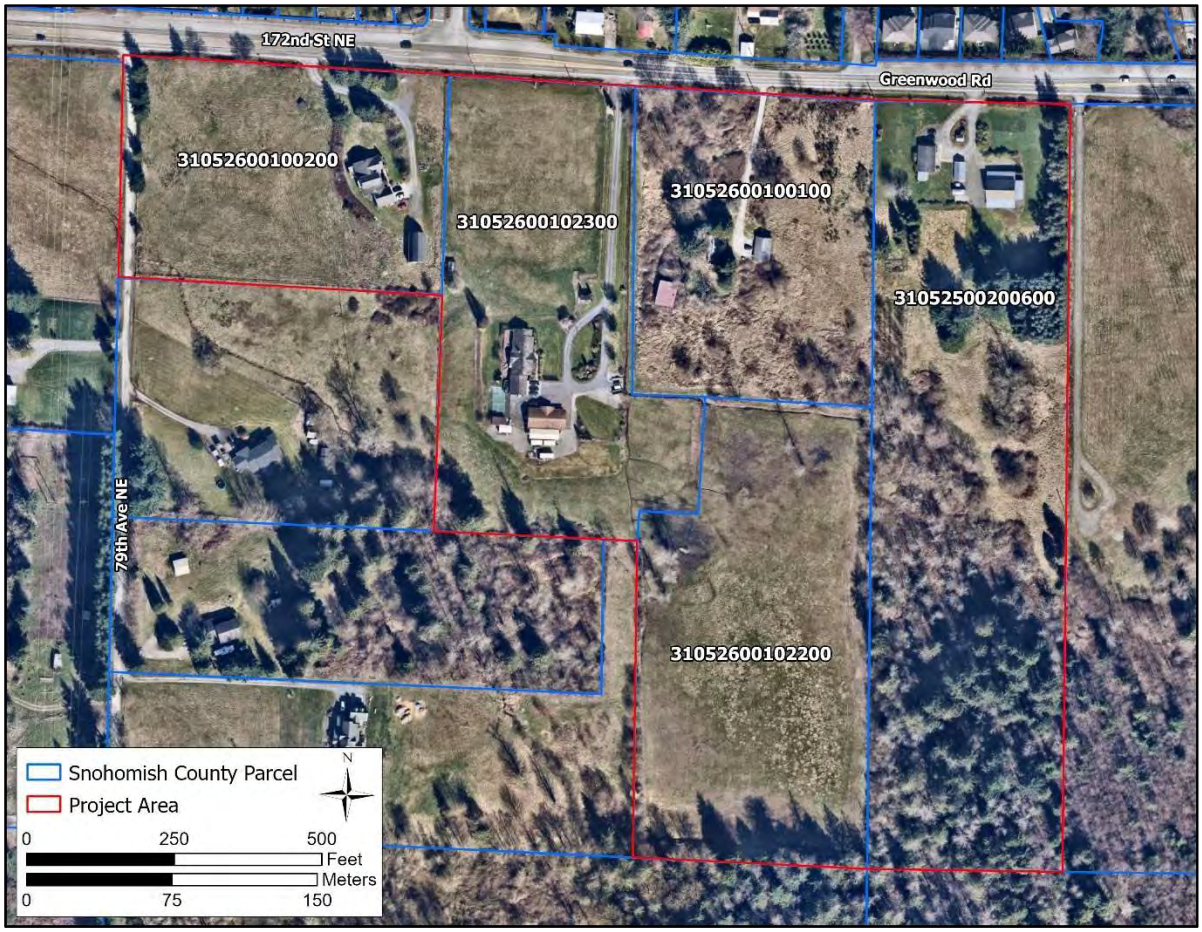

Figure 12: Sketch map showing labeled parcels.

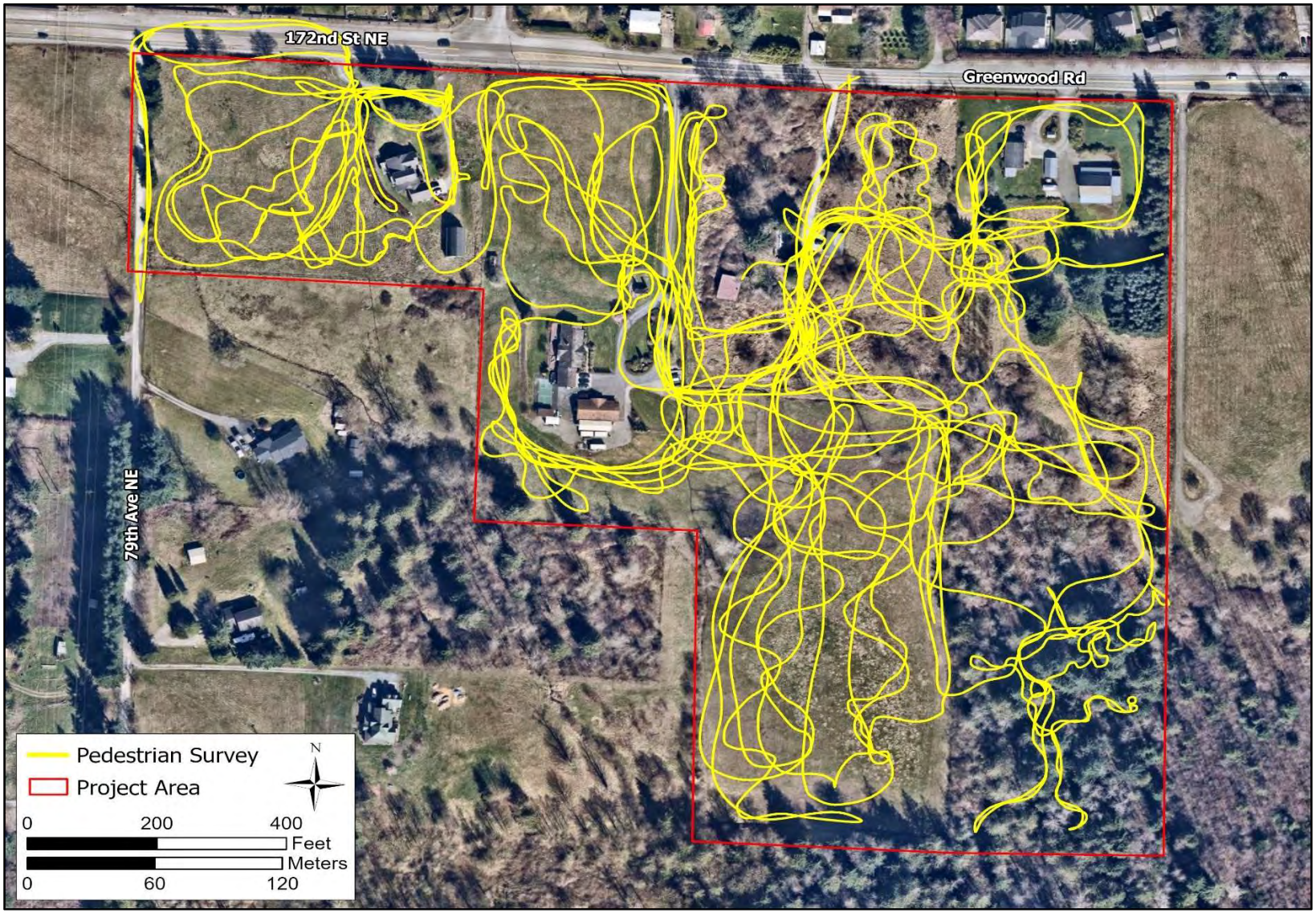

Figure 13: Sketch map showing pedestrian survey route.

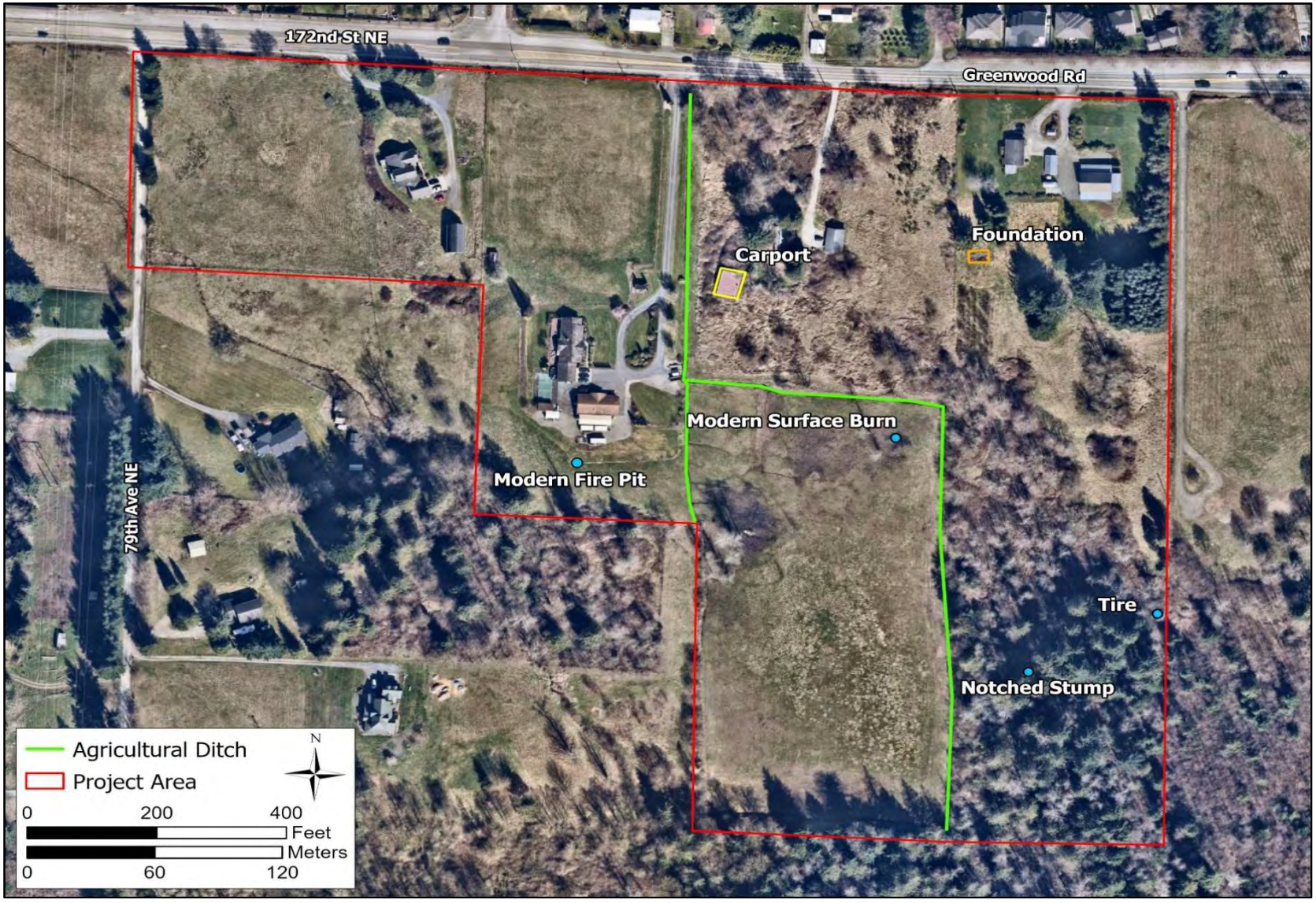

Figure 14: Sketch map showing points of interest from pedestrian survey.

8014 172nd St NE (Parcel 31052600100200)

This parcel contains a house, barn, gravel driveway, yard, and field (Figure 15–Figure 18). The residential area is situated on a mostly level terrace on the east side of the parcel; from this area the parcel slopes to the west and southwest. The field begins at the base of the steepest slope adjacent to the house. The field is uneven and has multiple slopes. In the field there is a deteriorating wood shed and decommissioned street spool.

Vegetation includes cedar, grass, Douglas fir, Himalayan blackberry, apple trees, cherry trees, birch, bracken fern, holly, and decorative shrubs. Surface visibility was very low; exposed sediment was visible from mole holes in the yard.

No protected cultural resources were observed.

Figure 15: View west, front of house and yard.

Figure 16: View south, barn and driveway.

Figure 17: View northeast, looking towards house from the base of steepest slope.

Figure 18: View northeast of field at base of slope.

8118 172nd St NE, First Parcel (Parcel 31052600102300)

This parcel contains a house, detached garage, paved driveway, multiple sheds, an agricultural field, and a yard (Figure 19–Figure 22). This parcel is also owned by the owner of 31052600102200; there is an agricultural ditch running between and on the two parcels, some of it with a black plastic culvert running through it (Figure 23). At its widest the ditch is approximately 2 m.

Vegetation on the parcel includes grass, an apple tree, and decorative trees and hedges lining the driveway. In the yard there was a modern fire pit (Figure 24). There was little surface visibility—the only exposed sediment was in the ditch.

Figure 19: View west, house and garage.

Figure 20: View southeast, agricultural field.

Figure 21: View south, backyard.

Figure 22: View north, driveway.

Figure 23: View south, looking down ditch from northern end.

Figure 24: View south southeast, modern firepit.

8118 172nd St NE, Second Parcel (Parcel 31052600102200)

This parcel is an undeveloped agricultural field (Figure 25). There were two cottonwood trees in the field. This parcel is also owned by the owner of 31052600102300; and is connected to the agricultural ditch running between and on this and the parcel at the same address (Figure 26).

ERCI saw a recent burnt area on the surface in the northeast corner of the parcel—it was similar to the one on the other parcel, but had been scattered, with some vegetation starting to grow through it (Figure 27). As with the other parcel at this address, there was little surface visibility and the only exposed sediment was in the ditch.

Figure 25: View northeast, overview of parcel 31052600102300 from the southwest corner.

Figure 26: View west, overgrown ditch at edge of field.

Figure 27: View west, recently burnt area on parcel 31052600102200

8210 172nd St NE (Parcel 31052600100100)

This parcel is vacant and overgrown with vegetation (Figure 28–Figure 30). There is a house (constructed in 1914), a detached garage, a gravel driveway, and a structure that appears to be a carport on the parcel.

Vegetation includes Himalayan blackberry, Douglas fir, cedar, rhododendron, alder, black pine, stinging needle, elderberry, rose bushes, Scotch broom, and grass.

The house, detached garage, and carport are overgrown and in disrepair (Figure 31–Figure 34). The carport is not listed on the county assessor's website. The carport does not appear to be suitable as a residence, although it has a chimney (Figure 35 and Figure 36); it was surrounded by Himalayan blackberry making it inaccessible during ERCI's survey.

If Project plans include removing this house, the lead agency for the Project may require a Historic Property Inventory (HPI), as it is older than 50 years.

Figure 28: View north, driveway.

Figure 29: View southeast, garage and driveway.

Figure 30: View southeast, parcel overview.

Figure 31: View west, front porch of house.

Figure 32: View south, front of house.

Figure 33: View north, side porch of the house.

Figure 34: View northeast, back side of house, roof caved in.

Figure 35: View east, carport.

Figure 36: View north, carport with chimney indicated in red.

8326 172nd St NE (Parcel 31052500200600)

The north portion of this parcel contains a house, gravel driveway, detached barn, and two sheds; surrounding the residence there is a well-maintained lawn with decorative shrubs and trees (Figure 37 and Figure 38). Moving south from the residence, the parcel transitions into an overgrown field with a few trees; continuing south the parcel turns into a densely treed area (Figure 39).

Vegetation in the parcel includes grass, holly, elderberry, Himalayan blackberry, salmonberry, cedar, Douglass fir, stinging nettle, sword fern, willow trees, alder, and noble fir. Within the treed area, ERCI encountered marshy ground and standing water by the southern end of the parcel (Figure 40); paths through the dense vegetation had recently been cut and ERCI used them to complete the survey.

One colorless glass Gatorade bottle was encountered on the surface in the treed area (Figure 41). Based on the design of the bottle it was manufactured between 1991 and 1999 (Fandom 2024). A Dasani water bottle wrapper was also observed on the surface in the treed area, as well as a car tire.

ERCI saw one deteriorating old-growth notched stump with at least four notches in the treed area (Figure 42 and Figure 43). This notched stump indicates the land was likely logged around the beginning of the twentieth century. ERCI does not intend to manage this stump as an archaeological site.

Near the residence on the parcel, ERCI observed a 28- by 19-foot concrete foundation (Figure 44 and Figure 45). ERCI excavated SP 21 next to the northwest corner of this foundation to determine the depth of the foundation below the surface; is 42 cm thick in total, and 13 cm is below ground. There were brick and brick fragments, cinder blocks, and pieces of wood on the foundation.

Figure 37: View southeast, residential area of parcel.

Figure 38: View southwest, residential area of parcel.

Figure 39: View east, ERCI in treed area.

Figure 40: View south, standing water in treed area.

Figure 41: Plan view, colorless glass Gatorade bottle.

Figure 42: View west, old-growth notched stump.

Figure 43: View west, old-growth notched stump.

Figure 44: View east, foundation.

Figure 45: View north, foundation.

6.2 Subsurface Survey

ERCI excavated 58 SPs across the Project area, of which six were augered (Figure 46–Figure 49). SPs were terminated early due to impassable roots, cobbles, extremely dense glacial sediment (hardpan), or groundwater.

Two distinct sedimentary matrices were encountered. Matrix 1 (M1) is a dark grayish-brown sandy silt with gravels, pebbles, and occasional cobbles—this is a disturbed local sediment; M2 is a dark grayish-brown to dark yellowish-brown sandy silt that is very dense, with few gravels, pebbles, and cobbles—this is intact glacial till. Five SPs had a profile of only M1, one SP had a profile of M2, and all other SPs had a profile of M1 overlying M2. Full sedimentary descriptions can be found in Appendix 1; annotated sediment profiles can be found in Figure 50 and Figure 51.

Nondescript refuse was encountered in four SPs; all refuse was found in M1. SP 36 contained metal fragments, ferrous nails, a colorless glass fragment, and an amber glass fragment (Figure 52). SP 58 contained a ferrous nail and colorless glass fragment. SP 48 contained a pink gum wad, a brick fragment, a white plastic fragment, a colorless glass fragment, a green glass fragment, an amber glass fragment, one ferrous nail, a plastic object, and red plastic fragment.

SP 21 was excavated next to the northwest corner of the foundation encountered on Parcel 31052500200600 during pedestrian survey, to determine the depth of the foundation below the surface (Figure 53). Within the M1 in SP 21 ERCI recorded colorless glass fragments and wire nails (Figure 54).

No protected cultural resources were encountered.

Figure 46: Sketch map showing negative SP locations and those that were augered.

Figure 47: View northwest, SP 15 overview with ERCI at SP 8 in background.

Figure 48: View north northeast, SP 51 overview.

Figure 49: View northeast, SP 39 overview.

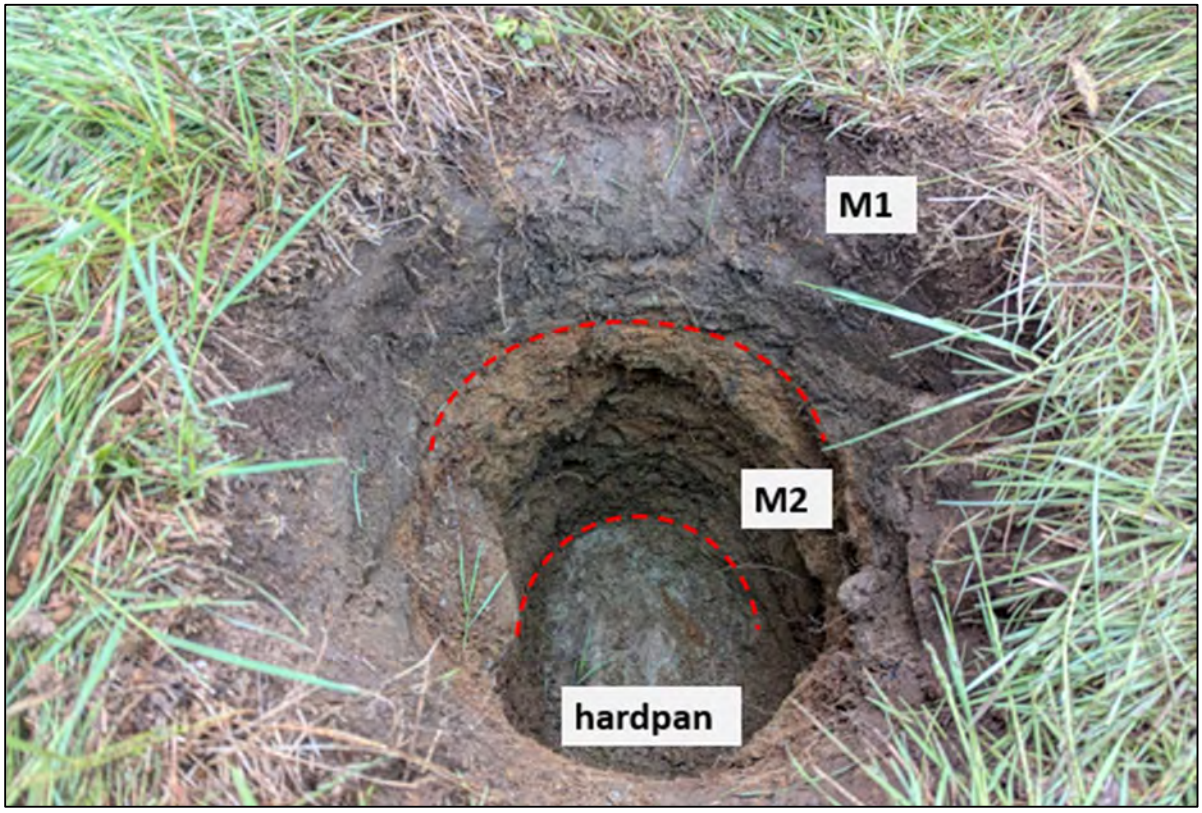

Figure 50: View south, SP 30 profile of M1 overlying M2.

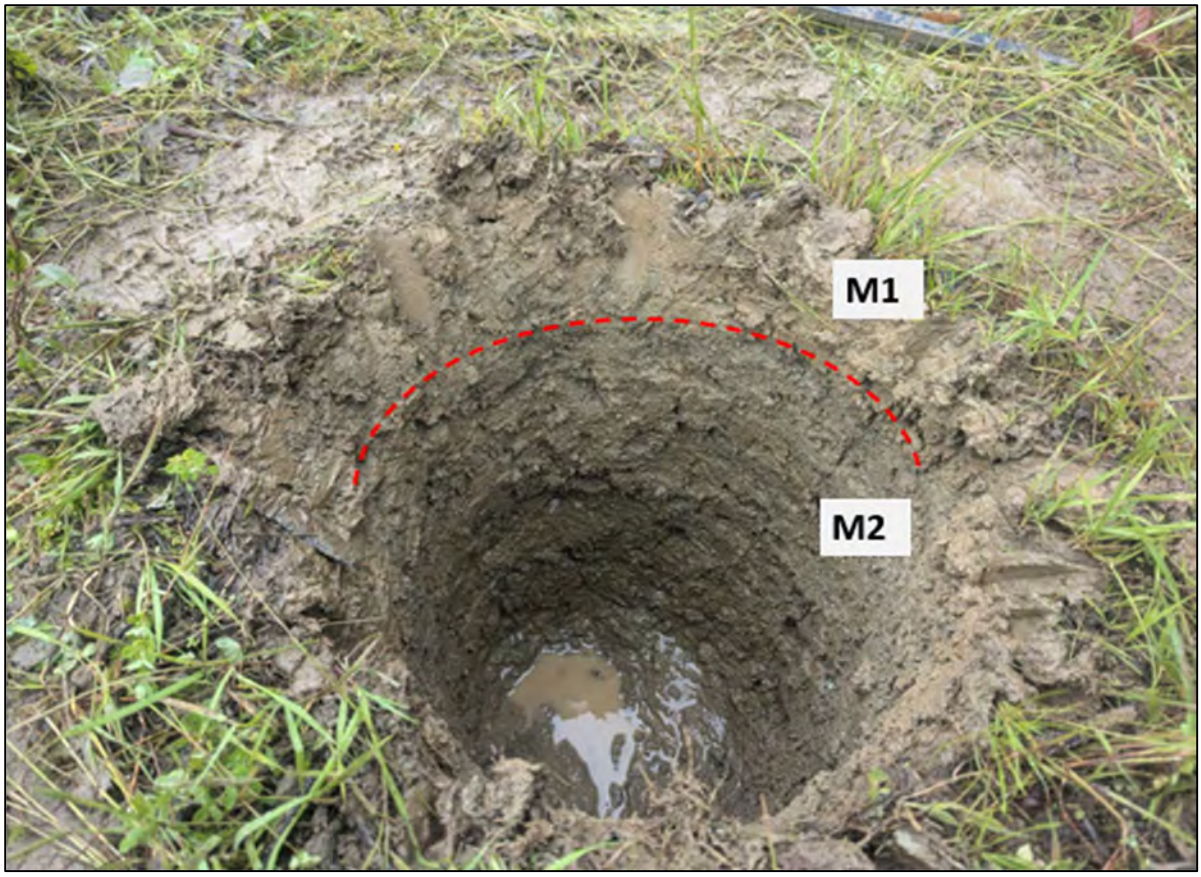

Figure 51: View south, SP 9 profile of M1 over M2.

Figure 52: Plan view, SP 36 refuse from M1.

Figure 53: View south, SP 21 overview with foundation, SP marked with shovel.

Figure 54: Plan view, wire nails from M1 of SP 21.

6.3 Discussion

ERCI's archaeological survey for 8014, 8118, 8210, and 8326 172nd Street Northeast (the Project) **encountered no protected cultural resources**. There was evidence of modern residential land use in both pedestrian and subsurface survey. One notched stump provided evidence of past logging. Subsurface survey revealed a consistent sediment profile throughout the Project area, disturbed sediment overlying intact sediment, including hardpan; cultural resources are most often found at the interface between sedimentary deposits.

According to the DAHP predictive model the Project area is in a moderately low-risk to moderate-risk area. The Project area is less than a mile from Portage Creek; there is a moderate probability of encountering a range of precontact, protohistoric, and historic Native American cultural resources related to travel between resources. Precontact artifacts or features might include those related to travel, hunting and processing of land animals or temporary encampments.

Project ground-disturbing activities may yield isolated historic artifacts associated with agriculture, logging, or residential use. Historic artifacts are older than 50 years and may include: refuse such as glass bottles, cans, nails, or ceramics relating to agriculture or residential use.

One residence in the Project area is over 50 years old; it may require a historic property inventory if Project plans include their removal.

Surveys such as this one are intended to yield information about moderate-to-large buried cultural deposits and are not intended to reveal the existence of isolated artifacts, small sites, or features. Any resources encountered should be responded to using the Unanticipated Discovery Protocol (UDP), found in Appendix 3.

7.0 MANAGEMENT RECOMMENDATIONS

No protected cultural resources were identified during our fieldwork. The management recommendations that we are now providing are based on our findings from this field survey. We recommend that:

1. As the Project is still in the planning phase, we do not know the depth of ground disturbance. An archaeologist should review the plans to see if our survey provided enough coverage for the actual ground disturbance proposed.
2. If Project plans include removing the house older than 50 years on parcel 31052600100100, a historic property inventory may be required; this should be confirmed with the lead agency when there is one.
3. The proposed Project proceed as planned, following an unanticipated discovery protocol (UDP) training given to all construction personnel by a professional archaeologist. A copy of the Unanticipated Discoveries Protocol (UDP) to be kept on site at all times.
4. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover protected archaeological objects or sediments (e.g., old bottles or cans, charcoal, bones, shell, stone, horn or antler tools or weapons), all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.
5. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a

safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.

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9.0 APPENDICES

Appendix 1: Shovel Probe Descriptions, Particle Size Classes and Matrix Descriptions

Particle Size Classes

Scale	Clay	Silt	Sand	Gravel	Pebble	Cobble	Boulder
in	<.00015	.00015–.0025	.0025–.08	.08–1	1–4	4–10	>10
mm	<.004	.004–.062	.062–2	2–25.4	25.4–102	102–254	>254

Matrix Descriptions

Matrix 1: 10YR 3/2 very dark grayish brown to 10YR 4/2 dark grayish brown; 80%–85% sandy silt, 5%–10% subangular to rounded gravels, 5%–10% subangular to rounded to pebbles, 0%–5% organics [decomposing woody debris], <1% subrounded to subangular cobbles; moderate compaction; damp to wet; gradual to clear interface. Disturbed local sediment.

Matrix 2: 2.5Y 5/2 grayish brown with oxidation streaks (hardpan), 10YR 2/2 dark grayish brown to 3/6 dark yellowish brown; 75%–100% sandy silt, 0–10% subangular to subrounded gravels, 0–10% subangular to subrounded pebbles, 0–5% subrounded to subangular cobbles; moderate to dense compaction; dry to saturated; gradual to clear color transition. Intact glacial till.

Shovel Probe Descriptions

SP	Depth (cm)	Dia (cm)	Matrix Description (Depths in cm)	Result
1	78	48	**0–36:** M1, gradual interface. **36–78:** M2, grayish brown.	Negative
2	84	41	**0–47:** M1, clear interface. **47–84:** M2, clear color transition to 5/2 grayish brown at 67. 67–84: M2 with 10% coarse sand and 30% silt, undeveloped, moderate to dense compaction.	Negative
3	68	55	**0–43:** M1, orangish brown with decomposing organics, 80% sandy silt, less than 5% organics, 15% subangular to rounded pebbles and gravels. **43–68:** M2, 85% sandy silt, brownish gray.	Negative
4	70	49	**0–35:** M1, clear interface **35–64:** Decomposing tree root, 10YR 3/1 20% silt, 10% medium sand, 70% organics, clear interface. **64–70:** M2, clear interface, water table at 66.	Negative
5	29	45	**0–29:** M1, very dark grayish brown, sandy silt 80%, organics 15%, 5% rounded pebbles.	Negative
6	60	60	**0–9:** M1 clear interface **9–60:** M2, clear color transition at 51 to lighter color, clear interface, water table at 51.	Negative
7	63	55	**0–44:** M1 grayish brown sandy silt 80%, 5% organics, 15% subrounded to subangular pebbles and gravels, gradual transition. **44–63:** M2 brownish gray 85% sandy silt, 15% subrounded to subangular pebbles and gravels.	Negative

SP	Depth (cm)	Dia (cm)	Matrix Description (Depths in cm)	Result
8a	72	50	**0–47:** M1, clear interface at 35 to dark organic stained layer on north and west sides, clear interface. **47–67:** M2, organic staining from above extends to 67 on north and west sides, water table at 54 **Auger 10 cm diameter:** **67-72:** M2.	Negative
9	71	53	**0–14:** M1, very dark grayish brown. **14–71:** M2, grayish brown.	Negative
10	100	51	**0–52:** M1, gradual color transition from very dark grayish brown to dark grayish brown at 22. **52–100:** M2.	Negative
11	75	46	**0–54:** M1, clear transition. **54–75:** M2. Only east wall starts as normal M2 for about 10 cm, the rest is all very dark brown from a large decomposing root.	Negative
12	69	45	**0–55:** M1, gradual color transition from very dark grayish brown to dark grayish brown at 24. **55–69:** M2.	Negative
13	74	45	**0–55:** M1, clear transition, large root in east wall (dug around it). **55–74:** M2, very dense compaction, groundwater seeping in at interface, sediment dry until groundwater leaks in.	Negative
14	80	50	**0–45:** M1, natural carbon (root burn) throughout, clear transition. **45–80:** M2, starts out moderate compaction and brown, gradual transition into the gray hardpan at about 69, very dense.	Negative
15	74	54	**0–46:** M1, more organics (a couple of small decomposing organics) and higher density of pebbles and cobbles. **46–74:** M2, sandy, gravel—less sand inclusion in the southwest wall	Negative
16	60	46	**0–47:** M1, wet, clear transition. **47–60:** M2, very dense, groundwater filling in.	Negative
17	60	43	**0–60:** M1 grayish brown silty sand 80–85%, 0–5% organics, 15% subrounded to subangular pebbles and gravels. M2 may have been at base but SP filled with groundwater.	Negative
18	90	43	**0–70:** M1, brown sandy silt 80%, 15% subangular to rounded pebbles and gravels, 5% organics. **70–90:** M2 gray sandy silt 85%, 15% subangular to rounded pebbles and gravels.	Negative
19	85	45	**0–32:** M1, damp, gradual transition. **32–80:** M2. Begins moderate compaction and yellowish brown, at 72 abrupt transition to gray hardpan, very dense.	Negative
20	60	48	**0–60:** M2 dark yellowish brown, moderate compaction, many roots. Groundwater at base.	Negative

SP	Depth (cm)	Dia (cm)	Matrix Description (Depths in cm)	Result
21	81	45	**0–50:** M1, colorless glass fragments and 2 wire nails throughout, discontinuous and wavy transition. **50–81:** M2, begins moderate compaction and yellowish brown. Compaction increases with depth. Gradual transition into gray hardpan at about 70, very dense.	Negative
22a	108	52	**0–32:** M1, dry to damp, dark brown, few gravels. Gradual interface. **32–94:** M2 dark yellowish brown, 25% subrounded to rounded gravels, <5% subrounded to round pebbles, 70% silt, <1% organic. Clear transition to hardpan. 80–94: M2, dense gray hardpan, 5% subrounded to round gravels. **Auger 10 cm diameter:** **94–108:** M2, dense hardpan grayish brown, 10% subrounded to round gravels, 1% round pebbles, 45% silt, 40% fine sand.	Negative
23	66	49	**0–30:** M1. In the north and east walls there is a very large, curved root taking up about half the SP. **30–66:** M2. Below the root is associated black staining. The rest of the SP is yellowish brown; about 50 it gradually transitions to gray but is not hardpan. 2 perpendicular cobbles making the diameter extra narrow, shovel doesn't fit.	Negative
24	60	48	**0–40:** M1, clear transition, wet. **40–60:** M2, yellowish brown, saturated.	Negative
25a	120	47	**0–65:** M1, northwest wall interface there was some decomposing wood and associated staining, clear transition. **65–90:** M2, moderately dense compaction to 90, SP filling with water **Auger 10 cm diameter:** **90–120:** M2, dense compaction and saturated.	Negative
26	70	50	**0–27:** M1, dry to damp, moderate compaction, 15% large subrounded to round pebbles, 25% subrounded to round gravels, 60% silt, dark brown. **27–70:** M2, dry to damp, moderate compaction. Beginning at 58 dense hardpan.	Negative
27a	75	47	**0–55:** M1, gradual color transition from 10YR 3/2 to 10YR 4/2 at ~17 **55–63:** M2, saturated. **Auger 10 cm diameter:** **63–75:** M2, heavily saturated from groundwater.	Negative
28	58	50	**0–28:** M1 dark brown, 30% organic, 65% silt, 5% subrounded to round gravels, damp to wet. **28–58:** M2, lighter orange to brown, wet to saturated, 10% organics, <1% subrounded to rounded cobble, <5% subrounded–rounded pebbles, 25% subrounded to rounded gravels, 70% silt. Root burn at 39 and 46 in northwest wall, 43 in northeast wall, 39 in southeast wall (smaller inclusion).	Negative

SP	Depth (cm)	Dia (cm)	Matrix Description (Depths in cm)	Result
29	90	48	**0–37:** M1, clear interface. **37–70:** M2, clear transition at 58 to M2 with lighter color, dense compaction.	Negative
30	79	47	**0–27:** M1, clear transition. **27–79:** M2, begins yellowish brown and moderate compaction. Compaction increases with depth, gray hardpan at 78.	Negative
31	50	50	**0–48:** M1, gradual color transition at ~10. **48–50:** M2.	Negative
32	31	45	**0–31:** M1, high number of organics and roots, 10YR 2/3.	Negative
33	90	48	**0–69:** M1 very dark brown, 55% organics (grass, wood), 10% subrounded to rounded gravels, 5% subrounded to round pebbles, 30% silt, damp to wet, scattered carbon inclusions from decay. **69–78:** M2, wet, grayish yellowish brown, 15% organic materials, 20% subrounded to round gravels, 65% silt, loose to mod. At 78, gray, wet to saturated.	Negative
34	66	48	**0–30:** M1, damp to wet, gradual transition. **30–66:** M2, yellowish brown, moderate compaction. Two large cobbles in east and west walls (one maybe boulder) making diameter narrow, also filling with water.	Negative
35	64	45	**0–51:** M1, gradual color transition at ~23. **51–64:** M2, dense compaction.	Negative
36	85	47	**0–47:** M1, 3 metal fragments, 4 nails, 1 colorless glass fragment, 1 amber glass fragment. **47–85:** M2.	Negative
37	95	48	**0–85:** M1. **85–95:** M2.	Negative
38	30	40	**0–30:** M1, landscaping fabric and imported, subrounded fill.	Negative
39	100	50	**0–97:** M1. **97–100:** M2.	Negative
40	81	48	**0–15:** M1, 40% organic materials, moderate. Gradual interface. **15–81:** M2, dry, moderate, 1% subrounded cobble, 5% angular to round pebbles, 15% subangular to round gravels, 60% silt, 20% sand. Hardpan at 72, very dense compaction, dry.	Negative
41	67	50	**0–30:** M1, decomposing wood and staining in east wall at interface, clear transition. **30–67:** M2, wet, groundwater leaking in, begins yellowish brown, about 59 transitions to gray and dense compaction.	Negative
42	47	47	**0–31:** M1, moderate, dry. **31–47:** M2 moderate to dense compaction, dry, less rocks.	Negative
43	100	45	**0–90:** M1. **90–100:** M2.	Negative
44	100	50	**0–90**: M1. **90–100:** M2.	Negative

SP	Depth (cm)	Dia (cm)	Matrix Description (Depths in cm)	Result
45	35	44	**0–35:** M1, 80% sandy silt, 10% gravels, 5% subrounded and sub-angular pebbles, 5% cobbles.	Negative
46a	122	55	**0–27:** M1, looser compaction. **27–100:** M2, gradual color transition from reddish yellow-brown to light-medium gray with oxidation at ~70. Dense compaction starting at ~70. **Auger 10 cm diameter:** **0–122:** M2, light-medium gray with oxidation, dense compaction, dry.	Negative
47	60	58	**0–12:** M1, dry, dense compaction, 80% sandy silt, 15% subrounded and subangular pebbles, 5% gravels, <1% rootlets. **12–60:** M2, dense compaction, 50% silty sand, 25% sub-angular and subrounded pebbles, 20% gravels, 5% cobbles. Gradual color transition from yellowish light brown to brownish gray at ~25. Very dense compaction starting at ~25.	Negative
48	23	62	**0–23:** M1, moderate compaction, then dense compaction, pink gum wad, brick fragment, white plastic fragment and colorless glass fragment from 0 to 10. Green glass fragment, amber glass fragment, nail, and plastic object from 10 to 20, red plastic fragment between 15 and 20.	Negative
49	100	56	**0–26:** M1. **26–100:** M2.	Negative
50	91	50	**0–12:** M1, clear interface, dry, moderate compaction, 90% yellowish brown sandy silt. **12–91:** M2, 12–60 was a yellow brown, moderate compaction, 80% sandy silt, 10% subrounded and subangular pebbles, 10% subrounded cobbles. 60–91, yellowish medium gray, dense compaction, 75% silty sand, 15% gravels, 10% pebbles.	Negative
51	86	52	**0–75:** M1, color transition at ~15, rootlets and medium sized roots throughout. **75–86**: M2, dense compaction.	Negative
52	45	50	**0–45:** M1, saturated.	Negative
53a	104	46	**0–19:** M1, clear transition. **19–90:** M2, begins yellowish brown and moderate to 76, abrupt change to gray hardpan. **Auger 10 cm diameter:** **90–104:** M2, gray hardpan.	Negative
54	100	47	**0–20:** M1, clear transition. **20–100:** M2, all moderate compaction. Began yellowish brown, at 70 abrupt color change to gray.	Negative
55	100	45	**0–20:** M1, clear transition. **20–100:** M2, all yellowish brown and moderate compaction.	Negative
56	80	45	**0–30:** M1, clear transition. **30–80:** M2, all dark brown and moderate compaction. Boulder taking up half of base.	Negative

SP	Depth (cm)	Dia (cm)	Matrix Description (Depths in cm)	Result
57	100	45	**0–25:** M1, gradual transition. **25–100:** M2, all yellowish brown and moderate compaction.	Negative
58	100	50	**0–30:** M1, gradual transition, one ferrous metal nail and colorless glass fragment. **30–100:** M2, all yellowish brown and moderate compaction.	Negative

Appendix 2: Photograph Log

Number	View	Description
24.06.27GAB001	E	SP 9 with scale, P200
24.06.27GAB002	E	SP 9 without scale
24.06.27GAB003	NNW	SP 9 overview
24.06.27GAB004	NNE	SP 10 with scale, P200
24.06.27GAB005	NNE	SP 10 without scale
24.06.27GAB006	NW	SP 10 overview with ERCI at SPs 3 and 11
24.06.27GAB007	NE	SP 12 with scale, P200
24.06.27GAB008	NE	SP 12 without scale
24.06.27GAB009	NW	SP 12 overview with ERCI at SP 13
24.06.27GAB010	SSE	SP 15 with scale, P200
24.06.27GAB011	SSE	SP 15 without scale
24.06.27GAB012	NW	SP 15 overview with ERCI at SP 8
24.06.27GAB013	NW	SP 27 with scale, P100
24.06.27GAB014	NW	SP 27 without scale
24.06.27GAB015	NW	SP 27 overview
24.06.27GAB016	NE	SP 29 with scale, P100
24.06.27GAB017	NE	SP 29 without scale
24.06.27GAB018	SW	SP 29 overview
24.06.27REP001	SE	SP 2 with scale
24.06.27REP002	SE	SP 2 without scale
24.06.27REP003	SE	SP 2 overview
24.06.27REP004	SE	SP 4 with scale
24.06.27REP005	SE	SP 4 without scale
24.06.27REP006	S	SP 4 overview
24.06.27REP007	SE	SP 6 with scale
24.06.27REP008	SE	SP 6 without scale
24.06.27REP009	S	SP 6 overview
24.06.27REP010	P	Water table in SP 8 before augering
24.06.27REP011	NW	SP 6 with scale, northwest side
24.06.27REP012	NW	SP 6 with scale, northwest side, close up of organic layer
24.06.27REP013	NW	SP 6 without scale, northwest side
24.06.27REP014	SE	SP 6 with scale, southeast side
24.06.27REP015	SE	SP 6 without scale, southeast side
24.06.27REP016	W	SP 6 overview with ditch
24.06.27ILP001	NE	SP 1 with scale
24.06.27ILP002	NE	SP 1 without scale
24.06.27ILP003	NE	SP 1 overview with ERCI
24.06.27ILP004	N	SP 1 overview with ERCI
24.06.27ILP005	S	SP 3 with scale

Number	View	Description
24.06.27ILP006	S	SP 3 without scale
24.06.27ILP007	N	SP 3 overview with ERCI
24.06.27ILP008	N	SP 5 with scale
24.06.27ILP009	N	SP 5 without scale
24.06.27ILP010	WNW	SP 5 overview
24.06.27ILP011	NNE	SP 7 with scale
24.06.27ILP012	NNE	SP 7 without scale
24.06.27ILP013	E	SP 7 overview with ERCI
24.06.27ILP014	W	SP 17 with scale
24.06.27ILP015	W	SP 17 without scale
24.06.27ILP016	W	SP 17 overview
24.06.27ILP017	E	SP 17 overview
24.06.27ILP018	P	Wood stakes found in shallow bank
24.06.27ILP019	P	Wood stakes found in shallow bank
24.06.27ILP020	E	Wood stakes found in shallow bank, overview
24.06.27ILP021	N	SP 18 with scale
24.06.27ILP022	N	SP 18 without scale
24.06.27ILP023	NE	SP 18 overview
24.06.27AAY001	N	P2200 overview
24.06.27AAY002	NE	P2200 overview
24.06.27AAY003	E	P2200 overview, east end of parcel
24.06.27AAY004	SW	P2200 overview, east end of parcel
24.06.27AAY005	S	Path leading into P600
24.06.27AAY006	N	Elderberry, P600
24.06.27AAY007	S	Standing water/muck, P600
24.06.27AAY008	E	Recently bushwacked path, P600
24.06.27AAY009	N	Holly, P600
24.06.27AAY010	N	P600, north of treed area
24.06.27AAY011	E	P600, foundation
24.06.27AAY012	N	P600, foundation
24.06.27AAY013	NE	P600, foundation and barn for reference
24.06.27AAY014	W	P600, foundation and barn for reference
24.06.27AAY015	S	P600, foundation and barn for reference
24.06.27AAY016	P	Bricks on foundation
24.06.27AAY017	SE	Wood on foundation
24.06.27AAY018	W	Cinderblocks on foundation
24.06.27AAY019	S	P100100 overview
24.06.27AAY020	SW	Parcel 100100 garage
24.06.27AAY021	W	[1914 house, P100100] front porch
24.06.27AAY022	S	[1914 house, P100100], west side

Number	View	Description
24.06.27AAY023	SW	[1914 house, P100100], east side covered in vegetation
24.06.27AAY024	S	[1914 house, P100100] front porch
24.06.27AAY025	S	[1914 house, P100100] front porch
24.06.27AAY026	SE	[1914 house, P100100] side door/porch
24.06.27AAY027	N	[1914 house, P100100] side porch roof
24.06.27AAY028	N	[1914 house, P100100] side porch
24.06.27AAY029	E	[1914 house, P100100] patio, side of house
24.06.27AAY030	NE	[1914 house, P100100] side of house, collapsed
24.06.27AAY031	N	[1914 house, P100100] side of house, collapsed
24.06.27AAY032	N	SP 11 with scale
24.06.27AAY033	N	SP 11 without scale
24.06.27AAY034	NW	SP 11 overview with ERCI in background
24.06.27AAY035	S	SP 13 with scale
24.06.27AAY036	S	SP 13 without scale
24.06.27AAY037	S	SP 13 overview
24.06.27AAY038	N	SP 14 with scale
24.06.27AAY039	N	SP 14 without scale
24.06.27AAY040	N	SP 14 overview with ERCI at SPs 15 and 8
24.06.27AAY041	W	Recent surface burn
24.06.27AAY042	N	Ditch
24.06.27AAY043	W	Looking down ditch
24.06.27AAY044	P	Ditch end
24.06.27AAY045	S	Ditch from the end
24.06.27AAY046	N	Ditch end
24.06.27AAY047	ENE	Utilities
24.06.27AAY048	SE	P100100 overview
24.06.27AAY049	E	Carport
24.06.27AAY050	N	Carport, chimney visible
24.06.27AAY051	N	P100100 overview, east of garage
24.06.27AAY052	N	SP 16 with scale
24.06.27AAY053	N	SP 16 without scale
24.06.27AAY054	N	SP 16 overview
24.06.27AAY055	E	SP 19 with scale
24.06.27AAY056	E	SP 19 without scale
24.06.27AAY057	S	SP 19 overview
24.06.28GAB001	N	SP 30 with scale
24.06.28GAB002	N	SP 31 without scale
24.06.28GAB003	N	SP 31 overview, facing path taken there
24.06.28GAB004	P	Blue and colorless plastic Dasani wrapper, found on surface near SP 32
24.06.28GAB005	E	SP 32 with scale

Number	View	Description
24.06.28GAB006	E	SP 32 without scale
24.06.28GAB007	NE	SP 32 overview with notched stump in background
24.06.28GAB008	NE	SP 51 with scale
24.06.28GAB009	NE	SP 51 without scale
24.06.28GAB010	NNE	SP 51 overview
24.06.28GAB011	SW	SP 35 with scale
24.06.28GAB012	SW	SP 35 without scale
24.06.28GAB013	NNW	SP 35 overview
24.06.28GAB014	NE	SP 38 with scale
24.06.28GAB015	NE	SP 38 without scale
24.06.28GAB016	NNW	SP 38 overview with ERCI at SP 39
24.06.28FLK001	E	ERCI pedestrian survey through dense ferns
24.06.28FLK002	E	ERCI pedestrian survey through dense ferns
24.06.28FLK003	W	Dense vegetation
24.06.28FLK004	S	Dense vegetation
24.06.28FLK005	S	Large stump with ERCI
24.06.28FLK006	S	Large stump with ERCI
24.06.28FLK007	S	Wetland area
24.06.28FLK008	P	Complete Gatorade glass bottle with tin foil
24.06.28FLK009	P	Complete Gatorade glass bottle with tin foil
24.06.28FLK010	P	Complete Gatorade glass bottle with tin foil
24.06.28FLK011	P	Complete Gatorade glass bottle with tin foil, base
24.06.28FLK012	W	Glass bottle location (near shovel)
24.06.28FLK013	S	SP 20 overview
24.06.28FLK014	N	SP 20 with scale
24.06.28FLK015	N	SP 20 without scale
24.06.28FLK016	W	SP 20 overview
24.06.28FLK017	W	Vegetation and stump
24.06.28FLK018	N	Old growth with notches
24.06.28FLK019	N	Old growth with notches
24.06.28FLK020	W	Old growth with notches
24.06.28FLK021	SW	Old growth with notches
24.06.28FLK022	NNE	ERCI at SP 32 by old growth
24.06.28FLK023	NE	Tree with tire surrounding base
24.06.28FLK024	W	SP 52 with scale
24.06.28FLK025	W	SP 52 without scale
24.06.28FLK026	P	Boreal bramble
24.06.28FLK027	N	SP 52 overview
24.06.28FLK028	E	SP 36 with scale
24.06.28FLK029	E	SP 36 without scale

Number	View	Description
24.06.28FLK030	S	SP 36 overview
24.06.28FLK031	P	SP 36 refuse
24.06.28FLK032	S	SP 37 with scale
24.06.28FLK033	S	SP 37 without scale
24.06.28FLK034	W	SP 37 overview
24.06.28FLK035	S	SP 39 with scale
24.06.28FLK036	S	SP 39 without scale
24.06.28FLK037	NE	SP 39 overview
24.06.28FLK038	S	SP 44 with scale
24.06.28FLK039	S	SP 44 without scale
24.06.28FLK040	E	SP 44 overview
24.06.28FLK041	E	SP 43 with scale
24.06.28FLK042	E	SP 43 without scale
24.06.28FLK043	NE	SP 43 overview
24.06.28IRC001	NW	Overview from SP 28
24.06.28IRC002	S	Overview from SP 28
24.06.28IRC003	E	Overview from SP 28, grass
24.06.28IRC004	NW	Rose bush
24.06.28IRC005	N	Rose bush
24.06.28IRC006	N	Rose bush, close up with flower
24.06.28IRC007	N	SP 28 with scale
24.06.28IRC008	N	SP 28 without scale
24.06.28IRC009	NW	SP 28 overview
24.06.28IRC010	N	Bush with seed pod to identify
24.06.28IRC011	NE	Bushes to identify
24.06.28IRC012	N	Berry bush to identify, possibly twinberry
24.06.28IRC013	SW	Large anthill
24.06.28IRC014	N	Project area overview
24.06.28IRC015	P	Small flowers and grasses
24.06.28IRC016	P	Deer tracks
24.06.28IRC017	NW	Scotch broom brushes
24.06.28IRC018	NW	Scotch broom brushes
24.06.28IRC019	W	Red elderberry
24.06.28IRC020	W	Red elderberry
24.06.28IRC021	N	Bushes- potentially blackberries
24.06.28IRC022	SE	Project area overview
24.06.28IRC023	S	Grass or rush to identify
24.06.28IRC024	S	Grass or rush to identify
24.06.28IRC025	SSE	Project area overview
24.06.28IRC026	SSE	Willow grove/stand

Number	View	Description
24.06.28IRC027	S	Willow close up
24.06.28IRC028	P	ERCI holding M3
24.06.28IRC029	NW	SP 22a with scale
24.06.28IRC030	NW	SP 22a without scale
24.06.28IRC031	SSE	SP 22a overview
24.06.28IRC032	NNE	SP 22a overview
24.06.28IRC033	E	Trees to identify
24.06.28IRC034	S	SP 26 with scale
24.06.28IRC035	E	SP 26 without scale
24.06.28IRC036	N	SP 26 overview
24.06.28IRC037	N	Deer tracks at SP 33
24.06.28IRC038	N	Saturated M1 mixed with M2 in screen
24.06.28IRC039	NNE	SP 33 with scale
24.06.28IRC040	NNE	SP 33 without scale
24.06.28IRC041	N	SP 33 overview
24.06.28IRC042	NE	SP 40 with scale
24.06.28IRC043	NE	SP 40 without scale
24.06.28IRC044	S	SP 40 overview
24.06.28IRC045	N	Overview of field vegetation
24.06.28IRC046	WNW	Grass to identify
24.06.28IRC047	ENE	SP 42 with scale
24.06.28IRC048	ENE	SP 42 without scale
24.06.28IRC049	E	SP 42 overview
24.06.28AAY001	N	P100100 driveway
24.06.28AAY002	NE	P100100 overview
24.06.28AAY003	SE	P100100 overview
24.06.28AAY004	S	P100100 overview
24.06.28AAY005	SW	P100100, 1914 house covered in vegetation
24.06.28AAY006	W	P100100 overview
24.06.28AAY007	E	P100100 overview
24.06.28AAY008	SE	P100100 overview
24.06.28AAY009	SW	P100100 overview, backyard
24.06.28AAY010	W	P100100 overview
24.06.28AAY011	NW	P100100 overview
24.06.28AAY012	N	P2300 driveway
24.06.28AAY013	S	P2300 yard
24.06.28AAY014	W	P2300 house
24.06.28AAY015	E	P2300, shed and trailers
24.06.28AAY016	N	P2300 backyard
24.06.28AAY017	S	P2300 backyard

Number	View	Description
24.06.28AAY018	SE	P2300 backyard and house
24.06.28AAY019	SSE	Recent surface fire
24.06.28AAY020	E	P2300 backyard
24.06.28AAY021	S	SP 30 with scale
24.06.28AAY022	S	SP 30 without scale
24.06.28AAY023	S	SP 30 overview
24.06.28AAY024	W	SP 21 with scale
24.06.28AAY025	W	SP 21 without scale
24.06.28AAY026	S	SP 21 with scale and foundation
24.06.28AAY027	S	SP 21 with scale and foundation
24.06.28AAY028	S	SP 21 overview, marked with shovel
24.06.28AAY029	P	Wire nails, 6.5cm long, 6mm diameter heads, SP 21 M1
24.06.28AAY030	P	SP 21 colorless glass fragments, M1
24.06.28AAY031	S	SP 23 with scale
24.06.28AAY032	W	SP 23 with scale
24.06.28AAY033	S	SP 23 without scale
24.06.28AAY034	E	SP 23 overview
24.06.28AAY035	S	P600 overview, ERCI at SP 22
24.06.28AAY036	W	NW corner, parcel 600
24.06.28AAY037	SE	P600 house, two sheds, and barn
24.06.28AAY038	E	P600 yard
24.06.28AAY039	W	SP 24 with scale
24.06.28AAY040	W	SP 24 without scale
24.06.28AAY041	W	SP 24 overview
24.06.28AAY042	S	East boundary, P600
24.06.28AAY043	W	North boundary, P600
24.06.28AAY044	SW	P600 overview, yard and barn
24.06.28AAY045	W	P600 overview, yard and barn
24.06.28AAY046	W	P2300 field overview
24.06.28AAY047	NW	P2300 field overview
24.06.28AAY048	N	P2300 overview, north parcel boundary
24.06.28AAY049	SE	P2300 overview, looking upslope from northwest parcel corner
24.06.28AAY050	S	P2300 overview, west parcel boundary
24.06.28AAY051	SSE	Deteriorating wood shed in field
24.06.28AAY052	W	Deteriorating wood shed in field
24.06.28AAY053	N	SP 35 with scale
24.06.28AAY054	N	SP 34 without scale
24.06.28AAY055	N	SP 34 overview
24.06.28AAY056	W	SP 25a with scale
24.06.28AAY057	NW	SP 25a overview

Number	View	Description
24.06.28AAY058	W	SP 25a without scale
24.06.28AAY059	E	SP 41 with scale
24.06.28AAY060	E	SP 41 without scale
24.06.28AAY061	N	SP 41 overview, W 152nd St
24.06.28AAY062	W	P200 overview
24.06.28AAY063	SW	P200 overview
24.06.28AAY064	W	P200 overview
24.06.28AAY065	SW	P200 overview
24.06.28AAY066	W	P200 overview
24.07.17AAY001	N	End of black plastic pipe in ditch
24.07.17AAY002	W	End of black pipe in ditch location
24.07.17AAY003	W	End of black pipe in ditch location
24.07.17AAY004	W	Front of house P100200
24.07.17AAY005	S	P100200 barn
24.07.17AAY006	N	P100200 modern pit
24.07.17AAY007	N	P100200 firepit
24.07.17AAY008	N	P100200 overview
24.07.17AAY009	E	P100200 disturbance in field
24.07.17AAY010	E	Looking upslope in P100200
24.07.17AAY011	NE	Looking upslope in P100200
24.07.17AAY012	W	P100200 field overview
24.07.17AAY013	NW	P100200 field overview
24.07.17AAY014	N	P100200 field overview
24.07.17AAY015	NW	Deteriorating structure in field
24.07.17AAY016	SW	Deteriorating structure in field
24.07.17AAY017	W	P100200 driveway
24.07.17AAY018	W	Septic
24.07.17AAY019	SE	P100200, ERCI at SP48
24.07.17AAY020	SW	Deer in field
24.07.17AAY021	E	SP53a with scale
24.07.17AAY022	E	SP53a without scale
24.07.17AAY023	S	SP53a overview towards 172nd St NE
24.07.17AAY024	SW	Decommissioned street sweeping spool (for animals)
24.07.17AAY025	E	SP 54 with scale
24.07.17AAY026	E	SP 54 without scale
24.07.17AAY027	E	SP 54 overview
24.07.17AAY028	E	SP 55 with scale
24.07.17AAY029	E	SP 55 without scale
24.07.17AAY030	NW	SP 55 without scale
24.07.17AAY031	N	SP 55 overview

Number	View	Description
24.07.17AAY032	NW	SP 56 with scale, trowel marking boulder
24.07.17AAY033	NW	SP 56 without scale, trowel marking boulder
24.07.17AAY034	W	SP 56 overview
24.07.17AAY035	NE	SP 57 with scale
24.07.17AAY036	NE	SP 57 without scale
24.07.17AAY037	N	SP 57 overview
24.07.17GAB001	E	SP 45 with scale
24.07.17GAB002	E	SP 45 without scale
24.07.17GAB003	SE	SP 45 overview
24.07.17GAB004	W	SP 46a before auger with scale
24.07.17GAB005	W	SP 46a with scale
24.07.17GAB006	W	SP 46a without scale
24.07.17GAB007	P	SP 46a without scale auger hole
24.07.17GAB008	SE	SP 46 overview with barn
24.07.17GAB009	NW	SP 47 with scale
24.07.17GAB010	NW	SP 47 without scale
24.07.17GAB011	NW	SP 47 overview with barn
24.07.17GAB012	NW	SP 50 with scale
24.07.17GAB013	NW	SP 50 without scale
24.07.17GAB014	SE	SP 50 overview
24.07.17GAB015	NE	SP 58 with scale
24.07.17GAB016	NE	SP 58 without scale
24.07.17GAB017	NE	SP 58 overview facing uphill towards 172nd St NE
24.07.17GAB018	SE	SP 58 overview facing uphill towards 172nd St NE, decomposing organics
24.07.17GAB019	P	SP 58 overview facing uphill towards 172nd St NE, decomposing organics, refuse M1, corroded nail/screw
24.07.17GAB020	W	SP 58 overview facing uphill towards 172nd St NE, decomposing organics
24.07.17REP001	NW	SP 48 with scale
24.07.17REP002	NW	SP 48 without scale
24.07.17REP003	W	SP 48 overview with house in background
24.07.17REP004	P	Pink gum wad with scale from SP 48
24.07.17REP005	P	Pink gum wad with scale from SP 48 other side
24.07.17REP006	P	Brick fragment with scale from SP 48
24.07.17REP007	P	Brick fragment with scale from SP 48
24.07.17REP008	P	Nail with scale from SP 48
24.07.17REP009	P	Nail with scale from SP 48 other side
24.07.17REP010	P	White plastic fragment with scale from SP 48
24.07.17REP011	P	White plastic fragment with scale from SP 48 other side
24.07.17REP012	P	Colorless glass fragment with scale from SP 48
24.07.17REP013	P	Colorless glass fragment with scale from SP 48 other side
24.07.17REP014	P	Plastic object with scale from SP 48

Number	View	Description
24.07.17REP015	P	Plastic object with scale from SP 48 other side
24.07.17REP016	P	Amber glass fragment with scale from SP 48
24.07.17REP017	P	Amber glass fragment with scale from SP 48 other side
24.07.17REP018	P	Green glass fragment with scale from SP 48
24.07.17REP019	P	Green glass fragment with scale from SP 48 other side
24.07.17REP020	P	Red plastic fragment with scale from SP 48
24.07.17REP021	P	Red plastic fragment with scale from SP 48 other side
24.07.17REP022	S	SP 49 with scale
24.07.17REP023	S	SP 49 without scale
24.07.17REP024	N	SP 49 overview

Appendix 3: Unanticipated Discovery Protocol

In the event that any ground-disturbing activities or other project activities related to this development or any future development uncover protected cultural material (see below), the following actions should be taken:

1. If the cultural material is a historic or precontact object (glass bottle, tin can, stone, bone, horn or antler tool); a historic or precontact feature (hearth, building foundation, privy), then the on-site supervisor should avoid the object, secure the location and relocate work activities to a different part of the Project area. The Project manager should then call a professional archaeologist to evaluate the discovery.
2. If ground disturbing activities encounter human skeletal remains during the course of construction, then all activity will cease that may cause further disturbance to those remains. The area of the find will be secured and protected from further disturbance. The finding of human skeletal remains will be reported to the county medical examiner/coroner and local law enforcement in the most expeditious manner possible. The remains will not be touched, moved, or further disturbed. The county medical examiner/coroner will assume jurisdiction over the human skeletal remains and make a determination of whether those remains are forensic or non-forensic. If the county medical examiner/coroner determines the remains are non-forensic, then they will report that finding to the Department of Archaeology and Historic Preservation (DAHP) who will then take jurisdiction over the remains. The DAHP will notify any appropriate cemeteries and all affected tribes of the find. The State Physical Anthropologist will make a determination of whether the remains are Indian or Non-Indian and report that finding to any appropriate cemeteries and the affected tribes. The DAHP will then handle all consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

Cultural material that may be protected by law could include but is not limited to:

- Logging, mining, railroad, or agriculture equipment older than 50 years (Figure 55)
- Historic foundations (Figure 56)
- Historic bottles, ceramics, and soldered dot cans (Figure 57, Figure 58)
- Buried cobbles that may indicate a hearth feature (Figure 59)
- Non-natural sediment or stone deposits that may be related to activity areas of people
- Stone tools or stone flakes, projectile points (arrowheads), ground stone adzes or grinding stones (abraders) (Figure 60–Figure 63)
- Bone, shell, horn, or antler tools that may include scrapers, cutting tools, wood working wedges (Figure 64, Figure 65)
- Perennially damp areas may have preservation conditions that allow for remnants of wood and other plant fibers; in these locations there may be remains including fragments of basketry, weaving, wood tools, or carved pieces (Figure 66)
- Culturally modified trees (Figure 67)
- Human remains

Figure 55: Example of railroad ties for UDP.

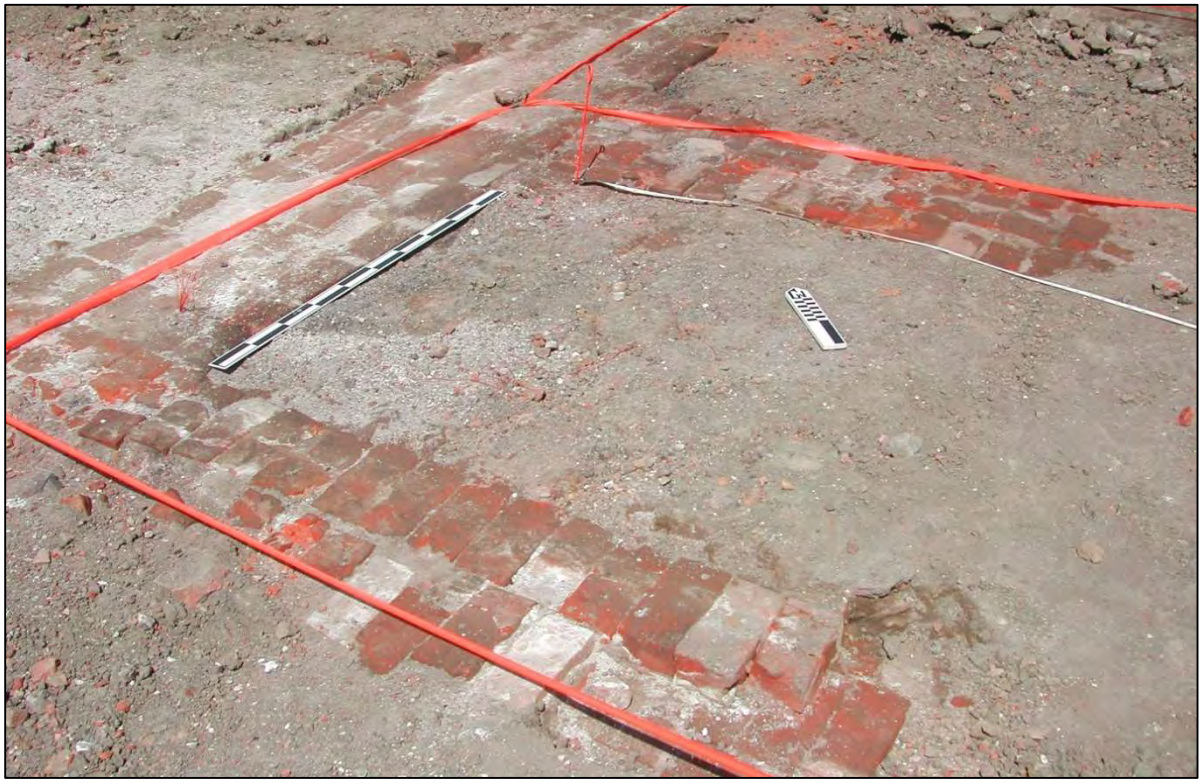

Figure 56: Example of historic foundation for UDP.

Figure 57: Example of historic glass artifacts for UDP.

Figure 58: Example of historic solder dot can for UDP

Figure 59: Example of protected rock-lined hearth feature for UDP.

Figure 60: Example of projectile point for UDP.

Figure 61: Example of protected adze blade for UDP.

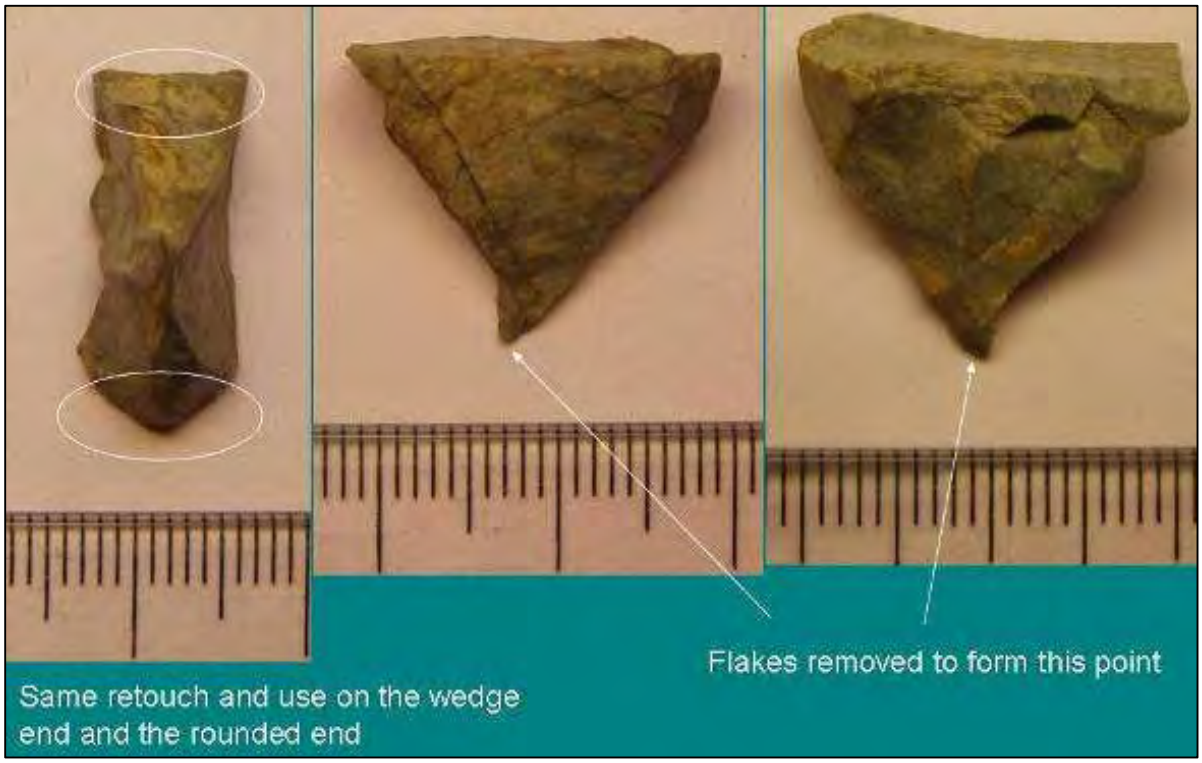

Figure 62: Example of stone tool for UDP.

Figure 63: Example of stone tool for UDP.

Figure 64: Example of bone awl for UDP.

Figure 65: Example of worked bone and spines for UDP.

Figure 66: Example of cedar bark basketry for UDP.

Figure 67: Example of planked tree for UDP.

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