CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: 2020-06-04283 (Please contact the lead agency for the project number. If associated to SEPA, please contact SEPA@dahp.wa.gov to obtain the project number before creating a new project.)

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Title of Report: Cultural Resource Assessment for the Manor House Development Project, Lacey, Thurston County, Washington

Date of Report: April 19, 2021

County(ies): Pierce Section: Township: 18N Range: 01W

Quad: East Olympia, WA; Lacey, WA; Nisqually, WA; Tenalquot Prairie, WA

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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- Submission of PDFs is required.
- Please be sure that any PDF submitted to DAHP has its cover sheet, figures, graphics, appendices, attachments, correspondence, etc., compiled into one single PDF file.
- Please check that the PDF displays correctly when opened.

Manor House Development Project
Lacey, Thurston County, Washington
Cultural Resource Assessment

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April 19, 2021

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ATCRC Report #TH-03-21
DAHP Report # 2020-06-04283

TABLE OF CONTENTS

FIGURES

PHOTOS

TABLES

Cultural Resources Assessment for the Manor House Development Project Lacey, Thurston County, Washington

EXECUTIVE SUMMARY

Aqua Terra Cultural Resource Consultants (ATCRC) was contracted by SCA to provide a cultural resource survey for the Manor House Development Project (the Project) in Township 18N, Range 01W, Sections 36 and 38. SCA is proposing to subdivide and develop ten Thurston County tax parcels into 503 single lot developments consistent with Thurston County zoning and development standards. The development is proposed at 5548 Kagy St. Lacey, WA on tax parcels: 9710001000, 9710005001, 9710005003, 9710005004, 11836330000, 11836330100, 11836330200, 11836330401, 11836330500, and 11836330700. The proposed development and associated infrastructure will impact approximately 79 acres of the total 82 acres within the parcels. Excavations and site grading are expected to disturb up to 6 feet below the modern ground surface for all structures, storm ponds, and underground utilities.

The cultural resource survey for the project was conducted by mechanical backhoe to depths between 4 and 7 feet below surface to assess whether cultural resources were present within the project area. The project area has a long history of land ownership with an agricultural background and has undergone several years of ground-disturbance activities. Background research indicates that there have been three cultural resources assessments previously conducted within one mile of the project area, and none have encompassed the current project area. There are no archaeological sites, historic properties, or cemeteries within a mile radius. The project area lies within a moderate risk area of encountering cultural resources as defined by the Department of Archaeology and Historic Preservation (DAHP) predictive model on the Washington Information System for Architectural and Archeological Records Database (WISAARD). A search of the Thurston County assessor's records for the property indicates no structures within the proposed direct impact area of the project older than 50 years of age (1971). The project will be completed with private funds with permitting by the City of Lacey and Thurston County. The project will require the completion of a State Environmental Protection Act (SEPA) permit, which requires the completion of a cultural resource survey.

ATCRC's cultural resource assessment consisted of background review, field investigation, and production of this report. Field investigation included visual reconnaissance of the APE in the form of a pedestrian survey of the project area and subsurface testing with a mechanical backhoe. Subsurface testing was conducted using three Kubota KX040-4 model miniature excavators simultaneously with an 18-inch bucket. Overall, 131 survey trenches were completed with sediments from each trench screened for cultural resources using ¼-inch mesh screens. One brown porcelain lag screw insulator was identified during the survey in trench ND2. The insulator is

commonly observed in private properties and cannot be dated. The excavator broke through a 5-inch NE/SW trending brick pipe in trench JM37 at the southwest corner of the API. The pipe may or may not be associated with the Kagy Homestead previously located somewhere in the vicinity of the southwest corner of the API. No other cultural resources were identified during the survey. ATCRC recommends that the project adopt an inadvertent discovery plan (IDP) in the case that additional cultural resources arise during construction (Attachment B), especially those associated with the Kagy Homestead, and that the project proceed as planned, as no significant cultural resource concerns were identified through the survey efforts.

PROJECT LOCATION AND DESCRIPTION

The project is located within the City of Lacey, Washington, within Sections 36 and 38 of Township 18 North, Range 01 West. The proposed direct impact area will be within tax parcels 9710001000, 9710005001, 9710005003, 9710005004, 11836330000, 11836330100, 11836330200, 11836330401, 11836330500, and 11836330700. The project proposes to subdivide ten parcels into 503 single lot developments consistent with Thurston County zoning and development standards. This includes demolishing the current structure standing at 5548 Kagy Street SE and constructing residential units, storm ponds, and underground utilities (Figures 1 & 2).

The Area of Potential Impact (API) is defined as the footprint of construction, including vertical and horizontal impacts, indirect impacts (visual, noise, etc.), staging, and spaces to be left open and undisturbed as part of the project design.

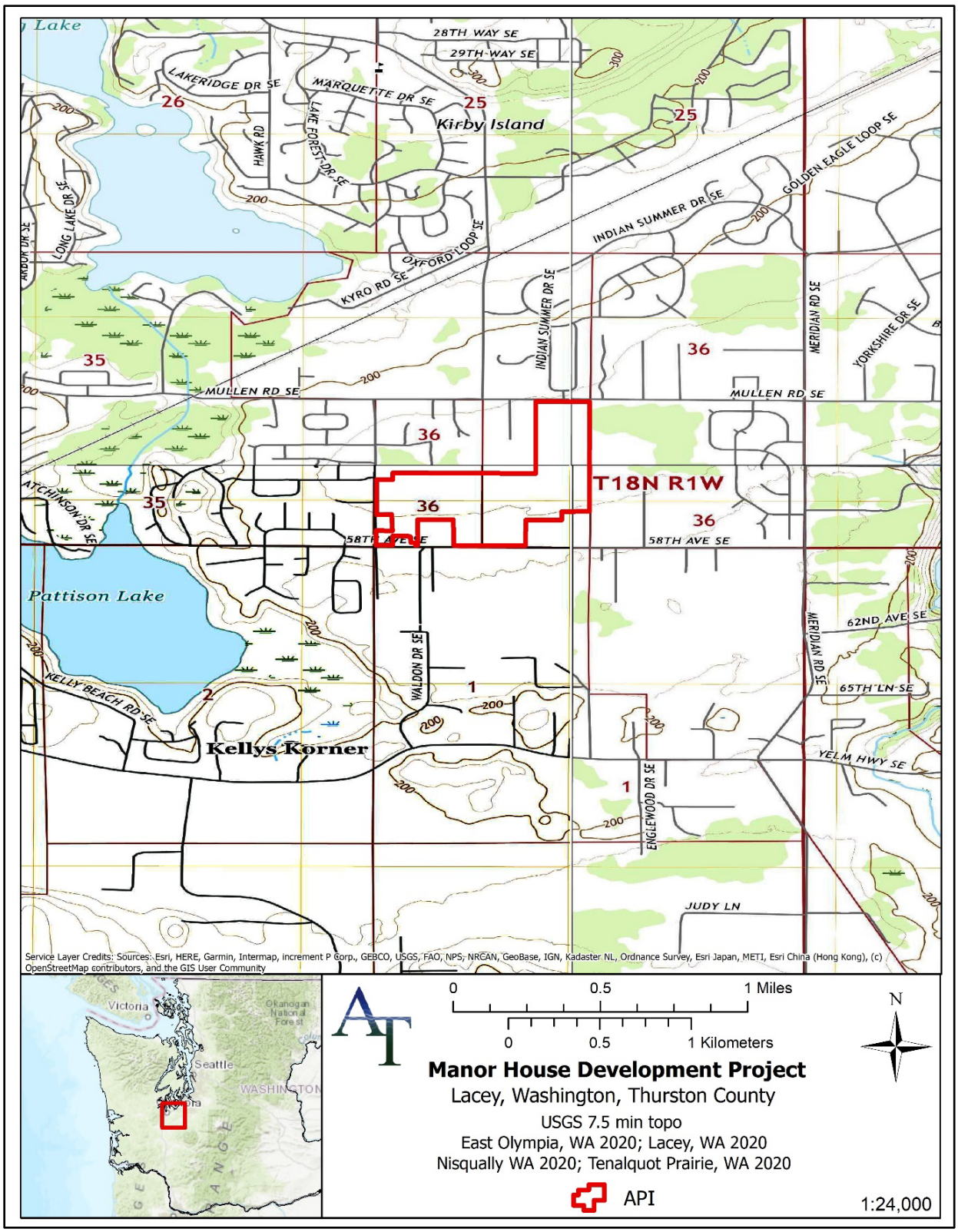

Figure 1. USGS topographic maps of API. East Olympia, WA 2020; Lacey, WA 2020; Nisqually, WA 2020; Tenalquot Prairie, WA 2020.

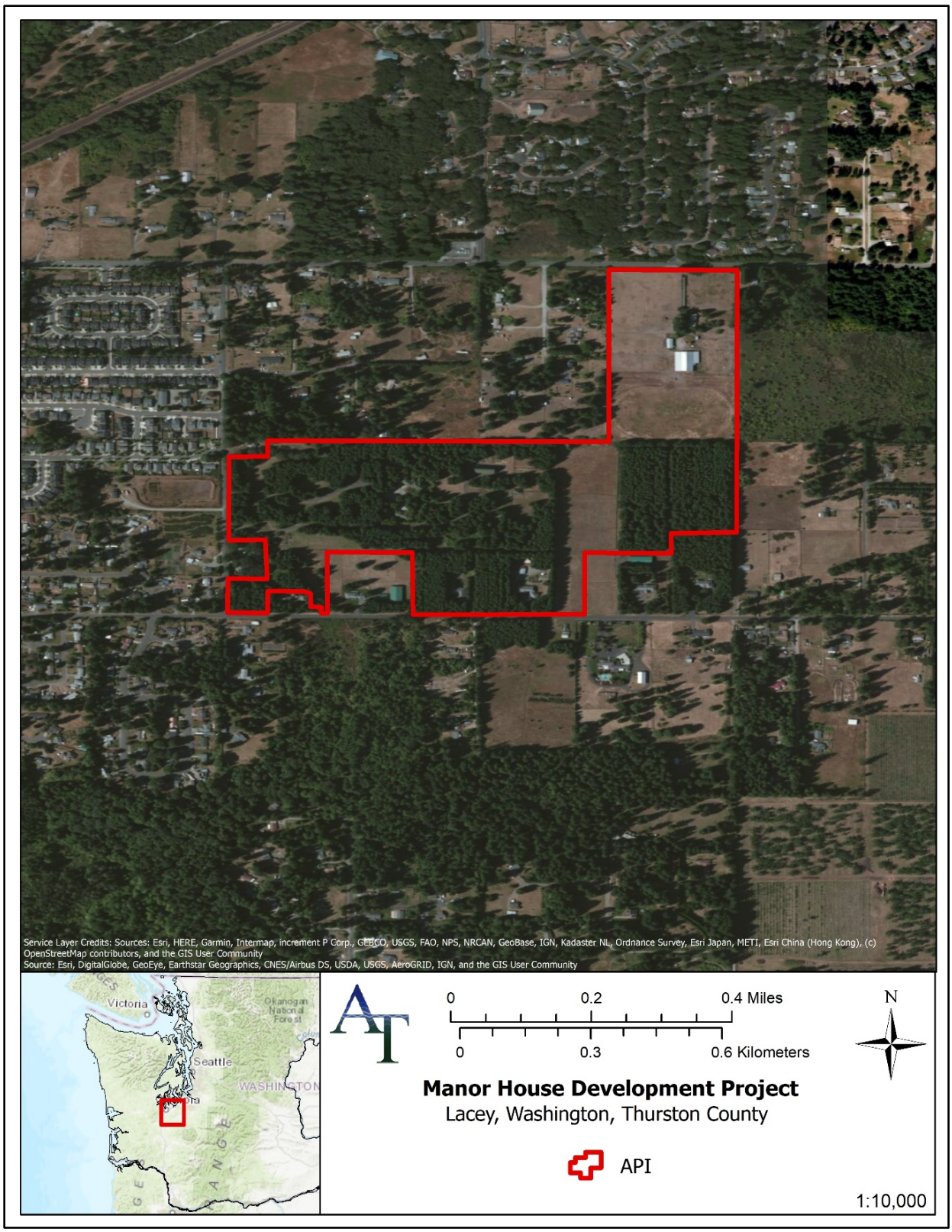

Figure 2. Satellite image of API.

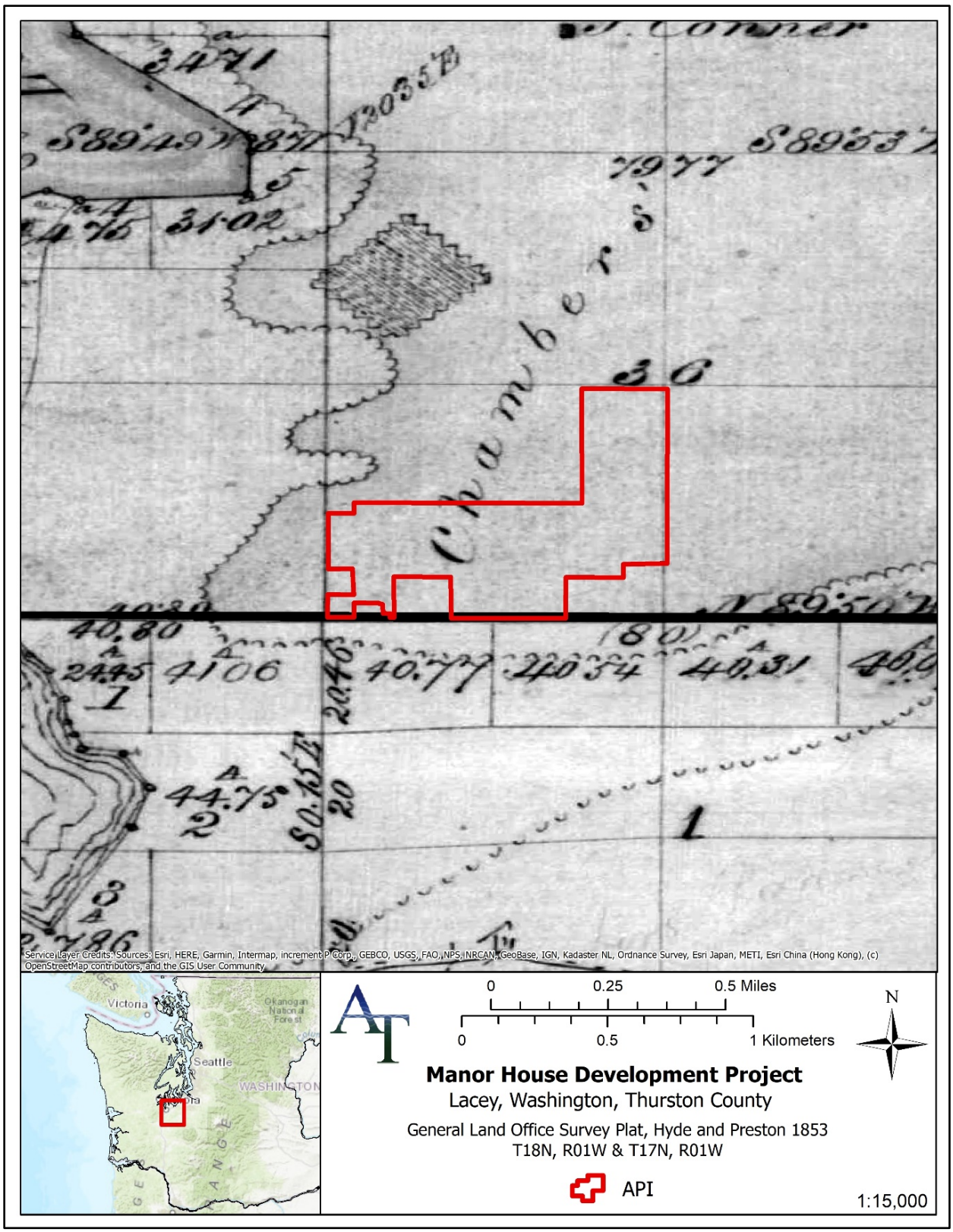

Figure 3. API in relation to Hyde and Preston 1853 Historic Plat survey maps (BLM n.d.).

REGULATORY CONTEXT

This cultural resource assessment was conducted, in part, to satisfy the regulatory requirements for SEPA. SEPA requires that impacts to cultural resources be considered during the public environmental review process. Under SEPA, the DAHP is the sole agency with technical expertise regarding cultural resources. It provides formal opinions to other state agencies and local governments regarding a property's significance and the potential impact of proposed projects upon such properties.

Washington's State Environmental Policy Act (SEPA) requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies be planned so that environmental considerations such as impacts on historic and cultural resources are considered when state agency-enabled projects affect properties of historical, archaeological, scientific, or cultural importance (Washington Administrative Code [WAC] 197-11-960). These regulations closely resemble regulations of the National Environmental Policy Act (NEPA). Similar to NEPA, SEPA considers cultural resources to be properties listed in or eligible for the Washington Heritage Register (WHR), which is the state equivalent of the National Register of Historic Places (NRHP) and sets forth similar criteria for evaluating cultural resources. The WHR, which is administered by DAHP, identifies and records significant historic and prehistoric resources at the state level.

BACKGROUND REVIEW

Determining the probability for cultural resources to be located within the API was based largely upon reviewing and analyzing past environmental and cultural contexts and previous cultural resource studies and sites. Consulted sources included project files; local geologic data; archaeological, historic, and ethnographic records; and selected published local historic records. Local geologic data was used to understand the depositional environment more fully. Archaeological, historic, and ethnographic records are made available on the WISAARD database.

ENVIRONMENTAL CONTEXT

The API is located in the southern Puget Sound Western Hemlock Zone of Washington State (Franklin and Dryness 1973). This environmental regime is generally neither temperature- nor precipitation-limited and is highly conducive to forest development, producing the highest plant biomass accumulations recorded in the temperate zone. The area experiences cool, dry summers and wet, mild winters, with more than 75% of its 80 to 120 cm of annual precipitation occurring between October 1 and March 31, and primarily as rain. The Olympic and Cascade mountain ranges to the west and east shield the area from both maritime and continental air masses, reducing precipitation compared to areas on the west coast of the Olympic Peninsula and mitigating seasonal temperature variations compared to areas east of the Cascades (Franklin and Dryness 1973).

Forests in Washington's Western Hemlock Zone, unlike most other temperate forest regions, are heavily dominated by groups of unusually large and long-lived coniferous species (particularly the Douglas-fir, Western Hemlock, and Western Red Cedar) with an understory of sword fern, red huckleberry, vine maple, Oregon grape, and salal (Franklin and Dryness 1973). Studies suggest that moisture stress from dry summer conditions, combined with mild winter conditions, favor year-long coniferous growth patterns and limit the summer growth of the hardwoods that dominate many other temperate forest regions, maintaining a silvicultural balance, likely leftover from harsher Pleistocene climatic conditions. Young, disturbed sites and riparian areas are dominated by bigleaf maple, black cottonwood, red alder, and willow with a variable understory including salmonberry (Franklin and Dryness 1973).

Much of the Puget Sound area has been extensively cleared and logged since its initial settlement, often with extensive fires during the dry season. It is now covered by subclimax stands of Douglas-fir more than Western Hemlock (Franklin and Dryness 1973). Human activities have introduced many invasive species to the region, including knotweed, Himalayan blackberry, common groundsel, knapweeds, European starlings, and house sparrows.

Geologic Context

The API is located on the glacial plain east of Olympia in the Puget Lowland, near Long Lake and Pattison Lake. The Puget Lowland is a physiographic province between the Olympic and Cascade mountains, extending from the San Juan Islands in the north past the southern extents of the Puget Sound. Many of the region's shallow geological features are the product of repeated glacial and interglacial cycles over the last million years, which created a distinctive topography and left a thick mantle of widespread but discontinuous glacial, lacustrine, and marine sediments, frequently bounded by unconformities marking the removal of more recent deposits by subsequent glacial advances (Booth et al. 2015; Troost 2016). In much of the Puget Lowland, glacial deposits contain exotic high-grade metamorphic clasts transported south by the glaciers. At the same time, non-glacial sediments will be more limited to local sandstones and igneous fragments from the nearby mountains. Still, a reworking of older material and occasional instances of depositional isolation can complicate petrological identification (Booth et al. 2015). The area is tectonically active, experiencing primarily SSW-NNE compression from the subduction of the Juan de Fuca plate at the Cascadia Subduction Zone (CSZ) to the west. Multiple active fault zones extend into the Lowland region with evidence of at least five surface-rupturing earthquakes in the last 3500 years, and the CSZ produces periodic high magnitude earthquakes with an average recurrence interval of 400-600 years (Graehl et al. 2015; Troost 2016).

During the Pleistocene, the Puget Lowland experienced multiple ice sheet glaciations and warmer interglacial periods; the most recent glaciation was the Vashon Stade of the Fraser glaciation, when the Cordilleran Ice Sheet (CIS) advanced to 25 km south of Olympia and covered the province in up to 1.8 km of ice, thinning to the south. The Vashon advance of the CIS scoured most of the Puget Lowland, removing older deposits and creating the region's current north-south ridgelines and troughs. However, the previous terrain resulted from more than a million years of similar

glacial cycles and probably qualitatively similar. Based on lithological changes in isolated pre- and post-Fraser deposits, Vashon scours probably also created the current split channels of the Puget Sound (Booth et al. 2015; Easterbrook 1992; Easterbrook 2003; Troost 2016). Scour seems to have persisted until near the glacial maximum around 16,900 years before present (BP). The deposition of glacial till indicates a change in subglacial conditions was promoting deposition rather than scour (Easterbrook 1992). Vashon recessional deposits indicate a gradual and piecemeal retreat of the CIS shortly after the glacial maximum, followed by rapid disintegration and floating of the remaining ice (Easterbrook 1992). The remainder of the Pleistocene is characterized by a series of both terrestrial and marine, glacial and non-glacial deposits detailing a complex interplay between global sea-level changes, isostatic rebound, climatic shifts, and tectonic activity until climate and relative sea-level reached approximate stability at the start of the Holocene (Easterbrook 1969, 1992; Thorson 1980). Holocene modifications to topography are generally more localized, including fluvial incision, marine deposition, mass wasting events, features produced by seismic activity in the region's active fault zones, and anthropogenic modifications (Booth 1991; Troost 2016).

The API sits near the southeastern tips of Long Lake and Pattison Lake, two Late Vashon kettle formations that formed when free ice from the disintegrating CIS grounded within outwash channels (Walsh et al. 2003, Logan et al. 2003). The API and large areas to the east and west are covered in the sands, and finer sediments that accumulated on and around the grounded ice or within the hollows left when it melted. The surrounding geology suggests that this was a deeper drainage channel originating from stagnant ice somewhere to the south of the API and splitting between Pattison Lake and the nearby Lake St. Clair to empty through Henderson Inlet, Budd Inlet, and the mouth of the Nisqually River (Walsh et al. 2003, Logan et al. 2003). According to the USDA National Resource Conservation Service (n.d.), soils within the API are almost entirely Nisqually loamy fine sand. Small amounts of Spana gravelly loam and Spanaway gravelly sandy loam along the southern and eastern boundaries.

Table 1. Soils located within the API (USDA NRCS 2021).

Name	Slope %	Typical Profile	Landform	Parent Material
Nisqually Loam Fine Sand	0 to 3	H1 - 0 to 5 inches: loamy fine sand H2 - 5 to 31 inches: loamy fine sand H3 - 31 to 60 inches: loamy sand	Terraces	Sandy Glacial Outwash
Spana Gravelly Loam	0 to 3	H1 - 0 to 22 inches: gravelly loam H2 - 22 to 26 inches: gravelly loam H3 - 26 to 38 inches: gravelly loam H4 - 38 to 60 inches: extremely gravelly sandy loam	Outwash Plains, Drainageways	Glacial Outwash

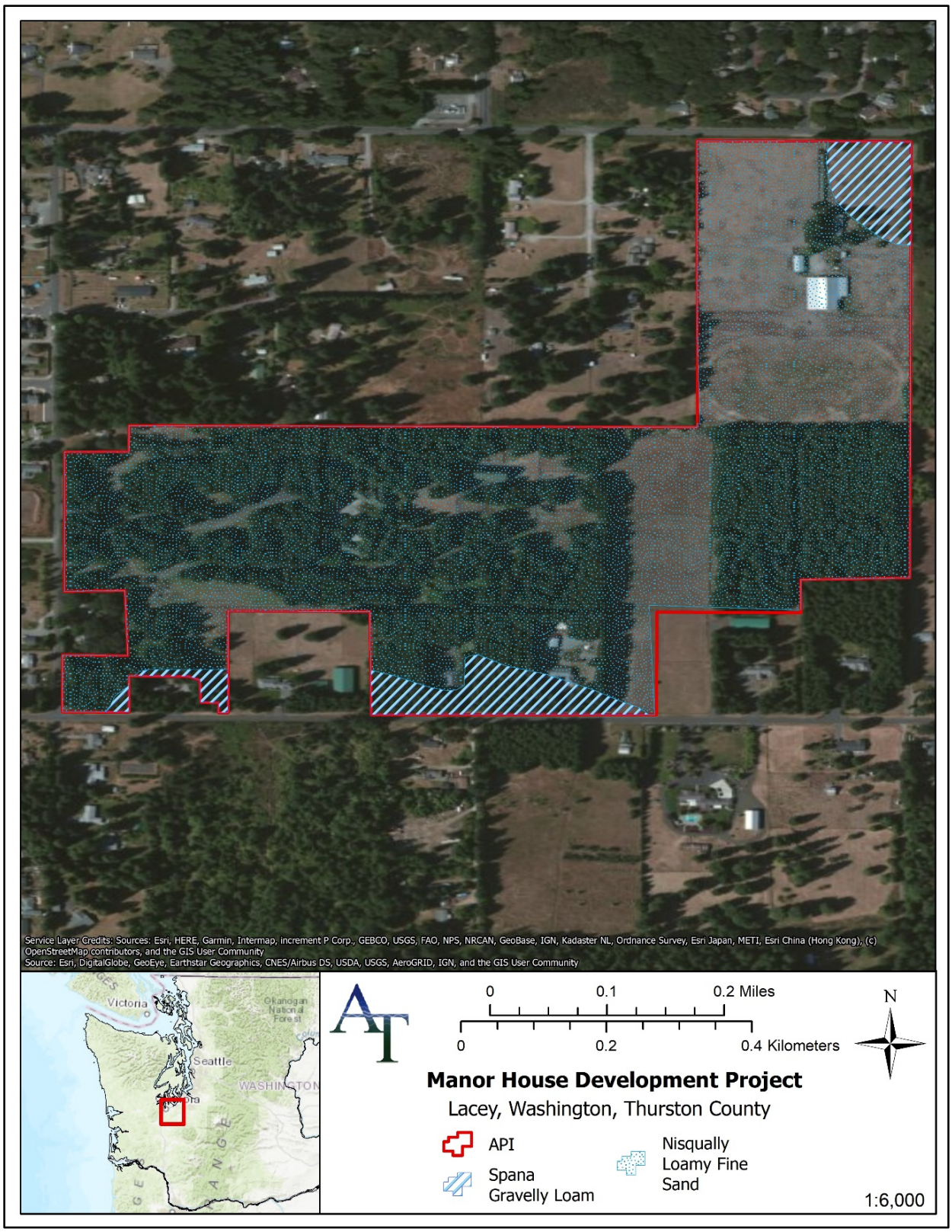

Figure 4. Map of soils within API (USDA NRCS 2021).

CULTURAL CONTEXTS

Precontact Context

Earliest Cultures (14,000+ to 10,000 BP)

Human occupation in the Northwest Coast is believed to have begun following the retreat of glacial ice across the landscape in the Late Pleistocene. To date, the oldest indication of human occupation in Washington State appears at the Manis Mastodon Site in Sequim, which dates to approximately 13,800 years before present (BP) (Gustafson and Manis 1984). Here, a bone point was identified embedded in the bone of a mastodon, which provided evidence of hunting and butchering by early humans (Gustafson et al 1979).

Several archaeological sites provide information about the earliest period of occupation in Washington. The Ayer Pond bison remains from Orcas Island date to approximately 14,000 BP and includes evidence of human butchering (Kenady et al. 2011). The Richey-Roberts site in Wenatchee, Washington, contained a large cache of Clovis points and bone rods dated to ca 13,000 to 12,000 BP (Kirk and Daugherty 2007). Within the Puget Sound lowlands, the Bear Creek site (45KI839) in Redmond, Washington, is the only example of a stratified site dating to this earliest period of human occupation. The site contains a large flaked stone assemblage and includes both stemmed and concave base projectile points (Kopperl et al. 2015). Other early archeological sites identified in Washington State include the Clovis / Richey-Roberts Site, located in Wenatchee.

Traditionally, the earliest occupation recognized in North America and the Pacific Northwest has been the Clovis culture (12,000-11,000 BP) with its distinctive fluted projectile points (Matson and Coupland 2009). Clovis projectile points are widely distributed in the Puget Sound region, all surface finds (Croes et al. 2008). There is also growing evidence of an earlier pre-Clovis occupation in the Northwest (e.g., Paisley caves in southeastern Oregon at 14,400 BP [Gilbert et al. 2008; Beck and Jones 2010, 2012]). At the Ritchie-Roberts site near Wenatchee Washington, numerous large Clovis points were encountered in situ. Silica encrusted on the points was dated to 13,000 years old (Kirk and Daugherty 2007:15). Overall, these archaeological sites have led to the indication that early culture in Washington State was highly mobile and relied heavily upon large game. During this period, humans were continually adapting to the region, which includes a dynamic landscape of glacial retreat as well as climatic and environmental change (Matson and Coupland 2009).

Between about 14,000 and 10,000 BP, it has been hypothesized that there was a general continuity in settlement, subsistence, and technologies. Archaeological evidence from this period indicates that human social groups were probably small, highly mobile, and reliant on seasonally available resources across the landscape (Ames and Maschner 1999; Matson and Coupland 2009).

The Archaic (10,000 to 5,000 BP)

The Archaic period in the Puget Sound region is one with a few distinct types of archaeological sites. These distinct site types have led archaeologists to hypothesize that occupants of the region during this period continued to follow a highly mobile settlement pattern focused on terrestrial game supplemented by plant processing and use of aquatic environments to a lesser extent (Ames and Maschner 1999). Between 12,000 to 7,000 years ago, socio-economies appeared to have changed to a foraging strategy that included smaller inland game, aquatic animals, and a variety of plants (Suttles and Lane 1990). Sites from this period are typically encountered on high marine and river terraces (current and abandoned), subalpine meadows, and saltwater shores (Kirk and Daugherty 2007:84). The artifact assemblage from this period is generally represented by large leaf-shaped and stemmed points, scrapers, flake tools, and blade cores (Carlson 1990). Hearths, structures, and/or plant and animal remains have not been found associated with these sites from this period.

After 5000 BP, populations appear to become larger and more complex as groups utilized a wider range of resources, including salmon and shellfish, land mammals, and plant resources such as berries, roots, and bulbs. Ground stone tools, microblades, and cores appear at this time as well as bone and antler tools, ground shells, and harpoons. Shell middens are also prevalent in this period and continued into the ethnohistoric period (Ames and Maschner 1999:89).

Archaeological sites from this period are often characterized by the presence of larger laurel leaf-shaped blades/projectile points and are part of a tradition that goes by many regional names. In the Puget Sound region, this period is often called the Cascade Phase (Matson and Coupland 2009), and localized material culture complex names like Olcott (Kidd 1964) fall into this phase. In addition to laurel-leaf-shaped bifaces, other flaked stone tools (e.g., cobble tools), blade cores, and flaking debris are commonly found in association at Cascade sites (Carlson 1990; Miss and Campbell 1991; Matson 1985; Morgan 1999). Most commonly, sites dating to this period, especially Olcott sites, are generally found in upland settings and on higher river terraces. The sites are likely resource procurement and processing camps focused on the utilization of upland game and wild plant foods, but subsistence adaptations for this period are poorly understood. Although faunal remains for sites dating to this period are rare, mammalian and fish remains have been reported (Chatters et al. 2011). What is known about subsistence and settlement patterns from this period comes from sites like Glenrose Cannery (DgRr6) site in British Columbia, the Dalles Roadcut site (35WS8) on the Columbia River, and the Granite Falls site (45SN303) in western Washington, among others (Chatters et al. 2011; Kopperl et al. 2016). In the Puget Sound, Olcott-style points have been reported in private collections throughout the region as well as inland areas of islands in the Puget Sound (Deppen et al. 2014; Taylor et al. 2009 and 2011). Lowland sites dating to this period include the Marymoor site (45KI9), and the DuPont Southwest site (45PI172), dating ca 6,000 BP and containing the earliest shell lenses in the Puget lowlands along with other tools and evidence of shellfish processing (Kopperl et al. 2016). These sites have components into the following phase that are discussed in the following section.

Developmental Precontact Period (5,000 to 3,000 BP)

After about 5,000 BP, archaeological evidence suggests that distinctive regional cultures developed with settlement and subsistence patterns that differ from those of the earlier adaptations in western Washington (Kopperl et al. 2016). Throughout this period, subsistence among Puget Sound groups becomes increasingly focused on marine resources, particularly shellfish and salmon, along with the utilization of a broad spectrum of other intertidal and upland subsistence resources. Shell middens become more common during this period, and these sites provide some of the best insights into shifting subsistence regimes. During this period, settlement patterns appear to become more intensive in localized areas, indicating reduced residential mobility (sec. Binford 1980) through time. New technologies are also present, including ground stone tools and bone tools (Ames and Maschner 1999; Larson and Lewarch 1995; Matson and Coupland 2009).

Western red cedar becomes a dominant tree in the region during this period, and wood-working adzes appear as early as 5,000 years ago, with evidence of canoe technology and construction of large plank houses by at least 2,000-3,000 years ago (Hebda and Matthews 1984; Donald 2003; Matson and Coupland 2009). With the rise in sea level during this period, earlier sites in coastal settings are likely to be submerged or have eroded (Larson and Lewarch 1995; Kopperl et al. 2016).

Several previously excavated archaeological sites dating to this period provide information relevant to the general history of the Puget Sound lowlands. The Marymoor site (45KI9), located near the juncture of the Sammamish River and Bear Creek in King County, has cultural deposits dating from approximately 6,000 to 1,500 BP. The artifact assemblage contains flaked stone tools, stone tool manufacture, and evidence of food processing dating to both this and the preceding period (Greengo 1966; Lockwood 2016). The DuPont Southwest site (45PI72) is on a bluff overlooking the Nisqually Reach in the south Puget Sound (Wessen 1985). The site was tested and contains flaked stone artifacts along with lenses of shell and other food remains, with the oldest calibrated radiocarbon date ranging from 6,180 to 5,930 BP and the most recent at 3,000 BP. The West Point sites, 45KI428 and 45KI29, in West Seattle are shell middens with cultural deposits dating to this period. The cultural deposits at the site contain at least five distinct camping and food processing loci dating from 4,200 to 200 BP. Material remains included faunal bone, ground stone, flaked stone tools, and subsistence remains, including sea and terrestrial mammal remains, birds, fish, and shellfish (Larson and Lewarch 1995). The Bray site (45PI1276) located on a terrace above the White River near Sumner, Washington (Jolivette and Huber 2016) dates to approximately 3,800 to 2,500 BP and includes several earth ovens, an array of dart points, microblades, ground stone, and steatite beads. The earth ovens at the Bray site appear to be similar to those used to process camas bulbs in sites in eastern Washington; however, no evidence to support such use was found.

The Early Northwest Coast Cultural Pattern (3,000 to 1,000 BP)

A continued decrease in residential mobility marks the development of the Northwest Coast cultural pattern in the Puget lowlands (ca 3,500 to 1,000 BP). It is accompanied by evidence of increased social complexity (e.g., Larson and Lewarch 1995). The majority of shell midden sites in the Puget Sound date to this and, in part, to the preceding period (Taylor et al. 2011). Residential stability and logistic settlement patterns are in evidence during this period and seen by increases in lowland and upland limited activity procurement sites associated with spring and summer fishing and root-gathering areas and specialized base camps and permanent or semi-permanent winter villages (Kopperl et al. 2016). The latter is related to distinct longer-term community groupings, especially in large multifamily plank houses. Social stratification is seen in the region's archaeological record through differentiation in burial practices and wealth item distribution (Ames and Maschner 1999; Lewarch and Larson 1995). Also distinctive from the previous period is the marked degree of subsistence intensification, as shown by the presence of large-scale fish harvesting technologies (nets and weirs), large-scale storage of salmon, and winter storage of shellfish. Village sites are widely distributed in all coastal areas of the Puget Sound (Nelson 1990; Ames and Maschner 1999; Matson and Coupland 2009).

Fish weirs and other constructed features are often found in association with large village sites. Typical artifact assemblages consist of a range of hunting, fishing, and food processing tools; bone and shell implements; and dense midden deposits. By the end of the period, wide similarities to ethnographically described contact-period cultures in the Puget Sound lowlands are evident (Ames and Maschner 1999; Matson and Coupland 2009). The Marymoor site (45KI9) has cultural deposits dated at 2,500 BP. The long-term occupations at West Point (45KI428 and 45KI29) in King County and the Bray site in Pierce County (45PI1276) contain cultural deposits extending into this period and providing settlement subsistence information. Dated coastal sites from this and the preceding period appear to be relatively rare, perhaps due in part to destruction from development or burial beneath historical period fill deposits.

Late Northwest Coast Culture (1,000 BP to ca 250 BP)

The Late Northwest Coast period (1,000 to 250 BP), when European and American explorers arrived in the region, is characterized by the continued enhancement of material culture and social complexity from that noted in the previous period (Nelson 1990; Ames and Maschner 1999; Matson and Coupland 2009). These include widespread occupation of permanent and semi-permanent coastal villages, continued intensive procurement and storage of salmon and shellfish resources, and hereditary inequality throughout the coastal cultures of the Pacific Northwest, including the Puget Sound region. Village sites have been identified in the Puget Sound lowlands, typically located adjacent to, or near, river or marine transportation routes (Larson and Lewarch 1995; Ames and Maschner 1999). Common artifact assemblages consist of a range of hunting, fishing, and food processing tools, bone and shell implements, and midden deposits. This period is dominated by settlements along the coastlines and along streams and rivers, with far greater technology specialization than the preceding period.

Trade goods become relatively abundant, indicating extensive trade networks up and down the coast as well as with inland plateau neighbors (Wessen 1985). As in the preceding period, salmon was among the primary food sources during this period. Fish weirs and preserved netting dating to this period have been found at Wapato Creek in Tacoma (45PI47) and along the Green River (Ballard 1957; Munsell nd). This final precontact period of Northwest Coast Culture and its lifeways is characterized by dramatic changes to its cultures, lifeways, and communal organization with the influx of Euro-American material goods, diseases, and technologies throughout the Puget Sound and the Pacific Northwest (Boyd 1998; Suttles and Lane 1990). Ethnographically known villages, camps, and limited activity sites that were the loci of habitation, food processing, acquisition of riverine and upland plant and animal foods, along with other biotic and abiotic resources, have been documented throughout the Puget Sound region by Waterman (1922) and others. The ethnographic Northwest Coast cultures and traditional use areas around the APE are summarized in the following sections.

Ethnohistoric Context

The project area is located in the traditional territory of the Nisqually Indian Tribe and the Squaxin Island Tribe (Ruby et al. 2010; Spier 1936; Suttles and Lane 1990). The people of the Nisqually Indian Tribe were traditionally called Squalli or Squalli-absh, meaning "people of the grass country" (Carpenter et al. 2008:7). The traditional territory of the Nisqually is documented as extending along both sides of the Nisqually River from its delta at the southern end of the Puget Sound upstream for nearly 30 miles (Ruby and Brown 1986:150; Suttles and Lane 1990:486).

Coastal Salish groups were often located along major waterways and at heads of bays or inlets, where abundant coastal and estuarine environments supported a relatively rich, diverse, and reliable subsistence base (Kopperl 2005). The Nisqually relied heavily on salmon as a resource. Coastal Salish groups typically maintained strong social ties to neighboring groups in the pre-contact period. Ethnographic and archaeological information indicates that local bands established permanent villages near the convergence of protective marine shoreline and freshwater drainage outlets, while temporary camps were established during the warmer months along with seasonal round food resources. The cedar longhouses were gable-roofed and sided with vertical planks, unlike the shed-type roofs and vertical plank walls used by other Coastal Salish groups such as the Squaxin Island Tribe (Ragsdale et al. 2012:11-12).

The Nisqually were semi-sedentary people who followed an annual cycle with permanent winter villages consisting of cedar plank longhouses, which were occupied by several related families. These permanent winter villages were commonly situated on the banks of river courses and were occupied year-round. Major village sites have been identified at the Nisqually River delta, Nisqually Lake, and confluences of Muck Creek, Clear Creek, and Meshal Creek, and at the towns of Roy, Rainier, and Tenino (Ragsdale et al. 2012:12; Smith 1940:9). Winter subsistence consisted of freshwater and marine fish, shellfish, game, and preserved food collected during the other seasons. In the spring months, the Nisqually Tribe moved to temporary shelters made of reed mats and spent their time searching for fish, game, roots, berries, and bulbs. The most critical fish

resource was salmon, which were caught at the mouths and along the banks of fish-bearing rivers as the salmon migrated from Puget Sound to native spawning streams. Salmon were smoked or dried for the winter and provided the bulk of food consumed in that season and were often used as an item of trade with other groups (Suttles and Lane 1990).

During the ethnographic period, the Nisqually occupied at least 40 villages along the Nisqually River. The Squaxin inhabited the southern end of the Puget Sound, from Hood Canal to Case Inlet. The 1854 Medicine Creek Treaty secured certain rights for the Nisqually and Squaxin while ceding traditional territories to the United States (Ruby et al. 2010). Nisqually tribal members were assigned to the Nisqually Reservation near the project APE. Squaxin tribal members were assigned to the Squaxin Island Reservation, west of the APE, and near Kamilche, Washington.

Historic Context

Non-native settlement of the Puget Sound was prompted following the establishment of Hudson Bay Company (HBC) fur trading posts. The HBC capitalized on the high demand for beaver pelts and enlisted the services of local Native American trappers. Two HBC forts and one associated village were stationed on the Nisqually delta. Fort Nisqually was a pastoral and agricultural branch of the Puget Sound Agricultural Company (a subsidiary of the HBC) and shipped supplies to England and other fort establishments. The additional regional non-native settlement was encouraged by the Treaty of Washington in 1846, the Donation Land Claim Act of 1850, and the creation of the Territory of Washington in 1853.

The influx of Euromericans to Puget Sound drastically affected Native Americans and their traditions. In 1854, following negotiations between the Nisqually and the United States government during the Medicine Creek Treaty, three reservations were established. Chief Leschi and Quiemuth refused to sign the treaty after learning that the Nisqually reserve was to be established west of the delta and not on the river where people could fish (Carpenter et al. 2008). This initiated what has come to be known as the Treaty Wars of 1855 or the Indian Wars of 1855 and 1856 (History Link 2003).

During the establishment of Camp Lewis in 1916, a large portion of the reservation was condemned by Pierce County and then given to the US Army for the development of military installations (later to become Fort Lewis). Many displaced Nisqually were forced to relocate to other reservations (Carpenter et al. 2008).

The API itself sits on what came to be known as “Chambers Prairie,” named after Thomas McCutcheon Chambers, an Irish-born immigrant and settler, and his family (Gives 2020). Chambers settled the area in 1847, and through the Donation Land Claim Act of 1850, many others followed suit (Gives 2020). Henry George Parsons and his wife, Mary Jane Parsons, settled on the Chambers Prairie in 1853, on the western half of the API (Figure 5; BLM n.d.; City of Lacey 2014; Thurston County n.d.).

In 1866, a patent was issued for their son, William S. Parsons, and his wife Mary Parsons, a Nisqually woman, on the eastern half of the API (Figure 5; BLM n.d.) in Section 36 of Township 18N, Range 01W (Census Records, 1880 Thurston County Census, Thurston County Territorial Auditor, Washington State Archives, Digital Archives; Carpenter et al. 2008; Oregon Donation Land Claim Act, Thurston County, BLM CDI No. 1636527, 3/6/1866, General Land Office Records). Lela Parsons, daughter of William and Mary Jane Parsons, married Delmontero (Dell) M. Kagy in 1893 and had three children raised in the Parsons house, which later came to be known as the Kagy homestead (City of Lacey 2014; Thurston County n.d.). The last documentation of children born on the Kagy homestead is for Donald and Geraldine Kagy, born around 1916 (Thurston County n.d.). A 1950 photograph depicts Reeva (Neese) Kagy standing in front of the Chambers Prairie School, implying she taught at the school (Thurston County n.d.).

Figure 5. GLO map of Anson Henry's 1865 Private Land Claim Survey Plat in relation to API (BLM n.d.).

PREVIOUSLY RECORDED CULTURAL RESOURCE STUDIES AND SITES

Three cultural resource surveys have previously been completed within one mile of the API; none have been within the limits of direct impact (Table 2). The cultural resource surveys in the area were primarily conducted for infrastructure improvement projects. All eight surveys were negative for cultural resources. There are no recorded archaeological sites or registered historic properties within a one-mile radius of the project API. One cemetery is located within one mile of the API (Table 3). The API lies in an area that has been moderately impacted by residential development and agriculture. According to the DAHP's WISAARD Predictive Model, there is a moderate risk of encountering cultural resources within the API.

Table 2. Cultural Resource Studies conducted within 1-mile of the APE.

Author (Date)	Title	Findings	Distance from APE	NADB
Landreau, Christopher (2005)	Cultural Review and Inventory at a Proposed Sprint Telecommunication Facility, 9013 Mullen Road SE, Lacey, SE70XC440	No adverse effects	0.04 miles	1346504
Diedrich, Melanie (2015)	Thurston County Mullen Road Cultural/Historical Survey Project, Lacey	No adverse effects	0.9 miles	1687825
Valentino, Alicia (2009)	Letter to Jeanne Kinney RE: Historical and Cultural Resources Surveys for Thurston County Roads Project: Meridian/Mullen Road Intersection	No adverse effects	0.35 miles	1353436

Table 3. Cemeteries Recorded within 1-mile of the APE.

Smithsonian Number:	Name	Location	Built	Proximity to APE
45TN00361	Collins Family Cemetery	Olympia	unknown	0.96 miles

CULTURAL RESOURCES EXPECTATIONS

Based on ATCRC's background review of environmental and cultural contexts, previously recorded cultural resource studies and sites, and review of the WISAARD state-wide site probability model, the project area is considered to be located in an area of moderate risk of encountering precontact or historic archaeological sites. The risk of encountering near-surface cultural resources in the API is restricted by substantial land alterations related to residential and agricultural alterations throughout the 19th and 20th centuries.

Potential archaeological sites dating to the historic period result from ethnohistoric Native American and historic Euro-American settlement activities that include homesteading, farming, and ranching. Additionally, resource exploitation activities common to market-driven economies of the mid-to-late 19th century included everyday commercial activities that revolved around widespread timber harvesting and delivery to sawmills for processing, farming, and dairying.

Historic topographic maps of the API only date back to 1969 and indicate that the entire southern portion of the API was logged and cleared, likely for agricultural purposes (NETROnline 2021). This agricultural use was clearly defined in aerial photographs throughout the 1980s. Undated photographs of the Kagy homestead depict the residential complex and agricultural area within the API (Thurston County n.d.). The Thurston County Auditor Fieldbooks indicate that most of the structures associated with the homestead have been demolished, with four structures potentially remaining on two parcels located outside of the API. While no information about the exact location of the structures pertaining to the Kagy Homestead has been identified through research, the four structures outside of the API, reported by the Thurston County Assessor's website to have been constructed between the years 1914 and 1925, are located around the southwest corner of the API.

FIELD INVESTIGATION

On March 18, 2021 Sarah Amell (Principal Investigator/Owner of ATCRC) met with Steve Chamberlain (property owner/developer) to tour the parcels and discuss the project development plans and survey approach. On April 1, 2021, Jessica Morris (Project Archaeologist) and Lindsey Holdener (Cultural Resource Specialist) met at the project area to conduct a pedestrian survey of the project area and lay down pin flags at each proposed survey trench location prior to the survey. Between Monday, April 5, 2021, and Wednesday, April 7, 2021, Ms. Morris, along with Nick de Vry (Cultural Resource Specialist) and Colin Higashi (Archaeological Technician), performed the cultural resource survey with the assistance of the project engineer, Steve Chamberlain, and associates, Brad and Buck. Mr. Chamberlain and his associates each operated a miniature mechanical backhoe with an 18-inch bucket. The ATCRC crew surveyed the excavation of each trench using a ¼-inch screen mesh to screen soils from the spoil piles. Each trench was photographed and backfilled upon termination.

RESULTS

Subsurface Testing

Overall, 131 survey trenches were excavated and surveyed throughout the API (Figure 6; Photo 1; Appendix C). One brown porcelain lag screw insulator was identified at 3 feet below the surface during the excavation of trench ND2 (Photo 2). The insulator measures 2 14/16 inches by 1 12/16-inch diameter with a ¼-inch diameter screw protruding approximately 1.5 inches from the base. The insulator has a cable top and is marked with [3600 P] on one side and [PAT PEND] on the other side. Because this type of insulator is still in use today and commonly identified on private properties, there is currently no U-numbering for this insulator style and is therefore not datable (NIA 2021). A 5-inch NE/ SW-trending brick pipe was identified in the southwest corner of the API 24 inches below the ground surface in trench JM37. The pipe, measuring 9/16 inches thick, was not identified with the utility locates within the rest of the project area and does not appear to be in use. This pipe may or may not be associated with the Kagy Homestead previously located near the southwest corner of the project area.

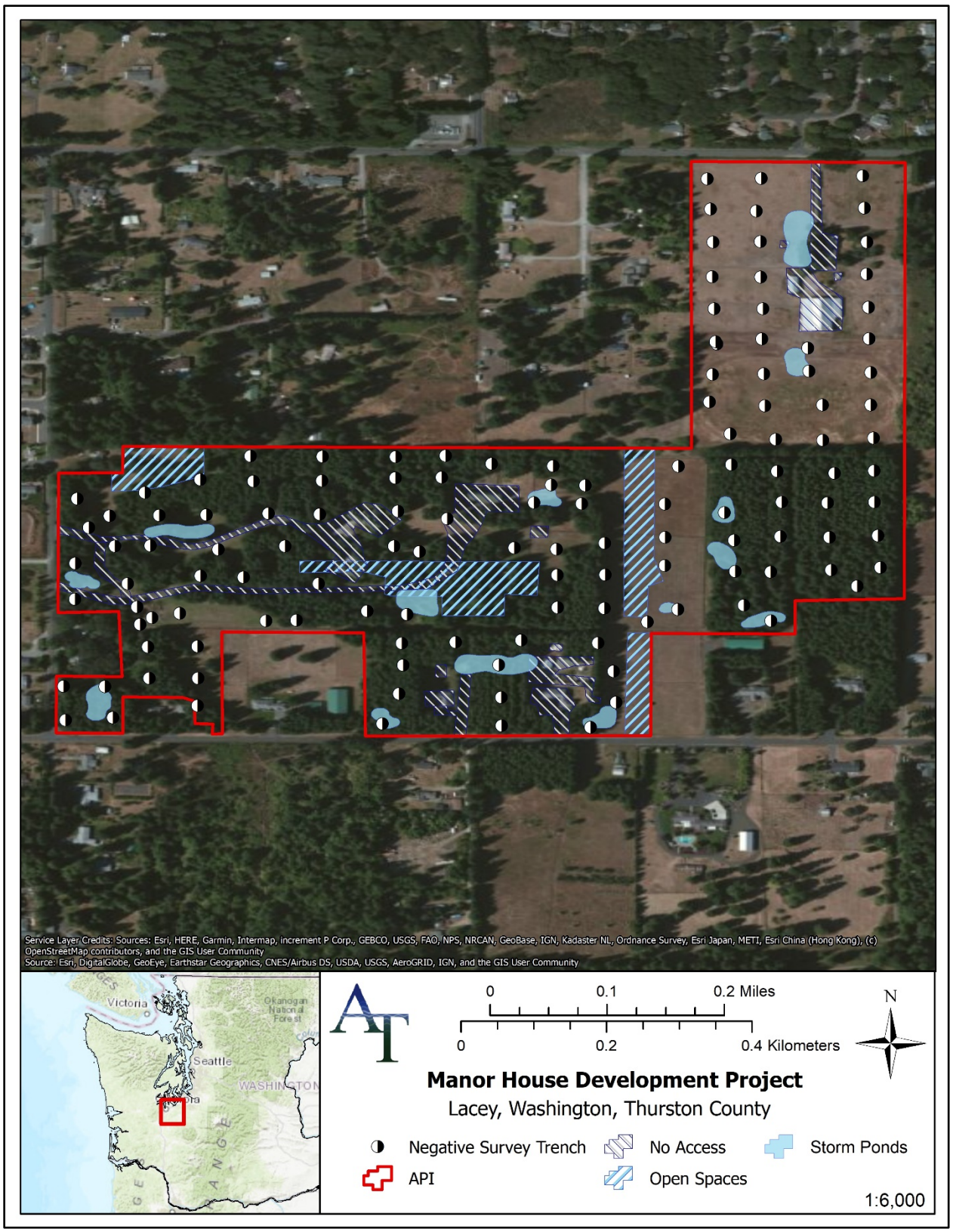

Figure 6. Overview of survey trench locations within API (numbered trenches in Appendix B).

Photo 1. Overview of trench JM 20 in northern portion of project area. View is south.

Photo 2. Overview of trench JM2 on western portion of project area. View is north.

Photo 3. Overview of trench ND2 on western portion of project area. View is north.

Photo 4. Detail of brown porcelain lag screw insulator identified in trench ND2. View is down.

Photo 5. Overview of trench JM37 in SW corner of API. View is SW.

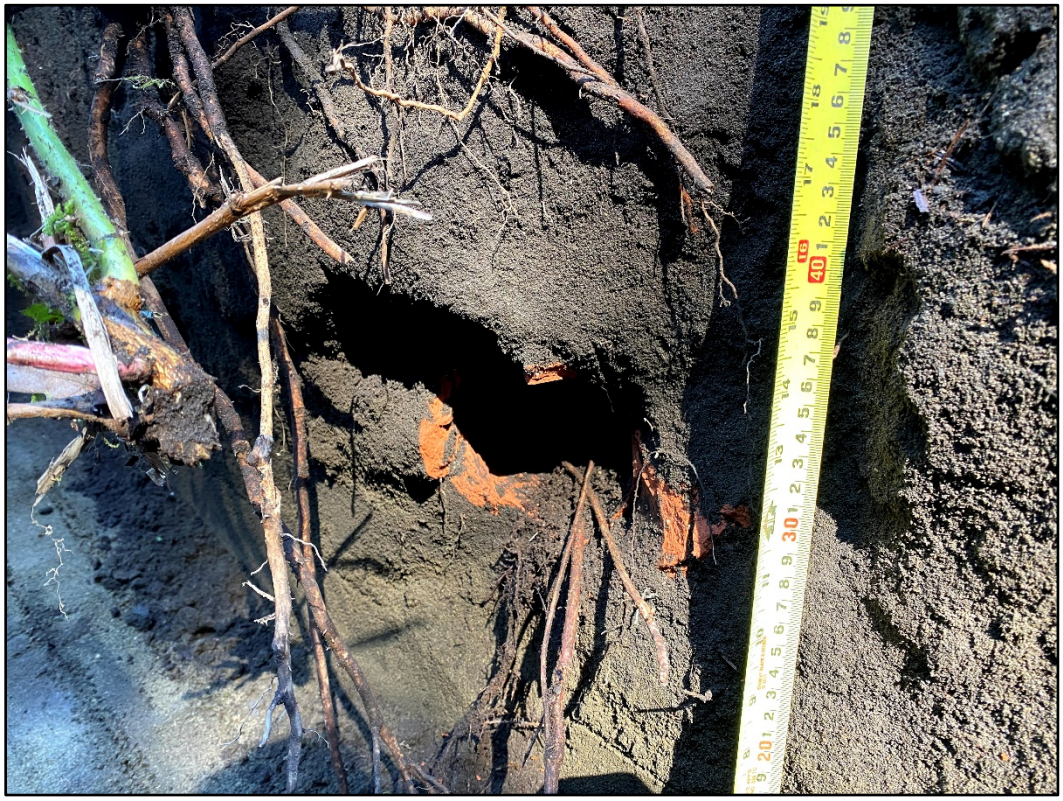

Photo 6. Detail of 5-inch pipe in fill sediments in JM37. View is NE.

CONCLUSIONS AND RECOMMENDATIONS

ATCRC conducted a cultural resource survey of the direct impact area for the project, including the subsurface survey of 131 survey trenches and a pedestrian survey of the project area. No significant cultural resources were encountered within the survey trenches.

A review of the 1854 GLO maps for the API and miscellaneous historic photographs indicate that the project area has a long history of homestead and agricultural use dating back to the mid-1800s (BLM n.d.; Thurston County n.d.). The sediments in the project area have been disturbed frequently as part of its agricultural use, and portions of the API are currently used for cattle grazing. The project's vertical impacts include ground disturbance to depths of 4 to 6 feet below surface, and no cultural resources were identified. Therefore, ATCRC recommends that the project proceed as planned. ATCRC also recommends that the project adopts an inadvertent discovery plan (IDP) for cultural resources as part of the construction plan documents (Appendix B) in the case that additional cultural resources are observed during construction, particularly in the southwest portion of the API.

No cultural resources study can wholly eliminate uncertainty regarding the potential for prehistoric sites, historic properties, or TCPs associated with a project. The information presented in this report is based on professional opinions derived from our analysis and interpretation of available documents, records, literature, and information identified in this report and on our reconnaissance-level field investigation and observations as described herein. Conclusions and recommendations presented apply to project conditions existing at the time of our study and those reasonably foreseeable. The data, findings, and interpretations in this report should not be construed as a warranty of subsurface conditions described in this report. They cannot necessarily apply to project changes that ATCRC is not aware of and has not had the opportunity to evaluate.

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APPENDIX A: SURVEY TRENCH LOGS

Trench Number	Max Depth (inches)	Description	Description of Cultural Material
Nd1	12	Black/brown loose sandy silts with 10-15% rounded gravel (5-10cm) and roots.	
	24	Yellow/brown fine sandy silt loose with 10% rounded gravels (5-10cm)	
	48	Dark grey/brown loose fine sandy silt with 5-10% rounded gravel (5-10cm)	
	60	Yellow brown loose find silty sand.	
ND2	72	Grey brown medium fine sand.	
	24	Black/brown loose non-plastic fine silty sand with 20% 10-12cm rounded gravels.	
	60	Yellow/brown loose fine silty sand with 10# rounded gravels (3-5cm)	Rusted barbell at top with landscape fabric beneath. At 120cmbs n=1 ceramic insulator. 7cm*4cm with 4cm long screw, and 1.5cm*3cm hole. Marked with [3600P] and a triangular mark with a Greek gamma character at its center.
ND3	72	Grey/light brown oose fine sand with 5% rounded gravels (3-5cm)	
	12	Black/brown loose non-plastic fine silty sand with 20% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND4	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
ND5	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
ND6	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	

	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
ND7	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
ND8	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND9	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND10	22	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	66	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND11	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND12	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND13	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	

	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	60	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND14	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND15	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND16	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND17	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND18	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND19	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	50	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	

	72	Grey/light brown oose fine sand with 5% rounded gravels (3-5cm)	
ND20	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND21	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND22	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND23	48	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND24	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND25	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND26	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	

	66	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND27	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	24	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND28	5	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND29	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND30	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND31	5	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND32	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	

ND33	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND34	24	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND35	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND36	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND37	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	60	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND38	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND39	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	24	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	

	48	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
	72	Yellow brown loose fine-medium sand with 10% subrounded gravel (3-5cm, 7-10cm)	
ND40	2	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	24	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow brown loose fine-medium sand with 15% subrounded gravel (3-5cm, 7-10cm)	
ND41	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	24	Brown/dark brown loose but dense sandy silt with 10% subrounded-gravels (3-10cm)	
	72	Yellow brown loose fine-medium sand with 15% subrounded gravel (3-5cm, 7-10cm)	
ND42	2	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	24	Brown/dark brown loose but dense sandy silt with 10% subrounded-gravels (3-10cm)	
	72	Yellow brown loose fine-medium sand with 15% subrounded gravel (3-5cm, 7-10cm)	
ND43	6	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	24	Brown/dark brown loose but dense sandy silt with 10% subrounded-gravels (3-10cm)	
	48	Yellow brown loose fine-medium sand with 15% subrounded gravel (3-5cm, 7-10cm)	
	72	Grey brown medium fine sand with 20% subrounded gravel (3-15cm)	
ND44	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND45	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	

	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND46	12	Black/brown loose non-plastic fine silty sand with 5% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	60	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
	72	Grey brown medium fine sand with 20% subrounded gravel (3-15cm)	
ND47	12	Black/brown loose non-plastic fine silty sand with 20% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND48	12	Black/brown loose non-plastic fine silty sand with 20% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND49	12	Black/brown loose non-plastic fine silty sand with 20% 10-12cm rounded gravels.	
	48	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
ND50	12	Black/brown loose non-plastic fine silty sand with 20% 10-12cm rounded gravels.	
	36	Brown/dark brown loose but dense sandy silt with 5% subrounded-gravles (3-5cm)	
	72	Yellow/brown loose fine silty sand with 10% rounded gravels (3-5cm)	
C1	30	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited	

		near the margins of kettle lakes or around grounded ice.	
C2 C2	40	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C3 C3	38	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C4 C4	38	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C5 C5	30	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C6 C6	40	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited	

		near the margins of kettle lakes or around grounded ice.	
C7 C7	32	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C8 C8 C8	19	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	44	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C9 C9 C9 C9	15	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	38	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	71	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	Clear Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C10 C10	14	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition

C10	41	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C11 C11	32	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C12 C12 C12	24	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	32	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C13 C13 C13	27	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	37	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	

C14 C14 C14	34	7.5YR 3/4 Soft very sandy loam with organics; A horizon	Very gradual Transition
	38	10YR 3/6 Soft very sandy loam	Clear Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C15 C15 C15	24	7.5YR 3/4 Soft very sandy loam with organics; A horizon	Very gradual Transition
	42	10YR 3/6 Soft very sandy loam	Clear Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C16 C16	23	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C17 C17 C17	18	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	24	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	Clear Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	

C18 C18 C18	17	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	35	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	Clear Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C19 C19 C19	18	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	50	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	Clear Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C20 C20 C20	32	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	44	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C21 C21	20	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition

C21	67	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	Clear Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C22 C22 C22	46	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	50	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	Clear Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C23 C23 C23 C23	28	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	42	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	58	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	Clear Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	

C24 C24	38	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C25 C25 C25 C25	20	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	40	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	55	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	Clear Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C26 C26	30	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C27 C27 C27	21	7.5YR 3/2 Somewhat compact cobbly sandy loam with organics; A horizon	Gradual Transition
	47	Somewhat compact fine to coarse sand with 15-20% rounded to subrounded 0.3-16 cm gravel and small cobbles; Vashon-age outwash materials	Clear Transition

	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C28 C28 C28	15	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	30	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/2 Free fine to medium sand with 5-15% rounded to subrounded 0.3-7 cm gravel; fine Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice	
C29 C29 C29	23	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	39	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	
C30 C30 C30	16	7.5YR 3/2 Organic-rich dark brown fine sand; A horizon	Clear Transition
	32	7.5YR 3/4 Dark brown fine sand with <3% rounded to subrounded 0.5-3 cm gravel; B horizon. Difficult to distinguish from Unit 1	Gradual Transition
	72	2.5Y 5/3 Fine sand with up to 5% rounded to subrounded 1-25 cm gravel and cobbles; finer Vashon-age outwash materials deposited near the margins of kettle lakes or around grounded ice.	

JM1	24	Brown sandy loam	
	48	Brown with transition to a tan loam	
	72	Tan to light tan coarse sand	
JM2	24	Browns silt with <1% gravel	
	48	transition to brown silt with some sand. <1% gravel	
JM3	24	Brown slightly sandy silt	
	48	Transition to lighter slightly sandy silt.	Large roots
JM4	24	Brown sandy silt	
	48	Brown sandy silt	
JM5	24	Brown sandy silt. 1-3% gravel/ pebbles	
	48	At 3ft, turns to light brown/ tan. Approx. 30% moderately coarse sand. 70% silt.	
JM6	24	Brown sandy silt. 1-3% gravel/ pebbles	
	48	At 3ft, turns to light brown/ tan. Approx. 30% moderately coarse sand. 70% silt.	
JM7	24	Brown silt. No gravel	
	48	Brown silt. No gravel. At 3.8ft, turns to lighter silt. No gravel.	
JM8	24	Brown silt. 1-3% gravel.	
	48	Brown silt. No gravel. Turns slightly tan at bottom of 4 ft.	
JM9	24	Brown silt. 1-3% gravel.	
	48	At 2.5 ft, transitions to light brown harder packed sandy silt. 1-3% gravel.	
JM10	24	Brown silt. 1-3% gravel.	
	48	At 2.5 ft, transitions to light brown harder packed sandy silt. 1-3% gravel.	
JM11	24	Dark brown silt. 1-3% gravel.	

	48	At 2.5ft, turns to a light brown/ tan silt. <1% gravel.	
JM12	24	Brown silt with 1-3% gravel.	
	48	At 3ft, turns to light brown sandy silt with <1% gravel.	
JM13	24	Brown silt with 1-3% gravel.	
	48	At 3ft, turns to light brown sandy silt with <1% gravel.	
JM14	24	Brown silt with 1-3% gravel.	
	48	At 3ft, turns to light brown sandy silt with <1% gravel.	
JM15	24	Dark brown silt. 1-3% gravel.	
	48	Transition to light brown silt at 2.5ft. <1% gravel.	
JM16		Brown silt with 1-3% gravel.	
		At 3ft, turns to light brown sandy silt with <1% gravel.	
JM17	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	
JM18	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	
JM19	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	
JM20	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	
JM21	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	

JM22	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown coarse sand with 5% pebbles.	
JM23	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	
JM24	24	Dark brown silt. 1-3% gravel.	
	60	At 3ft, turns to light brown brown, moderately coarse sand.	
JM25	36	Dark brown silt. <1% gravel.	
	52	Light brown sand. <1% gravel. Moderately coarse sand.	
	60	Slightly compact silt. No sand, no gravel.	
JM26	24	Dark brown silt. 1-3% gravel.	
	48	At 3ft, turns to light brown brown, moderately coarse sand.	
JM27	30	Dark brown silt. 1-3% gravel.	
	48	Brown moderately coarse sand. <1% gravel	
JM28	24	Dark brown silt. 1-3% gravel. At 2ft, hit a layer of cobbles up to 5.5" in diameter.	
	48	Brown to light brown sand. 85% cobble/ boulder matrix. Up to 7.5" in diameter.	
JM29	24	Dark brown silt with 60% cobbles/ boulders. Average of 7" diameter.	
	48	At 2ft, turned to light brown silty sand with 80% cobble/ boulder matrix. Boulders up to 8.5" in diameter.	Walls at the bottom caving in from boulder removal.
JM30	24	Dark brown silty sand. 1-3% gravel.	
	48	Brown to light brown sand. Moderately coarse. 1-3% gravel.	
JM31	24	Dark brown silty sand. 1-3% gravel.	
	48	Dark brown silty sand. 1-3% gravel with some cobbles averaging 3-4" in diameter.	

JM32	24	Dark brown silty sand. 30% gravels/ cobbles. Transition to light brown very coarse sand with 90% gravel and some large cobbles approx. 4" in diameter.	
	48	Continues very coarse, loose and caving at bottom.	
JM33	48	Dark brown slightly sandy silt with 1-3% gravel all the way through.	Roots at the bottom.
JM34	24	Dark brown silty sand. 1-3% gravel.	
	48	Dark brown silty sand. 1-3% gravel. Transitions to sand with 1-3% gravel at 3.5ft.	
	72	Sand continues. Transition to <1% gravel at 5ft.	
JM35	24	Dark brown silty sand. 1-3% gravel.	
	48	Dark brown silty sand. 1-3% gravel. At 3ft, transition to light brown sand with apprx. 10% gravel.	
	84	At 5.5ft transitions to coarse sand with 80% gravel and large cobbles and boulders. Boulders up to 10" in diameter.	
JM36	24	Dark brown silty sand. 1-3% gravel.	
	48	Turned to brown sandy silt with 40% gravel at 3ft.	
	84	At 5.5ft transitions to 90% gravel/ cobble matrix in silty sand. Up to 10" diameter.	
JM37	24	Dark brown silt. 1-3% gravel.	5" brick pipe running NE/SW. 9/16" thick. Empty.
	48	Grayish brown sand. <1% gravel.	
JM38	24	Dark brown silt. 1-3% gravel.	
	48	Grayish brown sand. 1-3% gravel.	
JM39	48	Dark brown silt all the way through.	
LH1	30	Dark brown silt with no gravels.	light surface roots.
	60	Yellowish gray brown sandy silt loam with some gravels subrounded.	
LH2	24	dark brown silt loam	

	60	Yellow brown gray clay loam	
	64	Yellow brown gray sandy loam	
LH3	24	Dark brown silt loam	
	30	Yellow gray brown silty sand	
	60	Yellow gray brown silty sand with some gravels.	
LH4	24	Dark brown silty sand	
	60	Yellow brown silty sand with some gravels.	
LH5	36	Dark brown silty sand, no gravels, very few roots.	
	60	Yellow brown silty sand no gravels.	
LH6	36	Dark Brown silty sand, no gravels	
	60	Yellow brown silty sand with few gravels.	
LH7	24	Dark brown silty sand, few gravels	
	60	Yellow brown silty sand with few gravels.	
LH8	48	Dark brown silty sand with approx 5-10% small subrounded gravels.	
	60	Yellow brown sandy silt with 20% small subrounded gravels.	
LH9	24	Dark brown silty sand	
	60	Yellow brown silty sand	
LH10	36	Dark brown silty sand	
	72	Yellow brown sandy silt.	
LH11	24	Dark Brown silt loam	
	60	Yellow brown sandy silt .	
LH12	36	Dark brown sandy silt.	

	60	Yellow brown sandy silt.	

APPENDIX B: INADVERTENT DISCOVERY PLAN (IDP)

Plan and Procedures for the Inadvertent Discovery of Cultural Resources and Human Skeletal Remains

1. Introduction

The following Inadvertent Discovery Plan (IDP) outlines the procedures to be implemented, in accordance with state and federal laws, if National Register of Historic Places (NRHP) potentially-eligible and ineligible cultural resource materials are discovered during construction. The separate protocol for discovery of human skeletal remains is described below, in Section 4.

2. Recognizing Cultural Resources

A cultural resource is an item of historical, traditional, or cultural importance e. The item could be prehistoric or historic. Examples include:

- A multi-species accumulation of shell (shell-midden) with associated bone, stone, antler or wood artifacts, burned rocks or charcoal.
- Bones that appear to be human or animal bones associated with a shell-midden (i.e. with associated artifacts or cooking features).
- An area of charcoal or very dark stained soil with associated artifacts,
- Artifacts made of chipped or ground stone (i.e. an arrowhead, adze or maul) or an accumulation (more than one) of cryptocrystalline stone flakes (lithic debitage),
- Basketry, cedar garments, fish weir stakes or items made of botanical materials,
- Clusters of tin cans or bottles, logging or agricultural equipment that appear to be older than 50 years,
- Buried railroad tracks, decking, or other industrial materials.

Not all cultural resource material encountered will be potentially-eligible for listing on the NRHP. To be eligible for the NRHP cultural resources identified during construction must be 50 years of age or older, meet one or more of the four criteria listed below, and retain sufficient physical integrity to convey historical significance (36 CFR 60.4). A building, site, object, or structure may be considered for inclusion in the NRHP if it meets at least one of the following criteria:

1. The property is associated with events that have made a significant contribution to the broad patterns of our history.
2. The property is associated with the lives of persons significant in our past.
3. The property embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components might lack individual distinction.
4. The property has yielded, or might be likely to yield, information important in prehistory or history.

The following archaeological resources will indicate potentially NRHP-eligible deposits and will be assumed NRHP-eligible until determined otherwise by the State Historic Preservation Officer (SHPO).

- Pre-contact deposits (such as midden deposits) associated with Native American use or occupation.
- Historic era non-Native American artifacts from NRHP-eligible (or potentially NRHP eligible) deposits (native soil or surfaces that were stable and exposed either between fill episodes, or after the conclusion of historic filling).
- Historic features consisting of stratified deposits with artifact concentrations that appear to be spatially or temporally distinct. This includes refuse deposits, privies, or other discrete accumulations.
- Courses of brick or other architectural materials that are part of a building foundation or pavement in their original position.
- Historic era non-Native American artifacts from non-eligible contexts, only if they are diagnostic or have educational value.

Examples of deposits that will not be considered NRHP eligible include:

- Isolated or loose construction materials (brick, mortar, window glass), bottles, cans, located within fill sediments (not located in primary context).
- Mass deposits of lumber, concrete, granite, coal, etc.
- Pilings, decking, trestle, and railroad track, unless of clearly unusual construction.
- Historic-era artifacts not associated with a feature or stable surface.

Artifacts or deposits that are not potentially eligible, as described above, will be noted in daily field logs, photographed and documented on scaled site plans if possible. The protocol for Inadvertent Discovery, including the stop-work clause noted in the procedure below will not be implemented for artifacts or deposits that are not potentially eligible for listing in the National Register.

3. On-Site Responsibilities

- STOP WORK

If any contractor or subcontractor believes that he or she has uncovered any cultural resource during construction of the project, all work adjacent to the discovery must stop. The discovery location should not be left unsecured at any time. Cultural resources encountered during an archaeological survey are intentional discoveries and are not covered under this plan.

- NOTIFY DAHP

Contact the DAHP Cultural Resource staff-

<u>State Archaeologist</u>
Rob Whitlam, Ph.D.

email: Rob.Whitlam@dahp.wa.gov
(360) 586-3080
(360) 890-2615 – Cell

The DAHP will review the eligibility criteria above, make a recommendation to the artifact or deposits potential eligibility, and will proceed with agency and tribal notification as necessary (so long as the artifact or deposit is determined eligible).

After consultation DAHP will complete a written plan of action describing the disposition of cultural resources pursuant to 43 CFR Part 10 and will execute their prescribed duties within that plan of action.

4. Protocol for Discovery of Human Skeletal Remains

Washington State law requires immediate notification of known or suspected human remains whenever they are uncovered by investigation or construction activities to county and/or municipal law enforcement agencies, county medical examiner or coroner's offices, DAHP, and federal and local agencies involved directly with the project or having jurisdiction over the subject properties.

If human remains are discovered or exposed in backhoe trench spoils or sidewalls, and/or any other excavations performed during the excavation of the project all excavation will cease and the site will be secured. The remains will be covered with a tarp or other materials (not soil or rocks) temporarily. The Coroner will be notified regarding the discovery. The Coroner will determine if the remains are human, whether the discovery constitutes a crime scene, and will notify the Washington State Department of Archaeology and Historic Preservation (DAHP). The DAHP will be responsible for informing the affiliated tribes regarding the discovery.

Construction may continue at the discovery location after the DAHP determine the boundaries of the discovery location and compliance with state and federal law requirements are complete.

5. Discovery Protocol Contact Information

Gary Warnock, Coroner Thurston County Coroner's Office 2925 37th Ave SW Tumwater, WA 98512 (p) 360-586-2091
Guy Tasa, State Physical Anthropologist Department of Archaeology and Historic Preservation PO Box 48343 Olympia, WA 98504-8343 (p) 360-586-3534

APPENDIX C: CLOSE-UP OF SURVEY AREAS

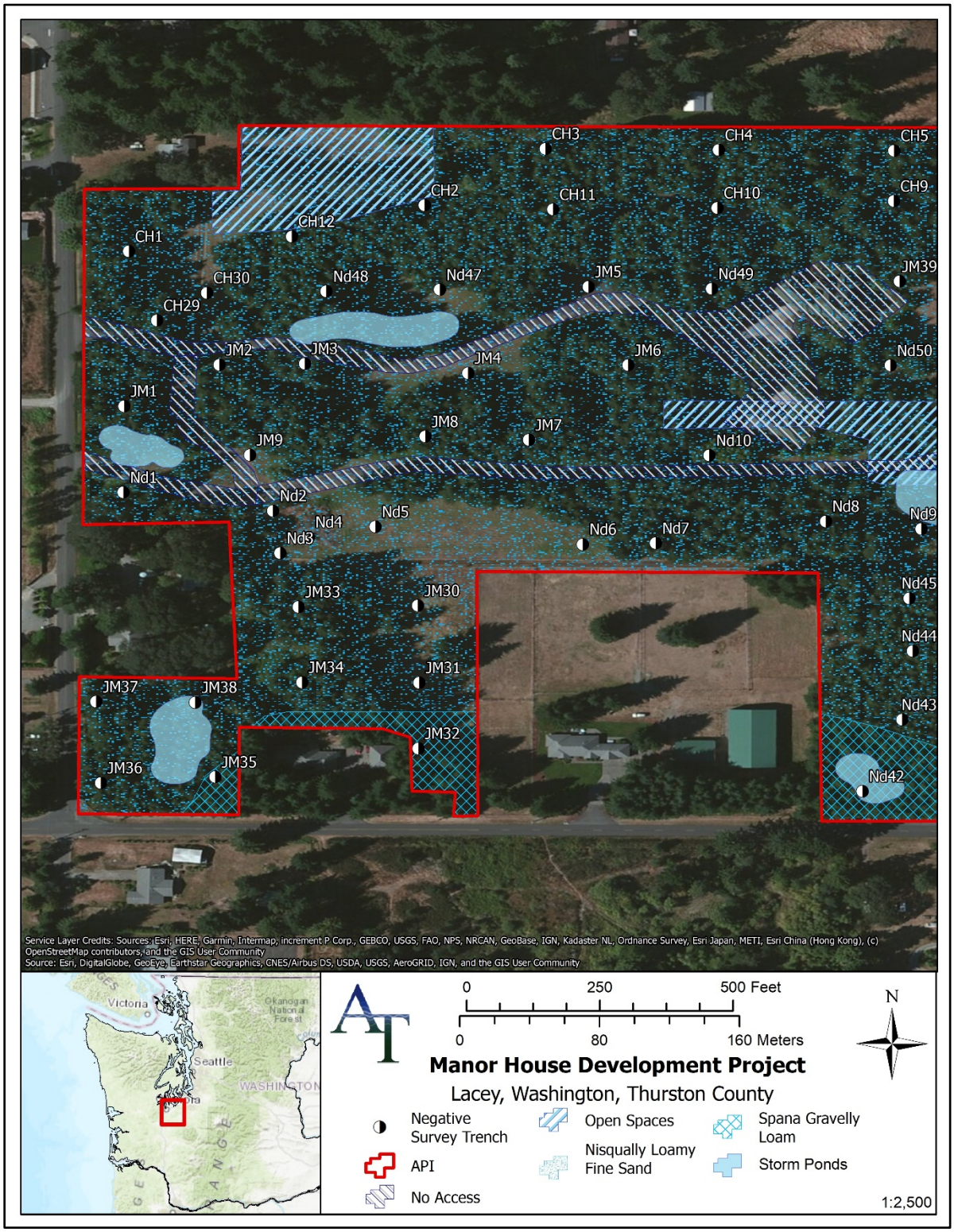

Figure 7. West portion of API with trench numbers and soil information.

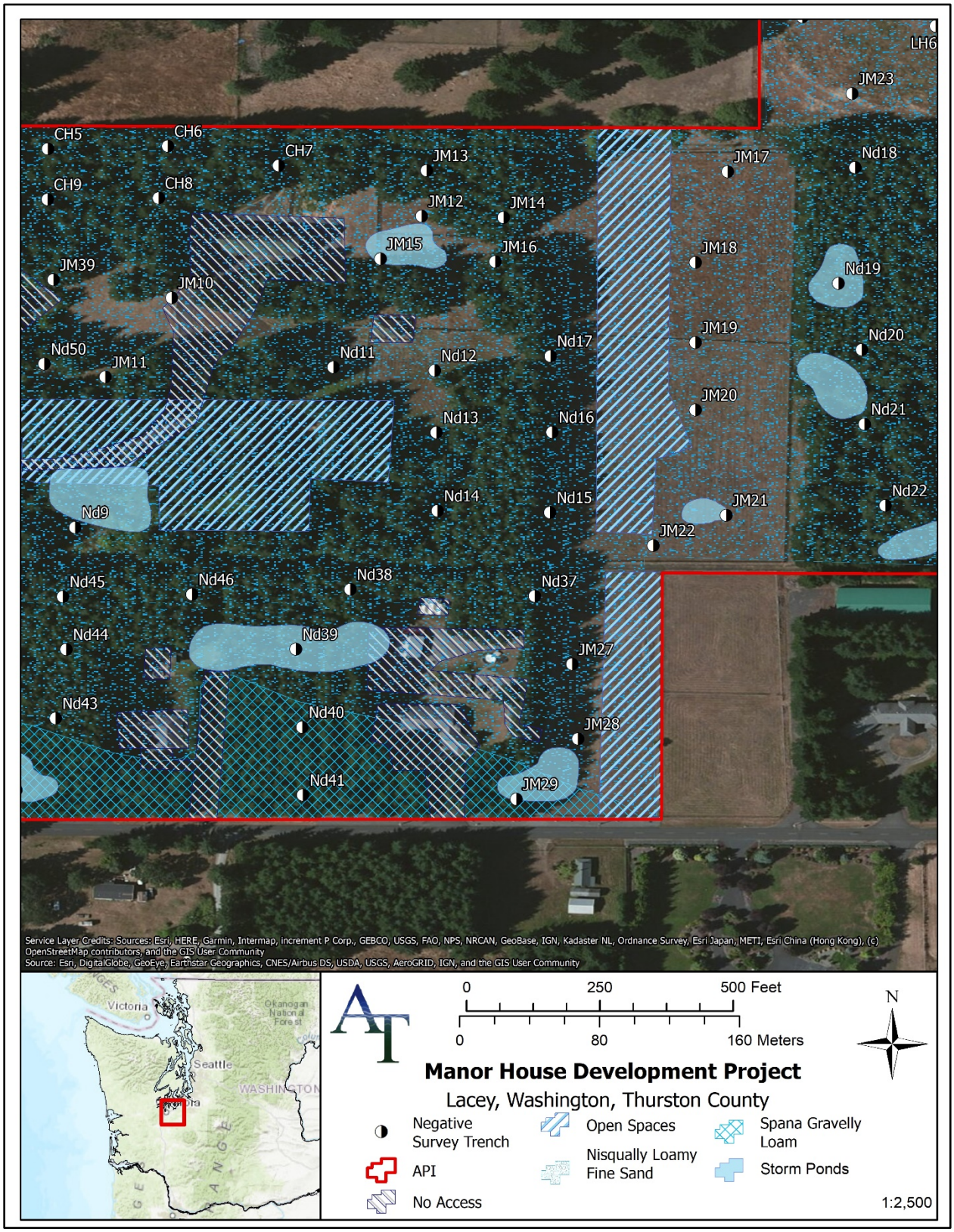

Figure 8. Center portion of API with trench numbers and soil information.

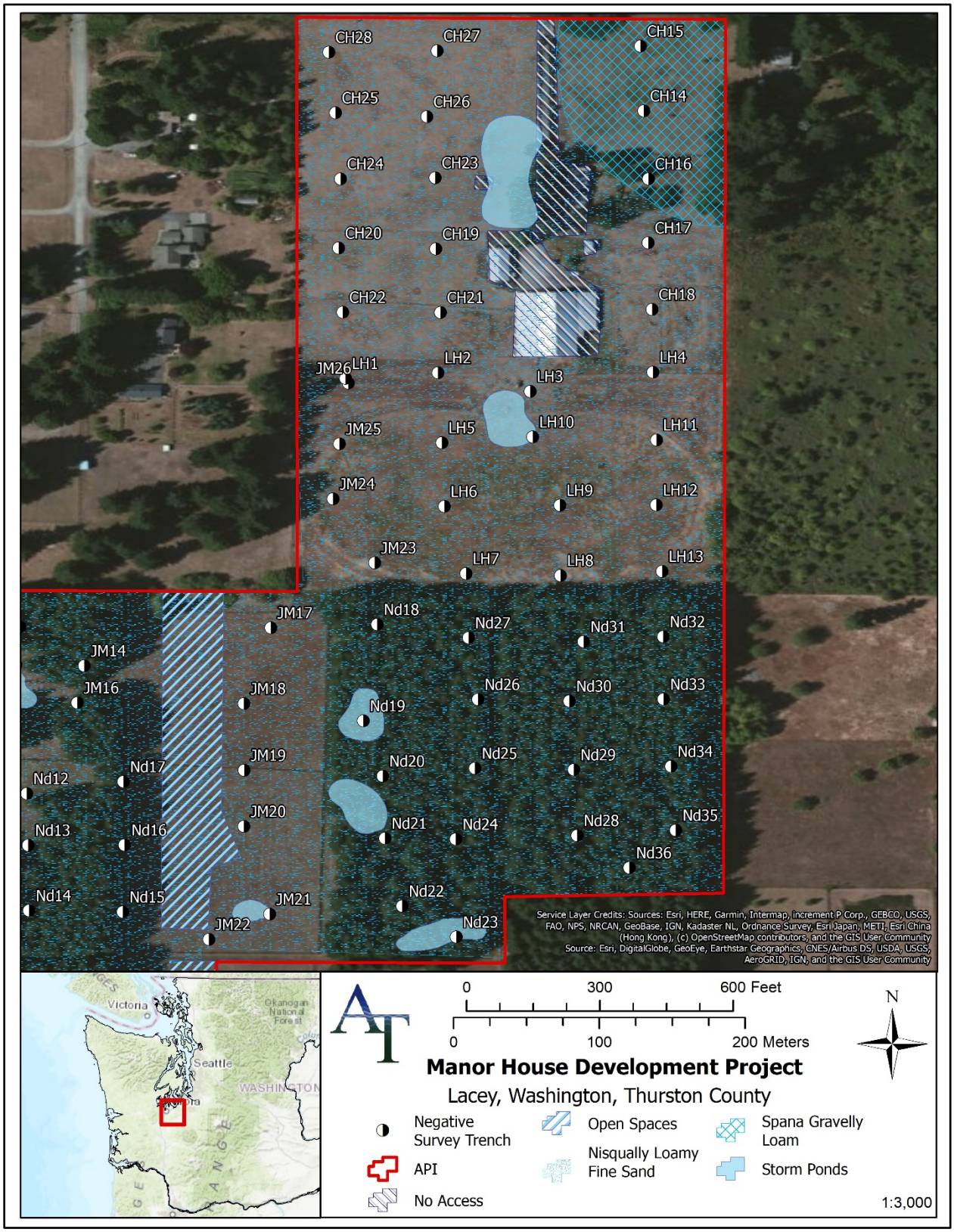

Figure 9. East portion of API with trench numbers and soil information.