

APPENDIX B

Data Recovery Plan

DATA RECOVERY PLAN FOR ARCHAEOLOGICAL SITE 45KI757, KING COUNTY, WASHINGTON

Proposed Actions: Data recovery excavation of 45KI757

Principal Investigator: James C. Chatters, PhD, AMEC Earth and Environmental, Inc.

INTRODUCTION

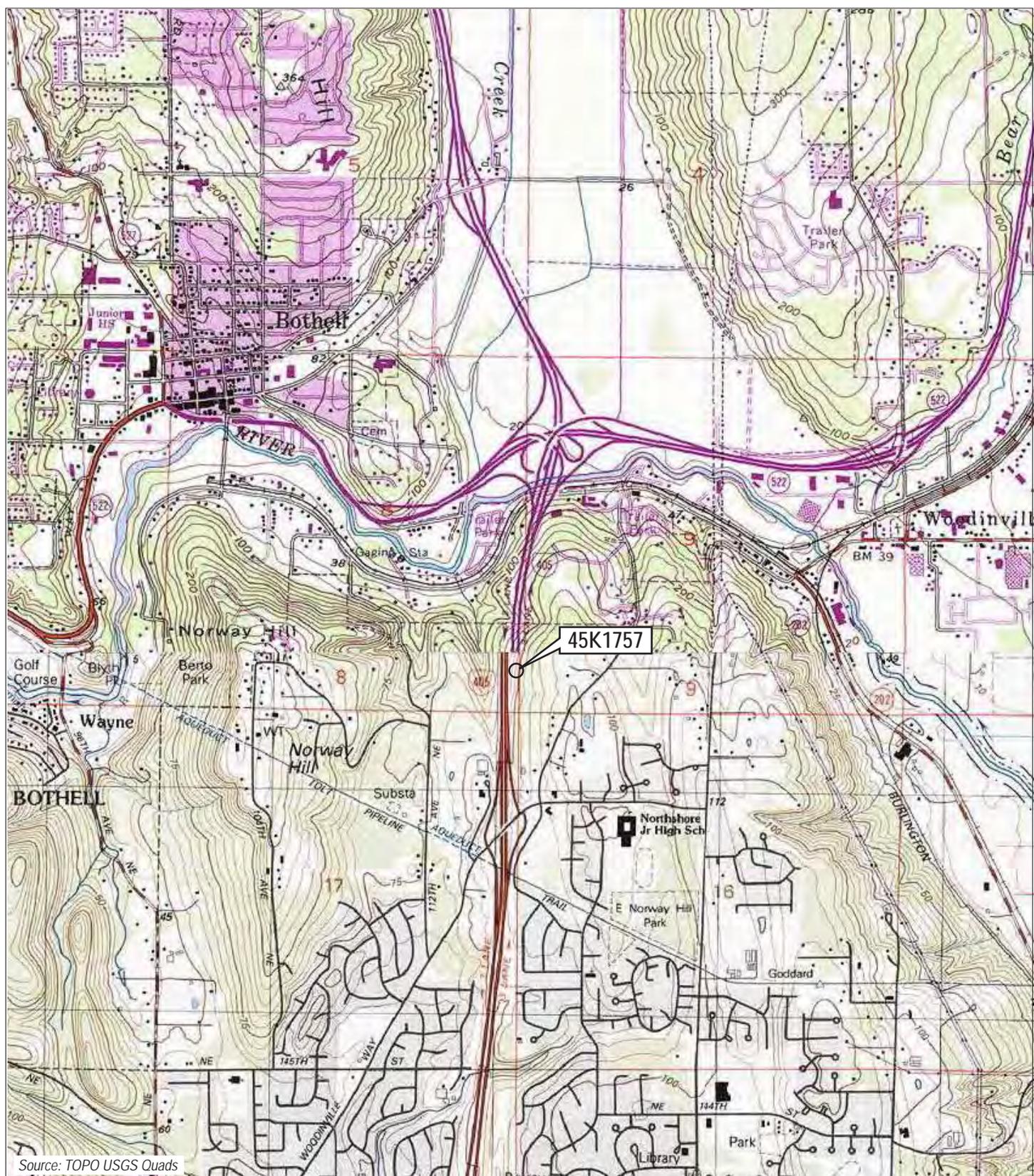
The Washington State Department of Transportation (WSDOT) is constructing improvements to I-405, called the SR-520 to I-5 Improvement Project, in the cities of Kirkland, Bothell, and Lynnwood. Engineering necessities indicate that under proposed Build Alternatives 1 and 2, archaeological site 45K1757 cannot be avoided. The portion of the site within the WSDOT right-of-way will be entirely destroyed. The WSDOT Urban Corridors Office (UCO) and FHWA, in consultation with the Washington State Historic Preservation Officer (SHPO), have determined that archaeological data recovery is necessary to mitigate (in part or in full) construction impacts to the site. This document describes the site and presents, in detail, the methods to be used to excavate the site, analyze recovered artifacts and other data, and report the findings. A site security plan, plan for inadvertent discovery of human remains, public participation plan, and curation plan are also presented.

PREVIOUS INVESTIGATIONS

Site 45KI757 is a small lithic scatter situated on the south wall of the Sammamish River valley. It sits on a narrow bench overlooking the valley near the head of a small, unnamed creek that flows north toward the Sammamish River (Figure 1). The site was discovered in 2007 by archaeologists from Landau, Inc. (Landau). Landau made the discovery during a subsurface archaeological survey conducted as part of the National Historic Preservation Act, Section 106 compliance effort for the SR-520/I-5 Improvement Project. Landau explored the narrow bench on which the site was found by excavating a line of 30-centimeters (cm) diameter shovel probes at 20 meter intervals. When their Shovel Probe 33 encountered a flaked quartzite cobble, Landau excavated additional probes at 5 meter intervals to the north, south, and east, finding additional archaeological materials.

Once the find had been designated a site, Landau conducted systematic test excavations. Working from a north-south baseline, they excavated 30-cm diameter shovel probes every two meters over an area of 12 meters north-south by 10 meters east-west. They placed an additional 14 shovel probes judgmentally. Landau excavated a total of 50 shovel probes. WSDOT archaeologists excavated two additional shovel probes, one of which recovered an artifact (at approximately 0 south along the baseline).

Shovel probes ranged from 25 to 65 cm deep in what appears to be a sandy, glaciofluvial deposit. Soil at the site is a well-developed spodosol with a disturbed E horizon and a B horizon rich in iron. Excavators reported fire-affected rock (FAR); flaked cobbles; a schist knife; preforms of slate and metasedimentary rock; and debitage of schist, slate, and metasedimentary rock. WSDOT staff found another flaked cobble at 0 south. Altogether, nearly 100 artifacts were reported from the site. They occurred between the surface and 24 inches (60 cm) below surface.



Source: TOPO USGS Quads



0 1950
Approximate Scale in Feet

FIGURE 1

Site Location Map

WSDOT and AMEC archaeologists inspected the collection from the site and determined that the majority of the reported artifacts were natural shards of platy stone. Sixteen items do appear to have a cultural origin, however, including fire-cracked rock, an anvil stone, and flakes and flaked cobbles of igneous and metasedimentary rock. The distribution of these items is shown in Figure 2.

As currently known from the artifact distribution, 45KI757 extends 32 meters north-south by 12 meters east-west. Discovery of an artifact in the 0 south unit, however, indicates the site may extend farther to the north. The site may be conterminous with the bench landform, which continues north for approximately 30 meters. The setting of the site and its long history as a bio-active forest floor preclude the possibility for geological stratification. The surface cannot have received new sediment since the end of the glacial melt-off; artifacts vary in depth only as a result of bioturbation.

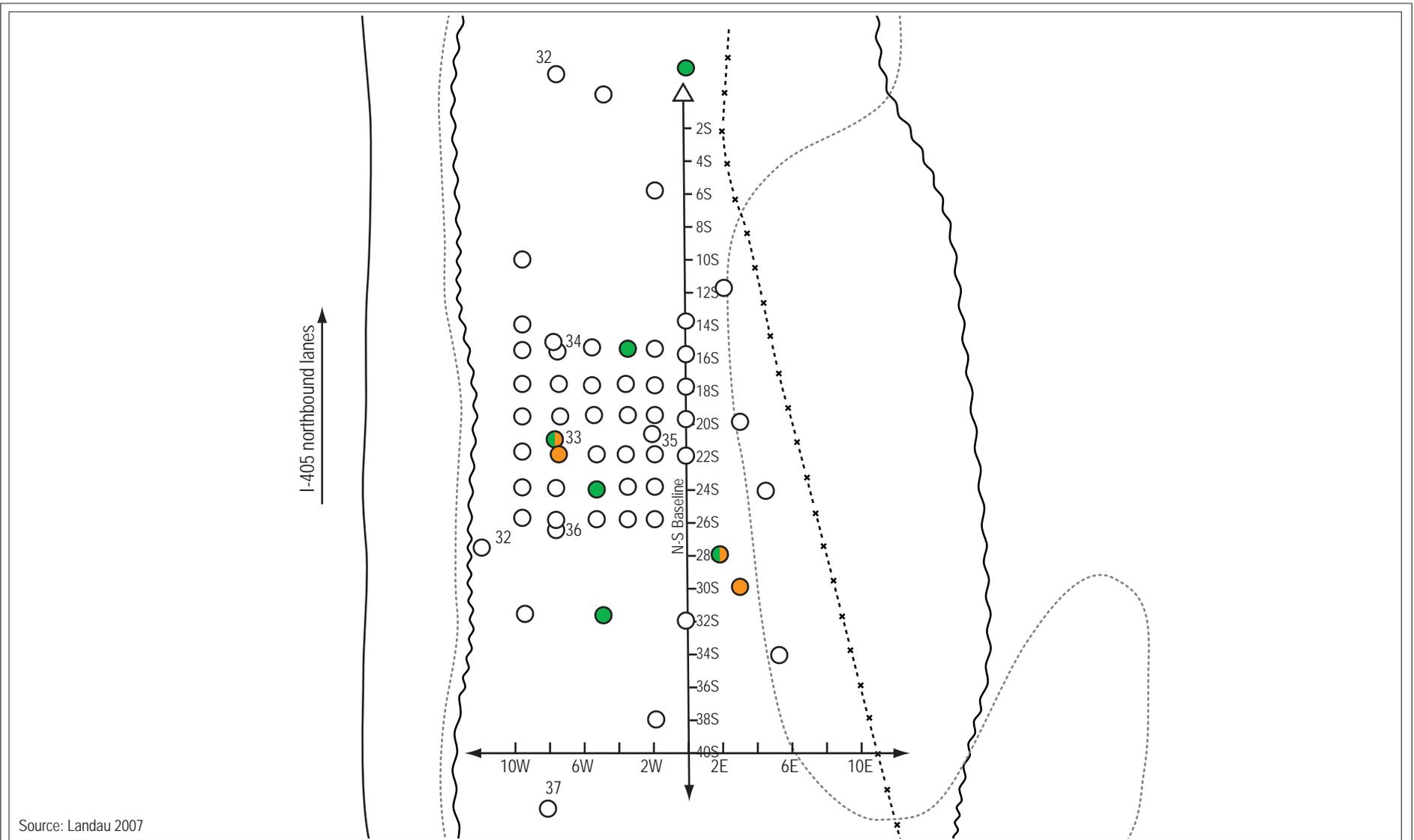
RESEARCH CONTEXT

The artifacts that have thus-far been found at 45KI757 consist of flaked cobbles, lithic debitage, and FAR. Such artifacts, found on high benches or terraces overlooking formerly or currently estuarine drainages in the central Northwest Coast are traditionally assigned to what Carlson (1990) calls the Pebble Tool Tradition. In Puget Sound, manifestations of this tradition are usually identified with the Olcott Phase (Butler 1961). Manifestations of the Olcott Phase contain cobble cores, cobble flakes, large bifaces, leaf-shaped or lanceolate projectile points, and occasional end scrapers, usually made from basalt, dacite, or some other crystalline volcanic rock (Mattson 1985; Wessen 1993). Sites attributable to this phase are commonly found around upland ponds and on elevated terraces overlooking Puget Sound and the large river valleys tributary to it (e.g. Blukis Onat et al. 2001; Mattson 1985; Stilson and Chatters 1981). The Olcott Phase shares most characteristics with the Cascade Phase of the Southern Columbia Plateau, which led Butler (1961) to include both within his Old Cordilleran Culture.

Work at 45KI757 will address two issues related to understanding the Olcott Phase in the Puget Sound region: chronology of this cultural phenomenon and the composition of a single-event assemblage related to this time period.

Olcott Chronology

The difficulty with Olcott Phase sites in general is that thus-far, they have almost completely defied dating. With the exception of the Stewe'yuk (Tolt) Site (Onat et al. 2001) and a limited assemblage from Layser Cave (Daugherty et al. 1987), no chronometric dates have yet been obtained on manifestations of this phase. Radiocarbon of charcoal and uranium series dating of weathering rinds on artifacts of volcanic rock place the primary occupation of Stewe'yuk sometime between 3600 and 7700 cal BP. Olcott occupation of Layser Cave dates between 6000 and 7500 cal. If 45KI757 can be attributed to Olcott Phase and can be dated using thermoluminescence methods, this data recovery effort will make a significant addition to what is known about the age of the phase. Successful thermoluminescence dating will encourage other area researchers to use the method, leading to a great improvement in the archaeological chronology of western Washington.



Source: Landau 2007



- | | | | |
|-----------|----------------|-------|--------------------|
| △ | Datum | ○ | FAR |
| ○ | Negative probe | ● | Debitage and cores |
| - - - - - | Contour lines | ~~~~~ | Forest |
| - - x - - | Fence lines | ———— | Edge of Road |

FIGURE 2

45K1757 Site Map Lithic Scatter

Olcott Assemblages

The small, spatially discrete assemblage from 45KI757 may represent a single occupation event or a few events that occurred over a brief time interval. Most Olcott occupations that have been intensively studied, including the Olcott type site (Butler 1961), Stewe'yuuq (Blukis-Onat et al. 2001), the Squirrel Site (Lewarch and Benson 1989a), the Vine Site (Lewarch and Benson 1989b), Layser Cave (Daugherty et al. 1987), Slab Camp (Gallison 1994), and Beech Creek (McClure 1992), were used repeatedly and are likely to represent a variety of subsistence and tool production activities performed over long periods of time. Because the low sedimentation rates and extensive bioturbation of western Washington soils, separate occupation episodes are inextricably co-mingled. Small sites with low artifact counts are not usually subjected to intensive study, although, they have the most potential for information about the nature of individual Olcott Phase occupation events. To date, only one such site, 45SN48N, has been thoroughly excavated and described (Stilson and Chatters 1981). Thus, data from 45KI757 will double the amount of information currently available about the characteristics of an assemblage produced by a single Olcott Phase habitation episode.

PROPOSED WORK

WSDOT's data recovery effort will consist of five steps: mapping, exploration, focused excavations, analysis, and reporting. Each step is described in detail below.

Mapping

Fieldwork will begin with production of a high-resolution (20-cm interval) topographic map of the bench and its immediate surroundings. This map will cover approximately 70 meters along the long axis of the site and at least 35 meters perpendicular to that axis. It is intended to provide a means for demonstrating the precise relationship between the archaeological materials and the landform on which they rest.

Exploration

As shown on Figure 2, the location of artifact concentrations has been determined precisely for the area subjected to systematic shovel probing, but the artifact distribution extends an undetermined distance beyond that small grid. To determine if additional artifact concentrations exist, WSDOT's consultant will hand-excavate up to 20 additional shovel probes and a series of 50-cm (20-inch) wide trenches with a total combined length of 200 feet (60 meters). Shovel probes 16 inches (40 cm) in diameter and up to 60-cm deep will be placed judgmentally to assist with site boundary determination. Shovel probe locations will conform to the existing site grid; a shovel/auger probe form Attachment B-1 will be completed for each of these probes. This effort will focus on portions of the bench that extend north and south of the existing testing grid.

Once site boundaries have been established, trenches will be placed to seek artifact concentrations, with their length and location taking into account the subtleties in terrain slope and obstacles. Horizontal provenience (provenience) control will be maintained in 3-foot (1 meter) intervals. Excavation will be by the skim-shoveling method, with each 3.25-foot (1-meter) long horizontal segment being removed as a single vertical unit. Units will be excavated

in a manner that enables estimation of the approximate depth of individual artifacts or artifact clusters to within 4 inches (10 centimeters). Sediment will be screened through 1/4 inch mesh; all lithic artifacts and FAR will be collected for analysis. A unit level form will be completed for each 3.35-foot (1 meter) segment (see Attachment B-2). A stratigraphic profile will be drawn, described in NRCS soils terminology, and photographed for one long side wall of each trench unit.

Focused Excavations

In order to obtain a larger sample of artifacts and gain more information about any discovered features, block excavations will be conducted in areas adjacent to finds made in the shovel probes and trenches, including finds made previously by Landau and WSDOT. Each square meter will be excavated in a single vertical unit level to a culturally sterile depth, estimated at approximately 24 inches (60 cm) in weathered glacial sediments. Units will be excavated in a manner that enables estimation of approximate depth of individual artifacts or artifact clusters to within 4 inches (10 centimeters), but emphasis is placed on maximizing sediment volume sampled given the site's open setting and lack of cultural horizons exposed during site characterization. Block size will be determined by artifact returns, but will be at least 2 square meters per area. Blocks will be excavated adjacent to Unit 8E/22S and Units 2-4E/28-30S, all of which produced FAR. Provenience will be maintained by square meter grid unit. Vertical provenience, excavation, and screening will be addressed in the same manner as described under "Exploration," with the exception noted below. One long sidewall of each block will be profiled, described in NRCS soils terminology, and photographed.

If excavators encounter any feature, which is likely to take the form of a concentration of lithics, FCR, or both, they will expose the artifacts in situ, produce a measured sketch of the associated objects, and take multiple photographs. Artifacts, FAR, and any charcoal found in a feature will be collected as a feature unit. A sample of soil from the feature will be retained for flotation and possible chemical analysis. Remaining feature matrix will be screened through 1/8-inch mesh. The measured sketch of the feature will be included on the unit level form for the meter square(s) in which it occurs. The feature will be cross-sectioned during excavation; a profile of the resulting vertical exposure will be drawn.

Analysis

Collected artifacts will be catalogued and subjected to lithic technological analysis (flake material, type, and size), functional analysis (including macroscopic and microscopic wear patterns and traditional functional types analyses of tools), stylistic analysis, and FAR analysis (count, weight, morphology). Any obsidian will be submitted for source determination. Any carbon arguably associated with site artifacts and features will be submitted for radiocarbon dating. A sample of FAR found during the project and considered the probable product of human activity will be submitted for thermoluminescence dating.

As many as four thermoluminescence samples will be submitted for dating to the University of Washington. Any obsidian will be submitted to Northwest Research Obsidian Laboratory of Corvallis, Oregon for X-ray diffraction analysis to determine source.

Reporting

Upon completion of fieldwork and analysis, AMEC will complete a data recovery report according to the guidelines of the Washington DAHP.

Procedures for Encountering Human Remains

Any human skeletal remains that are discovered during this project will at all times be treated with dignity and respect. WSDOT acknowledges that any find of human skeletal remains may be a burial of Native American ancestry. WSDOT further acknowledges that the concerned Indian Tribes are extremely sensitive about ancestral burials, and that any such find must be treated confidentially.

If any member of the project team believes that he or she may have encountered human skeletal remains, all work within 10 meters (33 feet) of the discovery will immediately cease. He or she will immediately inform the Principal Investigator, who will confirm identity of the remains and, if human, immediately contact the WSDOT UCO Archaeologist and the Project's Environmental Manager. The police department will arrange for the King County Medical Examiner to inspect the discovery. The Medical Examiner's representative will determine whether the discovery should be treated as a crime scene, a historic grave of a person or persons of nonnative ancestry, or as a human burial of Native ancestry, in accordance with State law.

WSDOT will also simultaneously notify FHWA, the SHPO and the Snoqualmie Tribe, Tulalip Tribes of Washington, Muckleshoot Indian Tribe, and the Yakama Indian Nation, and the non-federally recognized Duwamish Tribe of the inadvertent discovery of human remains. If not crime scene remains, the parties will consult to determine an appropriate treatment plan.

SITE RESTORATION PLAN

The site will not be restored upon completion of the data recovery effort. The entire area to be affected by excavations will be removed during of the improvements to I-405. At the close of excavations, any small pits or narrow trenches will be backfilled. Larger excavation blocks will be partially backfilled to slope the pit walls and eliminate a safety hazard for wildlife and any inadvertent human visitors to the site.

ARTIFACT CURATION PLAN

The Thomas Burke Memorial Washington State Museum (the Burke) has agreed to accept the artifacts and records resulting from this data recovery project (see Attachment C). Artifacts and records will be labeled, reproduced, and packaged according to the standards specified by the Burke. During the analysis phase, all artifacts will be kept in a secure room at the AMEC offices. Only cultural resources staff members have keys to the cultural resources curation workspace; even janitorial staff must request permission to enter and clean.

AGREEMENT OF LAND OWNER

The site is located on WSDOT owned right-of-way. No outside agreement is necessary.

SITE SECURITY PLAN

The land parcels on which excavations and other investigations will take place are protected by their location. The site lies at the top of a steep road cut beside a busy lane of I-405. High up and masked by trees, it is entirely out of sight of passing cars. Access to the right-of-way from the east (away from traffic) is through a privately-owned expanse of dense forest and across a 3-foot high barbed wire fence. There is no evidence of human activity nearby, either on the right-of-way or the adjacent private property. No additional security measures are envisioned due to the natural security of the location.

PUBLIC PARTICIPATION PLAN

Site 45KI757 is not well situated for public access: the section of I-405 beside which it was found is particularly busy and dangerous; there is no other means of access to the site. Therefore, the only public participation envisioned for this effort consists of inclusion of representatives of the consulted Indian tribes. The Snoqualmie Tribe, Tulalip Tribes of Washington, the Muckleshoot Indian Tribe, and the Yakama Indian Nation will be consulted as part of Section 106 compliance, as will the non-federally recognized Duwamish Tribe (as an interested party). Representatives of these tribes will be offered a site visit and the opportunity to participate during site excavations. Results of the excavations will also be made publicly available. A digital copy of the data recovery report will be supplied to the DAHP for access by professional archaeologists. One hard copy of the report will be given to the University of Washington for inclusion in its Northwest Collection. If any scientifically significant results come from this effort, including but not limited to advances in the chronology of the Pebble Tool Tradition or Olcott Phase or the success of thermoluminescence dating of manifestations of those archaeological complexes, they will be presented at the Northwest Anthropological Conference. They may also be offered for publication by a scientific journal, such as *Northwest Science* or the *Journal of Field Archaeology*. In any and all instances, acknowledgement will credit WSDOT and the citizens of the State of Washington with funding the research.

QUALIFICATIONS OF PROJECT STAFF

Principal Investigator for this project will be James C. Chatters, PhD. Field Director will be Ms Lara Rooke, MA. Resumes of these individuals are provided in Attachment D.

REFERENCES CITED

- Blukis-Onat, A., M. E. Morgenstein, P. L. LeTourneau, R. P. Stone, J. Kosta, and P. Johnson
 2001 *Archaeological Investigations at steweyuq^w – Site 45KI464, Tolt Rivere, King County, Washington*. Boas, Inc. Seattle, Washington.
- Butler, B. R.
 1961 The Old Cordilleran Culture in the Pacific Northwest. Occasional papers No. 5. Idaho State College Museum, Pocatello.
- Carlson, R. L.
 1990 Cultural Antecedents. In *Handbook of North American Indians, vol 7: Northwest Coast*, edited by W. Suttles, pp. 60-69. Smithsonian Institution Press, Washington, DC.
- Daugherty, R. D., J. J. Flenniken, and J. M. Welch
 1987 *Data Recovery Study of Layser Cave (45LE223) in Lewis County, Washington*. Studies in Cultural Resource Management Number 7. USDA Forest Service, Pacific Northwest Region, Portland.
- Gallison, J. D.
 1994 Slab Camp: An Early to Middle Holocene Olcott Complex in the Eastern Olympic Mountains of Washington. Unpublished PhD Dissertation. Department of Anthropology, Washington State University, Pullman.
- Lewarch, D. E. And J. R. Benson
 1989a *Archaeological Data Recovery at the Squirrel Site (45-SA-120)*. Evans Hamilton, Seattle. Submitted to USDA, Gifford Pinchot National Forest, Mt Adams Ranger District, Forest Service, Vancouver, Washington.
 1989b *Archaeological Data Recovery at the Vine Site (45-SA-120)*. Evans Hamilton, Seattle. Submitted to USDA, Gifford Pinchot National Forest, Mt Adams Ranger District, Forest Service, Vancouver, Washington.
- Mattson, J. L.
 1985 Puget Sound Prehistory: Postglacial Adaptations in the Puget Sound Basin with Archaeological Implications for a Solution to the “Cascade Problem.” Unpublished PhD Dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.
- Stilson, M. L. and J. C. Chatters
 1981 *Excavations at 45SN48N and 45SN49A, Snohomish County, Washington*. Reports in Highway Archaeology No. 6. Office of Public Archaeology, Institute for environmental Studies, University of Washington, Seattle.
- Wessen, G. C.
 1993 *An Overview of Archaeological Activities Conducted by Western Heritage Inc in the Lake Cushman Project Area, 1988-1991*. Wessen & Associates, Seattle. Submitted to Tacoma Public Utilities.

APPENDIX C

Soil Descriptions

Table 1 Shovel Test Probe (STP) Soil Descriptions

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
25 N/ 16 W	0-20	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels and pebbles	No	.125 m ³	LR, DK	10/12/2009
	20-50	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions	5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	50-100	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	0%	No		LR, DK	10/12/2009
25 N/ 20 W	0-16	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels and pebbles	No	.088 m ³	ES, TAM	10/12/2009
	16-45	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and light charcoal flecking	<5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
	45-70	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<1% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
26 N/ 22 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels and pebbles	No	.088 m ³	ES, TAM	10/12/2009
	10-54	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions	<5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
	54-70	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<1% sub-angular to rounded gravels	No		ES, TAM	10/12/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
27 N/ 16 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	15% sub-angular to rounded gravels and pebbles	No	.076 m ³	LR, DK	10/12/2009
	15-55	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions	5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	55-60	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<1% sub-angular to rounded gravels	No		LR, DK	10/12/2009
27 N/ 20 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking, naturally occurring FAR	5% sub-angular to rounded gravels and pebbles	No	.076 m ³	ES, TAM	10/12/2009
	15-40	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking, naturally occurring FAR	<5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
	40-60	2.5Y5/4	C horizon: olive brown very fine sand with few cemented sand pockets	<1% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
29 N/ 20 W	0-17	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking, naturally occurring FAR	5% sub-angular to rounded gravels and pebbles	No	.076 m ³	ES, TAM	10/12/2009
	17-45	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking, naturally occurring FAR	<1% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
	45-60	2.5Y5/4	C horizon: olive brown very fine sand with few cemented sand pockets	0%	No		ES, TAM	10/12/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
31 N/ 16 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	15% sub-angular to rounded gravels and pebbles	No	.076 m ³	LR, DK	10/12/2009
	15-35	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions	5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	35-60	2.5Y5/4	C horizon: olive brown very fine sand	<1% sub-angular to rounded gravels	No		LR, DK	10/12/2009
33 N/ 16 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels and pebbles	No	.076 m ³	LR, DK	10/12/2009
	10-46	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal, ash and burnt wood	10% sub-angular to rounded gravels and pebbles	No		LR, DK	10/12/2009
	46-60	10YR5/6	C horizon: yellowish brown very fine sand	<5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
33 N/ 20 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	10% sub-angular to rounded gravels and pebbles	No	.076 m ³	ES, TAM	10/12/2009
	15-25	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking and ash	10% sub-angular to rounded gravels and pebbles	No		ES, TAM	10/12/2009
	25-60	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	0%	No		ES, TAM	10/12/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
35 N/ 16 W	0-5	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	10% sub-angular to rounded gravels	No	.076 m ³	LR, DK	10/12/2009
	5-40	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking and ash	10% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	40-60	10YR5/6	C horizon: yellowish brown very fine sand	<5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
35 N/ 20 W	0-5	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	5% sub-angular to rounded gravels	No	.076 m ³	LR, DK	10/12/2009
	5-56	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking	<5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	56-60	10YR5/6	C horizon: yellowish brown very fine sand	<5% sub-angular to rounded gravels, cobbles	No		LR, DK	10/12/2009
35 N/ 22 W	0-8	10YR3/3	Forest Duff underlain by A horizon: organic compact silty-sand with root intrusions	10% sub-angular to rounded gravels	No	.076 m ³	LR, DK	10/12/2009
	8-20	2.5Y5/4	B horizon: olive brown compact fine silty-sand with some clay and few root intrusions	10% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	20-60	2.5Y5/6	C horizon: olive brown very fine compact sand	5% sub-angular to rounded gravels, cobbles	No		LR, DK	10/12/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
39 N/ 16 W	0-9	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<10% sub-angular to rounded gravels	No	.094 m ³	ES, TAM	10/12/2009
	9-50	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking, ash	5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
	50-75	10YR4/6	C horizon: yellowish brown very fine compact sand	<5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
41 N/ 16 W	0-25	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<5% sub-angular to rounded gravels	No	.088 m ³	ES, TAM	10/12/2009
	25-27		Charcoal layer - natural	0%	No		ES, TAM	10/12/2009
	27-70	10YR4/4	B horizon: yellowish brown fine silty-sand	<5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
43 N/ 16 W	0-17	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels	No	.101 m ³	ES, TAM	10/12/2009
	17-25	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking	<5% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
	25-80	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<1% sub-angular to rounded gravels	No		ES, TAM	10/12/2009
AMEC-1	0-18	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	5% sub-angular to rounded gravels	No	.088 m ³	LR, ES	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	18-55	10YR4/6	B horizon: yellowish brown fine silty-sand with few root intrusions	10% sub-angular to rounded gravels and pebbles	No		LR, ES	10/20/2009
	55-70	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<5% sub-angular to rounded gravels	No		LR, ES	10/20/2009
AMEC-2	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, cobbles	No	.088 m ³	LR, ES	10/20/2009
	15-55	10YR4/6	B horizon: yellowish brown fine silty-sand with few root intrusions	<5% sub-angular to rounded gravels and pebbles	No		LR, ES	10/20/2009
	55-70	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-3	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	15-34	10YR4/6	B horizon: yellowish brown fine silty-sand with few root intrusions	10% sub-angular to rounded gravels, pebbles, cobbles	No		LR, ES	10/20/2009
	34-60	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<5% sub-angular to rounded gravels	No		LR, ES	10/20/2009
AMEC-4	0-12	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels, pebbles	No	.088 m ³	LR, ES	10/20/2009
	12-45	10YR4/6	B horizon: yellowish brown fine silty-sand with few root intrusions and charcoal flecking	5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	45-70	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	<5% sub-angular to rounded gravels	No		LR, ES	10/20/2009
AMEC-5	0-12	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	12-45	10YR4/6	B horizon: yellowish brown fine silty-sand with few root intrusions	<5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	45-60	2.5Y5/6	C horizon: olive brown very fine sand with cemented sand pockets	<1% sub-angular to rounded gravels	No		LR, ES	10/20/2009
AMEC-6	0-16	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels, pebbles	No	.088 m ³	LR, ES	10/20/2009
	16-55	10YR4/6	B horizon: yellowish brown fine silty-sand with few root intrusions	<5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	55-70	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-7	0-20	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	5% sub-angular to rounded gravels, pebbles	No	.088 m ³	LR, ES	10/20/2009
	20-45	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	45-70	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-8	0-12	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	5% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	12-47	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	10% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	47-60	2.5Y5/4	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-9	0-12	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels, pebbles	No	.088 m ³	LR, ES	10/20/2009
	12-50	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	50-70	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-10	0-16	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<5% sub-angular to rounded gravels, pebbles	No	.088 m ³	LR, ES	10/20/2009
	16-44	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	44-70	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-11	0-12	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	<5% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	12-50	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	50-60	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-12	0-16	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<5% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	16-50	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions and charcoal flecking	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	50-60	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-13	0-8	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<10% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	8-60	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
AMEC-14	0-8	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<10% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	8-55	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	55-60	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-15	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels, pebbles	No	.088 m ³	LR, ES	10/20/2009
	10-55	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions and charcoal flecking	<5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	55-70	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		LR, ES	10/20/2009
AMEC-16	0-8	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<5% sub-angular to rounded gravels, pebbles	No	.086 m ³	LR, ES	10/20/2009
	8-55	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<5% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	55-68	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
AMEC-17	0-14	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	<5% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	14-50	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
	50-60	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
AMEC-18	0-8	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	<5% sub-angular to rounded gravels, pebbles	No	.076 m ³	LR, ES	10/20/2009
	8-34	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions and charcoal flecking	<1% sub-angular to rounded gravels, 1 cobble	No		LR, ES	10/20/2009
	34-60	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	<1% sub-angular to rounded gravels, pebbles	No		LR, ES	10/20/2009
AMEC-19	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<5% sub-angular to rounded gravels, pebbles	No	.076 m ³	ES, TAM	10/20/2009
	10-35	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<1% sub-angular to rounded gravels, 1 cobble	No		ES, TAM	10/20/2009
	35-60	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		ES, TAM	10/20/2009

Probe	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
AMEC-20	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking	<5% sub-angular to rounded gravels, pebbles	No	.082 m ³	ES, TAM	10/20/2009
	15-33	10YR4/6	B horizon: yellowish brown fine compact silty-sand with few root intrusions	<1% sub-angular to rounded gravels, 1 cobble	No		ES, TAM	10/20/2009
	33-65	2.5Y5/5	C horizon: olive brown very fine compact sand with cemented sand pockets	0%	No		ES, TAM	10/20/2009

Notes:

Table 2 Trench 1 Soil Descriptions

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
0-1 S/ 2.5-3 W	0-10	10YR3/3	Forest Duff underlain A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels and pebbles	No	.45 m ³	LR, DK	10/12/2009
	10-57	10YR4/4	B horizon: yellowish brown fine silty-sand with few root intrusions	5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	57-90	2.5Y5/4	C horizon: olive brown very fine sand with cemented sand pockets	>5% sub-angular to rounded gravels and few cobbles	No		LR, DK	10/12/2009
1-2 S/ 2.5-3 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels and pebbles	No	.30 m ³	LR, DK	10/12/2009
	10-60	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	>5% sub-angular to rounded gravels	No		LR, DK	10/12/2009
2-3 S/ 2.5-3 W	0-13	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	15% sub-angular to rounded gravels and pebbles	No	.325 m ³	LR, DK	10/12/2009
	13-50	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	>10% sub-angular to rounded gravels	No		LR, DK	10/12/2009
	50-65	2.5Y5/4	C horizon: olive brown very fine sand	>5% sub-angular to rounded gravels and few cobbles	No		LR, DK	10/12/2009
3-4 S/ 2.5-3 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	5% sub-angular to rounded gravels	No	.10 m ³	ES, TAM	10/13/2009
	10-20	10YR4/4	B horizon: yellowish brown silty sand with large impassable root intrusions	5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
4-5 S/ 2.5-3 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions. Ash layer present at level termination.	5% sub-angular to rounded gravels	No	.30 m ³	LR, DK	10/13/2009
	15-45	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	10% sub-angular to rounded gravels and pebbles	No		LR, DK	10/13/2009
	45-60	2.5Y5/4	C horizon: olive brown very fine sand	5% sub-angular to rounded gravels	No		LR, DK	10/13/2009
5-6 S/ 2.5-3 W	0-15	10YR3/4	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	15% sub-angular to rounded pebbles and cobbles	No	.30 m ³	TAM, DK	10/13/2009
	15-45	10YR4/6	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels and pebbles	No		TAM, DK	10/13/2009
	45-60	10YR5/3	C horizon: fine silty sand with minor root intrusions	<5% sub-angular to rounded gravels and pebbles	No		TAM, DK	10/13/2009
6-7 S/ 2.5-3 W	0-15	10YR3/4	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels and pebbles	No	.30 m ³	ES, TAM	10/13/2009
	15-40	10YR4/4	B horizon: yellowish brown silty sand with light charcoal flecking	5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009
	40-60	2.5Y5/4	C horizon: olive brown very fine sand	<5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009
7-8 S/ 2.5-3 W	0-20	10YR3/4	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	15% sub-angular to rounded gravels and pebbles	No	.30 m ³	ES, TAM	10/13/2009
	20-35	10YR4/6	B horizon: yellowish brown silty sand with light charcoal flecking, FAR, and root intrusions	10% sub-angular to rounded gravels and pebbles	No		ES, TAM	10/13/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	35-60	10YR5/4	C horizon: olive brown very fine sand with large root intrusion	5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009
8-9 S/ 2.5-3 W	0-13	10YR3/4	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking and ash layer in southern profile	10% sub-angular to rounded gravels and pebbles	No	.30 m ³	ES, TAM	10/13/2009
	13-55	10YR4/6	B horizon: yellowish brown silty sand with light charcoal flecking and root intrusions. Two large unmodified rocks at 50cmbs with no associated soil discoloration	5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009
	55-60	10YR5/4	C horizon: olive brown very fine sand	<5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009
9-10 S/ 2.5-3 W	0-17	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and charcoal flecking and ash layer in southern profile	10% sub-angular to rounded gravels and pebbles	No	.33 m ³	ES, TAM	10/13/2009
	17-47	10YR4/6	B horizon: yellowish brown silty sand with light charcoal flecking and root intrusions.	5% sub-angular to rounded gravels and pebbles	No		ES, TAM	10/13/2009
	47-66	10YR6/3	C horizon: olive brown very fine sand, silty sand	5% sub-angular to rounded gravels	No		ES, TAM	10/13/2009

Table 3 Trench 2 Soil Descriptions

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
0-1 N/ 7-7.5 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions and evidence of thin E horizon	10% sub-angular to rounded gravels	No	.275 m ³	LR, ES	10/13/2009
	10-45	10YR5/4	B horizon: yellowish brown fine silty-sand and root intrusions and natural FAR(2)	5% sub-angular to rounded gravels	No		LR, ES	10/13/2009
	45-55	2.5Y5/4	C horizon: olive brown very fine sand with large root obstructions	<5% sub-angular to rounded gravels	No		LR, ES	10/13/2009
0-1 S/ 7-7.5 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.25 m ³	LR, ES	10/13/2009
	10-50	10YR5/4	B horizon: yellowish brown fine silty-sand and large root intrusions preventing complete excavation of unit	5% sub-angular to rounded gravels	No		LR, ES	10/13/2009
1-2 S/ 7-7.5 W	0-18	10YR3/3	Forest Duff underlain by E Horizon and A horizon: organic silty-sand with root intrusions and light charcoal flecking	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	LR, ES	10/13/2009
	18-46	10YR5/4	B horizon: yellowish brown fine silty-sand and large root intrusions	10% sub-angular to rounded gravels, pebbles	No		LR, ES	10/13/2009
	46-60	2.5Y5/4	C horizon: olive brown very fine compact sand and few root intrusions	<5% sub-angular to rounded gravels	No		LR, ES	10/13/2009
2-3 S/ 7-7.5 W	0-12	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions and light charcoal flecking	10% sub-angular to rounded gravels, pebbles, and few cobbles	No	.30 m ³	LR, ES	10/13/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	12-47	10YR5/4	B horizon: yellowish brown fine silty-sand and large root intrusions	10% sub-angular to rounded gravels, pebbles	No		LR, ES	10/13/2009
	47-60	2.5Y5/4	C horizon: olive brown very fine compact sand and concretions	<5% sub-angular to rounded gravels, pebbles, and 1 cobble	No		LR, ES	10/13/2009
3-4 S/ 7-7.5 W	0-20	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/13/2009
	20-35	10YR5/4	B horizon: yellowish brown fine silty-sand and large root intrusions	10% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
	35-60	2.5Y5/4	C horizon: olive brown very fine compact sand	5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
4-5 S/ 7-7.5 W	0-15	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/13/2009
	15-40	10YR5/4	B horizon: yellowish brown fine silty-sand and large root intrusions	5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
	40-60	2.5Y5/4	C horizon: olive brown very fine compact sand	5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
5-6 S/ 7-7.5 W	0-10	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions	5% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/13/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	10-53	10YR5/4	B horizon: yellowish brown fine silty-sand and large root intrusions	5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
	53-60	2.5Y5/4	C horizon: olive brown very fine compact sand	<5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
6-7 S/ 7-7.5 W	0-15	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions	5% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/13/2009
	15-40	10YR5/4	B horizon: yellowish brown fine silty-sand	5% sub-angular to rounded gravels, pebbles, 1 cobble	No		TAM, DK	10/13/2009
	40-60	2.5Y5/4	C horizon: olive brown very fine compact sand	<5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
7-8 S/ 7-7.5 W	0-15	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions	5% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/13/2009
	15-36	10YR5/4	B horizon: yellowish brown fine silty-sand	5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
	36-60	2.5Y5/4	C horizon: olive brown very fine compact sand	<5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
8-9 S/ 7-7.5 W	0-25	10YR3/3	Forest Duff underlain by A horizon: very organic silty-sand with root intrusions and evidence of bioturbation	5% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	TAM, DK	10/13/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	25-40	10YR5/4	B horizon: yellowish brown fine silty-sand and evidence of bioturbation	5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009
	40-60	2.5Y5/4	C horizon: olive brown very fine compact sand with rodent burrow in southern profile	<5% sub-angular to rounded gravels, pebbles	No		TAM, DK	10/13/2009

Table 4 Trench 3 Soil Descriptions

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
14-15 S/ 3-3.5 W	0-18	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	TAM, DK	10/15/2009
	18-38	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels, cobbles	No		TAM, DK	10/15/2009
	38-60	2.5Y5/4	C horizon: olive brown very fine sand	>5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
15-16 S/ 3-3.5 W	0-25	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/15/2009
	25-50	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
	50-60	2.5Y5/4	C horizon: olive brown very fine sand	>5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
16-17 S/ 3-3.5 W	0-21	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	LR, TAM	10/15/2009
	21-50	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels, cobbles	No		LR, TAM	10/15/2009
	50-60	2.5Y5/4	C horizon: olive brown very fine sand	>5% sub-angular to rounded gravels	No		LR, TAM	10/15/2009
17-18 S/ 3-3.5 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	LR, TAM	10/15/2009
	15-48	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		LR, TAM	10/15/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	48-60	2.5Y5/4	C horizon: olive brown very fine sand	>5% sub-angular to rounded gravels	No		LR, TAM	10/15/2009
18-19 S/ 3-3.5 W	0-18	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	LR, ES, TAM	10/15/2009
	18-50	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		LR, ES, TAM	10/15/2009
	50-60	2.5Y5/4	C horizon: olive brown very fine sand	>5% sub-angular to rounded gravels	No		LR, ES, TAM	10/15/2009
19-20 S/ 3-3.5 W	0-18	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/15/2009
	18-44	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
	44-60	2.5Y5/4	C horizon: olive brown very fine sand and root intrusions	>5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
20-21 S/ 3-3.5 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM, DK	10/15/2009
	15-50	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
	50-60	2.5Y5/4	C horizon: olive brown very fine sand and root intrusions	>5% sub-angular to rounded gravels	No		TAM, DK	10/15/2009
21-22 S/ 3-3.5 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	LR, DK	10/15/2009
	15-55	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		LR, DK	10/15/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
	55-60	2.5Y5/4	C horizon: olive brown very fine sand and root intrusions	>5% sub-angular to rounded gravels	No		LR, DK	10/15/2009
22-23 S/ 3-3.5 W	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions and charcoal	15% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	LR	10/14/2009
	10-60	10YR4/4	B horizon: yellowish brown silty sand with root intrusions, charcoal flecking and burnt tree roots	5% sub-angular to rounded gravels	No		LR	10/14/2009
23-24 S/ 3-3.5 W	0-12	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	LR, DK	10/15/2009
	12-60	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	5% sub-angular to rounded gravels	No		LR, DK	10/15/2009

Table 5 Trench 4 Soil Descriptions

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
32-33 S/ 6.5-7 W	0-13	10YR3/3	Forest Duff underlain by E horizon and A horizon: organic silty-sand with root intrusions and charcoal flecking	15% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	LR, ES	10/13/2009
	13-45	10YR4/4	B horizon: yellowish brown silty sand with root intrusions	10% sub-angular to rounded gravels, cobbles	No		LR, ES	10/13/2009
	45-60	2.5Y5/4	C horizon: olive brown very fine sand	<3% sub-angular to rounded gravels	No		LR, ES	10/13/2009
33-34 S/ 6.5-7 W	0-15	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions and charcoal flecking. Ash visible in east profile.	15% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	LR, ES	10/13/2009
	15-55	10YR4/4	B horizon: yellowish brown silty sand with large root intrusions and natural FAR	10% sub-angular to rounded gravels, cobbles	No		LR, ES	10/13/2009
	55-60	2.5Y5/4	C horizon: olive brown very fine sand	<3% sub-angular to rounded gravels	No		LR, ES	10/13/2009
34-35 S/ 6.5-7 W	0-13	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions and charcoal flecking	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	LR, ES	10/14/2009
	13-52	10YR4/4	B horizon: yellowish brown silty sand with large root intrusions, charcoal and burnt roots	5% sub-angular to rounded gravels	No		LR, ES	10/14/2009
	52-60	2.5Y5/4	C horizon: olive brown very fine sand	<3% sub-angular to rounded gravels	No		LR, ES	10/14/2009

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
35-36 S/ 6.5-7 W	0-24	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions and charcoal flecking and ash	25% sub-angular to rounded gravels, pebbles, cobbles	No	.30 m ³	LR	10/14/2009
	24-48	10YR4/4	B horizon: yellowish brown silty sand with large root intrusions	10% sub-angular to rounded gravels	No		LR	10/14/2009
	48-60	2.5Y5/4	C horizon: olive brown very fine sand	<3% sub-angular to rounded gravels	No		LR	10/14/2009
36-37 S/ 6.5-7 W	0-23	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	TAM	10/14/2009
	23-35	10YR4/4	B horizon: yellowish brown silty sand with root intrusions and FAR	5% sub-angular to rounded gravels	No		TAM	10/14/2009
	35-60	2.5Y5/4	C horizon: olive brown very fine sand	<3% sub-angular to rounded gravels	No		TAM	10/14/2009
37-38 S/ 6.5-7 W	0-20	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with root intrusions	10% sub-angular to rounded gravels, pebbles	No	.30 m ³	ES, TAM	10/14/2009
	20-50	10YR4/4	B horizon: yellowish brown silty sand with root intrusions and charcoal flecking and ash in east profile	5% sub-angular to rounded gravels	No		ES, TAM	10/14/2009
	50-60	2.5Y5/4	C horizon: olive brown very fine sand	<3% sub-angular to rounded gravels	No		ES, TAM	10/14/2009

Table 6 Unit 1 Soil Descriptions

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
Unit 1	0-23	10YR3/3	Forest Duff underlain by E horizon and A horizon: organic silty-sand with root intrusions and charcoal flecking	10% sub-angular to rounded gravels and pebbles	No	3.31 m ³	TAM, DK	10/20/2009
	23-56	10YR4/6	B horizon: yellowish brown fine silty-sand with root intrusions and light charcoal	5% sub-angular to rounded gravels and pebbles	No		TAM, DK	10/20/2009
	56-82	10YR5/4	C horizon: olive brown very fine sand	<5% sub-angular to rounded gravels	Projectile Point		TAM, DK	10/20/2009

Table 7 Unit 2 Soil Descriptions

Unit	Level (cmbs)	Soil Color	Soil Type	Rock %	Cultural Material	Volume	Excavators	Date
Unit 2	0-10	10YR3/3	Forest Duff underlain by A horizon: organic silty-sand with large root intrusions and charcoal flecking, ash, burnt wood	15% sub-angular to rounded gravels, pebbles, few cobbles	No	2.31 m ³	LR, ES	10/19/2009
	10-45	10YR4/6	B horizon: yellowish brown fine silty-sand with root intrusions and charcoal flecking	5% sub-angular to rounded gravels and pebbles	No		LR, ES	10/19/2009
	45-66	10YR5/4	C horizon: olive tan brown very fine sand with cemented sand pockets and root intrusions	<1% sub-angular to rounded gravels	No		LR, ES	10/20/2009

APPENDIX D

Photographs



Photo 1. Overview of Trench 1 excavation, facing south.



Photo 2. East profile of Trench 1, from 0 to 1 South, 2.5 to 3 West.



Photo 3. East profile of Trench 1, from 1 to 2 South, 2.5 to 3 West.



Photo 4. East profile of Trench 1, from 2 to 3 South, 2.5 to 3 West.



Photo 5. East profile of Trench 1, from 3 to 4 South, 2.5 to 3 West.



Photo 6. East profile of Trench 1, from 4 to 5 South, 2.5 to 3 West.



Photo 7. East profile of Trench 1, from 5 to 6 South, 2.5 to 3 West.



Photo 8. East profile of Trench 1, from 6 to 7 South, 2.5 to 3 West.



Photo 9. East profile of Trench 1, from 7 to 8 South, 2.5 to 3 West.



Photo 10. East profile of Trench 1, from 8 to 9 South, 2.5 to 3 West.



Photo 11. East profile of Trench 1, from 9 to 10 South, 2.5 to 3 West.



Photo 12. Overview of Trench 2, 1 North to 9 South, 7 to 7.5 West, facing south.



Photo 13. East profile of Trench 2, 1 North to 0 South, 7 to 7.5 West.



Photo 14. East profile of Trench 2, 0 to 1 South, 7 to 7.5 West.



Photo 15. East profile of Trench 2, 1 to 2 South, 7 to 7.5 West.



Photo 16. East profile of Trench 2, 2 to 3 South, 7 to 7.5 West.



Photo 17. East profile of Trench 2, 3 to 4 South, 7 to 7.5 West.



Photo 18. East profile of Trench 2, 4 to 5 South, 7 to 7.5 West.



Photo 19. East profile of Trench 2, 5 to 6 South, 7 to 7.5 West.



Photo 20. East profile of Trench 2, 6 to 7 South, 7 to 7.5 West.



Photo 21. East profile of Trench 2, 7 to 8 South, 7 to 7.5 West.



Photo 22. East profile of Trench 2, 8 to 9 South, 7 to 7.5 West.



Photo 23. Overview of Trench 3, facing south.



Photo 24. East profile of Trench 3, from 14 to 15 South, 3 to 3.5 West.



Photo 25. East profile of Trench 3, from 15 to 16 South, 3 to 3.5 West.



Photo 26. East profile of Trench 3, from 16 to 17 South, 3 to 3.5 West.



Photo 27. East profile fo Trench 3, from 17 to 18 South, 3 to 3.5 West.



Photo 28. East profile of Trench 3, from 18 to 19 South, 3 to 3.5 West.



Photo 29. East profile of Trench 3, from 19 to 20 South, 3 to 3.5 West.



Photo 30. East profile of Trench 2, from 20 to 21 South, 3 to 35. West.



Photo 31. East profile of Trench 3, from 21 to 22 South, 3 to 3.5 West.



Photo 32. East profile of Trench 3, from 22 to 23 South, 3 to 3.5 West.



Photo 33. East profile of Trench 3, from 23 to 24 South, 3 to 3.5 West.



Photo 34. Overview of Trench 4, 32 to 38 South, 6.5 to 7 West, facing south.



Photo 35. East profile of Trench 4, 32 to 33 South, 6.5 to 7 West.



Photo 36. East profile of Trench 4, from 33 to 34 South, 6.5 to 7 West.



Photo 37. East profile of Trench 4, 34 to 35 South, 6.5 to 7 West.



Photo 38. East profile of Trench 4, 35 to 36 South, 6.5 to 7 West.



Photo 39. East profile of Trench 4, 36 to 37 South, 6.5 to 7 West.



Photo 40. East profile of Trench 4, 37 to 38 South, 6.5 to 7 West.



Photo 41. Overview of excavation of Unit 1, facing southeast.



Photo 42. East profile of Unit 1.



Photo 43. South profile of Unit 1.



Photo 44. Excavation of Unit 2, facing northwest.



Photo 45. East profile of Unit 2.



Photo 46. North profile of Unit 2.

APPENDIX E

State of Washington Archaeological Isolate Inventory Form



STATE OF WASHINGTON ARCHAEOLOGICAL ISOLATE INVENTORY FORM

Smithsonian Number: 45KI757

*County: King

*Date: 12/22/09 *Compiler: Lara C. Rooke

ISOLATE DESIGNATION

Isolate Name: East Norway Hill Cascade Point

Field/ Temporary ID:

***Site Type** (Refer to the DAHP Survey and Inventory Guidelines Pages 18-22): Pre-contact projectile point

ISOLATE LOCATION

***USGS Quad Map Name:** Kirkland WA (1950) Photorevised 1968 abd 1973

***Legal Description:** T26 R 5 E: Section(s): 9

Quarter Section(s): NW1/4, SW1/4, SW 1/4

***UTM: Zone 10 Easting 561120 Northing 5288700**

Latitude: 48.0044 **Longitude:**122.2294 **Elevation (FT/M):** 260

Other Maps:

Type:

Scale:

Source:

Drainage, Major: Sammamish River

Drainage, Minor: unnamed creek **River Mile:** 6

Aspect: West

Slope: 10%

***Location Description** (*General to Specific*): The Isolated Point was located near the town of Bothell, just south of the I-405/SR 522 Interchange. It is located on a terrace above an unnamed creek overlooking I-405 to the west. The point was situated on a forested bench along he west slope of the foot of Ewast Norway Hill near milepost 23. The find was located in the Washington State Department of Transportation (WSDOT) right-of-way just east of the I-405 norhtbound lanes, approximately 7 meters above the roadway.

Approach (*For Relocation Purposes*): Accessing the location where the point was found proceed north on I-405 past the NE 160th Street overpass (Exit 22). Travel approximately 0.5 mile past the exit and park on the shoulder of the highway, underneath an overhead directional sign. Proceed up the slope and walk south to the Kirkland Stage 2 landslide well. The point was found at an approximate depth of 63 centimeters below the surface.

ISOLATE DESCRIPTION

***Narrative Description:** The sole artifact recovered from 45KI757 is the tip of a projectile point made from a form of crystalline volcanic rock (Photograph 1). The absence of chemical weathering on this object, which is common on artifacts made from glassy dacites in this region indicates the raw material was a form of either basalt or andesite. Fragmentary dimensions are 18 mm long, 18 mm wide, and 6 mm thick. The width/thickness ratio of what remains of the point is 3.0.

Distinguishable flake scars are small and regular indicating pressure reduction of at least the tip of the original object. On the dorsal side (Photograph 1 (a)) these extend past the center line of the object, but on the ventral side (Photograph 1 (b)) they extend only 4.0 to 4.5 mm from the edge, leaving a broad triangle of the ventral face of the original flake blank in the center. Nearly all flake removals ended in step fractures.

The cross-section is biconvex, although the cross-section of the ventral face appears flat in the center and tapers to edges, as of the complete point would appear plano-convex. Both edges are serrated from the fracture edge to the tip. The serrations are regular, measuring up to 1.2 mm deep and 2.1 mm tip to tip. With the object oriented tip upwards, all but a few of the serration flake scars appear on the left edge of each face. This pattern indicates the maker serrated first one edge, the flipped the point over and serrated the opposite edge. Assuming he worked with the tip toward his thumb, or to the outside, the maker was probably right-handed. The projectile point is broken transversely in a step fracture of the sort that results from impact with a hard object (Photograph 2).

***Vegetation (On Site):** Hemlock and Douglas Fir trees make up the overstory, with a few small red alders and bigleaf maples growing in recently exposed openings. Bracken fern, salmonberry, and trailing blackberry dominate the understory, which also contains scattered clumps of dogtooth hazel, salal, stinging nettle, and lady fern.

Local: Second growth forest **Regional:** Tsuga heterophylla zone

Landforms (On Site): Glacial ridge **Local:**

Water Resources (Type): Sammamish river **Distance:** 0.5 miles **Permanence:** Permanent

***Method of Collection(s):** Data recovery

***Location of Artifacts (Temporary/Permanent):** AMEC's Bothell Office/ Burke Museum

ISOLATE AGE

***Component:** mid-Holocene/ Archaic ***Dates:** 10,000 to 4,000 BP ***Dating Method:** Regional Projectile Point Typology ***Phase:** Olcott **Basis for Phase Designation:** Typology

ISOLATE RECORDERS

Observed by: Lara Rooke **Address:** 11810 North Creek Parkway N, Bothell, WA 98011

***Date Recorded:** 10/20/09

***Recorded by** (*Professional Archaeologist*): Lara C. Rooke

***Affiliation:** AMEC Earth & Environmental, Inc. ***Affiliation Phone Number:** 425-368-1000

***Affiliation Address:** 11810 North Creek Parkway N, Bothell, WA 98011

***Affiliation E-mail:** lara.rooke@amec.com

ISOLATE HISTORY

Previous Work (*Done on Area Where Isolate was Found*):

45KI757 was originally recorded as a small lithic scatter situated on a narrow bench overlooking the valley near the head of a small, unnamed creek that flows north toward the Sammamish River. The site was discovered in 2007 by archaeologists from Landau Associates. (Landau). Landau made the discovery during a subsurface archaeological survey conducted as part of the National Historic Preservation Act, Section 106 compliance effort for the SR-520/I-5 Improvement Project.

To mitigate unavoidable impacts to the site, AMEC Earth & Environmental, Inc (AMEC) conducted data recovery during October 2009. An additional 35 shovel tests were excavated along the bench to define the boundaries of the site, two 2-by-2 meter block units, and four trenches, with a combined length of 37 meters, were placed along the bench and within the area noted by Landau for high artifact concentrations.

AMEC found one artifact. A Cascade style serrated projectile point tip was found in Unit 1, at the interface of a buried A horizon and the B horizon, underneath slope wash and colluvium. The artifact was the only definitively cultural object found at the site.

Unit 1 was a 2-by-2 meter block unit that was placed in an area where Landau had identified FCR concentrations. The unit was highly disturbed and impacted by slope run-off. Large areas within the unit were impacted by tree throw and several burned roots were present. All of the FCR observed appeared to have a natural origin and was found in association with tree roots.

WSDOT and AMEC archaeologists re-inspected the original artifact collection from the site and determined that all of the reported artifacts were natural shards of platy stone or natural occurrences of FCR. Prior to our data recovery work sixteen items were selected from the collection that did appear to have a cultural origin, including fire-altered rock, an anvil stone, and flakes and flaked cobbles of igneous and meta-sedimentary

***Mandatory Information for Official Smithsonian Number designation.**

Revised 10/2008

rock. In light of the lack of artifacts found during the data recovery, these pieces were reassessed and AMEC found that few of these artifacts were definitively cultural.

In light of the recent data recovery and reanalysis of the artifacts found previously, site 45KI757 appears to be an isolated find. (*Refer to Lara C. Rooke and Dr. James Chatters. 2009. Data Recovery at 45KI75, an Olcott Isolate, King county, Washingotn. AMEC Earth & Environmental, Inc., Bothell, WA.*)

LAND OWNERSHIP

- ***Owner:** WSDOT, Urban Corridors Program
- ***Address:** 401 2nd Ave. S., Suite 400, Seattle, WA 98104
- ***Tax Lot/ Parcel No:**

RESEARCH REFERENCES

***Items/Documents Used In Research** (*Specify*): Refer to *Lara C. Rooke and Dr. James Chatters. 2009. Data Recovery at 45KI75, and Olcott Isolate, King County, WA.. AMEC Earth & Environmental, Inc., Bothell, WA. 2009.*

USGS MAP

*Quad Name: Kirkland

*Series: 7.5"

*Date: 1950

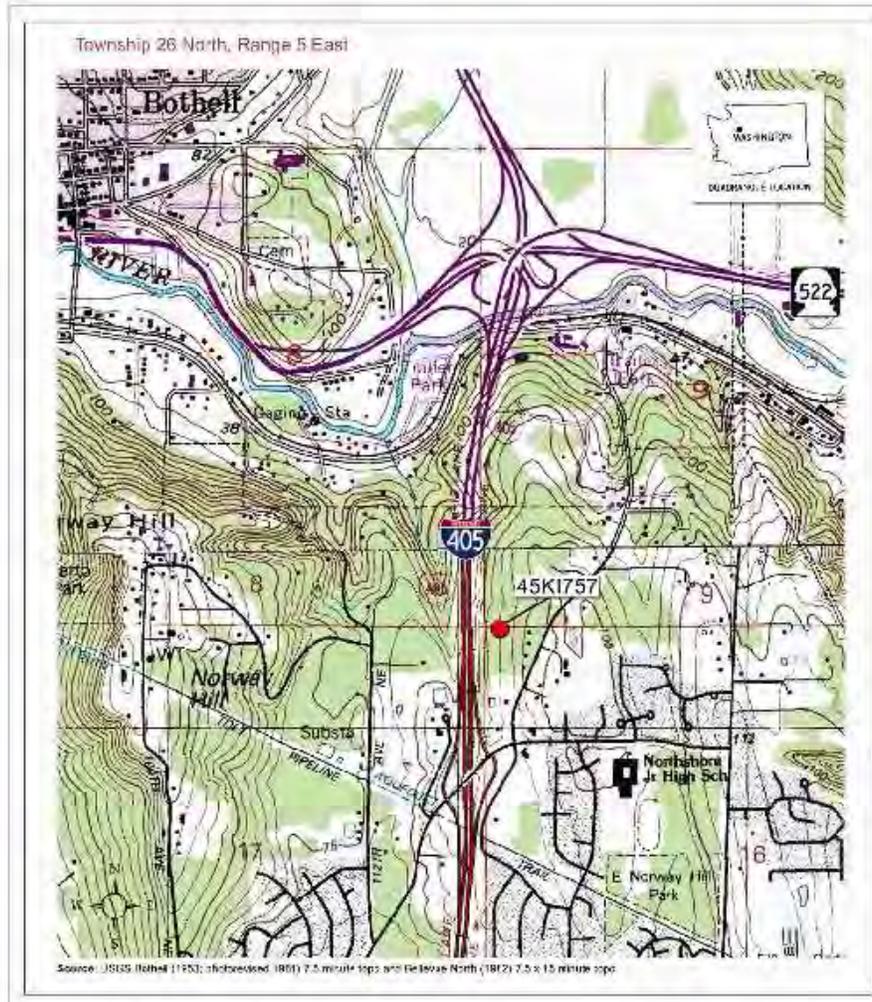


FIGURE 1

Project Vicinity Map

DATA RECOVERY AT 45KI757

9-915-10(4-90)



PHOTOGRAPH(S)

***Photograph Description(s):** Isolate Projectile point



Photograph 1. Serrated projectile point (From left to right: a-dorsal and b-ventral)



Photograph 2. View of the Impact fracture.

CONTINUATION/ ADDENDUM SHEET

Label all additional pages by corresponding headings.

(e.g. Isolate Description, Isolate History, Research References, etc.)