

ARCHAEOLOGICAL INVESTIGATION REPORT: MISSION BEACH HEIGHTS ROAD IMPROVEMENTS, TULALIP RESERVATION, SNOHOMISH COUNTY, WASHINGTON

Prepared for: Gray & Osborne, Inc.



June 20, 2016

Prepared by:



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Equinox Research and Consulting International Inc. (ERCI) would like to thank Kevin Brown of Gray & Osborne, Inc. for retaining us for this investigation and for their commitment to the process and archaeological resources.

We extend our thanks to the representatives of the Tulalip Tribes for their insights and timely attention to our projects.

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

MANAGEMENT SUMMARY

Project	Mission Beach Heights Road Improvements
County	Snohomish
TRS	Township 30N, Range 04 East, Sections 34, 35
Quad	Tulalip
Parcel ID	00613300006800, 00613300007100
Address	N/A
Property Owner	Tulalip Tribes
Area	~2.3 acres
Lat/Long	48°2'55" N 122°16'24" W
UTM Zone 10	Easting 554155 Northing 5321989
Elevation	Sea level to 172 feet above sea level
Tribal Lands	Tulalip Reservation
Nearest Water Body	Possession Sound, Tulalip Bay
Nearest Arch Site	45SN6 - ~0.5 miles
Soils	Kitsap silt loam, Everett very gravelly sandy loam, Alderwood gravelly sandy loam
Geology	Pleistocene – glaciomarine drift, Fraser age; Pleistocene – advance continental glacial outwash, sand, Fraser age

In June 2016 Kevin Brown of Gray & Osborne, Inc. contacted Kelly R. Bush of Equinox Research and Consulting International Inc. (ERCI) to carry out an archaeological investigation for the Mission Beach Heights Road Improvements Project on the Tulalip Reservation, Snohomish County, Washington. The Project encompasses the Road Right of Way on Mission Beach Heights Road and on Snohomish County Assessor Parcels 00613300006800 and 00613300007100.

In June 2016 ERCI undertook a research overview, an intensive pedestrian survey and a judgmental subsurface shovel-testing program comprising 113 Shovel Tests (ST) to look for material traces of past human activity in the Project area. This report documents the results of our investigation.

The management recommendations that we are now providing are based on our findings from this investigation. **A single stone tool was identified during the shovel testing portion of this project.** The location of this isolated lithic is not slated for ground disturbance. We recommend that

1. The Mission Beach Heights Road Improvements Project (the Project) proceed as planned, ensuring that no ground disturbance is planned for the location of the shovel test that holds the identified lithic.
2. The Project proceed with a professional archaeological monitor present for all ground-disturbing activities, due to the proximity of the Project area to recorded archaeological site to the Tulalip Tribal Cemetery and the location of the archaeological isolate, and the resultant potential to encounter intact precontact or historic deposits.
3. An approved archaeological monitoring plan be developed and reviewed in advance of ground-disturbing activities for the Project. It should include an Unanticipated Discovery Protocol.
4. Prior to construction activities an on-site Unanticipated Discoveries Protocol (UDP) training for the construction crew this includes prior to any ground-disturbing activities, including silt fence installation or mobilization of equipment. A copy of the UDP and monitoring plan should be kept on site at all times during all Project activities.

5. If any ground-disturbing activities in the Project area related to this development or in any other development in the future uncover protected archaeological deposits (e.g., bones, carbon, shell, stone or antler tools) when an archaeologist is not on site all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then contact:
 - a. The Project manager;
 - b. A professional archaeologist;
 - c. The Department of Archaeology and Historic Preservation (DAHP): Lance Woolwage (360-586-3536) or Gretchen Kaehler (360- 586-3088);
 - d. The Tulalip Tribes and Hilib Cultural Center's Preservation Officer Richard Young (360-716-2652) or Gene Enick (360-716-2653).

6. If any ground-disturbing activities on this property related to this development or in any other development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment be moved to a safe distance away from the location. The on-site superintendent should then contact:
 - a. The property owner and Project manager;
 - b. Tulalip Cultural Program Representative Richard Young (360-716-2652) or Gene Enick (360-716-2653);
 - c. The Snohomish County Sheriff's Department (425-407-3999) and the - Snohomish County Medical Examiner (425-438-6200) to determine if the remains are forensic in nature;

If the remains are not forensic in nature the Department of Archaeology and Historic Preservation (DAHP), Dr. Guy Tasa (360-586-3534), will take the lead on consulting with the tribe to determine the appropriate method of treatment for the remains.

CONTENTS

CREDITS AND ACKNOWLEDGMENTS.....	ii
MANAGEMENT SUMMARY.....	iii
FIGURES	vi
TABLES.....	vi
1.0 INTRODUCTION.....	1
2.0 TRIBAL CONSULTATION.....	1
3.0 BACKGROUND.....	1
3.1 Physical Environment.....	1
Geology and Geomorphology	2
Soils.....	6
Climate	7
3.2 Cultural Environment	7
Villages.....	8
Subsistence & Settlement Patterns	10
Resource Gathering and Processing.....	11
3.3 Previous Archaeology.....	14
Historic Register Properties.....	15
Previous Cultural Resource Reports.....	15
4.0 METHODS.....	16
4.1 Archival Research.....	16
4.2 Field Methods	16
5.0 RESULTS.....	20
5.1 Pedestrian Survey	20
5.2 Subsurface Testing.....	21
Site Sediments	24
Cultural Materials.....	24
Summary	26
6.0 MANAGEMENT RECOMMENDATIONS.....	26
7.0 REFERENCES CITED	28
8.0 APPENDIX(APPENDICES)	36
Appendix 1: Matrix Descriptions	36
Appendix 2: Shovel Test Descriptions	36
Appendix 3: Photolog.....	44

FIGURES

Figure 1: Regional map showing location of Project area.....	2
Figure 2: USGS Tulalip 7.5-minute quadrangle map showing Project area in red.	3
Figure 3: Snohomish County Assessor's map showing Project area in red.....	4
Figure 4: Lidar map showing Project area in red.	4
Figure 5: Greatest extent of Puget Lobe, Cordilleran Ice Sheet (after Washington State Department of Natural Resources 2016). Red dot indicates location of Project Area.	5
Figure 6: USGS Geologic map showing glacial deposits in the Project area (Menard 1980).....	6
Figure 7: View southeast, overview of lower footpath, beach and beach bluff.	16
Figure 8: View south, footpath leading from Mission Beach Road to beach.....	17
Figure 9: View southwest, Mission Beach Road and footpath to beach.	17
Figure 10: View northwest, lower Mission Beach Heights road, cemetery at right.....	18
Figure 11: View southeast, lower middle Mission Beach Heights Road, cemetery at left.	18
Figure 12: View southeast, upper middle portion of Mission Beach Heights Road.	19
Figure 13: View southeast, upper portion of Mission Beach Heights Road.	19
Figure 14: Chief Patkanim's memorial, erected in 1924 (Meany 1924) and epitaph (inset).	20
Figure 15: Tulalip Tribal Cemetery, Tulalip Tribes' Chief William Shelton's memorial.	21
Figure 16: Sketch map of Project area's western portion showing shovel test locations.	22
Figure 17: Sketch map of Project area's eastern portion showing shovel test locations.	23
Figure 18: ST profiles, left to right ST 20, 65 and 78.	24
Figure 19: ST 20 overview and profile.....	25
Figure 20: Representative sample of nondescript modern refuse (not to scale).....	25
Figure 21: Isolated artifact, unifacially flake cobble (scale in cm).	26

TABLES

Table 1: Place names of nearby sites recorded in Waterman et al. (2001).....	9
Table 2: Previously recorded archaeological sites within two miles of the Project area.....	14
Table 3: Historic register properties on file with DAHP.....	15
Table 4: Previous cultural resource reports on file with DAHP.....	15
Table 5: Shovel test matrix descriptions.	24

1.0 INTRODUCTION

In June 2016 Christopher J. Bacon of Gray & Osborne, Inc. contacted Kelly R. Bush of Equinox Research and Consulting International Inc. (ERCI) to carry out an archaeological investigation for the Mission Beach Heights Road Improvements Project on the Tulalip Reservation, Snohomish County, Washington. The Project encompasses the Road Right of Way on Mission Beach Heights Road and on Snohomish County Assessor Parcels 00613300006800 and 00613300007100. The Project is described as follows

roadway reconstruction of approximately 1,500 lineal feet of Mission Beach Heights Road from Mission Beach Road to the cul-de-sac. In addition to the roadwork, the project will include, storm drainage improvements, water main improvements, site preparation, grading, compacting, placement of gravel material and asphalt pavements, temporary traffic control, erosion control and miscellaneous surface and driveway restoration [Kevin Brown, Gray & Osborne, personal communication 2016].

The Tulalip Tribes are the lead agency for the Project.

This report documents the archaeological field investigation, which included photo documentation, a pedestrian survey and 113 subsurface shovel tests. Gray & Osborne are responsible for distributing this report to the Tulalip Tribes and to the pertinent regulatory agencies and Washington State Department of Archaeology and Historic Preservation.

2.0 TRIBAL CONSULTATION

On June 15, 2016, Tulalip Tribes representatives Richard Young and Gene Enick visited the Project while ERCI was conducting its investigation. The two escorted ERCI's Sarah Johnson Humphries to view the memorials to Chiefs Patkanim and William Shelton in the Mission Beach Cemetery, and observed the archaeological isolate recovered during this investigation and its discovery location.

3.0 BACKGROUND

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

3.1 Physical Environment

The Mission Beach Heights Road Improvements Project (the Project) will entail ground-disturbing activities on the Tulalip Reservation, Snohomish County, Washington (Figure 1). The Project area faces Possession Sound, about 6 miles north-northwest of Everett, Washington (Figure 2). The Project itself encompasses the footpath leading down to Mission Beach, south of the Mission Avenue and Mission Beach Heights Road intersection, a portion of Mission Beach Road, and the full length of Mission Beach Heights Road (Figure 3). The Project traverses the present-day beach and back beach at or near sea level, then ascends a low hill to about 170 feet above sea level (Figure 4).

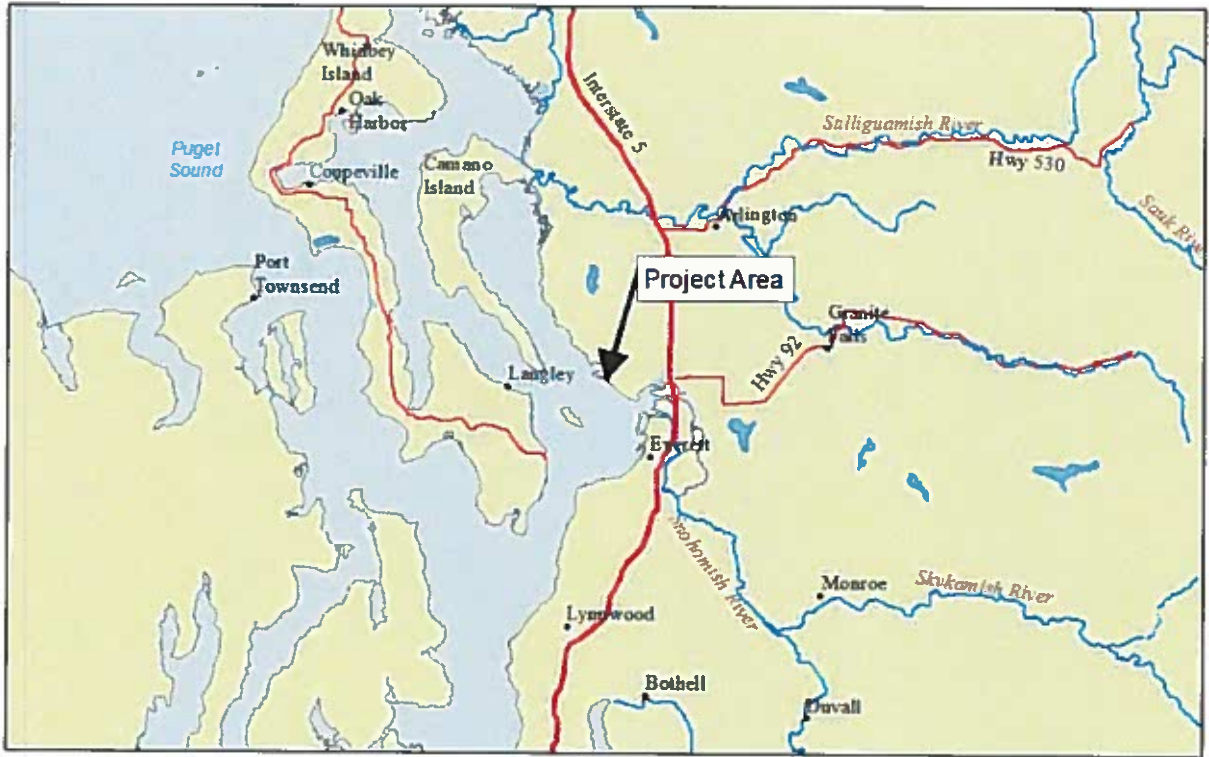


Figure 1: Regional map showing location of Project area.

Geology and Geomorphology

The countryside around the Project area is part of the Puget Trough section of the Pacific Border physiographic province, which formed between approximately 50 and 10 million years ago through tectonic uplift and accretion at the subduction zone on the North American Plate's western margin. The present-day landscape was formed more recently by repeated advances of the Cordilleran Ice Sheet, which covered much of northwestern North America during the cold stages of the Pleistocene Epoch, which began about 2.6 million years ago. The most recent glacial period—the Fraser Glaciation—lasted from about 25,000 to 10,000 years ago. In that time glacial ice advanced and retreated twice in what is now the area of Puget Sound and the surrounding Puget Lowland, first during the Everson Creek Stade and most recently in the Vashon Stade (Armstrong et al. 1965). At the height of the Vashon Stade, about 17,000 years ago, the Project area was under several hundred meters of glacial ice known as the Puget Lobe (Figure 5) of the Cordilleran Ice Sheet—which sculpted the Puget Lowland (Porter and Swanson 1998). By about 16,500 years ago the ice was retreating northward—gradually exposing the Puget Lowland and Cascade Range—and by about 5,000 years ago the region would have looked much as it does today, as sea level stabilized near its present-day elevation.

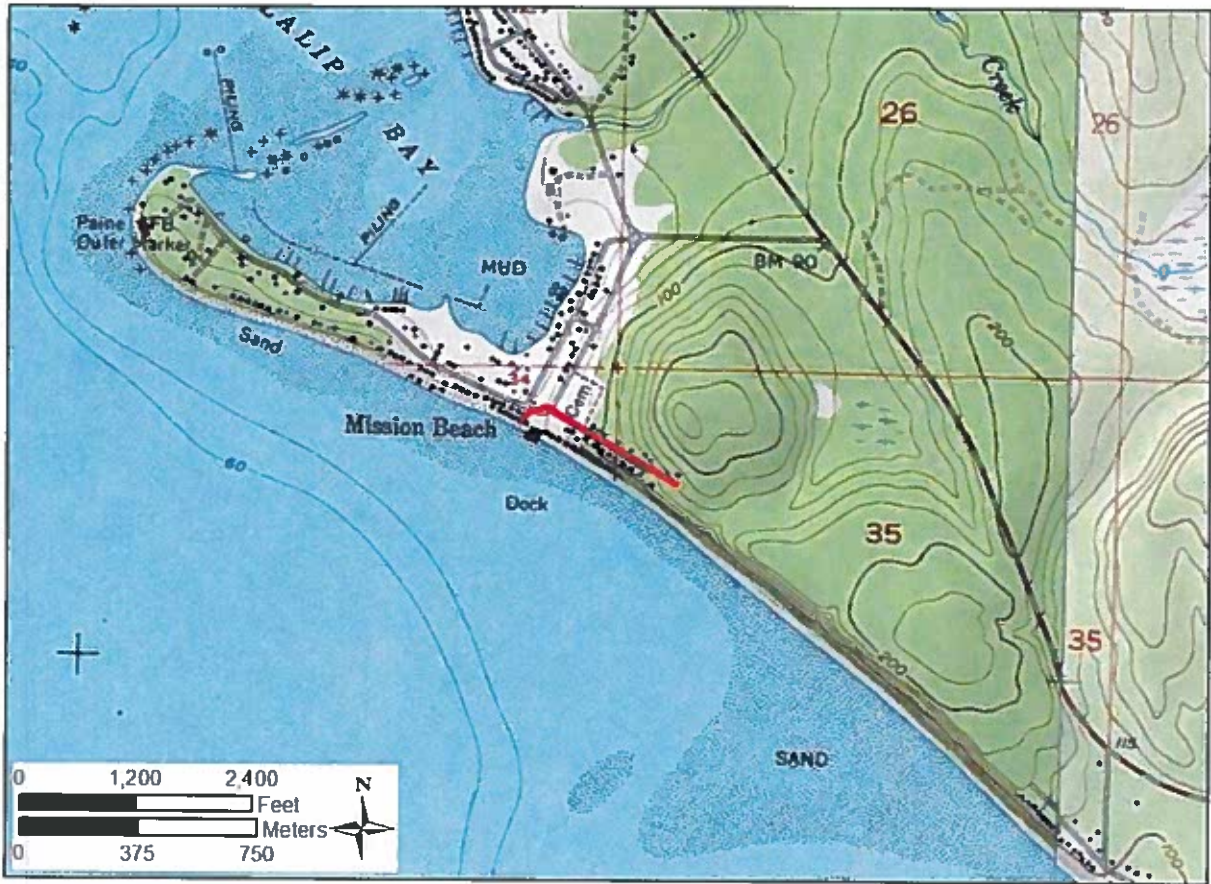


Figure 2: USGS Tulalip 7.5-minute quadrangle map showing Project area in red.

As the glaciers retreated for the last time their meltwaters carried with them an immense volume of material that the advancing glaciers had scraped from the surface and incorporated into the ice. These sediments blanket the Puget Lowland. Indeed, almost any relatively flat surfaces in previously glaciated areas is likely to be composed of glacial-origin sediments. The Project Area itself straddles two areas where geologists have identified Vashon-age till and outwash sediments. Figure 6 illustrates the surface sediments in the Project area. Specifically, these comprise

Qgm—glaciomarine drift. ... sparsely pebbly, medium dark gray silt, clay and sand ...

Qva—Vashon advance outwash. ... gray, pebbly sand with increasing amounts of gravel higher in the section. Fine-grained sand and silt are common in the lower part and also occur sparingly in the upper part of the unit [Menard 1980].

Glaciomarine drift (or till) lies at or near sea level, and is overlain by accumulated outwash sediments, which form bluff above Mission Beach.



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

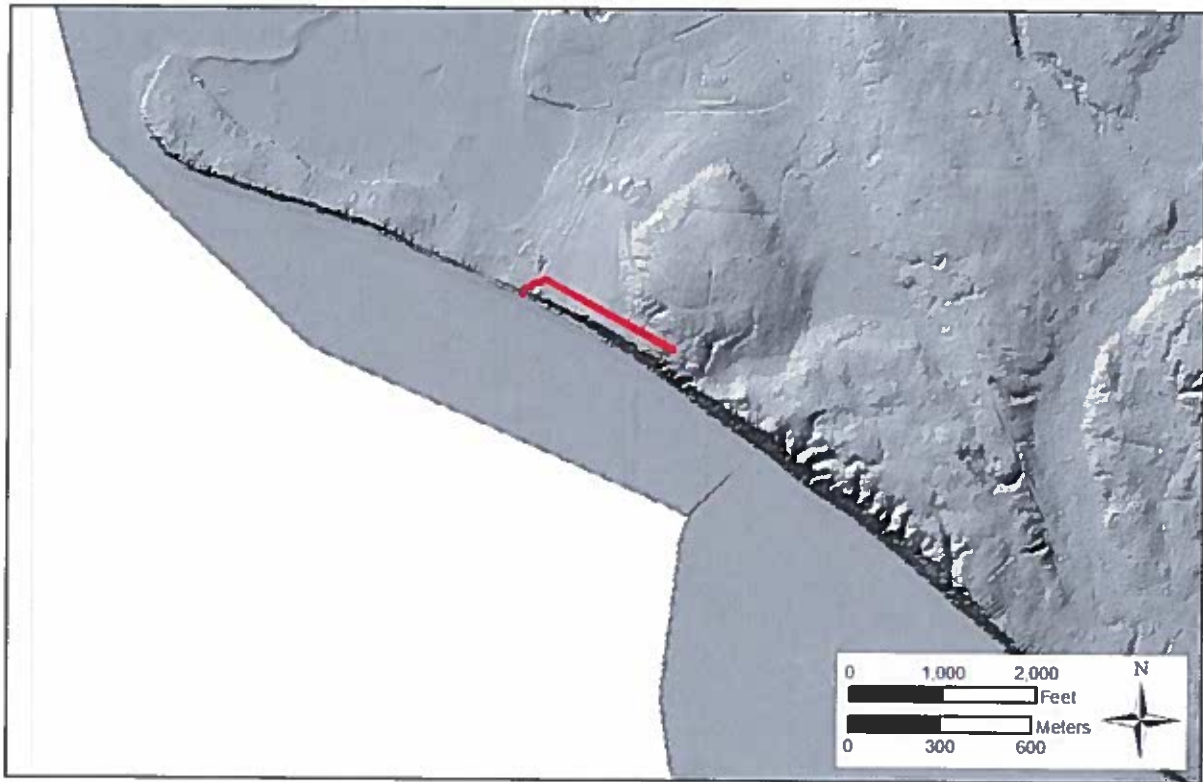


Figure 4: Lidar map showing Project area in red.

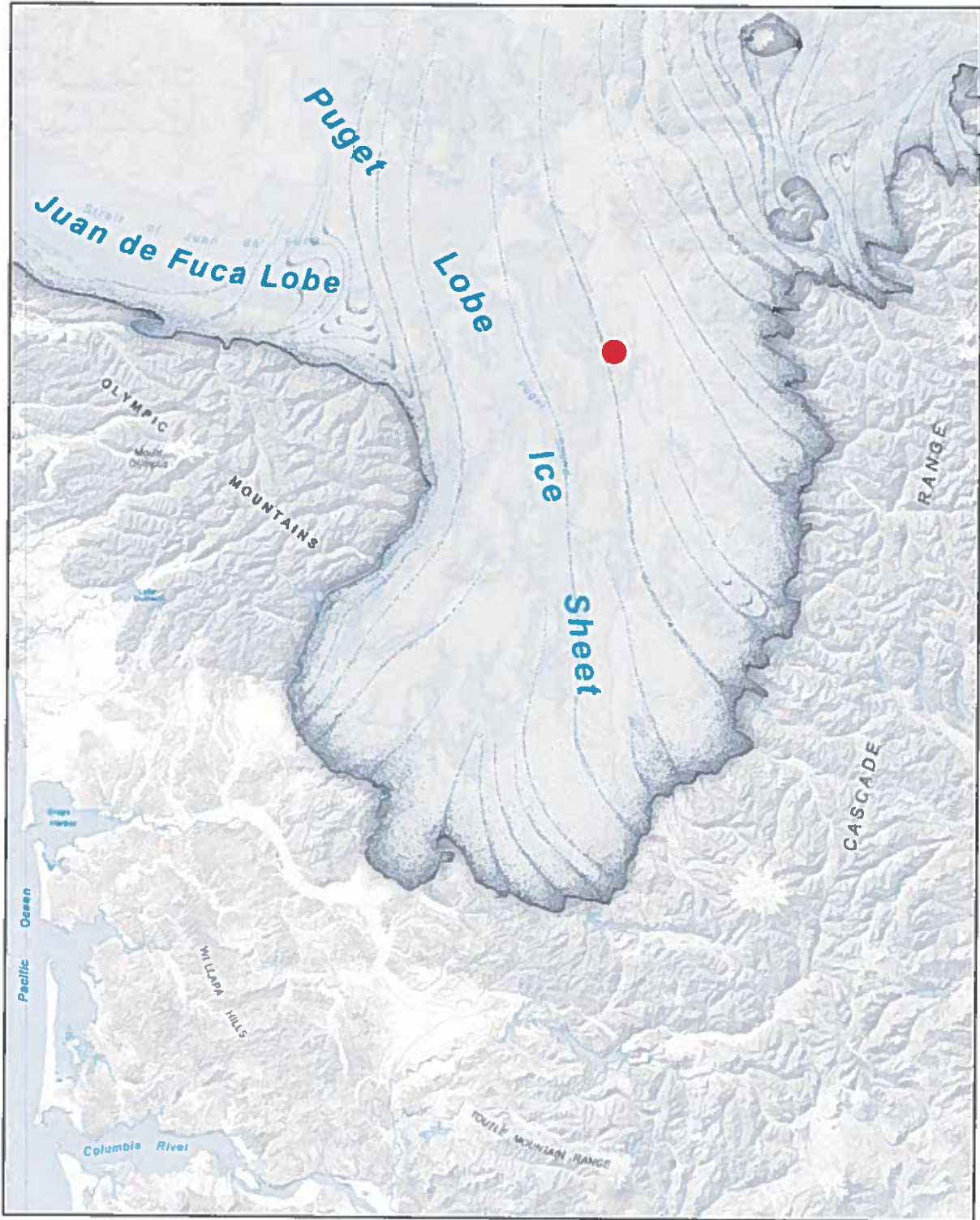


Figure 5: Greatest extent of Puget Lobe, Cordilleran Ice Sheet (after Washington State Department of Natural Resources 2016). Red dot indicates location of Project Area.

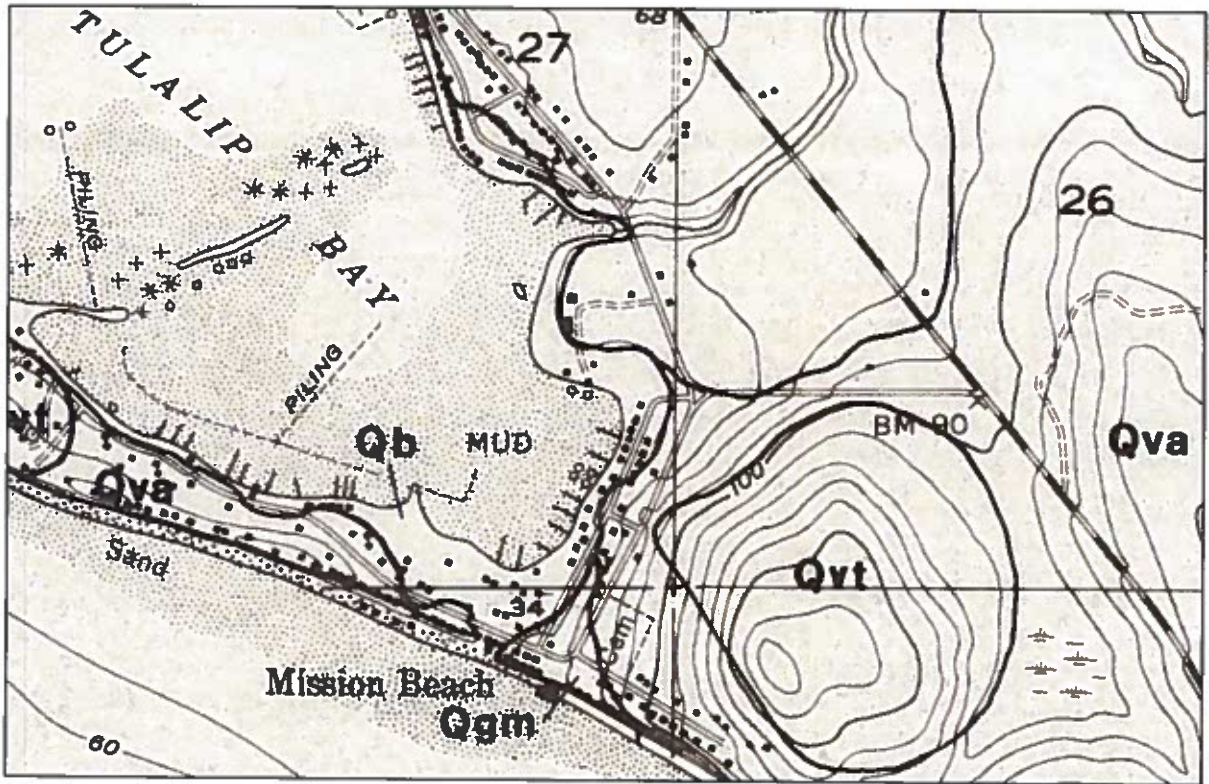


Figure 6: USGS Geologic map showing glacial deposits in the Project area (Menard 1980).

Soils

Geologists define a soil as the effect of weathering on naturally or culturally deposited sediments. A soil typically comprises an upper 'A horizon' that is infused with decomposed organic material, which lies above one or more horizons that contain varying degrees of input from above as a result of water percolating downward, carrying chemicals leached from the A horizon. Soils from place to place in keeping with the type of sediments that form the parent material, and the local environmental conditions. The horizons of different soil types present color variations according to the local soil chemistry, which enable distinguishing one soil type from another across a region. Three soil types occur in the Project area: *Kitsap silt loam*, *Everett very gravelly sandy loam* and *Alderwood gravelly sandy loam* (Soil Survey Staff 2016).

Kitsap silt loam on slopes of 0 to 50 percent covers 69 percent of the Project area. The parent material is lacustrine deposits. *Kitsap silt loam* is moderately well drained with a depth to the water table of about 18 to 30 inches. The surface does not pond nor flood. A typical profile includes 0 to 6 inches: ashy silt loam, 6 to 33 inches: silt loam and 33 to 60 inches: stratified silt to silty clay loam.

Everett very gravelly sandy loam comprises 20 percent of the Project area, on slopes between 8 and 15 percent, distributed on glacial moraines. The parent material of this soil is sandy and gravelly glacial outwash. *Everett very gravelly sandy loam* is somewhat excessively drained with a depth to the water table of more than 80 inches. The surface will neither flood nor pond water. A typical profile includes 0 to 1 inches: slightly decomposed plant material, 1 to 24 inches: very gravelly sandy loam, 24 to 35 inches: very gravelly loamy sand and 35 to 60 inches: extremely cobbly coarse sand.

Alderwood gravelly sandy loam is present in 11 percent of the Project area on 0 to 8 percent slopes. It is typically associated with ridges and hills and is derived from a

glacial drift and/or glacial outwash over dense glaciomarine deposit parent material. *Alderwood gravelly sandy loam* is moderately well drained with the depth to the water table of about 18 to 37 inches. A typical profile consists of 0 to 7 inches: gravelly sandy loam and 7 to 60 inches: very gravelly sandy loam.

Climate

The Project Area is located within the Puget Sound area subset of the *Tsuga heterophylla* environmental zone (Franklin and Dyrness 1988). The climate is significantly tempered by the proximal Pacific Ocean and Puget Sound. Summers are fairly warm and hot days are rare; winters are cool but snow and freezing temperatures are uncommon except at higher elevations. This wet, mild, maritime climate is responsible for the unique nature and wide distribution of the *Tsuga heterophylla* (Western hemlock) zone, the most extensive vegetation zone in western Washington, Oregon and southwestern British Columbia.

The Western Hemlock Zone (WHZ) extends from sea level to approximately 762 meters above sea level. While there are considerable variations within the zone, generally the WHZ has a wet and mild maritime climate (Franklin & Dyrness 1988: 71). Most of the precipitation falls in the form of rain and occurs mainly in the winter months. Soils are typically of medium texture, ranging from sandy loam to clay loam in some areas, with well developed soils limited to moderate slopes; on steeper slopes poorly developed, shallow soils are often encountered.

Major tree species within the Western Hemlock Zone include Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), grand fir (*Abies grandis*), Sitka spruce (*Picea siichensis*). However, the Puget Sound area varies slightly from the rest of the (WHZ), which is largely a result of differing climate and soil types. The area is greatly impacted by the rain shadow of the Olympic Mountains. The average precipitation within the Puget Lowlands ranges from 800 to 900 millimeters. Also significant are the soil types present in the region, which largely developed from glacial drift and outwash. These soils are typically coarse textured, nutrient poor and excessively drained (Franklin & Dyrness 1988:88).

Franklin & Dyrness (1988) list a number of notable differences in the plant communities as a result of these factors. They include:

- 1) Stands with shore pine (*Pinus contorta*), western white pine (*Pinus monticola*), and Ponderosa pine (*Pinus ponderosa*) as their major components.
- 2) Garry oak (*Quercus garryana*) groves, which are commonly invaded by Douglas fir (*Pseudotsuga menziesii*).
- 3) Poorly drained areas with swamp or bog plant communities.
- 4) Extensive prairies.
- 5) The presence of species not commonly found in the WHZ such as Rocky Mountain juniper (*Juniperus scopulorum*), trembling aspen (*Populus tremuloides*) and paper birch (*Betula papyrifera*).

3.2 Cultural Environment

The Project area includes the northern Puget Sound Culture area, whose groups speak the northern variety of the Lushootseed language and live in and around the Stillaguamish, Pilchuck and Snohomish Rivers and their deltas. The Tulalip Reservation was created by the treaty of Mukilteo in 1855 ensuring a land base on the Ebey Slough and other connecting sloughs. Traditional inhabitants from a number of areas in Northern Puget Sound were expected to move to the Tulalip Reservation in the post-treaty years as part of the treaty ratification.

The Coast Salish Culture Area has been studied by students of many disciplines for well over a century (Allen 1976), Ballard (1925), Borden (1968, 1975), Carlson (1976), Carlson and Dalla Bona (1990), Fladmark (1975), Franck (1999), Gunther (1928, 1945, 1950), Haeberlin and Gunther (1930), Jorgenson (1969), Kew (1972), Kirk (1978), Mattson (1971, 1985), Miller, B. (1995), Miller, J. (1988), Mitchell (1971), Nooksack (1973), Onat (1984, 1987), Onat et al. (1970), Robbins (1980, 1986), Ruby and Brown (1986), Sampson (1938, 1961, 1972), A. Smith (1988), M. Smith (1941, 1950, 1956), Snyder (1964, 1981), Spier (1935, 1936), Stein (2000), Stewart (1977, 1984), Suttles (1957, 1958, 1960, 1987, 1990), G. Thompson (1978), Turner (1995), Tweddell (1950), Waterman et al. (2001) and Whitlam (1980). In describing culturally distinguishable regions within the larger Coast Salish Culture area, Suttles states:

...the absence of any formal political organization, and occasional conflicts, the people of this region were linked together by continual intervillage marriage and participation in economic and social activities and the exchange of foods, goods, information and personnel (1987:103).

The people of the Project area, like other Coast Salish groups, participated in the salmon ceremony, extensive use of cedar and the tradition of the Potlatch (Collins 1974b:100; Roberts 1975). The theory of recent Salish emergence on the coast from the interior (originating with Boas) has little to support it (Suttles 1987:101). The people of this area consider their origins to be here in northern Puget Sound. To fully document the origins of the Traditional Peoples of this delta land, information from oral histories of the people who consider this the place of their ancestors/immortals should also be incorporated.

Hilbert (1985: iv) describes the value and place of narratives:

We do not know how long it has taken for these stories to come down to us, for we did not use the kind of calendar everyone uses today. My people marked time by referring to especially remarkable occasions, such as the year of the solar eclipse, or the period when the big log jam still blocked the Skagit River, all of our culture had to be committed to memory. To this end, our historians developed excellent memories in order to pass on important information to later generations.

Our legends are like gems with many facets. They need to be read, savored, and reread from many angles. My elders never said to me, "this story carries such and such a meaning." I was expected to listen carefully and learn why the story was being told. Though guided, I was allowed the dignity of finding my own interpretation.

Information passed down in the narratives of the people who consider this delta part of their ancestry provides the context and richness that fill in ethnographic gaps.

Villages

Traditionally the river drainage was the primary unifying concept among the loosely organized groups of the Puget Sound Salish. Cultural distinctions were recognized along the following biogeoclimatic culture zones (AFSC 1970:6): Saltwater people, River people, Inland people, Prairie people. The land was not owned in the European understanding of ownership. To travel across the landscape, people considered convenience and their feelings about the people they might encounter (AFSC 1970:7)

Resource-gathering summer encampments in the higher elevations and out in the islands for would have been common, and the trails and travel corridors to these resource-gathering areas would have been well known to the users and their neighbors. Table 1 provides ethnographic place names in the vicinity of the Project area (Waterman et al. 2001).

Table 1: Place names of nearby sites recorded in Waterman et al. (2001).

Waterman Name	Translation	Location	Lushootseed Orthography	Lushootseed Translation
Sbi'bida	Vary small baby	Site of a settlement known as Subeebeda, north of Everett.	sbi'beda?	Small baby
SEqsu'q'wbats	Where alders grow	A dull projection in the shoreline south of Subeebeda.	sak ^w sak ^w abac	Alder tree
Tu ^w kwa'ixkub	Place for using the dip net	A place on the shoreline just north of Tulalip. The term kwa'ix means a dip net stretched on a hoop and fastened between two diverging poles, used for taking salmon from in front of a weir.	-	-
Kwi'kwiks	Skate promontory	The tip of the sandy promontory projection from the south side of the opening at Tulalip Bay. This place is named from the number of skates in the shallow water here.	k ^w ik ^w ilqs	Skate promontory
Cteagks	Outside or seaward promontory	A small promontory projecting from the side of reference #4.	čag ^w qs	Promontory into water
Lk'laLalc'gwEd	Lying exactly in the middle	Site occupied by the Mission on the southern margin of Tulalip Bay. This name possibly refers to the situation of the gully here, between two promontories. This was village site in the old days and an Indian, who was called Gaspard by the whites, used to give elaborate potlatches. The posts of his house are still visible.	čəqalig ^w əd	To one side of it
Tu ^w je'lop	Sand flat	A level promontory in the inner part of the harbor known as Tulalip Bay. This native term, anglicized as Tulalip, has been applied to the bay, and to the Indian reservation and post office on its northern shore.	dx ^w liləp	Place of deep water
Tcaiya'lgo	Hidden water	A small spring on the coastline south of Tulalip. This spring was hard to locate, lying among a lot of vegetation.	čəyalq ^w u'	Hidden water

Significant displacement of the Coast Salish groups resulted from Euroamerican settlement. Severe depopulation occurred during the eighteenth century due to disease, relocation, and dispersal. The fur trade at this time would have been a catalyst for the movement of some groups as they struggled to adjust to population decline and relocated their families closer to trading posts or marketable resources. The strength of long-established kin ties was clearly flexible in response to these external forces and allowed for groups to maintain traditional boundaries and alliances during changing times.

The most significant documented movement of people was due to the effort to relocate the area's people to reservations as a condition of the signing of the Múckl-te-óh (Point Elliot) Treaty in 1855. The Tulalip Reservation was a place where people from many Coast Salish groups congregated.

Subsistence & Settlement Patterns

During the early contact period, the area's people employed a settlement pattern that included permanent but dispersed winter village sites. Despite the existence of permanent winter villages people demonstrated some level of mobility as much of their resource gathering activities involved an annual seasonal round. Summer camps were visited year after year to collect and process important plant and animal resources. Summer houses consisted of mat lodges that could be easily moved. Houses in villages along the shores of the Puget Sound and at the main river mouths occasionally required relocation to avoid rising flood water levels. Planks from the houses and family graveyards, which were usually located near the houses, were also moved to drier sites (Collins 1974b:16).

The settlement patterns of people in post-treaty times reflect culture groups trying to recover from seemingly insurmountable assaults on a variety of fundamental elements of their culture, not the least of which was a devastating decline in population from European diseases. In his analysis of the decreasing numbers of Indians in the Fort Nisqually census, Taylor (1960: 404) wryly notes that "...these figures are for the year 1838–1839 after civilization's multiple blessings of rum, syphilis, gun powder, and smallpox had done their work."

Smallpox was likely the most significant contributor to the loss of cultural foundations in Coast Salish communities. The devastating population reduction in a culture that relies on its people as holders of all-important information is difficult to imagine. To lose ninety percent of the cultural information base (all libraries, schools, books, research centers, archives, scholars, teachers, scientists, religious leaders, television, radio and the internet...to name a few) in a matter of decades would destabilize any society; many would collapse. For detailed discussions on the effect of smallpox, see Carlson (1997) and Harris (1997).

During the nineteenth and twentieth centuries, as the cash-based economy flourished in the Puget Sound Region, Native populations continued to be marginalized and their traditional lifeways severed by the literal and figurative fences of European settlement and government policies. Young people, the catalysts of all cultures, began to move to towns and urban centers, further eroding familial groups. Traditional communities who had once thrived on the strength of their familial ties and social constructs were greatly reduced by formal and informal assimilation policies.

Today, with the increased success and self-determination of governmental and business organizations representing traditional tribes, a number of tribal members have returned to their traditional communities. Members are returned to live and reconnect their affinal ties, or to exercise treaty rights and/or to help maintain their identities.

Resource Gathering and Processing

The daily lives of the traditional people of the area revolved around food gathering, preparation, preserving and presentation. The abundant resources of the riverine and marine environment rewarded hard work. Foods were collected based on seasonal availability and complex social constructs developed to allow for maximum collection efficiency, redistribution, and healthy alliances within and between groups.

Procurement was only part of the program as it is the ability to process and store food items that determines population density in the environment of the Northwest where abundance is cyclic and resources are available in huge amounts for brief, somewhat predictable periods of time.

...while the habitat was undeniably rich, abundance did not exist the year round but only here and there and now and then, and that such temporary abundances-though they may well be a necessary condition for population density and cultural development of the sort seen on the Northwest Coast- are not sufficient to create them. Equally necessary conditions were the presence of good though limited food-getting techniques, food storing techniques, a social system providing the organization for subsistence activities and permitting exchanges, and a value system that provided the motivation for getting food, storing food, and participating fully in the social system (Suttles 1987:46).

As the processing of food was generally cited as female labor, the ability of a group to store enough food for the winter might have depended upon the number of females capable and available for this work.

There do appear...to be differences in the productivity of households due in part to differences in the number of women available to process food in season...women, the processors of food (Suttles 1987:49).

Fishing

Fish are central to the culture of the Indians today and their ancestors.

Salmon was not merely an important part of life—not a recreation and not solely a means of providing food—it was the heart of a whole way of life. It was the staple article of year-round diet; fresh, smoked, or dried... It was a major commodity in trade between tribes. Above all, it was a blessing for which the Indians always gave thanks.... Many religious beliefs and tales concerned salmon, and these were often presented in the rituals....The ceremonies, stories and taboos exhibited a fundamental concept of the immortality of the salmon and the related desire not to offend it and endanger its return. The methods and skill of the aboriginal fishermen achieved extraordinary harvests but at the same time ensured continuation of the great runs [AFSC 1970:3].

The Tulalip peoples would have fished for a variety of species. The local river systems contain all five salmon species, steelhead and a variety of trout. Like other types of resource gathering, fishing was sometimes a communal enterprise and at other times carried out by only one or two people in established fishing locations. Some traps and weirs may have been maintained by related groups (Snyder 1964:69).

Numerous ethnographic accounts provide descriptions of fishing strategies, techniques, equipment and tools that could be used on nearby waterways (Batdorf 1980; Snyder 1964; Stewart 1977). All of these fishing styles listed in the quote below would have been possible in the nearby creeks, sloughs and rivers:

Salmon are taken by a variety of techniques. Some of these involved fish traps reaching across the entire river. Others include basket traps located in strategic positions below falls or narrow channels, large nets dragged in the water between two canoes, nets set in deep portions of the river, dip nets manipulated by hand, fish spears hurled from the bank, and line and bait (Collins 1974b: 79).

Fishing was regulated traditionally, as is it today, within and between groups through a complex set of alliances. Fishing technology and styles have changed over millennia, however the fundamental relationships to fish and fishing have remained.

Testimony that the descendants of aborigines had forsaken ancestral rites and adopted the same habits and aspirations as their non-Indian neighbors did not sway Judge Boldt. All the plaintiffs in the case, he declared, had established their status as Indian tribes. And even though “employment acculturation” and state law enforcement had drastically reduced the number of Indians who fished, most Indians were distinguished by the fact that the right to fish remained their “single most highly cherished interest and concern (Harmon 1998:240).

Fishing and processing of the catch, as well as associated feasting, played such a large and complex role in the culture of the traditional people of this area that it could be discussed under any number of subheadings in this overview. Each part of the process was subject to cultural and religious sanctioning. Success in fishing is related to guardian spirit power, not just for the act of fishing, but also for the acquisition of materials and the building of fishing equipment including transportation, gear, traps and weirs. Acquiring and maintaining gear to catch and process fish is regarded equally as important as the ritual paraphernalia to bless the boats and catch. As long ago, complex ceremonies continue today to ensure safety and to provide healthy fish to eat.

Hunting and Trapping

Hunting was secondary to fishing. Mammals and birds were the primary prey and, following the traditional philosophy, much of the creature was used. Skin or fur for clothing, flesh for food, sinew and other soft tissue for various uses, bone for tools, weapons and other functional devices such as straws. Many parts of animals and birds are also used in ceremony. Ethnographic discussions of hunting are found in Gunther (1950), Jeffcott (1949), Onat (1980), Onat and Hollenbeck (1981), Onat et al. (1980), Smith (1941, 1950) and Suttles (1987).

Hunting and trapping were undertaken by groups and individuals. Various styles of hunting were used depending on the prey, the season, and the need.

Animals such as the bear, deer, and beaver are usually secured by traps.... Birds also provide a source of food. Among the birds used as food are the pheasant, the blue grouse, the duck, the goose, and the loon (Collins 1974b: 80).

Processing the meat was also part of a complex and well-adapted system of procurement. Feasting, drying, smoking, and various forms of caching were used to maintain a food supply during lean times. Traditional tools and weapons kits were highly adaptable. It took little time for technological advancements to become incorporated into successful hunting kits. This is apparent from the speed with which tools and materials from traders and explorers were incorporated into the archaeological and ethnographic record. Excellent discussions on lithic tools and weapons are found in numerous archaeological reports and documents (e.g., Bamforth 1986a, 1986b; Binford 1979; Cotterell and Kamminga 1979; Crabtree 1972; Hayden 1979, 1986; Magne 1985; Odell 1980, 1981a, 1981b, 1982; Rousseau 1992).

Gathering

Indian women, through the centuries, devised ingenious methods of gathering, preparing, and preserving the foods which nature provided. They learned when the edibles were mature and ripe for harvesting, and they developed tools and techniques for the work. They learned which woods to use and which kinds of fire best suited their needs, they designed and made their own cooking utensils and equipment from material available to them (Batdorf 1980:4).

The management of root gathering patches is well documented, with burning, weeding, replanting of root tops, and prairie ownership considered indigenous practices (Collins 1974b: 77). For an excellent discussion of potato use in the early contact period see Suttles (1987:137-151).

Berry patches were also owned and managed. Ownership of resource gathering areas is an excellent boundary for teaching rules around behavior. Children learn early that certain behaviors are acceptable in certain settings and they carry this information with them to adulthood to help guide them to act accordingly. How individuals respond to these rules is part of how other members of the culture act towards and react to the individuals. Ownership of resources, such as berry picking patches or fishing locations is one of the many strategies that is used to reassert the beliefs of a culture group; it is a cultural practice important to maintaining historic identity. Berries are still found, but in much smaller quantities. Formerly, large patches of berries were burned over every year or two by specialists with spirit power to increase their yield (Snyder 1981:224).

The cedar tree was so much a part of traditional life that it provided material for clothing, houses, transportation and tools as well as the spirit power and central stability that the cedar provided for the traditional peoples of the Sound. "They held the supernatural cedar in high esteem, for, like the bountiful salmon of the seas, the ubiquitous tree of the forest gave of itself to sustain and enrich their lives" (Stewart 1984:19). In the contemporary response of Salishan people to the new needs of their peoples we find the cedar once again central to maintaining identity. The cedar tree is often central to the arts, providing wood, bark, roots and withes (Stewart 1984:19). The cedar tree was part of every moment of life in traditional culture. The respect and importance of this tree continues today in ceremonial life where clothing, regalia, ritual items, firewood, functional items and indeed the buildings used for ceremonies are still made of cedar. Administrative buildings incorporate cedar, as cedar is still considered a cornerstone for cultural identity.

Discussions of gathering and associated activities are found in most of Collins's work, Bruseth (1926), Fish and Bedal (2000), Harold Engles's tapes, Jenkins (1956), Onat and Hollenbeck (1981), Roberts (1975), A. Smith (1988), M. Smith (1941, 1950, 1956), Snyder (1964) and Turner (1995).

Plants, lithics, spirit power and other resources would have been acquired in a variety of ways. Much of this mobile resource procurement would have occurred in the warmer months from spring through autumn. Plants and plant products would have been harvested at the most useful point in their cycle. For example, berries at their ripest, cambium at it sappiest, roots and tubers at their sweetest. Edible plants would have been harvested at the time of their highest sugar content, when they were easiest to dry and store. Roots, stems and leaves were collected at the point in their cycle when the active ingredient(s) were most potent. Long-term collection strategies would likely have incorporated an understanding of how to maintain strong and abundant plants (e.g., prescribed burning, pruning, etc.).

A number of local histories share tales of survival and homesteading of European immigrants to the Northern Puget Sound. Settlers are the main characters, with occasional anecdotal mention of Native individuals or groups. For historic reading see Ames (1884), Barkan (1987), Batdorf (1980), Bierwert (1990, 1999), Boxberger (2001), Boyd (1999), Bruseth (1910), Clark (1970), Conroy (2005), Costello (1895), DAHP (1989), Edson (1968), Essex (1971, n.d.), Fish (1927), Humphrey (1984), Hyatt (1998),

Island County Historical Society (1993), Jones (n.d.), Jordan (1974), Malstrom (1986), Martin (1952), Meeker (1905), Neil (1989), O'Donnell (1992, 1993), Riddle (1975), Strickland (1984, 1990), Sucher (1973), Washington Historical Records Survey Division of Community Service Programs Work Projects Administration (1942), Thompson (1989), White (1980), Whitfield (1926a, 1926b) and Willis (1976).

3.3 Previous Archaeology

The earliest archaeological studies of the region are H. Smith's (1900, 1907). For more detail about the archaeology of this area see Blukis Onat (1987, 1980), Bryan (1955), Carlson (1990), Carlson and Dalla Bona (1996), Mattson (1971, 1985) and Stein (1984, 2000).

Records of five archaeological sites within two miles of the Project APE are on file at the Washington State Department of Archaeology and Historic Preservation (DAHP). A short description of the sites is provided below (Table 2).

Table 2: Previously recorded archaeological sites within two miles of the Project area.

Site	Type	Distance from Project area
45SN6	Precontact Camp, Precontact House Pit/Depression, Precontact Shell Midden	~0.5 miles
45SN5	Historic Logging Properties, Precontact Camp, Precontact Lithic Material, Precontact Shell Midden	~1.2 miles
45SN318	Precontact Camp, Precontact Lithic Material	~1.7 miles
45SN663	Historic Camp, Historic Cemetery/Burial, Historic Debris Scatter/Concentration, Precontact and Historic Components, Precontact Burial, Precontact Camp, Precontact House Pit/Depression, Precontact Village	~1.95 miles
45SN319	Historic Debris Scatter/Concentration	~2 miles

45SN6 is a culture-rich precontact site on both sides of a stream emptying into Tulalip Bay, approximately 0.5 miles from the Project area. Bryan (1953) recorded culture-rich shell midden as well as an apparent house depression associated with an old longhouse. Miss (1991b) encountered culture-rich shell midden including fire-modified rock (FMR), mammal bone, ash and charcoal.

45SN5 is a culture-rich historic and precontact site on the east side of the mouth of Tulalip Creek approximately 1.2 miles from the Project area. Bryan and Lurman (1953) described the site as disturbed, with culture-rich shell and FMR sporadic over 100 yards. Miss (1991a) was unable to locate the site based on Bryan and Lurman's public land survey system description. Also in 1991, Young located a site in section 27 (as opposed to section 22 in the original site form) that appeared to be an extension of the original site. Young observed a portion of an adze as well as disturbed culture-rich shell midden on the site of a historic sawmill (Young 1991).

45SN318 is a precontact lithic scatter on the terraces of a narrow ravine approximately 1.7 miles from the Project area. Four pieces of FMR and four lithic flakes were observed in shovel test probes along with a weathered padlock body. One of the flakes recovered was found above buried cinder block and ceramic pipe fragments, clearly indicating that the context was secondary (Juell 2001a).

45SN663 is a complex historic and precontact site near the confluence of the Snohomish River and Possession Sound, approximately 1.95 miles from the Project area. During a salt marsh restoration project, heavy equipment exposed human remains where beach-front houses had been razed. Interments

and both historic and precontact artifacts were encountered—metal military buttons and a casket containing a rifle and pistol, and precontact hearths, ovens, and possible post holes (Miss 2015).

45SN319 is a historic domestic dump on the terrace edges of a narrow ephemeral channel approximately two miles from the Project area. Debris observed at the site included bottles, cans, metal fragments, porcelain fragments and a Washington State tax token. Maker’s marks date the materials to sometime between 1940 and 1953 (Juell 2001b).

Historic Register Properties

Records of three historic register properties within two miles of the Project area are on file with DAHP from (Table 3).

Table 3: Historic register properties on file with DAHP.

Register #	Name	Distance from APE
45SN137	St. Anne’s Roman Catholic Church	~0.9 miles
45SN136	Tulalip Indian Agency Office	~1.25 miles
45SN138	Indian Shaker Church	~1.7 miles

Previous Cultural Resource Reports

There are ten previous cultural resource reports on file with DAHP from within two miles of the project area; they are listed below in Table 4.

Table 4: Previous cultural resource reports on file with DAHP.

Author	Title	Date
Baldwin	Cultural Resources Review of Priest Point Septic Upgrades, Tulalip Reserve Land, [Skagit] County, Washington	2012
Baldwin	Cultural Resources Review for a[n] Proposed Septic System Installation at 7 Priest Point Drive NE, Tulalip Reservation, Snohomish County, Washington	2013
Juell	Cultural Resources Assessment for Proposed Improvements to Marine Drive, 7 th Avenue NW and 19 th Avenue NE, Snohomish County, Washington	1999
Juell	Cultural Resources Investigations at Two Proposed Wetland Mitigation Sites	2000
Juell	Letter to Chuck James re: Emergency Archaeological Excavations at Priest Point, Washington, ARPA Permit #P10T123A01-2001	2002
Shong	Cultural Resources Assessment for the Proposed Tulalip Administration Building Site, Tulalip Indian Reservation, Snohomish County, Washington	2005
Shong and Juell	Cultural Resources Assessment for the Proposed Marine Drive and Waterworks Road / Old Smokehouse Road Intersection Improvement Project, Tulalip Indian Reservation, Snohomish County, Washington	2002
Shong and Juell	Letter to Chuck James re: Cultural Resource Monitoring Results for the Marine Drive Improvement Project, Tulalip Indian Reservation, Snohomish County, Washington	2004
Stipe	SEA Tulalip Cultural Resources Review	2011
Young	Cultural Resources Reconnaissance Report of the Boys and Girls Club Development on the Tulalip Indian Reservation	1995

4.0 METHODS

4.1 Archival Research

- Review of site forms and previous reports on file at the Department of Archaeology and Historic Preservation in Olympia, Washington
- Review of other archaeological reports and related documents on file at the Equinox Research and Consulting International Inc. (ERCI) office, Mount Vernon, Washington
- Review of published information on the prehistory or traditional native use of the area including Snohomish River Valleys

4.2 Field Methods

Fieldwork for the Mission Beach Heights Road Improvements Project (the Project) was carried on June 14 and 15, 2016. ERCI's Ian R. Lewis, M.A. and Michelle North, B.A. conducted an extensive pedestrian survey of the beach near the western end of the Project area (Figure 7), excavated 113 judgmentally placed subsurface shovel tests in the road right of way and alongside the footpath (Figure 8 through Figure 13), and documented the investigation with handwritten notes and digital photographs. All excavated sediments were passed through ¼-inch mesh hardware cloth shaker screens to check for cultural resources, then used to back-fill the excavations. As skeletal material was encountered each specimen was photographed and the images transmitted to ERCI biological anthropologist Alyson Rollins, M.A. to determine whether or not it was human. One precontact archaeological isolate was recovered and reburied where it was found. In all, 355 digital photographs were taken, and are stored at the ERCI offices in Mount Vernon, Washington. No samples or artifacts were removed from the Project area. Matrix and shovel test column descriptions are provided in Appendix 1 and 2; Appendix 3 contains the digital photograph log.



Figure 7: View southeast, overview of lower footpath, beach and beach bluff.



Figure 8: View south, footpath leading from Mission Beach Road to beach.



Figure 9: View southwest, Mission Beach Road and footpath to beach.



Figure 10: View northwest, lower Mission Beach Heights road, cemetery at right.

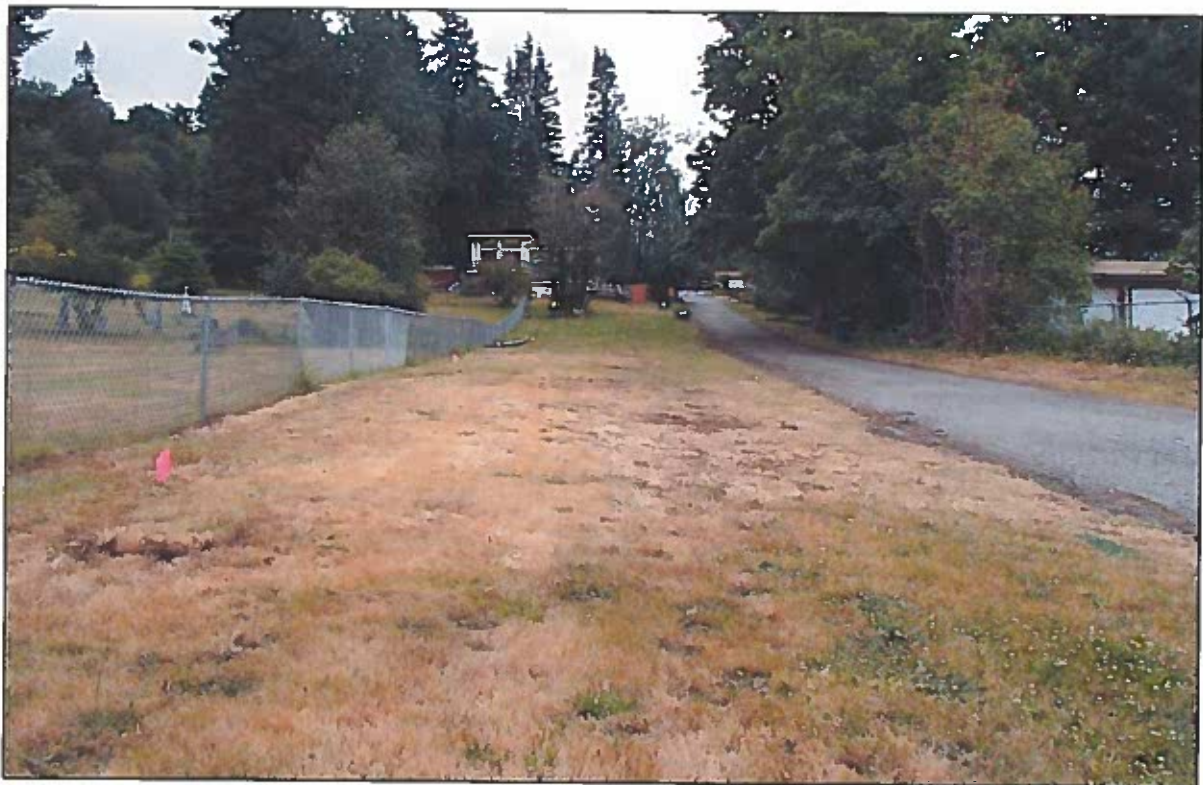


Figure 11: View southeast, lower middle Mission Beach Heights Road, cemetery at left.



Figure 12: View southeast, upper middle portion of Mission Beach Heights Road.



Figure 13: View southeast, upper portion of Mission Beach Heights Road.

5.0 RESULTS

This section presents results of the pedestrian survey and subsurface testing that Equinox Research and Consulting International Inc. (ERCI) undertook as part of the Mission Beach Height Road Improvements Project (the Project).

5.1 Pedestrian Survey

On June 14 and 15, 2016 ERCI archaeologists Nicholas Gouette, B.A., Noah Heidenreich, B.A., Sarah Johnson Humphries, M.A., Susan Larsen, M.A., Ian R. Lewis, M.A. and Michelle N. North, B.A. conducted an intensive shovel testing and pedestrian survey of the western portion of the Project area—a portion of the beach that includes the beach bluff. The bluff itself is heavily vegetated, and the beach is cluttered with the remnants of the old wooden seawall. No precontact shell midden or protected cultural resources were observed on the surface.

The Project area borders the Mission Beach Cemetery (45SN00517), the final resting place of, among others, Chief Patkanim (Figure 14) and Chief William Shelton (Figure 15). Chief Patkanim was a leading figure in the historical trajectory of Washington State, and Chief Shelton's enduring legacy to the Tulalip Tribes cannot be overestimated. Although the Cemetery is outside of the Project area it is of great concern to the Tulalip Tribes, and although it is not currently listed on the National Register of Historic Places (the Register), given the historically significant personages who are interred or memorialized there it is highly likely that the Cemetery is eligible for inclusion on the Register.



Figure 14: Chief Patkanim's memorial, erected in 1924 (Meany 1924) and epitaph (inset).



Figure 15: Tulalip Tribal Cemetery, Tulalip Tribes' Chief William Shelton's memorial.

5.2 Subsurface Testing

On June 14 and 15, 2016 ERCI archaeologists Nicholas Gouette, B.A., Noah Heidenreich, B.A., Sarah Johnson Humphries, M.A., Susan Larsen, M.A., Ian R. Lewis, M.A. and Michelle N. North, B.A. undertook a program of subsurface shovel testing. Weather was cloudy to partly sunny, with light rain on both days. In all, 113 shovel tests (ST) were placed judgmentally, in areas away from obvious disturbance due to road or residential access infrastructure. ST locations are shown on Figure 16 and Figure 17. Testing entailed using long-handled round-nosed shovels to excavate quasi-circular holes ranging from 28 to 55 centimeters (cm) in diameter and from 28 to 100 cm deep. ST diameter varied due to subsurface obstructions, with 100 cm being about the maximum depth possible using this technique of subsurface investigation. Descriptions of the shovel test sediment columns are provided in Appendices 1 and 2. **One protected precontact stone tool artifact was observed.**

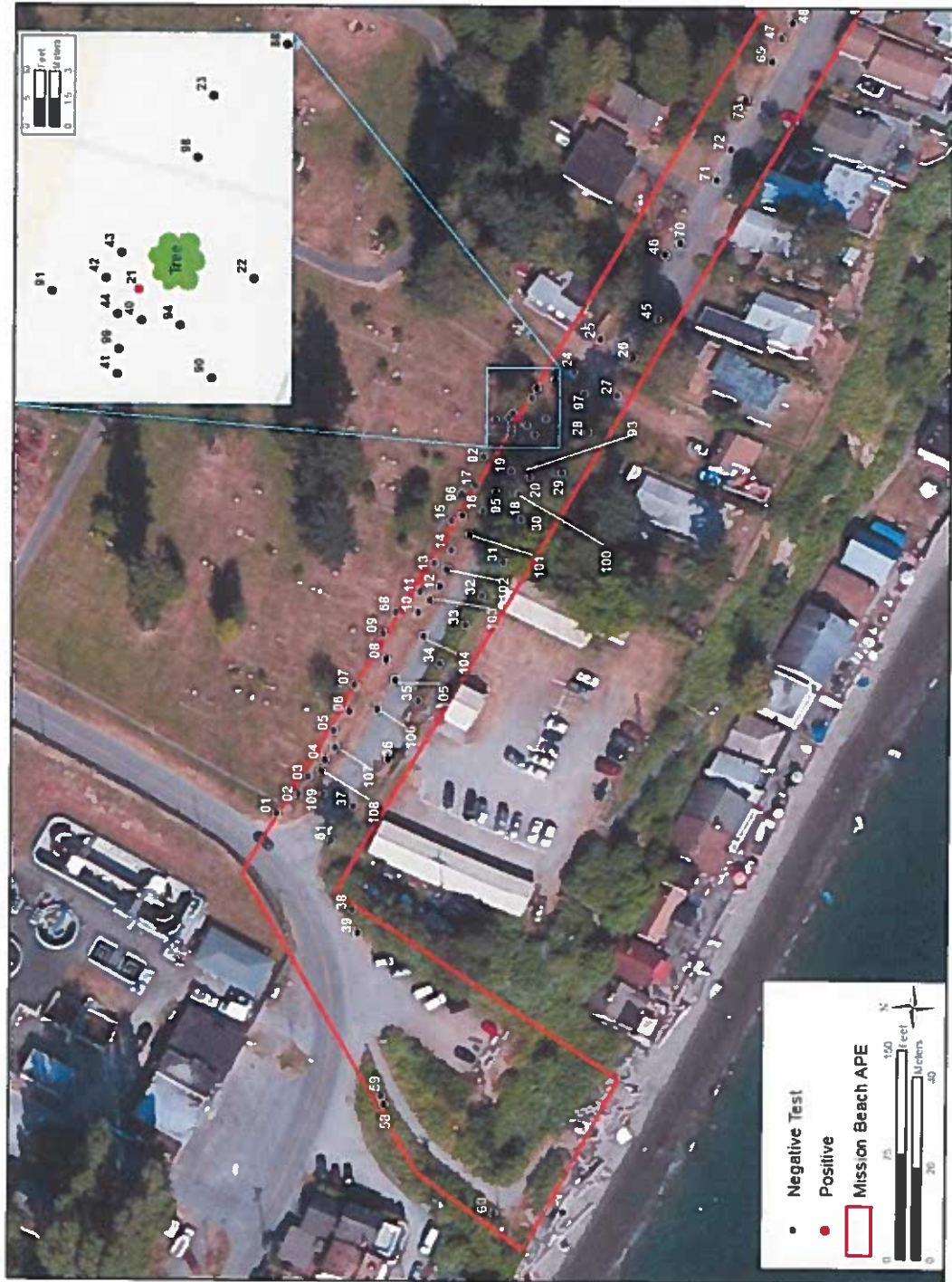


Figure 16: Sketch map of Project area’s western portion showing shovel test locations.



Figure 17: Sketch map of Project area's eastern portion showing shovel test locations.

Site Sediments

Excavated sediments were generally in keeping with the nature of the landform, created during the most recent advance and retreat of the Pleistocene ice sheet. Sediments varied from predominantly sandy silt glaciomarine till to gravelly-pebbly-cobbly deposits of glacial outwash, which formed the hill above Mission Beach. Color variations are in keeping with what is known of soil development in this area, as described above in Section 3. These are described below (Table 5). Figure 18 illustrates typical sediment profiles from the margins of Mission Beach Heights Road—ST 20 from the lower elevation, ST 68 from the middle portion and ST 75 from the upper portion.

Table 5: Shovel test matrix descriptions.

Matrix	Description
1	10 YR 3/3 dark brown sandy silt (85%) with 5% gravels/pebbles and 10% rootlets; moderate compaction; A horizon. Variation: 10 YR 2/2 very dark brown
2	10 YR 4/4 dark yellowish brown coarse sandy silt (40%) mottled with 10 YR 5/2 grayish brown silt pockets (20%) with 40% pebbles/gravels/occasional cobbles, occasional debris; dense compaction; local fill origin
3	10 YR 4/4 dark yellowish brown coarse sand (60%) with 40% pebbles/gravels; loose to moderate compaction; glacial origin
4	10 YR 4/4 to 10 YR 4/6 dark yellowish brown sandy silt (80%) with 15% pebbles/gravels and 5% organics (rootlets, charcoal, wood, bark; moderate compaction; B horizon



Figure 18: ST profiles, left to right ST 20, 65 and 78.

Cultural Materials

In all, 58 STs yielded nondescript modern refuse, in disturbed local sediments (refer to Figure 16 and Figure 17 and 20)—1, 2, 6–8, 10–18, 20, 22–26, 28, 29, 32, 36–37, 39, 40, 42, 44, 47, 48, 57, 60–64, 68, 74, 79, 86, 88, 90, 92, 96–100, 102–106, 109, 111 and 113. Among the objects observed were

Only one subsurface test—ST 21—contained precontact cultural material. This is a unifacially flaked medium-grained igneous cobble (Figure 21), found in a buried B horizon, M4, at 83 cm below surface (cm dbs). It measures approximately 10 by 12 cm and is about 5 cm thick. It bears at least five unidirectional overlapping flake scars on one face and two areas of (possibly percussion) attrition on the opposite. Archaeologists probed the surrounding area, STs 40 through 44 revealed no other artifacts or other evidence of sustained activity in the vicinity of ST 21. However, the investigation was impeded by the copse of trees growing nearby, and exploration was limited to the area northwest of the root system (see Figure 16, above). The artifact was measured and photographed, then placed in a paper bag and reburied at 39 cm dbs while ST 21 was being back-filled.

Summary

Pedestrian survey and a program of subsurface shovel testing for the Mission Beach Heights Road Improvements Project have revealed one precontact archaeological isolate from a buried soil horizon, and no unequivocally historical cultural resources found in disturbed deposits.

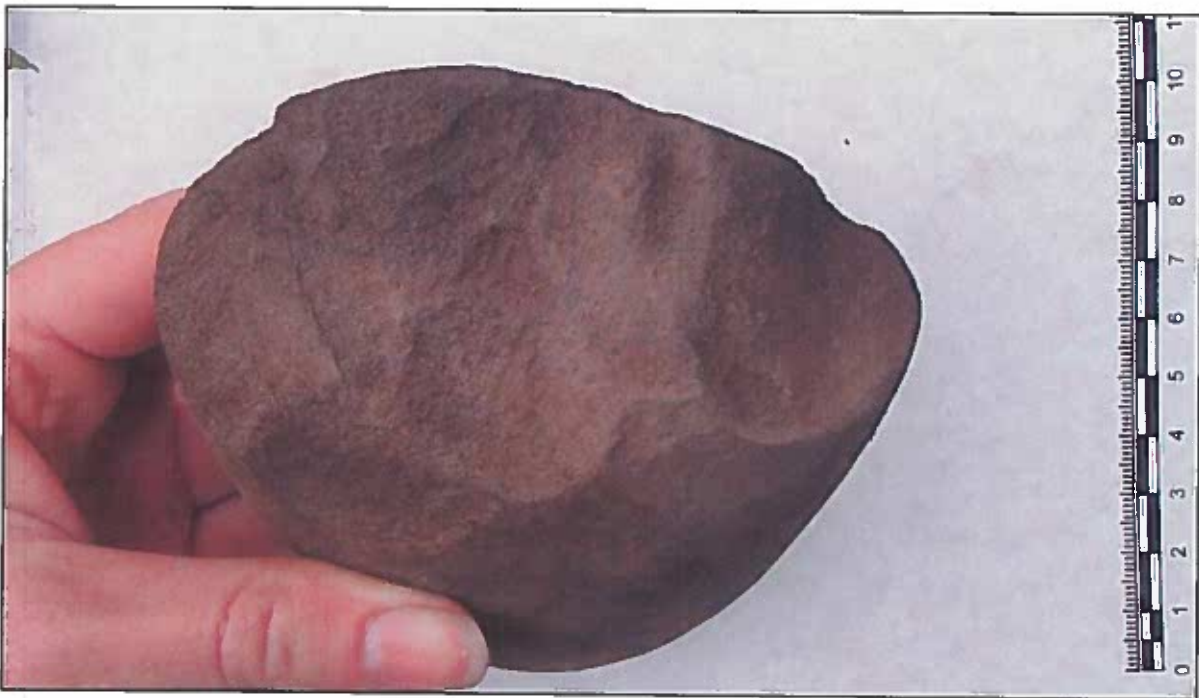


Figure 21: Isolated artifact, unifacially flake cobble (scale in cm).

6.0 MANAGEMENT RECOMMENDATIONS

The management recommendations that we are now providing are based on our findings from this investigation. **A single stone tool was identified during the shovel testing portion of this project.** The location of this isolated lithic is not slated for ground disturbance. We recommend that

1. The Mission Beach Heights Road Improvements Project (the Project) proceed as planned, ensuring that no ground disturbance is planned for the location of the shovel test that holds the identified lithic.
2. The Project proceed with a professional archaeological monitor present for all ground-disturbing activities, due to the proximity of the Project area to recorded archaeological site to the Tulalip Tribal Cemetery and the location of the archaeological isolate, and the resultant potential to encounter intact precontact or historic deposits.

3. An approved archaeological monitoring plan be developed and reviewed in advance of ground-disturbing activities for the Project. It should include an Unanticipated Discovery Protocol.
4. Prior to construction activities an on-site Unanticipated Discoveries Protocol (UDP) training for the construction crew this includes prior to any ground-disturbing activities, including silt fence installation or mobilization of equipment. A copy of the UDP and monitoring plan should be kept on site at all times during all Project activities.
5. If any ground-disturbing activities in the Project area related to this development or in any other development in the future uncover protected archaeological deposits (e.g., bones, carbon, shell, stone or antler tools) when an archaeologist is not on site all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then contact:
 - a. The Project manager;
 - b. A professional archaeologist;
 - c. The Department of Archaeology and Historic Preservation (DAHP): Lance Woolwage (360-586-3536) or Gretchen Kaehler (360- 586-3088);
 - d. The Tulalip Tribes and Hibulb Cultural Center's Preservation Officer Richard Young (360-716-2652) or Gene Enick (360-716-2653).
6. If any ground-disturbing activities on this property related to this development or in any other development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment be moved to a safe distance away from the location. The on-site superintendent should then contact:
 - a. The property owner and Project manager;
 - b. Tulalip Cultural Program Representative Richard Young (360-716-2652) or Gene Enick (360-716-2653);
 - c. The Snohomish County Sheriff's Department (425-407-3999) and the - Snohomish County Medical Examiner (425-438-6200) todetermine if the remains are forensic in nature;

If the remains are not forensic in nature the Department of Archaeology and Historic Preservation (DAHP), Dr. Guy Tasa (360-586-3534), will take the lead on consulting with the tribe to determine the appropriate method of treatment for the remains.

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8.0 APPENDIX(APPENDICES)

Appendix 1: Matrix Descriptions

- Matrix 1: 10 YR 3/3 dark brown sandy silt (85%) with 5% gravels/pebbles and 10% rootlets; moderate compaction; A horizon.
Variation: 10 YR 2/2 very dark brown
- Matrix 2: 10 YR 4/4 dark yellowish brown coarse sandy silt (40%) mottled with 10 YR 5/2 grayish brown silt pockets (20%) with 40% pebbles/gravels/occasional cobbles, occasional debris; dense compaction; local fill origin
- Matrix 3: 10 YR 4/4 dark yellowish brown coarse sand (60%) with 40% pebbles/gravels; loose to moderate compaction; glacial origin
- Matrix 4: 10 YR 4/4 to 10 YR 4/6 dark yellowish brown sandy silt (80%) with 15% pebbles/gravels and 5% organics (rootlets, charcoal, wood, bark; moderate compaction; B horizon

Appendix 2: Shovel Test Descriptions

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
1	56	49	Level 1: 0-9 cm dbs: M1. Level 2: 9-39 cm dbs: M2 – very compact, 1x amber glass fragment, 1x clear glass fragment. Level 3: 39-56 cm dbs: M3.	Negative.
2	79	52	Level 1: 0-4 cm dbs: M1. Level 2: 4-72 cm dbs: M2 – ultra compact PVC pipe, white and brown glass. Level 3: 72-79 cm dbs: M3.	Negative.
3	66	45	Level 1: 0-13 cm dbs: M1. Level 2: 13-43 cm dbs: M2 – cobbles and gravel. Level 3: 43-66 cm dbs: M3.	Negative.
4	85	46	Level 1: 0-8 cm dbs: M1. Level 2: 8-69 cm dbs: M2 – charcoal. Level 3: 69-85 cm dbs: M3.	Negative.
5	58	47	Level 1: 0-8 cm dbs: M1. Level 2: 8-31 cm dbs: M2. Level 3: 31-58 cm dbs: M3 – sub-rounded medium gravels, 10%.	Negative.
6	54	51	Level 1: 0-6 cm dbs: M1. Level 2: 6-36 cm dbs: M2 – amber base with 4 on it, white and brown glass, 7 up can, nail, paper at 21 cm dbs. Level 3: 36-54 cm dbs: M3.	Negative.
7	60	53	Level 1: 0-8 cm dbs: M1 – amber glass fragment. Level 2: 8-40 cm dbs: M2 – charcoal flecking in wall between 27-38 cm dbs. Level 3: 40-60 cm dbs: M3 more yellowish brown than orange.	Negative.
8	88	45	Level 1: 0-9 cm dbs: M1. Level 2: 9-80 cm dbs: M2 – glass. Level 3: 80-88 cm dbs: M3.	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
9	57	53	Level 1: 0-5 cm dbs: M1. Level 2: 5-33 cm dbs: M2 – fragments of charred wood. Level 3: 33-57 cm dbs: M3.	Negative.
10	49	52	Level 1: 0-5 cm dbs: M1. Level 2: 5-28 cm dbs: M2 – party paper and clay fragment at 20 cm dbs. Level 3: 28-49 cm dbs: M3.	Negative.
11	80	50	Level 1: 0-10 cm dbs: M1. Level 2: 10-50 cm dbs: M2 - glass. Level 3: 50-80 cm dbs: M3.	Negative.
12	74	51	Level 1: 0-8 cm dbs: M1 – amber glass fragment. Level 2: 8-53 cm dbs: M2. Level 3: 53-74 cm dbs: M3 – sub-rounded fine to coarse gravels, 15%.	Negative.
13	86	55	Level 1: 0-7 cm dbs: M1 – amber bottle fragment. Level 2: 7-60 cm dbs: M2 – very compact in places, clear glass fragments, nail. Level 3: 60-86 cm dbs: M3.	Negative.
14	90	50	Level 1: 0-29 cm dbs: M1. Level 2: 29-78 cm dbs: M2 – glass and charcoal. Level 3: 78-90 cm dbs: M3.	Negative.
15	80	51	Level 1: 0-5 cm dbs: M1. Level 2: 5-56 cm dbs: M2 – white and brown glass, nail at 10 cm dbs Aqua glass fragments at 30 cm dbs. Level 3: 56-80 cm dbs: M3 – clear jar at 60 cm dbs.	Negative.
16	100	48	Level 1: 0-38 cm dbs: M1. Level 2: 38-88 cm dbs: M2 – glass and charcoal. Level 3: 88-100 cm dbs: M3.	Negative.
17	92	45	Level 1: 0-6 cm dbs: M1. Level 2: 6-54 cm dbs: M2 – aqua glass bottle fragment, metal. Level 3: 54-92 cm dbs: M3 – charcoal at 66 cm dbs.	Negative.
18	93	50	Level 1: 0-11 cm dbs: M1 – sawn cow bone. Level 2: 11-52 cm dbs: M2 – rusted nail. Level 3: 52-90 cm dbs: M3.	Negative.
19	100	51	Level 1: 0-7 cm dbs: M1-duff. Level 2: 7-43 cm dbs: M2 fill. Level 3: 43-49 cm dbs: M1 – more gravel variation. Level 4: 49-100 cm dbs: M3 glacial.	Negative.
20	88	49	Level 1: 0-6 cm dbs: M1. Level 2: 6-58 cm dbs: M2 – asphalt chunk, clear glass fragment. Level 3: 58-66 cm dbs: M1. Level 4: 66-88 cm dbs: M3.	Negative.
21	86	51	Level 1: 0-4 cm dbs: M1. Level 2: 4-66 cm dbs: M2 with roots, no silt pockets. Level 3: 66-86 cm dbs: M4 – 1 lithic isolate at 83 cm dbs.	Positive.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
22	90	51	<p>Level 1: 0-9 cm dbs: M1.</p> <p>Level 2: 9-50 cm dbs: M2 – can lid, 2x bottle caps, aluminum foil, plastic, amber bottle glass fragment.</p> <p>Level 3: 50-62 cm dbs: M1 – <i>Tresus/Saxidomus sp</i> shell fragment.</p> <p>Level 4: 62-78 cm dbs: M4.</p> <p>Level 5: 78-90 cm dbs: M3.</p>	Negative.
23	56	50	<p>Level 1: 0-12 cm dbs: M1 – washer, 2x clear glass fragments under sod.</p> <p>Level 2: 12-50 cm dbs: M4 – dense with grass rootlets.</p> <p>Level 3: 50-56 cm dbs: M3 – lighter in color than described.</p>	Negative.
24	42	47	<p>Level 1: 0-9 cm dbs: M1 – 2x nails under sod.</p> <p>Level 2: 9-37 cm dbs: M4.</p> <p>Level 3: 37-42 cm dbs: M3 – very coarse sand.</p>	Negative.
25	77	52	<p>Level 1: 0-14 cm dbs: M1.</p> <p>Level 2: 14-65 cm dbs: M2 – glass.</p> <p>Level 3: 65-77 cm dbs: M3.</p>	Negative.
26	52	45	<p>Level 1: 0-6 cm dbs: M1.</p> <p>Level 2: 6-44 cm dbs : M2 – animal mandible with sawn facet at bottom of M2.</p> <p>Level 3: 44-52 cm dbs: M3.</p>	Negative.
27	57	44	<p>Level 1: 0-6 cm dbs: M1.</p> <p>Level 2: 6-40 cm dbs: M2.</p> <p>Level 3: 40-57 cm dbs: M3.</p>	Negative.
28	55	43	<p>Level 1: 0-12 cm dbs: M1 - bone.</p> <p>Level 2: 12-35 cm dbs: M2.</p> <p>Level 3: 35-55 cm dbs: M3.</p>	Negative.
29	79	55	<p>Level 1: 0-10 cm dbs: M1 – very gravelly-angular, driveway gravel.</p> <p>Level 2: 10-47 cm dbs: M2 – very gravelly-angular, driveway gravel.</p> <p>Level 3: 47-74 cm dbs: M4 – bone fragment.</p> <p>Level 4: 74-79 cm dbs: M3.</p>	Negative.
30	41	28 (roots)	<p>Level 1: 0-6 cm dbs: M1.</p> <p>Level 2: 6-41 cm dbs: M2.</p> <p>Terminated due to roots.</p>	Negative.
31	100	48	<p>Level 1: 0-50 cm dbs: M1.</p> <p>Level 2: 50-98 cm dbs: M4.</p> <p>Level 3: 98-100 cm dbs: M3.</p>	Negative.
32	70	51	<p>Level 1: 0-9 cm dbs: M1 – coarse, sandy.</p> <p>Level 2: 9-29 cm dbs: M2 – very gravelly, lots of cobbles.</p> <p>Level 3: 29-64 cm dbs: M4 – band saw cut bone.</p> <p>Level 4: 64-70 cm dbs: M3.</p>	Negative.
33	72	48	<p>Level 1: 0-9 cm dbs: M1.</p> <p>Level 2: 9-39 cm dbs: M2.</p> <p>Level 3: 39-61 cm dbs: M4.</p> <p>Level 4: 61-72 cm dbs: M3.</p>	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
34	60	49	Level 1: 0-9 cm dbs: M1. Level 2: 9-42 cm dbs: M2. Level 3: 42-60 cm dbs: M3.	Negative.
35	66	49	Level 1: 0-10 cm dbs: M1 – gravelly-sub-rounded. Level 2: 10-47 cm dbs: M2 – very gravelly-sub-rounded, fine to coarse. Level 3: 47-66 cm dbs: M3.	Negative.
36	77	52	Level 1: 0-4 cm dbs: M1. Level 2: 4-29 cm dbs: M2 – brown and white glass. Level 3: 29-70 cm dbs: M4 – brown and white glass. Level 4: 70-77 cm dbs: M3.	Negative.
37	55	49	Level 1: 0-8 cm dbs: M1. Level 2: 8-41 cm dbs: M2 – aqua, amber glass fragments. Level 3: 41-55 cm dbs: M3 – 4 cm diameter metal pipe at 47 cm dbs. Didn't break.	Negative.
38	80	49	Level 1: 0-15 cm dbs: M1. Level 2: 15-61 cm dbs: M2. Level 3: 61-80cm dbs: M3.	Negative.
39	65	45	Level 1: 0-9 cm dbs: M1. Level 2: 9-62 cm dbs: M2 – brown glass. Level 3: 62-65 cm dbs: M3.	Negative.
40	42	54	Level 1: 0-10 cm dbs: M1. Level 2: 10-42 cm dbs: M2 – brick fragment, plastic wrappers. Terminated due to concrete with metal support.	Negative.
41	100	49	Level 1: 0-7 cm dbs: M1. Level 2: 7-72 cm dbs: M2 fill, no silt pockets. Level 3: 72-100 cm dbs: M4, possible M3 at base.	Negative.
42	63	48	Level 1: 0-16 cm dbs: M1 – white ceramic earthenware fragment. Level 2: 16-55 cm dbs: M2 – dense with tree rootlets. Level 3: 55-63 cm dbs: M3.	Negative.
43	60	50	Level 1: 0-13 cm dbs: M1. Level 2: 13-49 cm dbs: M4 – dense with tree roots/rootlets. Level 3: 49-60 cm dbs: M3.	Negative.
44	34	46	Level 1: 0-13 cm dbs: M1. Level 2: 13-34 cm dbs: M2. Concrete sewer bell angled downward across hole from SE to SW	Negative.
45	50	45	Level 1: 0-9 cm dbs: M1. Level 2: 9-32 cm dbs: M2. Level 3: 32-50 cm dbs: M3.	Negative.
46	81	46	Level 1: 0-9 cm dbs: M1. Level 2: 9-65 cm dbs: M2. Level 3: 65-81 cm dbs: M3. Sewer line ~10" pipe in side wall.	Negative.
47	53	47	Level 1: 0-6 cm dbs: M1. Level 2: 6-41 cm dbs: M2 – brick fragment. Level 3: 41-53cm dbs: M3.	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
48	46	47	Level 1: 0-3 cm dbs: M1. Level 2: 3-35 cm dbs: M2 – metal fragment. Level 3: 35-46 cm dbs: M3.	Negative.
49	77	43	Level 1: 0-7 cm dbs: M1. Level 2: 7-53 cm dbs: M2. Level 3: 53-77 cm dbs: M3.	Negative.
50	48	76	Level 1: 0-6 cm dbs: M1. Level 2: 6-42 cm dbs: M2 – charcoal at 26 cm dbs. Level 3: 42-48 cm dbs: M3.	Negative.
51	57	45	Level 1: 0-10 cm dbs: M1. Level 2: 10-43 cm dbs: M2 – charcoal flecking-looks like root burn. Level 3: 43-57 cm dbs: M3.	Negative.
52	73	49	Level 1: 0-4 cm dbs: M1. Level 2: 4-35 cm dbs: M2. Level 3: 35-73 cm dbs: M3.	Negative.
53	51	50	Level 1: 0-10 cm dbs: M1. Level 2: 10-46 cm dbs: M2. Level 3: 46-51 cm dbs: M3.	Negative.
54	73	45	Level 1: 0-13 cm dbs: M1. Level 2: 13-32 cm dbs: M2. Level 3: 32-73 cm dbs: M3 – very gravelly, 50% - fine to coarse.	Negative.
55	51	44	Level 1: 0-15 cm dbs: M1. Level 2: 15-50 cm dbs: M2 – very compact, fine to coarse gravels. Level 3: 50-51 cm dbs: M3 – very compact.	Negative.
56	54	49	Level 1: 0-37 cm dbs: M1 – deep top soil. Level 2: 37-48 cm dbs: M4. Level 3: 48-54 cm dbs: M3 – more fine grained gray sand.	Negative.
57	65	47	Level 1: 0-3 cm dbs: M1. Level 2: 3-38 cm dbs: M2. Level 3: 38-59 cm dbs: M4 – white glass. Level 4: 59-65 cm dbs: M3.	Negative.
58	100	45	Level 1: 0-11 cm dbs: M1. Level 2: 11-100 cm dbs: M2 – very dense fill with quarry spalls.	Negative. Top of trail to beach.
59	87	50	Level 1: 0-12 cm dbs: M1. Level 2: 12-80 cm dbs: M2 – very dense fill with quarry spalls. Level 3: 80-87 cm dbs: M3.	Negative. Top of trail to beach.
60	60	44	Level 1: 0-9 cm dbs: M1 – plastic cup. Level 2: 9-52 cm dbs: M2 – quarry spall from gravel path, wood debris. Level 3: 52-60 cm dbs: M3 – finer grain than described.	Negative. Bottom of trail to beach.
61	54	44	Level 1: 0-3 cm dbs: M1. Level 2: 3-43 cm dbs: M2 – brown glass. Level 3: 43-54 cm dbs: M3.	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
62	68	40	Level 1: 0-9 cm dbs: M1. Level 2: 9-58 cm dbs: M2 – metal fragment. Level 3: 58-68 cm dbs: M3.	Negative.
63	45	45	Level 1: 0-4 cm dbs: M1. Level 2: 4-44 cm dbs: M2. Level 3: 44-45 cm dbs: M3. Terminated at 2" metal pipe; pipe was not damaged.	Negative.
64	86	50	Level 1: 0-7 cm dbs: M1. Level 2: 7-83 cm dbs: M2 – asphalt. Level 3: 83-86 cm dbs: M3.	Negative.
65	35	48	Level 1: 0-14 cm dbs: M1. Level 2: 14-35 cm dbs: M2. Terminated at rock.	Negative.
66	52	45	Level 1: 0-10 cm dbs: M1. Level 2: 10-38 cm dbs: M2. Level 3: 38-52 cm dbs: M3.	Negative.
67	49	47	Level 1: 0-10 cm dbs: M1. Level 2: 10-33 cm dbs: M2. Level 3: 33-49 cm dbs: M3 – clay rich sand, mottled.	Negative.
68	54	47	Level 1: 0-5 cm dbs: M1. Level 2: 5-46 cm dbs: M2 – clear glass. Level 3: 46-54 cm dbs: M3.	Negative.
69	31	45	Level 1: 0-13 cm dbs: M1. Level 2: 13-17 cm dbs: M2. Level 3: 17-31 cm dbs: M3 – mottled sandy clay.	Negative.
70	93	49	Level 1: 0-19 cm dbs: M1. Level 2: 19-80 cm dbs: M2. Level 3: 80-93 cm dbs: M3.	Negative.
71	84	51	Level 1: 0-18 cm dbs: M1. Level 2: 18-70 cm dbs: M2. Level 3: 70-84 cm dbs: M3.	Negative.
72	30	47	Level 1: 0-11 cm dbs: M1. Level 2: 11-30 cm dbs: M2. Hit sewer line, undamaged.	Negative.
73	56	48	Level 1: 0-12 cm dbs: M1. Level 2: 12-38 cm dbs: M2. Level 3: 38-56 cm dbs: M3.	Negative.
74	46	46	Level 1: 0-5 cm dbs: M1. Level 2: 5-27 cm dbs: M2 – white ceramic. Level 3: 27-46 cm dbs: M3.	Negative.
75	0	0	Terminated due to landscaping (black tarp in soil).	Negative.
76	51	44	Level 1: 0-7 cm dbs: M1. Level 2: 7-42 cm dbs: M2. Level 3: 42-51 cm dbs: M3.	Negative.
77	54	47	Level 1: 0-6 cm dbs: M1. Level 2: 6-49 cm dbs: M2 – very rocky. Level 3: 49-54 cm dbs: M3.	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
78	70	44	Level 1: 0-14 cm dbs: M1. Level 2: 14-36 cm dbs: M2 – 1% angular medium gravel. Level 3: 36-64 cm dbs: M4 – 1% angular medium gravel. Level 4: 64-70 cm dbs: M3.	Negative.
79	60	45	Level 1: 0-11 cm dbs: M1. Level 2: 11-50 cm dbs: M2 - brick. Level 3: 50-60 cm dbs: M3.	Negative.
80	54	49	Level 1: 0-5 cm dbs: M1. Level 2: 5-40 cm dbs: M2 – very rocky. Level 3: 40-54 cm dbs: M3.	Negative.
81	37	49	Level 1: 0-10 cm dbs: M1. Level 2: 10-28 cm dbs: M2 – 50% angular gravel, sub-rounded cobbles. Level 3: 28-37 cm dbs: M3.	Negative.
82	71	47	Level 1: 0-12 cm dbs: M1. Level 2: 12-61 cm dbs: M2. Level 3: 61-71 cm dbs: M3.	Negative.
83	47	48	Level 1: 0-9 cm dbs: M1. Level 2: 9-43 cm dbs: M2 – very compact, very gravelly, coarse sub-rounded/angular gravel (40%). Level 3: 43-47 cm dbs: M3.	Negative.
84	90	55	Level 1: 0-4 cm dbs: M1. Level 2: 4-88 cm dbs: M2 – very rocky. Level 3: 88-90 cm dbs: M3.	Negative.
85	80	50	Level 1: 0-13 cm dbs: M1. Level 2: 13-70 cm dbs: M2. Level 3: 70-80 cm dbs: M3.	Negative.
86	8	35	Level 1: 0-8 cm dbs: M1. Tried a couple locations, hit concrete.	Negative.
87	36	41	Level 1: 0-7 cm dbs: M1 – 20% medium sub-rounded gravels. Level 2: 7-18 cm dbs: M2 – 20% medium sub-rounded gravels. Level 3: 18-36 cm dbs: M3 – compact, mottled, clay content.	Negative.
88	78	49	Level 1: 0-20 cm dbs: M1. Level 2: 20-72 cm dbs: M2 – glass and charcoal. Level 3: 72-78 cm dbs: M3.	Negative.
89	70	47	Level 1: 0-8 cm dbs: M1. Level 2: 8-60 cm dbs: M2. Level 3: 60-70 cm dbs: M3.	Negative.
90	92	50	Level 1: 0-5 cm dbs: M1. Level 2: 5-39 cm dbs: M2 – brown and clear glass, 1x nail. Level 3: 39-81 cm dbs: M4. Level 4: 81-92 cm dbs: M3.	Negative.
91	62	50	Level 1: 0-20 cm dbs: M1. Level 2: 20-38 cm dbs: M4. Level 3: 38-62 cm dbs: M3.	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
92	65	46	Level 1: 0-7 cm dbs: M1. Level 2: 7-49 cm dbs: M2 – 1x rusted nail. Level 3: 49-65 cm dbs: M3.	Negative.
93	32	49	Level 1: 0-10 cm dbs: M1. Level 2: 10-32 cm dbs: M2.	Negative.
94	90	49	Level 1: 0-17 cm dbs: M1. Level 2: 17-50 cm dbs: M2 – nail, glass, amber bottle neck. Level 3: 50-80 cm dbs: M4. Level 4: 80-90 cm dbs: M3.	Negative.
95	89	46	Level 1: 0-7 cm dbs: M1. Level 2: 7-61 cm dbs: M2. Level 3: 61-70 cm dbs: M4. Level 4: 70-89 cm dbs: M3.	Negative.
96	92	45	Level 1: 0-3 cm dbs: M1. Level 2: 3-40 cm dbs: M2 – brown and clear glass, 3x nails. Level 3: 40-85 cm dbs: M4 – lots of charcoal. Level 4: 85-92 cm dbs: M3.	Negative.
97	77	45	Level 1: 0-7 cm dbs: M1. Level 2: 7-55 cm dbs: M2 – clear glass fragment. Level 3: 55-77 cm dbs: M3 – gravelly, fine to coarse (30%).	Negative.
98	91	49	Level 1: 0-5 cm dbs: M1. Level 2: 5-56 cm dbs: M2 – nail, white ceramic and clear glass. Level 3: 56-71 cm dbs: M4. Level 4: 71-91 cm dbs: M3.	Negative.
99	83	46	Level 1: 0-11 cm dbs: M1. Level 2: 11-59 cm dbs: M2 – concrete pipe piece. Level 3: 59-70 cm dbs: M4. Level 4: 70-83 cm dbs: M3.	Negative.
100	64	47	Level 1: 0-12 cm dbs: M1. Level 2: 12-54 cm dbs: M2 – 2x clear glass fragments, 1x ceramic fragment. Level 3: 54-64 cm dbs: M3.	Negative.
101	78	49	Level 1: 0-9 cm dbs: M1. Level 2: 9-70 cm dbs: M2. Level 3: 70-78 cm dbs: M3.	Negative.
102	84	48	Level 1: 0-4 cm dbs: M1. Level 2: 4-76 cm dbs: M2 – headlight, clear, brown and green glass, charcoal. Level 3: 76-84 cm dbs: M3.	Negative.
103	44	47	Level 1: 0-8 cm dbs: M1. Level 2: 8-41 cm dbs: M2 – black pipe at 32 cm dbs, did not break. Level 3: 41-44 cm dbs: M3.	Negative.
104	54	51	Level 1: 0-10 cm dbs: M1. Level 2: 10-54 cm dbs: M2. Terminated due to storm water pipe.	Negative.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments
105	99	45	Level 1: 0-9 cm dbs: M1. Level 2: 9-88 cm dbs: M2 – clear glass fragments, aluminum beer can. Level 3: 88-99 cm dbs: M3 – gravelly sand, fine to coarse grains.	Negative.
106	33	44	Level 1: 0-5 cm dbs: M1. Level 2: 5-33 cm dbs: M2 – green and clear glass, white ceramic. Terminated due to storm drain pipe. Pipe intact.	Negative.
107	65	44	Level 1: 0-8 cm dbs: M1. Level 2: 8-45 cm dbs: M2. Level 3: 45-65 cm dbs: M3.	Negative.
108	76	44	Level 1: 0-16 cm dbs: M1. Level 2: 16-60 cm dbs: M2. Level 3: 60-76 cm dbs: M3.	Negative.
109	99	45	Level 1: 0-6 cm dbs: M1. Level 2: 6-92 cm dbs: M2 – diet Coke can. Level 3: 92-99 cm dbs: M3.	Negative.
110	51	44	Level 1: 0-8 cm dbs: M1. Level 2: 8-44 cm dbs: M2 – charcoal at bottom. Level 3: 44-51 cm dbs: M3.	Negative. Very wet/muddy
111	66	48	Level 1: 0-3 cm dbs: M1. Level 2: 3-63 cm dbs: M2 – brown glass, ultra-compact. Level 3: 63-66 cm dbs: M3 – compact silt.	Negative.
112	49	49	Level 1: 0-4 cm dbs: M1. Level 2: 4-46 cm dbs: M2 – very rocky. Level 3: 46-49 cm dbs: M3.	Negative.
113	45	46	Level 1: 0-13 cm dbs: M1. Level 2: 13-40 cm dbs: M2 – 15% sub-rounded to sub-angular coarse gravel, 3 brick fragments. Level 3: 40-45 cm dbs: M3 – sandy clay, mottled.	Negative.

Appendix 3: Photolog

Number	View	Description
6-14-16-MN-1	N	ST 19 overview
6-14-16-MN-2	E	ST 19
6-14-16-MN-3	E	ST 19
6-14-16-MN-4	SE	ST 19
6-14-16-MN-5	N	ST 13
6-14-16-MN-6	PLAN	ST 13
6-14-16-MN-7	PLAN	ST 14
6-14-16-MN-8	PLAN	Cobble chopper from ST 21
6-14-16-MN-9	PLAN	Cobble chopper from ST 21

Number	View	Description
6-14-16-MN-10	PLAN	Cobble chopper from ST 21
6-14-16-MN-11	PLAN	Cobble chopper from ST 21
6-14-16-MN-12	PLAN	Cobble chopper from ST 21
6-14-16-MN-13	W	Cobble chopper from ST 21
6-14-16-MN-14	S	Cobble chopper from ST 21
6-14-16-MN-15	PLAN	Cobble chopper from ST 21
6-14-16-MN-16	PLAN	Cobble chopper from ST 21
6-14-16-MN-17	SE	Cobble chopper from ST 21
6-14-16-MN-18	N	Possible sawn sea mammal ST 21
6-14-16-MN-19	N	Possible sawn sea mammal ST 21
6-14-16-MN-20	PLAN	Refuse from ST 21 fill
6-14-16-MN-21	PLAN	ST 21
6-14-16-MN-22	E	ST 21
6-14-16-MN-23	NE	ST 21 overview
6-14-16-MN-24	PLAN	Cobble chopper from ST 21
6-14-16-MN-25	PLAN	Reburying artifact in ST 21
6-14-16-MN-26	E	Reburying artifact in ST 21
6-14-16-MN-27	PLAN	ST 41
6-14-16-MN-28	PLAN	Refuse from ST 41
6-14-16-MN-29	E	Overview of ST cluster by ST 21
6-14-16-MN-30	N	Overview of ST cluster by ST 21
6-14-16-IL-1	PLAN	ST 20
6-14-16-IL-2	N	ST 20 profile
6-14-16-IL-3	PLAN	Clear glass fragment from ST 20
6-14-16-IL-4	PLAN	ST 11
6-14-16-IL-5	N	ST 11 profile
6-14-16-IL-6	PLAN	Metal from ST 22
6-14-16-IL-7	PLAN	Amber bottle glass from ST 22
6-14-16-IL-8	PLAN	Plastic from ST 22
6-14-16-IL-9	PLAN	Aluminum foil from ST 22
6-14-16-IL-10	PLAN	<i>Tresus/Saxidomus sp.</i> shell fragment from ST 22
6-14-16-IL-11	PLAN	ST 22
6-14-16-IL-12	E	ST 22 profile
6-14-16-IL-13	PLAN	Cobble chopper from ST 21
6-14-16-IL-14	PLAN	Cobble chopper from ST 21
6-14-16-IL-15	PLAN	Cobble chopper from ST 21
6-14-16-IL-16	PLAN	Cobble chopper from ST 21
6-14-16-IL-17	PLAN	Cobble chopper from ST 21
6-14-16-IL-18	PLAN	ST 40
6-14-16-IL-19	N	ST 40 profile

Number	View	Description
6-14-16-IL-20	PLAN	Brick fragment and plastic from ST 40
6-14-16-IL-21	PLAN	Concrete and metal from ST 40
6-14-16-IL-22	PLAN	ST 43
6-14-16-IL-23	E	ST 43 profile
6-14-16-IL-24	PLAN	ST 42
6-14-16-IL-25	S	ST 42 profile
6-14-16-IL-26	PLAN	White ceramic earthenware fragment from ST 42
6-14-16-IL-27	PLAN	ST 44
6-14-16-IL-28	N	ST 44 profile
6-14-16-IL-29	N	Cluster of ST around ST 21-positive for cobble chopper
6-14-16-IL-30	E	Cluster of ST around ST 21-positive for cobble chopper
6-14-16-IL-31	PLAN	ST 23
6-14-16-IL-32	NE	ST 23 profile
6-14-16-IL-33	PLAN	Washer and clear glass fragment from ST 23
6-14-16-IL-34	DELETE	DELETE
6-14-16-IL-35	PLAN	Grass rootlets from ST 23
6-14-16-IL-36	PLAN	Nails from ST 24
6-14-16-IL-37	PLAN	ST 24
6-14-16-IL-38	N	ST 24 profile
6-14-16-IL-39	PLAN	ST 27
6-14-16-IL-40	N	ST 27 profile
6-14-16-IL-41	PLAN	ST 26
6-14-16-IL-42	N	ST 26 profile
6-14-16-IL-43	PLAN	Machine sawn mammal bone from ST 26
6-14-16-IL-44	PLAN	Machine sawn mammal bone from ST 26
6-14-16-IL-45	PLAN	Machine sawn mammal bone from ST 26
6-14-16-IL-46	PLAN	Machine sawn mammal bone from ST 26
6-14-16-IL-47	PLAN	ST 25
6-14-16-IL-48	N	ST 25 profile
6-14-16-IL-49	PLAN	ST 60
6-14-16-IL-50	N	ST 60 profile
6-14-16-IL-51	N	View from ST 60
6-14-16-IL-52	E	View from ST 60
6-14-16-IL-53	S	View from ST 60
6-14-16-IL-54	W	View from ST 60
6-14-16-IL-55	PLAN	ST 58
6-14-16-IL-56	N	ST 58 profile
6-14-16-IL-57	N	View of ST 59 from ST 58
6-14-16-IL-58	S	View from ST 58
6-14-16-IL-59	PLAN	ST 59

Number	View	Description
6-14-16-IL-60	E	ST 59 profile
6-14-16-SL-1	PLAN	ST 37
6-14-16-SL-2	E	ST 37
6-14-16-SL-3	PLAN	ST 35
6-14-16-SL-4	E	ST 35
6-14-16-SL-5	PLAN	ST 32
6-14-16-SL-6	S	ST 32
6-14-16-SL-7	PLAN	ST 29
6-14-16-SL-8	N	ST 29
6-14-16-SL-9	N	ST 29
6-14-16-SL-10	PLAN	Bone from M4
6-14-16-SL-11	PLAN	Bone from M4
6-14-16-SL-12	PLAN	ST 28
6-14-16-SL-13	N	ST 28
6-14-16-SL-14	E	Bone from M1
6-14-16-SL-15	PLAN	ST 56
6-14-16-SL-16	S	ST 56
6-14-16-SL-17	PLAN	ST 55
6-14-16-SL-18	W	ST 55
6-14-16-SL-19	PLAN	ST 53
6-14-16-SL-20	N	ST 53
6-14-16-SL-21	PLAN	ST 51
6-14-16-SL-22	N	ST 51
6-14-16-SL-23	PLAN	ST 50
6-14-16-SL-24	E	ST 50
6-14-16-SL-25	PLAN	ST 54
6-14-16-SL-26	N	ST 54
6-14-16-SL-27	PLAN	ST 64
6-14-16-SL-28	N	ST 64
6-14-16-SL-29	PLAN	ST 52
6-14-16-SL-30	N	ST 52
6-14-16-SL-31	PLAN	ST 47
6-14-16-SL-32	N	ST 47
6-14-16-SL-33	PLAN	ST 68
6-14-16-SL-34	PLAN	ST 68
6-14-16-SJH-1	E	Crew at ST 19
6-14-16-SJH-2	E	Crew at ST 19
6-14-16-SJH-3	SE	Overview at cemetery area
6-14-16-SJH-4	SE	Overview at cemetery area
6-14-16-SJH-5	E	Overview at cemetery area

Number	View	Description
6-14-16-SJH-6	SE	Overview at cemetery area
6-14-16-SJH-7	NW	Overview at cemetery area
6-14-16-SJH-8	NW	Crew shot
6-14-16-SJH-9	NW	Crew shot
6-14-16-SJH-10	NW	Crew shot
6-14-16-SJH-11	N	Crew shot
6-14-16-SJH-12	N	Crew shot
6-14-16-SJH-13	E	Crew shot
6-14-16-SJH-14	PLAN	ST 17
6-14-16-SJH-15	PLAN	ST 17
6-14-16-SJH-16	PLAN	ST 16
6-14-16-SJH-17	PLAN	ST 16
6-14-16-SJH-18	PLAN	ST 18
6-14-16-SJH-19	PLAN	ST 18
6-14-16-SJH-20	PLAN	Items from ST 17
6-14-16-SJH-21	PLAN	Items from ST 17
6-14-16-SJH-22	PLAN	Items from ST 17
6-14-16-SJH-23	PLAN	Items from ST 17
6-14-16-SJH-24	PLAN	Bone from ST 18
6-14-16-SJH-25	PLAN	Bone from ST 18
6-14-16-SJH-26	PLAN	Bone from ST 18
6-14-16-SJH-27	PLAN	Bone from ST 18
6-14-16-SJH-28	PLAN	Bone from ST 18
6-14-16-SJH-29	PLAN	ST 15
6-14-16-SJH-30	PLAN	ST 15
6-14-16-SJH-31	PLAN	"Best Foods" "Registered" from ST 15
6-14-16-SJH-32	PLAN	"Best Foods" "Registered" from ST 15
6-14-16-SJH-33	PLAN	"Best Foods" "Registered" from ST 15
6-14-16-SJH-34	PLAN	"Best Foods" "Registered" from ST 15
6-14-16-SJH-35	PLAN	"Best Foods" "Registered" from ST 15
6-14-16-SJH-36	PLAN	"Best Foods" "Registered" from ST 15
6-14-16-SJH-37	PLAN	ST 12
6-14-16-SJH-38	PLAN	ST 12
6-14-16-SJH-39	PLAN	ST 10
6-14-16-SJH-40	PLAN	ST 10
6-14-16-SJH-41	PLAN	ST 9
6-14-16-SJH-42	PLAN	ST 9
6-14-16-SJH-43	PLAN	ST 9
6-14-16-SJH-44	PLAN	ST 7
6-14-16-SJH-45	PLAN	ST 7

Number	View	Description
6-14-16-SJH-46	PLAN	ST 8
6-14-16-SJH-47	PLAN	ST 8
6-14-16-SJH-48	PLAN	ST 5
6-14-16-SJH-49	PLAN	ST 5
6-14-16-SJH-50	PLAN	ST 6
6-14-16-SJH-51	PLAN	ST 6
6-14-16-SJH-52	PLAN	Amber bottle base from ST 6
6-14-16-SJH-53	PLAN	Amber bottle base from ST 6
6-14-16-SJH-54	SE	Overview of cemetery area
6-14-16-SJH-55	PLAN	ST 3
6-14-16-SJH-56	PLAN	ST 3
6-14-16-SJH-57	DELETE	DELETE
6-14-16-SJH-58	PLAN	ST 4
6-14-16-SJH-59	PLAN	ST 4
6-14-16-SJH-60	PLAN	ST 2
6-14-16-SJH-61	PLAN	ST 2
6-14-16-SJH-62	PLAN	ST 1
6-14-16-SJH-63	PLAN	ST 1
6-14-16-SJH-64	SW	Trail area overview
6-14-16-SJH-65	SW	Trail area overview
6-14-16-SJH-66	SW	Trail area overview
6-14-16-SJH-67	PLAN	ST 39
6-14-16-SJH-68	PLAN	ST 39
6-14-16-SJH-69	PLAN	ST 38
6-14-16-SJH-70	PLAN	ST 38
6-14-16-SJH-71	PLAN	Pipe in ST 37
6-14-16-SJH-72	PLAN	Pipe in ST 37
6-14-16-SJH-73	PLAN	ST 36
6-14-16-SJH-74	PLAN	ST 36
6-14-16-SJH-75	PLAN	ST 36
6-14-16-SJH-76	PLAN	ST 34
6-14-16-SJH-77	PLAN	ST 34
6-14-16-SJH-78	NW	Overview of cemetery area
6-14-16-SJH-79	NW	Overview of cemetery area
6-14-16-SJH-80	PLAN	ST 33
6-14-16-SJH-81	PLAN	ST 33
6-14-16-SJH-82	PLAN	Saw cut bone from ST 32
6-14-16-SJH-83	PLAN	Saw cut bone from ST 32
6-14-16-SJH-84	PLAN	Saw cut bone from ST 32
6-14-16-SJH-85	PLAN	Saw cut bone from ST 32

Number	View	Description
6-14-16-SJH-86	PLAN	Saw cut bone from ST 32
6-14-16-SJH-87	PLAN	Saw cut bone from ST 32
6-14-16-SJH-88	DELETE	DELETE
6-14-16-SJH-89	PLAN	ST 31
6-14-16-SJH-90	PLAN	ST 31
6-14-16-SJH-91	PLAN	ST 30
6-14-16-SJH-92	PLAN	ST 30
6-14-16-SJH-93	S	Crew at ST 29
6-14-16-SJH-94	S	Crew at ST 29
6-14-16-SJH-95	PLAN	ST 45
6-14-16-SJH-96	PLAN	ST 45
6-14-16-SJH-97	PLAN	ST 57
6-14-16-SJH-98	PLAN	ST 57
6-14-16-SJH-99	PLAN	ST 74
6-14-16-SJH-100	PLAN	ST 74
6-14-16-SJH-101	PLAN	ST 46
6-14-16-SJH-102	PLAN	ST 46
6-14-16-SJH-103	SE	Overview of road area
6-14-16-SJH-104	NW	Overview of road area
6-14-16-SJH-105	NW	Overview of road area
6-14-16-SJH-106	SE	Overview of road area
6-14-16-SJH-107	PLAN	ST 70
6-14-16-SJH-108	PLAN	ST 70
6-14-16-SJH-109	PLAN	ST 62
6-14-16-SJH-110	PLAN	ST 62
6-14-16-SJH-111	PLAN	ST 63
6-14-16-SJH-112	PLAN	Pipe in ST 63
6-14-16-SJH-113	PLAN	ST 63
6-14-16-SJH-114	PLAN	ST 71
6-14-16-SJH-115	PLAN	ST 71
6-14-16-SJH-116	PLAN	ST 72
6-14-16-SJH-117	PLAN	ST 72
6-14-16-SJH-118	PLAN	ST 73
6-14-16-SJH-119	S	ST 73
6-14-16-SJH-120	PLAN	ST 65
6-14-16-SJH-121	W	ST 65
6-15-16-SJH-1	NW	Overview from end of road area
6-15-16-SJH-2	NW	Overview from end of road area
6-15-16-SJH-3	SE	Overview of flags layed out in cemetery area
6-15-16-SJH-4	SE	Overview of flags layed out in cemetery area

Number	View	Description
6-15-16-SJH-5	SE	Overview of road area
6-15-16-SJH-6	PLAN	Amber bottle neck from ST 94, M2
6-15-16-SJH-7	PLAN	Amber bottle neck from ST 94, M2
6-15-16-SJH-8	PLAN	Amber bottle neck from ST 94, M2
6-15-16-SJH-9	PLAN	Amber bottle neck from ST 94, M2
6-15-16-SJH-10	PLAN	Amber bottle neck from ST 94, M2
6-15-16-SJH-11	PLAN	Amber bottle neck from ST 94, M2
6-15-16-SJH-12	PLAN	ST 91
6-15-16-SJH-13	PLAN	ST 91
6-15-16-SJH-14	PLAN	ST 91
6-15-16-SJH-15	PLAN	ST 91
6-15-16-SJH-16	E	Overview of positive test 21
6-15-16-SJH-17	E	Overview of positive test 21
6-15-16-SJH-18	E	Overview of positive test 21
6-15-16-SJH-19	PLAN	ST 95
6-15-16-SJH-20	PLAN	ST 95
6-15-16-SJH-21	PLAN	ST 93
6-15-16-SJH-22	E	Chief Patkanim monument
6-15-16-SJH-23	E	Chief Patkanim monument
6-15-16-SJH-24	E	Chief Patkanim monument
6-15-16-SJH-25	E	Chief Patkanim monument
6-15-16-SJH-26	E	Chief Patkanim monument
6-15-16-SJH-27	E	Chief Patkanim monument
6-15-16-SJH-28	E	Chief William Shelton monument
6-15-16-SJH-29	E	Chief William Shelton monument
6-15-16-SJH-30	E	Chief William Shelton monument
6-15-16-RED-1	PLAN	ST 110
6-15-16-RED-2	S	ST 110 S wall
6-15-16-RED-3	PLAN	ST 87
6-15-16-RED-4	N	ST 87 N wall
6-15-16-RED-5	PLAN	ST 67
6-15-16-RED-6	N	ST 67
6-15-16-RED-7	PLAN	ST 89
6-15-16-RED-8	SE	ST 89
6-15-16-RED-9	PLAN	ST 111
6-15-16-RED-10	S	ST 111 S wall
6-15-16-RED-11	PLAN	ST 66
6-15-16-RED-12	S	ST 66
6-15-16-RED-13	PLAN	ST 69
6-15-16-RED-14	N	ST 69

Number	View	Description
6-15-16-RED-15	PLAN	ST 86
6-15-16-RED-16	N	ST 86
6-15-16-RED-17	PLAN	ST 112
6-15-16-RED-18	S	ST 112 S wall
6-15-16-RED-19	PLAN	ST 113
6-15-16-RED-20	E	ST 113 E wall
6-15-16-RED-21	PLAN	ST 76
6-15-16-RED-22	W	ST 76
6-15-16-RED-23	PLAN	ST 77
6-15-16-RED-24	S	ST 77 S wall
6-15-16-RED-25	PLAN	ST 78
6-15-16-RED-26	N	ST 78 N wall
6-15-16-RED-27	PLAN	ST 79
6-15-16-RED-28	W	ST 79
6-15-16-RED-29	PLAN	ST 80
6-15-16-RED-30	S	ST 80 S wall
6-15-16-RED-31	PLAN	ST 81
6-15-16-RED-32	N	ST 81
6-15-16-RED-33	PLAN	ST 82
6-15-16-RED-34	SW	ST 82
6-15-16-RED-35	PLAN	ST 85
6-15-16-RED-36	N	ST 85
6-15-16-RED-37	PLAN	ST 83
6-15-16-RED-38	S	ST 83
6-15-16-RED-39	PLAN	ST 84
6-15-16-RED-40	W	ST 84 W wall
6-15-16-RED-41	PLAN	ST 88
6-15-16-RED-42	NE	ST 88
6-15-16-RED-43	PLAN	ST 98
6-15-16-RED-44	S	ST 98 S wall
6-15-16-RED-45	N	ST 98 N wall
6-15-16-RED-46	PLAN	ST 94
6-15-16-RED-47	PLAN	ST 94
6-15-16-RED-48	PLAN	ST 97 no flash
6-15-16-RED-49	PLAN	ST 97 with flash
6-15-16-RED-50	S	ST 97
6-15-16-RED-51	PLAN	ST 92
6-15-16-RED-52	W	ST 92
6-15-16-RED-53	PLAN	ST 90
6-15-16-RED-54	S	ST 90 S wall

Number	View	Description
6-15-16-RED-55	PLAN	ST 99
6-15-16-RED-56	NE	ST 99
6-15-16-RED-57	PLAN	ST 96
6-15-16-RED-58	N	ST 96 N wall
6-15-16-RED-59	PLAN	ST 100 (north arrow actually pointing west)
6-15-16-RED-60	S	ST 100 (north arrow actually pointing west)
6-15-16-RED-61	PLAN	ST 101
6-15-16-RED-62	S	ST 101
6-15-16-RED-63	PLAN	ST 103
6-15-16-RED-64	PLAN	ST 103 pipe
6-15-16-RED-65	PLAN	ST 103
6-15-16-RED-66	PLAN	ST 103
6-15-16-RED-67	PLAN	ST 102
6-15-16-RED-68	PLAN	ST 102
6-15-16-RED-69	S	ST 106
6-15-16-RED-70	PLAN	ST 106
6-15-16-RED-71	PLAN	ST 104
6-15-16-RED-72	NW	ST 104
6-15-16-RED-73	PLAN	ST 61
6-15-16-RED-74	S	ST 61
6-15-16-RED-75	PLAN	ST 108
6-15-16-RED-76	PLAN	ST 108
6-15-16-RED-77	SE	Overview SE
6-15-16-RED-78	PLAN	ST 109
6-15-16-RED-79	S	ST 109 S wall