
Attachment E
Cultural Resources Assessment for the Sounder
Yard Expansion Project and Letter of No Effect
(redacted version 2013)



U.S. Department
of Transportation
**Federal Transit
Administration**

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Washington

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September 6, 2013

Dr. Allyson Brooks
State Historic Preservation Officer
Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504-8343

Project: Sounder 3rd Storage Track and Maintenance Facility
RE: Section 106 Consultation and Request for Comment

Dear Dr. Brooks:

The Federal Transit Administration (FTA) initiated Section 106 consultation with the Department of Architecture and Historic Preservation pursuant to Section 106 of the National Historic Preservation Act for the Sounder 3rd Storage Track and Maintenance Facility in its letter dated May 1, 2013. As previously noted, the proposed APE for each project covers much of the same area. FTA and Sound Transit conducted the inventory and analysis for each concurrently. SHPO concurred with the area of potential effect (APE) in its letter dated May 22, 2013. The Cultural Resources Assessment for the Sounder Yard Expansion Project is enclosed for your review.

Project Description

The storage track project would construct an additional storage track at the existing Lakewood storage site expanding capacity to seven, eight-car trains accommodating future corridor demand. The Lakewood storage site is in the City of Lakewood west of Lakeview Avenue SW between Steilacoom Boulevard SW and 100th Street SW. Project site improvements include paving existing gravel roads and pedestrian paths, relocating guy wires for electrical poles, providing new paved access roads, constructing a new infiltration trench, and a 3,200 square foot crew administration building with 40 parking stalls.

The future maintenance facility would be at the north end of the 3rd storage track project site adjacent to Steilacoom Blvd. SW. The maintenance facility project would also include additional tracks within the train yard north of 100th Street SW, a tie in to the mainline track and an optional car wash facility north of 108th Street SW at the south end of the project area.

Historic Resource Inventory and Eligibility Determination

A cultural resources assessment for the APE is enclosed. The archaeological inventory includes pedestrian transects and an archaeological subsurface survey, consisting of excavation of 15 shovel probes. One cultural isolate (45PI1304), a fence post, was identified during the inventory (Appendix A). The fence post is a cultural isolate and a common resource, and is not eligible for listing on the National Register of Historic Places (NRHP).

The architectural inventory included recordation and evaluation of all unrecorded buildings, structures, and objects 45 years old or older in the APE. There are 18 buildings that meet this age criteria, and 16 were previously recorded as part of the Washington Department of Transportation (WSDOT) Point Defiance

Bypass project. These buildings were determined not eligible for the NRHP, and SHPO concurred with this determination. Additionally, two previously unrecorded warehouses on the Lakes Auto Wrecking property at 4046 100th Street SW (Figure 7-5 and Section 8.2) were identified within the APE, and Historic Property Inventory (HPI) forms have been prepared and uploaded to the DAHP database. FTA has determined that neither of the two warehouses is eligible for listing in the NRHP. The cultural resources report includes an analysis of the eligibility of these resources as well as the HPI forms (Appendix B).

Adverse Effect Determination

FTA evaluated the Project's potential to adversely affect the historic Northern Pacific Railroad (NPRR) alignment, an NRHP eligible property located within the APE (DAHP 2010). FTA determined that the Project poses no major impacts to the integrity and significance of the NPRR alignment and would have no adverse effect.

Because the cultural isolate and two inventoried warehouses are not eligible for listing in the NRHP, they will not be adversely affected by the project.

As described in the cultural resources report, there is low to moderate probability for observing precontact to ethnohistoric period cultural remains. In the event that archaeological deposits are inadvertently discovered during construction in the APE, ground-disturbing activities in the vicinity of the find will be halted, and Sound Transit will be notified immediately. Sound Transit will contact DAHP, as well as other agencies and affected Tribes, as outlined in the enclosed inadvertent discovery plan for your review.

We request your concurrence on the determinations of not eligible for the two warehouse properties and the determination of no adverse effect for the NPRR alignment.

If you have questions or comments related to the proposed project, please contact Wesley King (206) 220-7501 or Wesley.king.ctr@dot.gov. We welcome your comments on the project within 30 days.

Sincerely,



Kenneth A Feldman
Deputy Regional Administrator

Enclosures: Cultural Resources Assessment for the Sounder Yard Expansion Project (cd)
Inadvertent Discovery Plan (cd)

Cc: Lauren Swift, Sound Transit
Matthew Sterner, DAHP

CULTURAL RESOURCES REPORT COVER SHEET

Author: Stevenson, Alexander E. and Matthew Sneddon
Title of Report: Cultural resources Assessment for the Sounder Yard Expansion Project, Lakewood, Washington

Date of Report: July 11, 2013

County(ies): King Section: 36 Township: 20N Range: 02E
Section: 01 Township: 19N Range: 02E

Quad: Tacoma South Acres: ~1

PDF of report submitted (REQUIRED) Yes

Historic Property Inventory Forms to be Approved Online? Yes No

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

TCP(s) found? Yes No

Replace a draft? Yes No

Satisfy a DAHP Archaeological Excavation Permit requirement? Yes # No

Were Human Remains Found? Yes DAHP Case # No

DAHP Archaeological Site #:
45PI11304

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

Cultural Resources Assessment for the Sounder Yard Expansion
Project, Lakewood, Washington

Submitted to:
Parsons Brinckerhoff



Submitted by:
Historical Research Associates, Inc.
Alexander E. Stevenson
Matthew Sneddon

Seattle, WA
July 2013



HISTORICAL
RESEARCH
ASSOCIATES, INC.

This report was prepared by HRA Principal Investigator Alexander E. Stevenson, MS, who meets the Secretary of the Interior's professional qualifications standards for archaeology and HRA Historian Matthew Sneddon, Ph.D., who meets the Secretary of the Interior's professional qualifications standards for history and architectural history. This report is intended for the exclusive use of the Client and its representatives. It contains professional conclusions and recommendations concerning the potential for project-related impacts to archaeological resources based on the results of HRA's investigation. It should not be considered to constitute project clearance with regard to the treatment of cultural resources or permission to proceed with the project described in lieu of review by the appropriate reviewing or permitting agency. This report should be submitted to the appropriate state and local review agencies for their comments prior to the commencement of the project.

Executive Summary

Sound Transit is proposing to expand the Sounder yard at the existing Lakewood Yard. Sound Transit's Sounder Yard Expansion Project (Current Project). Current Project improvements include a new layover track that would provide the capacity to accommodate storage of seven, eight-car train sets with standby power outlets on the site (currently five, seven-car train sets are stored at the yard). Train and engine crew facility trailer(s) would be added along the east side of the new track, along with up to 45 automobile parking spaces. The existing yard roadways, site lighting security system, and drainage facilities would be updated as described below. Parking, administrative buildings, access roads, and other improvements are also planned. Sound Transit is also considering construction of a maintenance facility as well as additional yard tracks at this location. This project (Potential Future Project) is in the early planning stages. The Area of Potential Effects (APE) includes project elements and planned construction limits for both the yard expansion (Current Project) and the potential maintenance facility.

Parsons-Brinckerhoff was contracted by Sound Transit to perform design and permitting services for the Project. Historical Research Associates, Inc. (HRA) was contracted by Parsons-Brinckerhoff to perform cultural resources consultation for the Project. The Project is subject to environmental analysis under the National Environmental Policy Act (NEPA), and qualifies as a Documented Categorical Exclusion (DCE). A cultural resource survey is required because Sound Transit may receive funding from the Federal Transit Authority (FTA) and the Project is defined as a federal undertaking. Under Section 106 of the National Historic Preservation Act (NHPA), any project receiving funding or permitting or being conducted on federal lands, and that is defined as an federal undertaking, must be performed in compliance with this regulation.

In May of 2013, HRA conducted a cultural resources inventory of the APE. The archaeological inventory included pedestrian transects and an archaeological subsurface survey which consisted of excavation of 15 shovel probes. One cultural isolate (45PI1304), a fence post, was identified during the inventory. Since it is a cultural isolate and a very common resource it is not eligible for the National Register of Historic Places (NRHP), Washington Heritage Register (WHR) or Lakewood Landmarks; therefore, the Project will not adversely affect any archaeological resources and further study is unnecessary.

The architectural inventory included recordation and evaluation of all unrecorded buildings, structures, and objects 45 years old or older in the APE. Two previously unrecorded buildings were identified. HRA recommends that neither of the two buildings are eligible for listing in the NRHP,

1 WHR or Lakewood Landmarks. Since these resources do not appear eligible, they will not be
2 adversely affected by the Project and further study is not warranted.

3 In addition, HRA evaluated the Project's potential to adversely affect the historic Northern Pacific
4 Railroad (NPRR) alignment, an NRHP eligible property located within the APE (DAHP 2010). It is
5 HRA's conclusion that the Project poses no major impacts to the integrity and significance of the
6 NPRR alignment. HRA recommends a finding of no adverse effect for this property, and that no
7 further study is necessary. If there are substantial changes to the current project design, further
8 cultural resources studies for the Sounder Yard Expansion Project may become necessary.

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1. Introduction and Project Description

1.1 Introduction

Sound Transit is proposing to add a third track for train storage at the existing Lakewood Yard. Sound Transit's Sounder Yard Expansion Project (Current Project). Project improvements include a new layover track that would provide the capacity to accommodate storage of seven, eight-car train sets with standby power outlets on the site (currently five, seven-car train sets are stored at the yard). Train and engine crew facility trailer(s) would be added along the east side of the new track, along with up to 45 automobile parking spaces. The existing yard roadways, site lighting security system, and drainage facilities would be updated as described below. Parking, administrative buildings, access roads, and other improvements are also planned. Sound Transit is also considering construction of a maintenance facility as well as additional yard tracks at this location. This project (Potential Future Project) is in the early planning stages. The Area of Potential Effects (APE) includes project elements and planned construction limits for both the yard expansion (Current Project) and the potential maintenance facility.

The project is located in Section 36 of Township 20 North, Range 2 East, and Section 1 of Township 19 North, Range 2 East. It extends from Steilacoom Boulevard Southwest along the existing railroad tracks, south to 108th Street Southwest (Figures 1-1 and 1-2).

Parsons-Brinckerhoff was contracted by Sound Transit to perform design and permitting services for the Project. Historical Research Associates, Inc. (HRA) was contracted by Parsons-Brinckerhoff to perform cultural resources consultation for the Project.

1.2 Current Project Description

Sound Transit is proposing to add a third track for train storage at the existing Lakewood Yard. Currently five, seven –car train sets are stored at the yard. The new layover track would provide the capacity to accommodate storage of seven, eight-car train sets with standby power outlets on the site. Train and engine crew facility trailer(s) would be added along the east side of the new track, along with up to 45 automobile parking spaces. The existing yard roadways, site lighting, security system, and drainage facilities would be updated as described below.

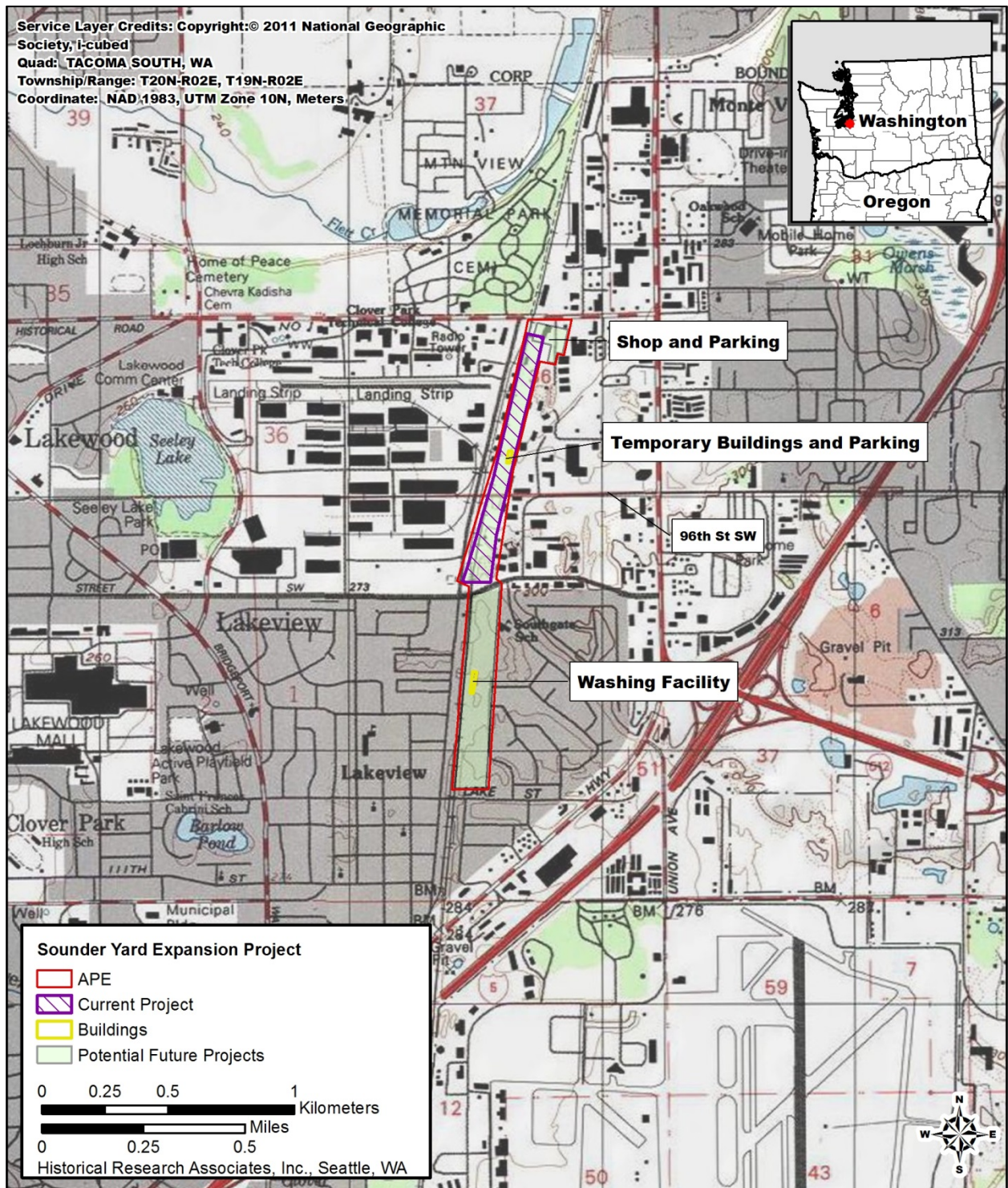


Figure 1-1. Location of the APE



Figure 1-2. Location of the APE and vicinity

- Third layover/storage track and turnouts at each end of the layover yard
- Trailer(s) with approximately 3,200 square feet of space for crew administration
- Concrete pad foundation for trailer(s)
- Up to 45 automobile parking spaces
- Retaining walls where required
- Air lines and air compressor building
- Standby power along tracks
- Access road (paved/12-foot wide) on the east side of the new storage tracks
- Sewage dump station
- Site lighting for the access road and parking area
- Modification and filling of the existing water quality ditches to provide appropriate track bedding for new tracks
- Paving the remainder of the existing Center Access Road and existing East Access Road
- Drainage improvements as required

1.3 Potential Future Project Description

Sound Transit is also considering construction and operation of a maintenance facility and additional yard tracks at this location, although a determination to proceed with the Potential Future Project of the project has not been made at this time. Because the additional service beginning in October 2016 (2 more round trips of commuter trains between Lakewood and Tacoma) requires an additional storage track, Sound Transit is proceeding with the Current Project project to provide the necessary storage track in time to accommodate this start of service. The Current Project storage track project has an independent utility from the potential Potential Future Project maintenance facility project. The construction of the additional storage track is needed whether or not the maintenance facility is constructed at this location or at all. If constructed at another location, storage tracks at this location remain useful and the storage tracks would not necessarily preclude consideration of alternative sites for a maintenance facility.

1.4 Regulatory Context

The Project is subject to environmental analysis under the National Environmental Policy Act (NEPA) but qualifies as a Documented Categorical Exclusion (DCE). However, a cultural resource survey is still required because Sound Transit is receiving funding from the Federal Transit Authority

(FTA) and the Project is defined as an undertaking. Under Section 106 of the National Historic Preservation Act (NHPA), any project receiving funding or permitting or being conducted on federal lands, and that is defined as an undertaking, must be performed in compliance with this regulation.

1.5 Area of Potential Effects

The Area of Potential Effects (APE) extends for a total of approximately 1.25 miles from Steilacoom Boulevard Southwest to 108th Street Southwest (Figures 1 and 2). The APE incorporates project elements for Current and Potential Future Projects. DAHP concurred with the APE on May 22, 2013 (Sternner 2013).

2. Archival Research

This chapter provides a review of archival data including previous cultural resources surveys; documented archaeological sites, historic sites, structures, and objects; and historic maps. Understanding previous cultural resource surveys and known cultural resources in the vicinity of a project is important for understanding how intensively work has been conducted in the area. This archival research is necessary for developing expectations for this Project which will be outlined in Section 5.

2.1 Research Methods and Materials Reviewed

HRA project archaeologist Alexander Stevenson conducted an archival record search for the project. Mr. Stevenson searched the Washington Department of Archaeology and Historic Preservation's (DAHP) confidential online Washington Information System for Architectural and Archaeological Records Data (WISAARD) database for archaeological site records, cultural resource survey reports, cemetery records, Historic Property Inventory (HPI) forms, and for National Register of Historic Places (NRHP), Washington Heritage Register (WHR), and Lakewood Landmark resources within ½ mile of the APE. The statewide predictive model in WISAARD was reviewed in order to assess the probability of archaeological resources within the APE.

HRA's in-house library was used to obtain information on the environmental, archaeological, and historical context of the project area. Nineteenth-century General Land Office (GLO) plats from the United States Surveyor General (USSG), as well as Metsker and Sanborn Fire Insurance maps, were reviewed in order to identify historic structures, sites, and features which may remain within the APE. Prior to surveying the project area, HRA architectural historian Matthew Sneddon consulted WISAARD and Pierce County tax assessors' records to determine the age of buildings, structures, or objects (BSOs) within the APE. Research for the historic context of the site utilized historic maps, United States Geological Survey (USGS) aerial photography, Bureau of Land Management (BLM) records, the University of Washington and Seattle Public Library, newspapers, and the Tacoma Public Library's (TPL) online resources.

2.2 Archival Research Results

2.2.1 *Previous Cultural Resources Studies*

Three previous cultural resource surveys have been performed within ½ mile of the APE (Table 2-1). Two of these surveys (Jones and Stokes 2008; Van Galder et al. 2012) have focused specifically on the railroad alignment which is included in the current study.

Table 2-1. Previous Cultural Resources Studies within Approximately 0.5 mi of the APE.

NADB #	Reference	Title	Description	Identified Cultural Resources within APE	Identified Cultural Resources Outside APE
1351522	Jones and Stokes 2008	Final Cultural Resources Survey/Discipline Report: Point Defiance Rail Bypass Project, Pierce County, Washington	Archival research, Pedestrian and subsurface survey	Northern Pacific Railroad Alignment recorded and evaluated; likely eligible for NRHP under criteria A and B	36 historic structures/objects identified and evaluated; three historic archaeological sites and two historic isolates identified
None	Silverman and Dellert 2011	Cultural Resource Reconnaissance Survey of the Woodland to St. Claire Transmission Line Project, City of Lakewood, Pierce County, Washington	Archival research, Pedestrian and subsurface survey	None	None
None	Van Galder et al. 2012	Federal Railroad Administration – WSDOT Point Defiance Bypass Project Environmental Assessment: Section 106 Discipline Report	Archival research, pedestrian and subsurface survey	None	HPIs updated; One archaeological site identified (45PI1263)

Silverman and Dellert (2011) surveyed locations near the APE. These investigators excavated nine shovel probes, but did not encounter any subsurface cultural resources.

Subsurface survey within the APE has been limited. Jones and Stokes (2008) excavated three shovel probes. The locations of two of these probes are within the APE of the Sounder Yard Expansion Project; neither of these yielded cultural materials. Van Galder et al. (2012) excavated five shovel probes. These were located more than 2 miles southwest of the APE.

All of the surveys have included above ground, built environment survey components as well, but have not recorded any buildings within or immediately adjacent to (within one tax parcel) the APE.

2.2.2 Archaeological Sites

No previously recorded archaeological sites exist within ½ mile of the APE.

2.2.3 *Historic Buildings, Structures, and Objects*

One historic BSO was identified in or within ½ mile of the project APE. The Northern Pacific Railroad (NPRR) alignment was recorded and recommended eligible for the NRHP by Jones and Stokes in 2008 (Jones and Stokes 2008). DAHP concurred with the recommendation in 2010 and determined the NPRR eligible for listing on the NRHP (DAHP 2010). The current Sound Transit rail line follows the alignment, which runs the length of the APE.

To provide extra time for project permitting, Sound Transit requested HRA identify all buildings 45 years old or older in the APE for potential survey, inventory, and evaluation rather than using the 50-year-old age criterion for eligibility for the NRHP, WHR, and Lakewood Landmarks register. HRA reviewed the Pierce County Tax Assessor's records for the properties within the APE and identified eighteen BSOs over 45 years old, listed in the table below and shown in Figure 2-1 on the next page. Sixteen of the BSOs were previously recorded on HPI forms, and determined not eligible for the NRHP and WHR by DAHP in 2010. Tax records showed one BSO in the APEs that had not yet been recorded.

2.2.4 *Cemeteries*

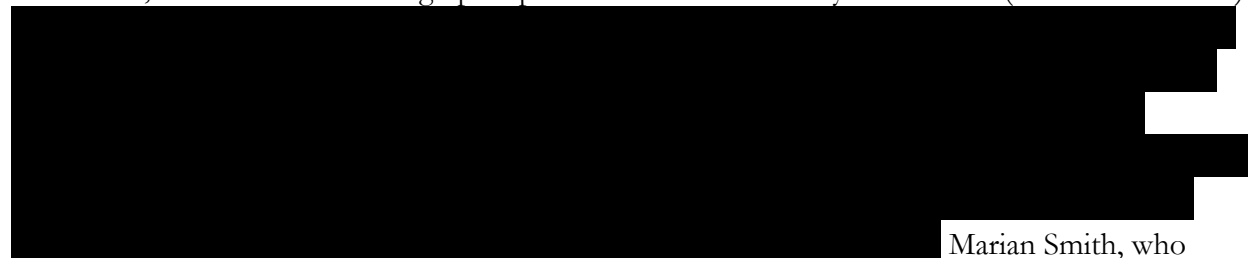
One cemetery is located within a ½ mile radius of the APE. The Mountain View Memorial Park is located on the north side of Steilacoom Boulevard Southwest, west of the Sound Transit rail alignment. This cemetery is adjacent to and not within the APE for the project.

2.2.5 *Historically Significant Properties*

The segment of the NPRR discussed above has been determined to be eligible for listing on the NRHP (DAHP 2010).

2.2.6 *Ethnogeography*

Thomas Talbot Waterman, an early twentieth century anthropologist working in the Pacific Northwest, recorded three ethnographic place names in the vicinity of the APE (Hilbert et al. 2001).



Marian Smith, who wrote a Puyallup-Nisqually ethnography, performed his fieldwork in the region during 1935. His (1940) information on this place is consistent with Hilbert and colleagues' (2001) translation of the term *sc(i)tilq'çd*.

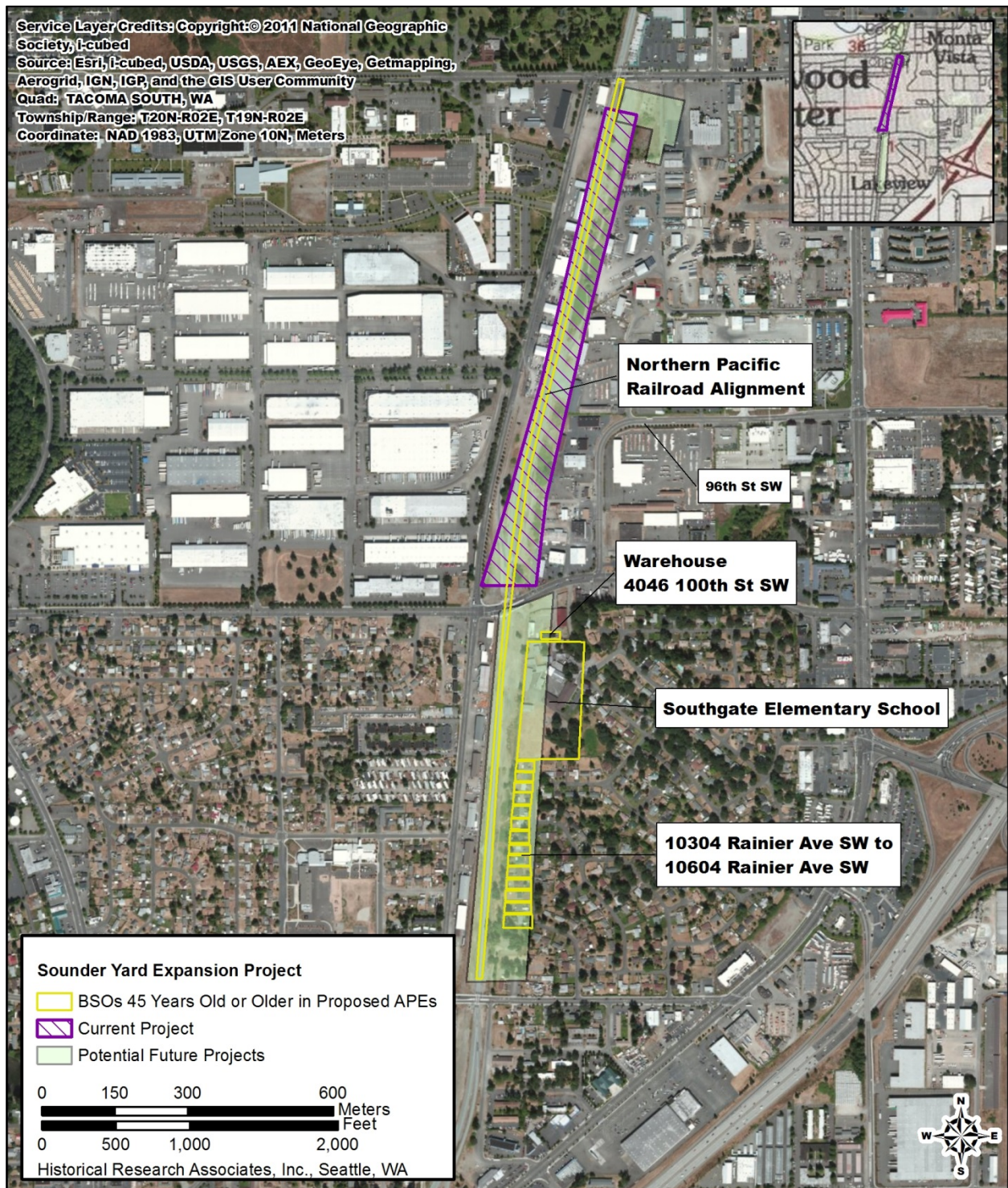


Figure 2-1. Locations of Buildings, Structures, and Objects 45 Years Old or Older in the APE.

Table 2-2. Buildings, Structures, and Objects 45 Years Old or Older in the APE.

BSO	Address	Tax Parcel	Build Date	Eligibility Status
Northern Pacific Railroad Alignment	10401 Lakeview Ave SW	0219011133	1873	Previously Determined Eligible
Southgate Elementary	10202 Earley Ave SW	0219011116	1953	Previously Determined Not Eligible
Southgate Elementary	10202 Earley Ave SW	0219011116	1956	Previously Determined Not Eligible
Kamm house	10304 Rainier Ave SW	7765300900	1958	Previously Determined Not Eligible
Giron house	10308 Rainier Ave SW	7765300890	1958	Previously Determined Not Eligible
Seelye house	10312 Rainier Ave SW	7765300880	1958	Previously Determined Not Eligible
Studholme house	10402 Rainier Ave SW	7765300870	1958	Previously Determined Not Eligible
no name listed	10404 Rainier Ave SW	7765300010	1955	Previously Determined Not Eligible
Johnson house	10412 Rainier Ave SW	7765300020	1955	Previously Determined Not Eligible
Saitta house	10418 Rainier Ave SW	7765300030	1955	Previously Determined Not Eligible
Cooke house	10424 Rainier Ave SW	7765300040	1955	Previously Determined Not Eligible
Eugenio house	10504 Rainier Ave SW	7765300050	1955	Previously Determined Not Eligible
St. Cyr house	10512 Rainier Ave SW	7765300060	1955	Previously Determined Not Eligible
Alejandro house	10518 Rainier Ave SW	7765300070	1955	Previously Determined Not Eligible
Nelson house	10524 Rainier Ave SW	7765300080	1955	Previously Determined Not Eligible
Speight house	10530 Rainier Ave SW	7765300090	1955	Previously Determined Not Eligible
Webber house	10604 Rainier Ave SW	7765300100	1955	Previously Determined Not Eligible
Lakes Auto Wrecking	4046 100 th St SW	0219011113	1952	Not previously recorded

2.2.7 *Historic Maps*

2.2.7.1 **General Land Office Plats**

General Land Office plats for T20N, R2E, Section 36 (USGS 1856, 1869) and T19N, R2E, Section 1 (USGS 1871, 1873, 1884, 1886) were reviewed in order to identify structures, objects, or archaeological sites that may be located within the APE.

The portion of the APE north of the current location of 96th Street Southwest (T20N, R2E, Section 36) was owned by the Puget Sound Agricultural Company in 1856, but was subdivided by 1869. The owners of the land, including that in the APE, are not identified on the 1869 GLO for this vicinity. No structures or objects are noted in the vicinity of the APE north of 96th Street Southwest.

Review of GLO plats south of 96th Street Southwest indicates that there was little to no development within the APE. Based on reviews of the GLOs detailing the area south of 96th Street Southwest (T19N, R2E, Section 1), it appears a structure, likely a house, attributed to Moses Ward was located near the center of Section 1, outside the APE, on the eastern shore of a body of water, probably Seeley Lake, which emptied, by way of a small stream, into Lake Steilacoom (USGS 1871). A second structure appears on this same map, near the north end of this body of water, outside the APE. Subsequent GLOs do not depict these structures or the small body of water. I. J. Keach purchased land on the eastern edge of this section sometime between 1871 and 1882; however, this does not include land within the APE. An 1871 GLO covering this section of the APE highlights the NPRR alignment evaluated by Jones and Stokes (2008).

2.2.7.2 **Sanborn Fire Insurance, Metsker, and Kroll Maps**

Several different map resources were used to determine historical property ownership in the vicinity of the APE. Except for the railroad right-of-way, which is owned by the NPRR Company, a 1915 Kroll Atlas of Pierce County identifies the northern part of the APE as “School Land;” ownership of the southern part is divided among several individual land owners and the “Town Plat of Lakeview” (Kroll 1915a, 1915b). By 1950, the US Navy had acquired a substantial lot that bordered the northwest edge of the APE, as shown on a suburban Sanborn Fire Insurance Map. Other land ownership in the area was not specified in this map. A Pierce County Metsker map from a year later, in 1951, shows land ownership in addition to the naval depot. Land along the east side of the APE was owned by two entities: R. A. Mueller owned the land north of Mount Tacoma Drive (now 96th Street South), while the land south of Mount Tacoma Drive was owned by the Harrison Brothers Company (Metsker 1951a, 1951b). Nine years later, another Metsker map from 1960 shows that north of 100th Street Southwest, some of the federal property to the west that formerly served as the naval depot was now owned by Clover Park School District No. 400; to the east, a steel fabrication company acquired land north of that still owned by the Harrison Brothers. South of 100th Street Southwest, land to the west of the APE was divided among individual residential owners, and land

to the east was owned by the Harrison Brothers, Clover Park School District (Southgate Elementary School), and additional residential owners (Metsker 1960a, 1960b).

2.2.8 DAHP Predictive Model

DAHP's predictive model is based on statewide information, using large-scale factors. Information on geology, soils, site types, and landforms, and GLO maps were used to establish or predict probabilities for prehistoric cultural resources throughout the state. DAHP's model uses five categories for the predictions: Low Risk, Moderately Low Risk, Moderate Risk, High Risk, and Very High Risk. The DAHP predictive model map indicates the APE extends across Moderate and High Risk areas.

3. Environmental Context

This chapter provides a brief overview of the local environment including historic modification to this landscape and natural resources. Understanding the local environment including geology, climate flora and fauna is important for understanding how people used the landscape in the past. This environmental context is necessary for developing expectations for this Project, which will be outlined in Section 5.

3.1 Topography and Geology

The APE is located within the Southern Puget Sound Basin, a portion of the Puget Trough Physiographic Province (Franklin and Dyrness 1973). The north-south trough of the Puget Lowland separates the Olympic Mountains to the west from the Cascade Range on the east. The lowland was carved out during the last major glaciation of western Washington, which ended approximately 16,000 years before present (B.P.) (Alt and Hyndeman 1995; Booth et al. 2004; Dethier et al. 1995; Easterbrook and Rahm 1970:49; Galster and Laprade 1991:249). As glaciers retreated, they left thick deposits of recessional outwash. This outwash, as well as till and glacial drift, forms the parent material of many soils throughout this part of Pierce County, including the APE (Snyder et al. 1973). The APE exists on a glacial upland comprised of continental glacial drift (DNR 2012). The surface of the glacial deposit has remained unmodified by natural forces since the end of the Fraser glaciation approximately 15,000 B.P. (Troost et al. 1999). Since the retreat of glaciers in this location, the landscape, including the APE, has been available for human habitation and human use.

3.2 Climate and Vegetation

Between approximately 13,000 and 12,000 years ago, the region had a much cooler and drier climate, than during much of the preceding Pleistocene. This climate supported an ecosystem characterized by lodgepole pine (*Pinus contorta*), sedges (*Cyperaceae* sp.), sage (*Artemisia*), and a variety of grasses and herbs. After 12,000 years ago, the climate warmed while continuing to dry, and Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and red alder (*Alnus rubra*) joined the developing parkland forest. By around 6,000 years ago, the climate of the region had cooled and moistened to levels comparable to today's maritime regime, producing the current western hemlock (*Tsuga heterophylla*) vegetation zone. Presently, uplands are moderately to heavily forested with Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and western red cedar (*Thuja plicata*). Red alder (*Alnus rubra*) and big-leaf maple (*Acer macrophyllum*) represent secondary species in forested habitats and are dominant in disturbed areas (Barnosky 1984; Barnosky et al. 1987; Brubaker 1991; Whitlock 1992).

3.3 Fauna

Throughout the Holocene, and prior to extensive Euroamerican influence in the area, larger terrestrial mammals would have included elk (*Cervus elaphus*), deer (*Odocoileus* spp.), black bear (*Ursus americanus*), coyote (*Canis latrans*), and mountain lion (*Felis concolor*) (Johnson and Cassidy 1997). Smaller mammals that inhabited the area included snowshoe hare (*Lepus americanus*), raccoon (*Procyon lotor*), and beaver (*Castor canadensis*) (Krukeberg 1991; Larrison 1967). Intertidal species like clams (e.g., *Tresus* sp. and *Protothaca* sp.) are found on nearby beaches. Marine mammals like the Pacific harbor seal (*Phoca vitulina*) are found in waters just west of the APE. Avifauna found in the Puget Sound region include raptors such the bald eagle (*Haliaeetus leucocephalus*) and waterfowl (*Aix* and *Anas* species). Pacific salmon and trout (*Onchorhynchus* spp.) would have been available in the region and from waterways near the APE (Quinn 2005). Freshwater mussels (*Anodonta* spp. and *Margaritifera falcata*) are known to occur in Lake Steilacoom and Chambers Creek, near the APE (Xerces 2010).

4. Cultural Context

This chapter provides a brief overview of nearly 14,000 years of human occupation in North America, focusing specifically on western Washington and the Puget Sound area where possible. Understanding the history of human occupation and land use in an area is crucial for understanding how archaeological data is important and what kinds of archaeological sites may be encountered during a project. This context is necessary for outlining the current state of knowledge about past lifeways and contributes to the development of expectations for this Project which will be discussed in Section 5.0.

4.1 Prehistoric Background

The current state of knowledge of Pacific Northwest precontact lifeways is derived from the archaeological record, which is constantly changing as our knowledge grows. How archaeologists see archaeological data is conditioned by a number of factors, including natural (e.g., rising sea levels) and cultural (e.g., excavation, curation, etc.) processes, which selectively modify what remains for modern investigators to be seen (Schiffer 1987). New discoveries can either change or reinforce prior notions of human lifeways, but the continually growing body of archaeological data helps give archaeologists a better understanding of the past (Trigger 2008).

In order to organize current knowledge of Pacific Northwest precontact lifeways numerous investigators have proposed chronologies for the region's archaeological record (e.g., Ames and Maschner 1999; Kidd 1964; King 1950). Ames and Maschner's (1999) chronology is used here to structure discussion of precontact archaeology and inferred lifeways. Their chronological sequence is divided into three basic developmental periods: Paleoindian, Archaic, and Pacific. The archaeological evidence from these periods suggests a gradual shift from small nomadic groups relying on generalized hunting and gathering to larger sedentary groups with increased social complexity and specialized reliance on marine and riverine resources (Ames and Maschner 1999). In essence the archaeological record in the region documents a shift from foraging to collecting strategies (Binford 1980) and cultural change toward ethnographically observed lifeways.

4.1.1 *Paleo-Indian (~12,500 B.C. to 10,500 B.C.)*

Evidence for late Pleistocene occupation of western North America comes from a very small number of archaeological sites, including Paisely 5-miles Cave in Oregon (Gilbert et al. 2008), and sites on California's Channel Islands (Erlandson et al. 2011). Data from these sites have reinforced the idea that these first inhabitants of the region lived in small groups, were probably highly mobile, and followed the migration patterns of animals across the landscape. Mounting evidence (e.g.,

Dillehay et al. 2008) suggests that occupants of the “new world” exploited both marine and terrestrial environments, contrary to long held hypotheses (e.g., Martin 1967). Up to now, no archaeological sites dating to the late Pleistocene have been discovered in the Puget Sound region.

The earliest sites in the Pacific Northwest date to the early Holocene and are commonly associated with Clovis points, an iconic large spear point found across much of North America during this time (Meltzer and Dunnell 1987; Osborne 1956). These sites are said to represent the remains of mobile hunting activities and are scarce in the Pacific Northwest. Clovis points have been recovered from sites across the Puget Sound, including Olympia (Osborne 1956). Other early western Washington sites dating to this period include the Manis Mastodon site (45CA218) near Sequim, and 45KI839 on Bear Creek in Redmond. The Manis site dates to roughly 11,800 B.P., and consists of the remains of a mammoth found in a peat bog with a human-made bone point lodged in a rib fragment (Waters et al. 2011). Site 45KI839 dates to approximately 10,000 to 12,000 B.P., and consists of a highly diverse stone tool kit (Kopperl et al. 2008). This site has been interpreted as a short term occupation site and has yielded evidence of mammal, fish, and plant exploitation. The Manis and Bear Creek sites have demonstrated that the earliest inhabitants of western Washington were not simply big game hunters who used large stone tools to kill game. These sites demonstrate the implementation of a diverse toolkits and subsistence strategies, signaling an excellent working knowledge of the landscape and available resources.

4.1.2 Archaic (10,500 B.C. to 4400 B.C.)

Sites dating to the Archaic period, especially prior to 5000 B.P., are rare, at least in part because of natural processes, like sea level rise, which have undoubtedly obscured sites that are currently underwater. The current view of this period is generally one of stasis, but this is likely at least partially conditioned by the rarity of sites dating to this period.

Lifeways during the Archaic period are thought to have changed little from the Paleoindian period. People are thought to have hunted game and lived in small highly mobile egalitarian groups, as foragers (*sensu*) (Binford 1980). Microblades and leaf shaped projectile points (i.e., Cascade points) have been used to argue for Archaic period occupation across Western (e.g., Chatters et al 2011; Greengo and Houston 1957). Identifiable faunal remains are rare at Archaic period sites making inferences about subsistence difficult but mammal and fish remains have been reported from Archaic period sites in the Puget Sound region (Chatters et al. 2011; Elder, personal communication 2013; Stilson and Chatters 1981).

The most discussed sites dating to the Archaic period are often referred to as "Olcott" sites (Kidd 1964). These sites typically lack good absolute dates, are highly disturbed, are located near rivers, and contain expedient tools such as scrapers, flaked cobbles, and debitage in addition to large lanceolate and stemmed projectile points. Much discussion of these sites has taken place in the last 50 years (e.g., Chatters and Stilson 1981; Chatters et al. 2011; Dancey 1969; Kidd 1969; Morgan 1999). The sites were thought to represent short-term camps where hunting and game processing was the

primary focus of activity (Kidd 1964). Investigators like Dancey (1969), Morgan (1999), and others have refuted Kidd's (1964) initial interpretation, and Chatters et al. (2011) have recently suggested that "Olcott" sites represent the cultural remains of a group of people well adapted to unpredictability who used both plants and animals but were still highly mobile.

The Zumwalt site (45PI251), located west of the APE, is one of the few sites in Pierce County with a documented "Olcott" like assemblage (Gallison and Wessen 1984). This site appears to have been intermittently occupied for nearly 6,000 years (roughly 9000 to 3000 B.P.), spanning much of the Archaic period. Stone tools recovered from the site were primarily made from basalt and include numerous cores, leaf shaped projectile points, a single microblade, and a single triangular projectile point, a form commonly ascribed to later occupations in the Puget Sound region.

4.1.3 Pacific (4400 B.C. to A.D. 1775)

Based on the archaeological record, the Pacific period is the most culturally dynamic precontact period in the Pacific Northwest (Chatters 1987 Larson and Lewarch 1995; Lewarch 2006). Over time, changing technologies and site locations suggest increased sedentism and specialization in the use of particular environments and resources (Ames and Maschner 1999). During this period evidence of exploitation of the littoral environment increases, shell middens become a prominent site type across Puget Sound. After about 5000 B.P., populations on or near the Puget Sound coast grew and became more complex in organization. Technological organization and subsistence practices became increasingly complex during the Pacific period as well. During this period, there is apparent increasing emphasis on the use of plants including berries and root-vegetables (e.g., Elder and Sparks 2010). Social stratification and inequality, a hallmark of Northwest coast cultures, is thought to be less pronounced in the Puget Sound than in other parts of the Pacific Northwest; however, objects like labrets, indicative of social stratification, appear early in the Pacific period in the Puget Sound at sites like West Point (45KI248) (Larson and Lewarch 1995). By shortly after 2500 B.P., a variety of bone, chipped stone, and groundstone artifacts represent coastal marine-oriented cultures and inland hunting/fishing/gathering cultures (Ames and Maschner 1999; Nelson 1976, 1990).

Shell midden sites dating to the past several thousand years have been recorded in and around the Puget Sound area. The most well studied shell middens are found around Seattle. The West Point sites (45KI428 and 45KI429), located at Discovery Park in West Seattle, have been interpreted as long-term camping and food-processing activity areas (Larson and Lewarch 1995). Five distinct cultural components indicate use of the sites between 4200 and 200 B.P. These sites included a number of personal items, including beads, bracelets, and labrets, which may be related to developing social inequality in the region (Ames and Maschner 1999). The West Point sites also yielded a highly diverse tool kit, including bone as well as ground and chipped stone implements used for capturing and processing prey (Larson and Lewarch 1995). The highly diverse faunal

assemblage includes sea mammals, fish, terrestrial mammals, birds, and shellfish, indicating exploitation of a number of available niches.

A number of shell middens exist in Pierce County, but are generally much less well studied than those in Seattle. A high concentration of these sites exists on McNeil Island, located west of the APE (Kennedy 1980). Sites like the Zumwalt site, which was occupied during the Archaic and Pacific periods (Garrison and Wessen 1984), exist in settings similar to that of the APE. These types of sites indicate a highly varied landuse pattern within Pierce County during the Pacific period.

4.2 Ethnographic Background

The APE is located within the traditional territory of the Southern Lushootseed speaking peoples of the Steilacoom, Puyallup and Nisqually groups (Suttles and Lane 1990). Smith (1940) notes that the Steilacoom inhabited the nearby village of *sc(i)tilq'čd*. Gibbs (1855) and Eells (in Castile 1985) referred to these people as the Steilakimahmish and the Stulakumamish, respectively. Based on information provided by Smith (1940:31), the Steilacoom were primarily focused on exploitation of marine resources.

Southern Lushootseed peoples comprise part of the Coast Salish cultural group (Suttles and Lane 1990), which spans much of the area from the southern sound into southern British Columbia. The Coast Salish peoples spent the majority of the winter inside large longhouses made from cedar planks (Haeberlin and Gunther 1930; Waterman and Greinier 1921). These houses held large extended family groups as well as much of the food they would need for the cold months. The houses were often arranged into villages of two to five structures either near beaches or along important watercourses. Family connections and political alliances were cemented through a flexible system of exogamy.

During spring, fall, and summer, people from the winter villages dispersed to hunt, fish, and gather plant foods for immediate consumption and winter storage (Haeberlin and Gunther 1930; Smith 1940). Summer camps usually consisted of small, temporary reed or grass-mat structures occupied by a single family, although several families might join together to build a larger mat house (Haeberlin and Gunther 1930; Suttles 1990; Suttles and Lane 1990). Settings like the APE (i.e., upland environments) not only attracted and supported deer and elk populations for hunting, but likely also provided a variety of plant resources such as berries, nuts, and root foods. Also in the uplands, prairies were maintained through intentional burning which cleared the land providing suitable habitat for game and camas.

4.3 Historic Background

4.3.1 *Early Euroamerican Settlement in the Southern Puget Sound*

The Puget Sound region was first explored by Euroamericans in 1792, when Captain George Vancouver claimed land for King George III of Great Britain. Settlement, however, did not begin in earnest until the 1830s, when the Hudson's Bay Company (HBC) established Fort Nisqually for agricultural pursuits at the mouth of the Nisqually River (Becker 2006). By 1838, HBC officials established the Puget's Sound Agricultural Company (PSAC) here, focusing on animal husbandry in the Fort Nisqually vicinity. The PSAC founded a number of satellite stations across its estimated 150,000 acres on the Nisqually Plains. One such station, "Whyatchie" (or Whiatchi), the Native name for Steilacoom Lake, was located on the eastern shore of the lake, and consisted of fenced fields and sheep pens. Records indicate that crops grown here around 1845 included peas, cabbage, potatoes, and oats—the usual crops for this vicinity. The Whyatchie station was abandoned by 1852 (Dickey 1994:5).

The establishment of the HBC outpost promoted trade and settlement in the region. Further explorations and fur trading expeditions began in the 1840s and, with the Donation Land Act of 1850, the influx of settlers truly began in the Puget Sound region. Washington became a Territory in 1853, and a state by 1889 (Schwantes 1989:95–106). In December 1854, the Treaty of Medicine Creek was signed between 62 leaders of major western Washington tribes (including the Steilacoom, Puyallup, and Nisqually) and Washington Territorial Governor, Isaac I. Stevens. The Treaty was ratified by Congress on April 10, 1855, and it established two reservations for Pierce County Indians. Many Steilacoom resettled on the Puyallup and Nisqually Reservations after the Treaty of Medicine Creek was signed (Steilacoom Tribe 2010). Disputes amongst the native populations and Euroamerican settlers erupted in the Indian Wars of 1855–1856.

4.3.2 *Development of Lakeview and Lakewood*

The City of Lakewood took shape on an earlier townsite platted as Lakeview. Lakeview was named for a nearby railway station on the NPRR's transcontinental line to Tacoma that was completed in 1873 (Phillips 1971:75). The arrival of the Northern Pacific stimulated additional railroad construction, economic development, and population growth in the Puget Sound region. An 1889 map of Pierce County (Figure 4-1) shows Lakeview—about 7 miles south of Tacoma—at an important crossroad between the Union Pacific and Northern Pacific lines, and some of the early land claims in the area, including I. Keech to the southwest and W. P. Dougherty to the north (Plummer 1889). One of the major north-south roads also passed through Lakeview, which later became the route of the Pacific Highway that ran from Vancouver to Blaine (Pierce County Immigration Association 1897).

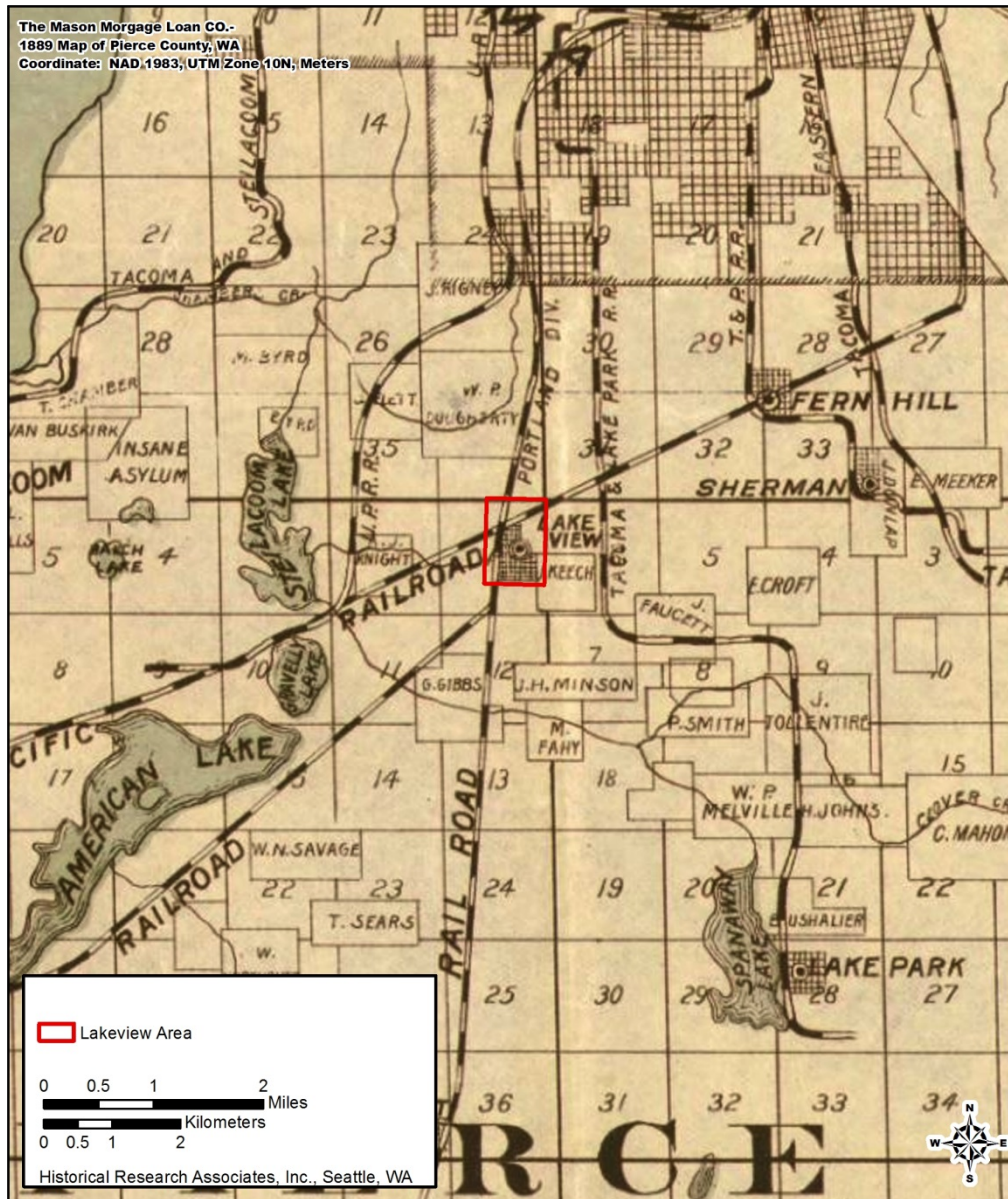


Figure 4-1. 1889 Map of Pierce County Showing Relationship of Lakeview to Tacoma (Plummer 1889).

Despite the town plat, railroad station, and thoroughfare, the area around Lakeview was slow to develop. Lakeview was too far from Tacoma to count as an early suburb, but the area once known as “the prairie” began to attract residential developers and wealthy Tacoma residents looking to build estates outside of the city in the early twentieth century (Dunkelberger and Neary 2005:43–44). In 1910, the Tallman-Thompson Company, a real estate firm, advertised residential lots in a development called “Lakewood,” later adopted as the incorporated city’s name (Dunkelberger and Neary 2005:40). A photograph of the area in 1920 near the APE shows a largely rural setting

(Figure 4-2) (TPL 1920a). Somewhere just to the north stood the grandstands of the Tacoma Speedway, which first opened in 1912.

The Tacoma Speedway was one of the top automobile racing venues in the United States in the early twentieth century (Dunkelberger 2004). Races on July 4, 1914 attracted 35,000 spectators and almost 5,000 more were turned away at the gates (TPL 1914). Originally a 5-mile long dirt track, the speedway was shortened and rebuilt in 1915 with a wood surface to improve driving conditions, especially during wet weather (TPL 2013). A photograph from 1922 shows two racers competing on the wood track (Figure 4-3) (TPL 1922).



Figure 4-2. Aerial Photograph of the vicinity of the APE in 1920 (TPL 1920a)

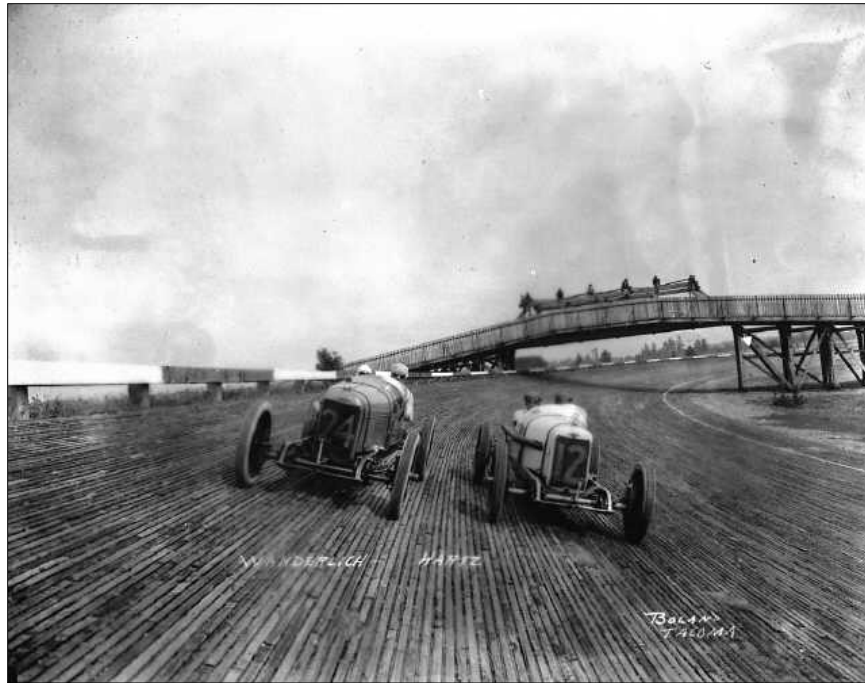


Figure 4-3. Racers on the Wood Track at the Tacoma Speedway in 1922. (TPL 1922)

The shorter course, shown on a 1915 Kroll Map of Pierce County (Figure 4-4), was roughly bounded by what is now Steilacoom Boulevard to the north, Gravelly Lake Drive to the west, 100th Street Southwest to the south, and Lakeview Avenue Southwest to the east (Kroll Map Company 1915). The eastern part of the track ran along a path close to the western edge of the APE.

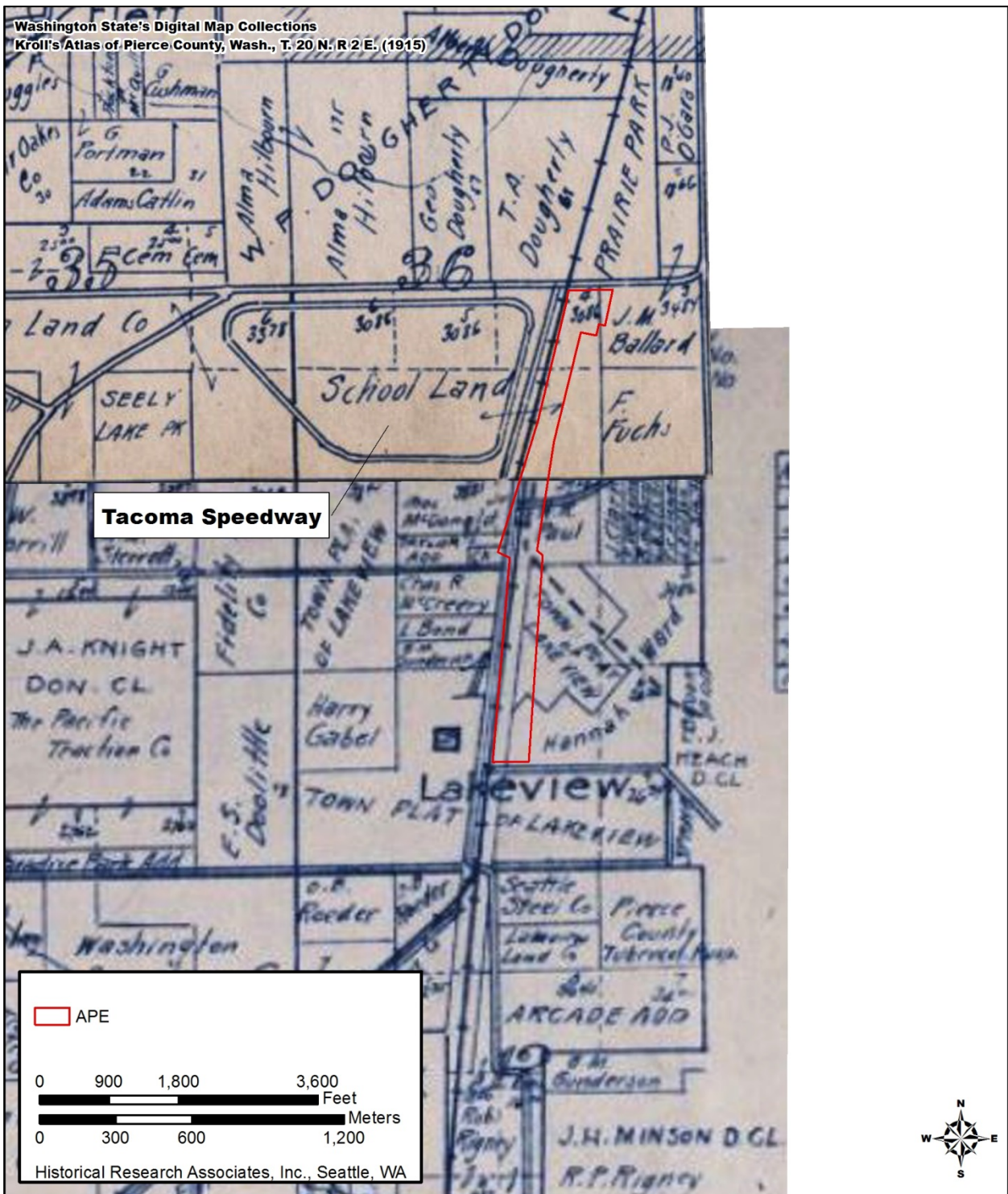


Figure 4-4. Kroll Map of Pierce County, Township 20N, Range 2 E WM in 1915 (Kroll 1915).

Although over 40,000 fans turned out in 1920 to watch the 225 mile classic, the biggest car race in Tacoma's history, just two years later financial problems closed the track (TPL 1920b). The site was soon converted to an airfield, shown below (Figure 4-5) when known as the Mueller Harkins Airport. The airfield was considered one of the finest private fields in the Northwest, and was noted as a training ground for the Civilian Pilot Training Program (1939–1944), a federal program following a European model to increase the number of civilian pilots and military preparedness. According to the TPL's Image Archives, the program also provided new opportunities in aviation for women and African-Americans (TPL 1939).



Figure 4-5. Hangar at Mueller Harkins Airport (TPL 1939).

In the later years of the Great Depression, Lakewood began to add some of the foundations of future growth and community identity. In 1937, one of the nation's early shopping malls was built about a mile west of the APE, and a year later the US Army constructed McChord Airfield on the site of the old County Air Field to the southeast, adding to a military presence in the area that dated back to the establishment of Fort Steilacoom in the mid-nineteenth century (Dumond 2013). Land use in the immediate project area remained relatively unchanged during the 1930s, except for the rerouting of the Pacific Highway, which formerly ran parallel to the Northern Pacific tracks to the roadway now known as South Tacoma Way. The retired section of the old Pacific Highway was renamed Lakeview Avenue Southwest (ILWU 2013).

During World War II, the Navy acquired the Mueller Harkins Airport and built the Pacific Advance Naval Base in Lakewood, more familiarly known as the Lakewood Navy Yard, on the property (TPL 1950). An aerial photograph from 1941 shows the area still largely undeveloped; the faint outline of the old Tacoma Speedway is still visible, a few structures are clustered near the site of the old Northern Pacific Lakeview Station and Lakeview School, and a gravel pit covers a sizeable area

northeast of the current intersection at Lakeview Avenue Southwest and 100th Street Southwest (USGS 1941). Construction of the naval yard did not begin until 1944. A 1951 Metsker's map lists the gravel pit property as owned by the Harrison Brothers Company (Metsker 1951a). Metsker's maps and aerial photographs suggest that the two warehouses surveyed for this project were built by Harrison Brothers Company in the early 1950s to support either the gravel pit operations or the company's contractor business (Metsker 1960a, 1960b; USGS 1957).

Another aerial photograph, taken sixteen years later in 1957 (Figure 4-6), shows significant changes in the area (USGS 1957). The Navy yard occupies a large property west of the Northern Pacific tracks between Steilacoom Boulevard and 100th Street Southwest. Some homes and commercial structures appear to the east.

Residential neighborhoods fill the land south of 100th Street Southwest, many homes built to meet the postwar population boom in the Pacific Northwest. One 1952 Lakewood development by March Construction Company, Lakeview Village (Figure 4-7), offered affordable two-bedroom homes in a World War II-era Cottage Style built in vast numbers across the nation (DAHP 2013a). Typical of rapid residential growth, school construction followed. Southgate Elementary School was built in 1952 on property adjacent to and east of the railroad tracks just south of 100th Street Southwest (Pierce County 2013).

The Navy yard was also undergoing change. After only seven years of service, the Navy began to phase out operations at the Lakewood Yard in 1951. Several buildings were taken over by the Clover Park Vocational-Technical Institute, which by 1961 occupied all of the former Navy buildings (Clover Park Technical College 2013). The school eventually redeveloped the site, but some Navy buildings and the former Mueller Harkins Airport hangar still stand as markers of the site's earlier history. In contrast, the Northern Pacific's historic Lakeview Station, located on the west side of the Northern Pacific tracks between Pacific Street Southwest and Hayden Street Southwest, was torn down at some point after it ceased operations in 1967 (Ferris 2012). One of the stations built during the initial construction of the Prairie Line, Lakeview Station, had occupied the site for nearly a century. The station was associated with the expulsion of the Chinese from Tacoma in 1885, when a mob rounded up the city's Chinese residents and marched them to Lakeview Station for a one-way trip south out of Tacoma. Ironically, many of the Chinese swept from the city had helped build the railroad just twelve years earlier. (Dunkelberger and Neary 2005:100).

Other major developments in the area during the 1960s included the grading over of the former Holroyd gravel pit for a commercial zone, and the completion of Interstate 5 to the south (USGS 1968). By next decade, the area around the APE had acquired much of its current character: a mixed use zone that combined residences, schools, an industrial park, and commercial structures. Warehouses are prevalent in the area. Ownership of the Northern Pacific tracks through Lakewood had earlier passed to a new company formed by the merger of several railroad companies, the Burlington Northern and Santa Fe (BNSF 2013:3).

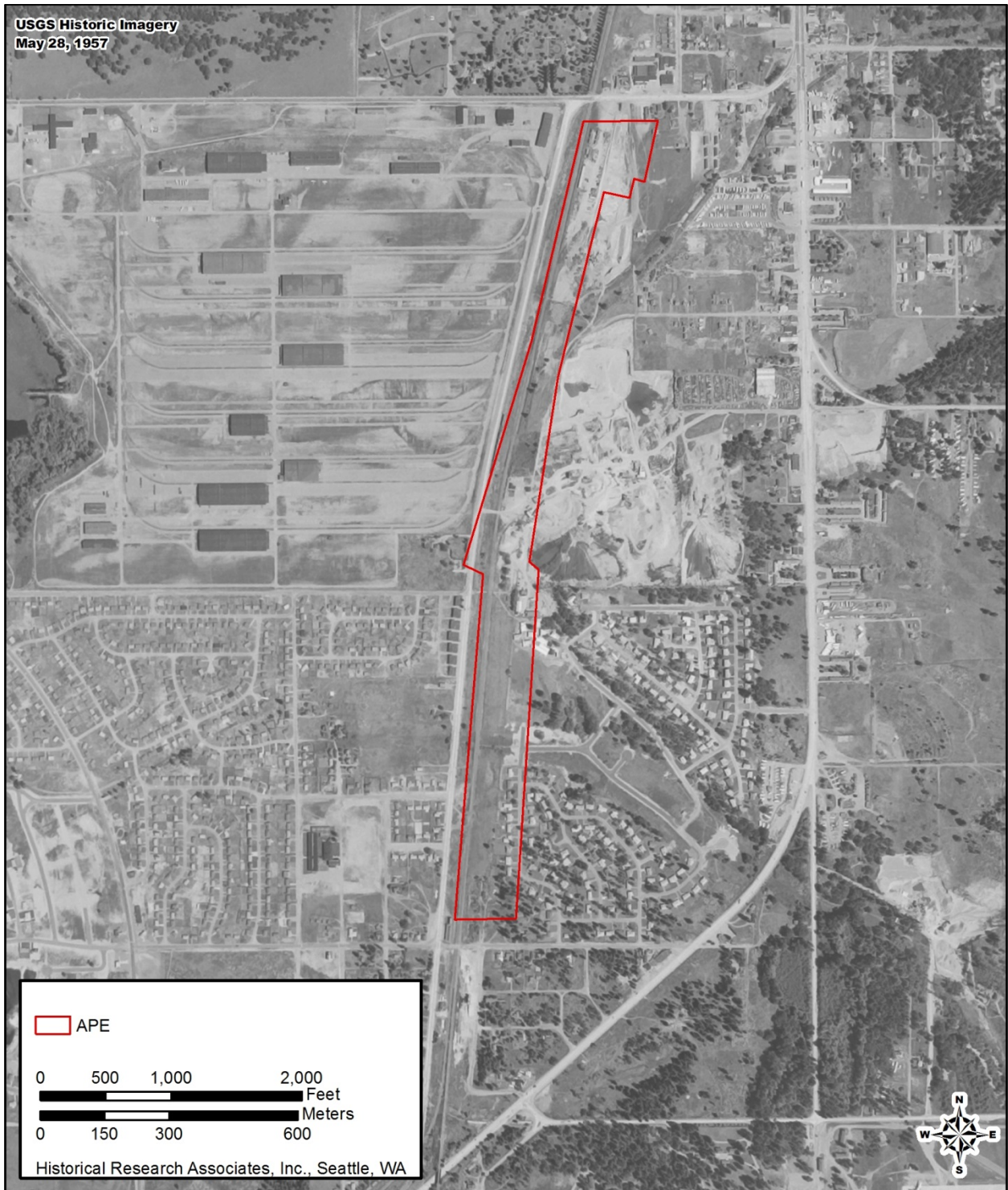


Figure 4-6. 1957 Aerial Photograph of Area near Project APE (USGS 1957).



Figure 4-7. Lakeview Village (TPL 1952).

5. Expectations for Cultural Resources within the APE

5.1 Archaeological Expectations

Based on archival research, as well as the environmental and the cultural settings of the APE, there is a low to moderate probability for observing precontact to ethnohistoric period cultural remains. Settings similar to that of the APE would have been the focus of hunting and gathering activities. Expected artifacts and features would relate to these activities. Although the APE has been the subject of development over the past 100 years, anticipated materials could include fragments of fire-modified rock (FMR), either singly or in intact clusters (sometimes with charcoal and/or oxidized soils), indicating the presence of cooking or processing hearths; lithic and/or bone tools and tool fragments; and isolated bone tools and tool fragments.

The likelihood of finding historic-period archaeological remains is moderate to high, given the use of the APE as an important transportation corridor, early in the history of Washington State. Historic features and artifacts encountered would likely be associated with the NPRR and facilities constructed to support operation of this railway. Artifacts and features may include railroad spikes, brick, nails, glass and metal refuse, building foundations, and objects related to operation of the railway (e.g., portions of signals).

5.2 Architectural Expectations

Research conducted prior to the field survey suggested a low probability for significant new historical resources in the APE. Tax parcel information indicated the presence of only a single building over 45 years old in the project APE, a warehouse that appeared to be of standard construction from satellite imagery.

Given that the Project proposes no significant changes to the existing alignment, the Project is not expected to pose an adverse effect on the NRHP-eligible NPRR alignment; however, the field survey was conducted with potential impacts on the NRHP property's character defining features and historic integrity in mind.

6. Field Strategy and Methods

6.1 Archaeological Inventory

HRA archaeologists Alexander E. Stevenson, M.S., Angus Tierney, M.A., and Adam Frugé, B.A., conducted an archaeological inventory on May 29, 2013. The inventory included pedestrian survey and shovel probe (SP) excavation (subsurface survey) within the APE. HRA historian Matthew Sneddon, M.A., assisted with the pedestrian survey portion of the field work, since the pedestrian and subsurface surveys were conducted concurrently. Surface and subsurface survey methods were the same for both the Current and Potential Future Projects areas.

6.2 Surface Survey

HRA archaeologists walked parallel transects spaced less than 20 meters apart across the entire APE. Surface survey was designed to identify cultural resources visible above ground including ditches, artifact scatters, features, and other signs of human landscape use. Representative photographs were taken during the course of the survey in order to document the landscape. Additionally, cultural resources visible on the surface were photographed and GPS points were taken in order to document the location of these resources.

6.3 Subsurface Survey

Shovel probes (SP) were excavated across the APE in order to identify buried cultural resources. Sediments recovered from each SP were screened through ¼-inch hardware mesh. Observations regarding SP sediments were documented on standardized forms. These observations included: sediment grain size (e.g., sand, silt), gravel size and shape, contacts (e.g., abrupt, diffuse), color, presence of water, presence of roots, signs of soil development, origin of sediment, and disturbance. Cultural materials recovered during SP excavation were noted. Precontact and historic artifacts, if observed, would have been photographed from multiple angles. Modern and temporally non-diagnostic artifacts were not photographed. GPS points were taken for each SP in order to document their locations. Shovel probe excavation was terminated when impassible objects (e.g., large cobbles, wood) were encountered or when *in situ* (i.e., in place/not disturbed) glacially deposited sediment was encountered.

7. Archaeological and Architectural Inventory Results

7.1 Archaeological Inventory

HRA archaeologists Alexander E. Stevenson, Angus Tierney and Adam Fruge performed surface and subsurface survey across the APE on May 29, 2013. The results of this survey are discussed below.

7.1.1 *Current Project*

The portion of the APE for Current Project included a number of subsurface utilities. Fiber optic lines were noted across the length (north-south) of the Current Project area, approximately 20 feet east of the rail alignment, and were approximately 3 feet below surface. A large water line was located approximately 20 feet north of 100th Street Southwest and was noted across the entire width (east-west) of the Current Project area. Tacoma Public Utilities personnel indicated that this waterline was located from 3 to 12 feet below surface.

7.1.1.1 **Surface Survey**

Surface survey across the Current Project area revealed that much of the landscape had undergone extensive modification (Figure 7-1). Ground surface visibility was good (50–75 percent), however much of the surface sediment appeared to be imported fill. North of 100th Street Southwest, cutting and filling appears to have taken place in order to create suitable locations for access roads and utility roads. Ditches along the railroad alignment were noted, but were not examined intensively because of the concurrent architectural history survey underway at the time (discussed below).





Figure 7-1. Overview of Current Project area (view south from west of SP4).



Figure 7-2. [REDACTED]



7.1.1.2 Subsurface Survey

A total of seven SPs were excavated within the Current Project area (Figure 7-3). Two shovel probes (SP8 and SP9) were excavated adjacent to the APE because excavation within the APE, less than 25 feet from the main rail line, would have required HRA to have a flagger from Sound Transit, as well as re-compaction of sediments to Sound Transit specifications.

Three basic stratigraphic units were identified within the Current Project area. Dark gray, moderately compact silt with poorly sorted gravels, interpreted as fill, was observed in only two shovel probes (Table 7-1). This gray silt overlaid a dark brown organic sand with some round to subround gravels and included a number of modern and temporally non-diagnostic artifacts including brown bottle glass and metal fragments. This dark brown organic sand was observed across the entire APE, appeared to be highly disturbed, and was interpreted as disturbed glacial outwash. An olive brown medium to coarse sand with poorly sorted round to subround cobbles was observed below the dark brown sand, and was interpreted as *in situ* glacial outwash which had not been disturbed. There was a sharp contact between these two glacially derived sediments and no obvious signs of soil development were noted, indicating relatively recent disturbance of the landscape, likely extensive grading and scraping associated with construction of the railroad alignment.

Shovel probes 1, 2, 3, 5, 7, 8, and 9 yielded cultural materials that were interpreted as modern or temporally non-diagnostic and were recovered from sediment that was previously disturbed (Table 7-1). These temporally non-diagnostic or modern artifacts included brown and clear bottle glass fragments, one ceramic fragment, wire nails, and fragments of shell. No precontact, historic, or temporally diagnostic cultural materials were identified in any of the shovel probes in the Current Project area.

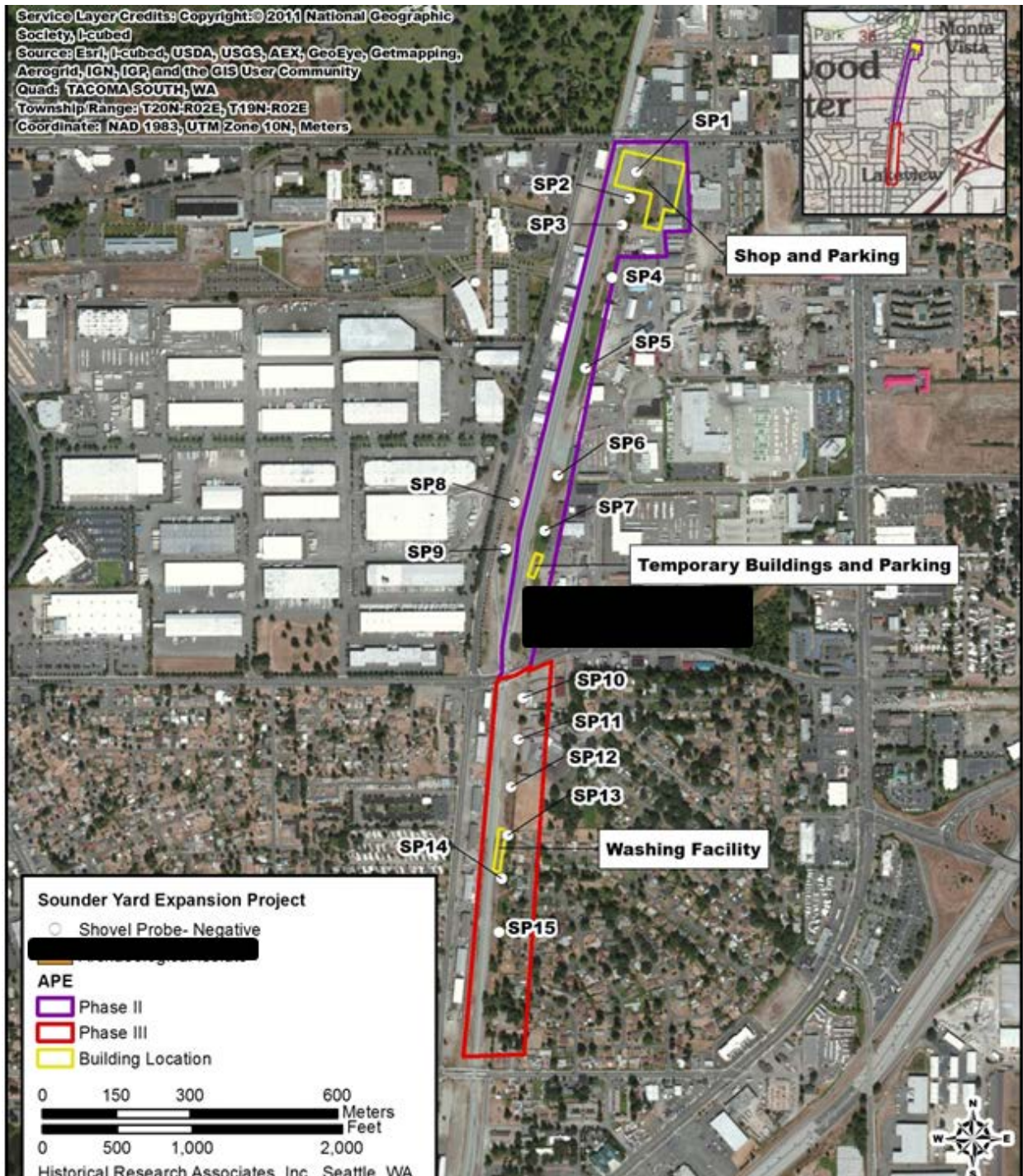


Figure 7-3 Shovel Probe and Fence Post locations.

Table 7-1. Current Project shovel probe results.

SP #	Project	Maximum Depth (cmbs)	Depth (cm): Description – <i>Comments</i>	Cultural Materials (depth)
1	Current Project	95	0-20: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	6 clear glass frags (0-20 cmbs)
			20-95: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None
2	Current Project	110	0-60: Dark brown organic sand,, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	1 wire nail
			60-110: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None
3	Current Project	90	0-32: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	Modern debris
			32-90: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None
4	Current Project	77	0-25: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	None
			25-77: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels, some FeO ₂ staining at 40 cmbs – <i>glacial outwash, in situ</i>	None
5	Current Project	100	0-100: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	Brown glass frags (0-80 cmbs)
6	Current Project	95	0-25: Dark gray silt, moderately compact, poorly sorted rounded to subround gravels – <i>fill</i>	None
			25-30: Brown fine to medium sand, grass and roots – recent buried surface	None
			30-80: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	None
			80-95: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None

SP #	Project	Maximum Depth (cmbs)	Depth (cm): Description – <i>Comments</i>	Cultural Materials (depth)
7	Current Project	94	0-15: Dark gray silt, moderately compact, poorly sorted rounded to subround gravels – <i>fill</i>	3 brown glass frags, 1 ceramic frag (0-20 cmbs)
			15-62: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	
			62-94: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	
8	Current Project	100	0-100: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	6 shell fragments (30-50 cmbs) 2 wire nails (95 cmbs)
9	Current Project	72	0-72: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i>	2 brown glass frags, 2 sanitary can frags and carpeting/insulation (50-72 cmbs)

7.1.2 Potential Future Project

The fiber optic lines were observed within the Potential Future Project area of the APE. The lines existed roughly 10–20 feet east of the rail alignment, approximately 3 feet below surface, and were found across the entire length (north/south) of the Potential Future Project area.

7.1.2.1 Surface Survey

The landscape within the Potential Future Project area appears to have undergone less modification than that of the Current Project area. The northern portion of this area was generally flat (Figure 7-4). Ground surface visibility was moderate (roughly 50 percent). The southern portion of this area had been the subject of some modifications, including access road construction, which included some cutting and filling. Ditches along the railroad alignment were noted, but were not examined intensively because of the concurrent architectural history survey underway at the time (discussed below). No archaeological sites were identified during the surface survey portion of this project.



Figure 7-4 Overview of northern portion of Potential Future Project area (view south); note orange paint marking fiber optic line.

7.1.3.1 Subsurface Survey

A total of six shovel probes were excavated within the Potential Future Project area (Figure 7-3). Two basic stratigraphic units were identified across the Potential Future Project area (Table 7-2). These strata corresponded to the two lower stratigraphic units observed in the Current Project area. A dark brown organic sand with some round to subround gravels included a number of modern and temporally non-diagnostic artifacts, including brown and clear bottle glass and unidentifiable metal fragments observed near the surface across the Potential Future Project area. This dark brown organic sand was interpreted as disturbed glacial outwash. An olive brown medium to coarse sand with poorly sorted round to subround cobbles was observed below the dark brown sand and was interpreted as *in situ* glacial outwash which had not been disturbed. There was a sharp contact between these two glacially derived sediments and no obvious signs of soil development were noted, indicating relatively recent disturbance of the landscape, likely extensive grading and scraping associated with construction of the railroad alignment.

Shovel probes 10 and 13 yielded cultural materials that were interpreted as modern or temporally non-diagnostic and were recovered from sediment that was previously disturbed (Table 7-2). These temporally non-diagnostic or modern objects included one wire nail, copper wire, and brown and clear bottle glass fragments. No precontact, historic or temporally diagnostic cultural materials were identified in any of the shovel probes in the Potential Future Project area.

Table 7-2. Potential Future Project shovel probe results

SP #	Project	Maximum Depth (cmbs)	Depth (cm): Description – <i>Comments</i>	Cultural Materials (depth)
10	Potential Future Project	76	0-65: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i> 65-76: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	Wire nail (0-20 cmbs) Copper wire (20 cmbs) None
11	Potential Future Project	70	0-30: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i> 30-70: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None None
12	Potential Future Project	85	0-72: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i> 72-85: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None None
13	Potential Future Project	75	0-72: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact, terminated on cobbles – <i>disturbed/fill</i>	Brown and clear bottle glass fragments throughout
14	Potential Future Project	61	0-61: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact, terminated on cobbles – <i>disturbed/fill</i>	None
15	Potential Future Project	60	0-22: Dark brown organic sand, moderately compact, some round to subround gravels, sharp lower contact – <i>disturbed/fill</i> 22-60: Olive brown medium to coarse sand, many poorly sorted rounded to subround gravels – <i>glacial outwash, in situ</i>	None None

7.2 Architectural Inventory

Architectural Historian Matt Sneddon conducted an architectural inventory of the APE on May 29, 2013. Sneddon walked the length of the APE to ensure identification of all potential above ground historical resources.

7.2.1 Current Project

Aside from the NPRR alignment, none of the BSOs 45 years old or older identified in Section 2.2.3 are located in the portion of the APE for the Current Project.

7.2.2 Potential Future Project

In addition to the NPRR alignment, seventeen of the BSOs 45 years old or older identified in Section 2.2.3 are located in the Potential Future Project area. Initial desk research indicated that only one of the seventeen BSOs—a warehouse at 4046 100th Street Southwest owned by Lakes Auto Wrecking—had yet to be recorded (Table 7-3). During the inventory, Sneddon determined that another warehouse in the Lakes Auto Wrecking yard likely met the 45-year-old age criterion, a finding that later research confirmed. Sneddon photographed, recorded, and conducted a condition assessment of the following two BSOs in the project APE (Table 7-3; Figure 7-5).

Table 7-3 Newly recorded BSOs within the Potential Future Project Area.

BSO	Address	Tax Parcel	Build Date
Lakes Auto Wrecking Warehouse #1	4046 100 th St SW	0219011113	c. 1952
Lakes Auto Wrecking Warehouse #2	4046 100 th St SW	0219011113	1952

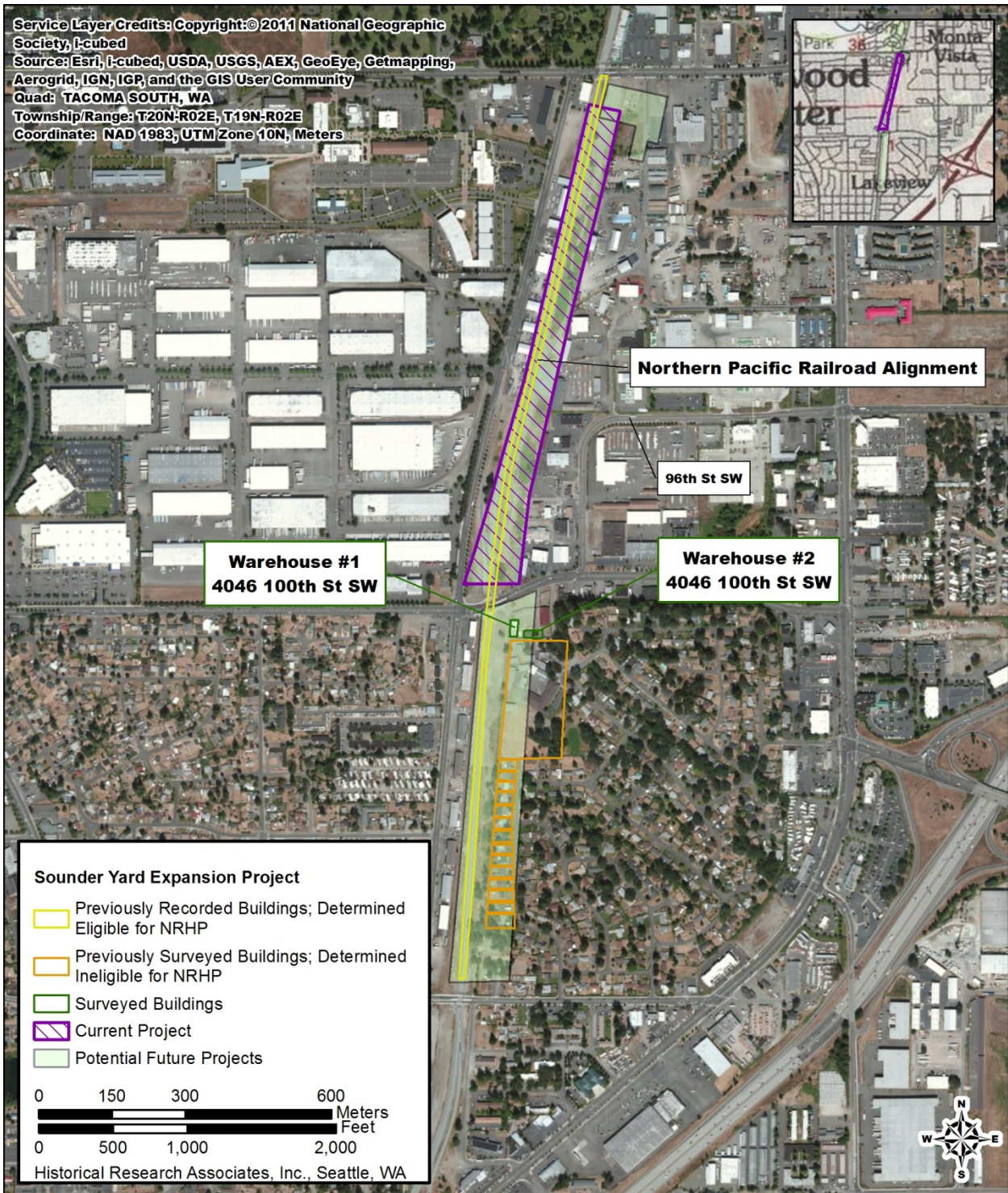


Figure 7-5 New and previously recorded BSOs within the APE.

8. Architectural Evaluation

8.1 Evaluation Criteria

8.1.1 *NRHP Criteria for Evaluation*

The criteria for evaluating and listing properties in the NRHP require that a historic property be at least 50 years old; possess integrity of location, design, setting, materials, workmanship, feeling, and association; and meet at least one of the following criteria:

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Property is associated with the lives of persons significant in our past; or
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction; or
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Buildings under 50 years of age may be eligible for listing in the NRHP if they are exceptional or rare examples of specific architectural styles, or have exceptional historic significance (U.S. Department of the Interior, National Park Service 1997).

8.1.1.1 Integrity

Historic integrity is a measure of how a property conveys its significance. To retain integrity, a property—or in this case, buildings—must retain several if not all of the seven aspects of integrity, which are as follows:

- Location: the place where the property was constructed or the place where the historic event occurred.
- Design: the combination of elements that create the form, plan, space, structure, and style of a property.
- Setting: the physical environment of a historic property.
- Materials: the physical elements that were combined or deposited during a particular period of time, and in a particular pattern or configuration, to form a historic property.

- Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling: a property's expression of the aesthetic or historic sense of a particular period of time.
- Association: the direct link between an important historic event or person and a historic property.

8.1.2 *Washington Heritage Register*

The WHR is an official listing of historically significant sites and properties found throughout the state. The list is maintained by DAHP and includes districts, sites, buildings, structures, and objects that have been identified and documented as being significant in local or state history, architecture, archaeology, engineering or culture. Listing in the WHR is strictly an honorary designation and raises the public awareness about historic and cultural values. To qualify,

- A. A building, site, structure or object must be at least 50 years old. If newer, the resource should have documented exceptional significance.
- B. The resource should have a high to medium level of integrity, i.e. it should retain important character defining features from its historic period of construction.
- C. The resource should have documented historical significance at the local, state or federal level (DAHP 2013b).

8.1.3 *Lakewood Landmark*

The City of Lakewood municipal code outlines two primary criteria for designating city landmarks (City of Lakewood 2013):

- A. An historic resource may be designated as a Lakewood landmark if it is more than fifty years old or, in the case of a landmark district, contains resources that are more than fifty years old, and possesses integrity of location, design, setting, materials, workmanship, feeling and association, and:
 - Is associated with events that have made a significant contribution to the broad patterns of national, state or local history; or
 - Is associated with the lives of persons significant in national, state or local history; or
 - Embodies the distinctive characteristics of a type, period, style or method of design or construction, or that represents a significant and distinguishable entity whose components may lack individual distinction; or

- Has yielded or may be likely to yield information important in prehistory or history; or
 - Is an outstanding work of a designer or builder who has made a substantial contribution to the arts.
- B. An historic resource may be designated a community landmark because it is an easily identifiable visual feature of a neighborhood or city and contributes to the distinctive quality or identity of such neighborhood or the city or because of its association with a significant historical events or historic themes, association with important or prominent persons in the community or county, or recognition by local citizens for substantial contribution to the neighborhood or community. An improvement or site qualifying for designation solely by virtue of satisfying criteria set out in this section shall be designated a community landmark.

8.2 Evaluations

Because of the similarity of the two warehouses on the Lakes Auto Wrecking property, evaluation of the eligibility of the two structures for the historic registers were combined; however each building has an individual physical descriptions and assessments of integrity.

8.2.1 *Lakes Auto Wrecking Warehouse #1*

Location: 4046 100th Street Southwest, west edge of lot, Potential Future Project area.

Lakes Auto Wrecking Warehouse #1 (Figure 8-1) is likely incorrectly listed in Pierce County tax parcel records as constructed in 1976. Aerial photographs show a structure in the same configuration and of the same size at this location in 1957 (USGS 1957), and the building's materials appear older than 37years old. The warehouse is one of three structures in an auto wrecking and repair compound. The single-story, wood-framed warehouse has a rectangular plan of 3,000 square feet with a side gable roof of moderate pitch. The metal roof appears relatively new and has close eaves and verges. West elevation has several multi-light, fixed pane, metal frame windows that are currently painted over or boarded up. Sections of the corrugated metal siding on the west elevation are missing in places, especially on the southwest corner. Two sets of large fixed pane picture windows flank a pedestrian door on the north elevation. The north end is sided with plywood, and three of the four windows are boarded up. The east elevation faces the main yard and has roll up garage doors and a few pedestrian doors. A small shed is attached to the south elevation; fencing and vegetation prevented a closer look at other materials and features.



Figure 8-1. Lakes Auto Wrecking Warehouse #1 oblique, north and west elevations, 2013.

8.2.2 Lakes Auto Wrecking Warehouse #2

Location: 4046 100th Street Southwest, south edge of lot, Potential Future Project area.

Lakes Auto Wrecking Warehouse #2, built in 1952, is one of three structures in an auto wrecking and repair compound. The single-story, wood-framed warehouse has a rectangular plan of 3,240 square feet with a low pitched shed roof (Figure 8-2). The built-up roof has projecting eaves and exposed rafters. Two solid pedestrian doors and a boarded up, metal frame and sash two-light sliding window are interspersed between four metal roll-up garage doors of various sizes that dominate the front, north, elevation. Most of the front elevation is sided with T1-11 except for a strip of unknown material that may cover an original ribbon of fenestration. Signage that reads “Imports & Japanese Engine” is attached to a section of the stripping. Other elevations are solid walls of vertical shiplap wood siding.



Figure 8-2. Lakes Auto Wrecking Warehouse #2 north elevation, 2013.

8.2.2.1 Evaluation

Historic Register Criteria

Pierce County tax parcel records list the construction date of Warehouse #1 as 1976 and Warehouse #2 as 1952. As discussed earlier, Warehouse #1 was likely built at approximately the same time as Warehouse #2. Assuming the construction date of Warehouse #1 is incorrectly recorded, the two warehouses meet the age criteria but fail to qualify under any other criteria for eligibility for the NRHP, WHR, and Lakewood Landmark historic registers. In addition, the warehouses appear to have fair to low integrity.

The warehouses are associated with gravel mining and later, the auto service industry. Gravel mining was an important part of road building projects and concrete production, but a fairly common industry in and around developing urban areas in the twentieth century. A 1951 Washington State mining directory lists 125 sand and gravel operations in Washington, and 12 in the greater Tacoma area alone (Stebbins 1951:14–15, 22). A gravel pit is still in operation approximately 1 mile north of the APE (McClain’s Soil Supply 2013). Similarly, automotive service industries including auto wrecking, repair, painting, and car wash have been well represented in Lakewood since the 1960s

(Polk 1960:225–226). The buildings lack any known direct associations with events that have made a significant contribution to the broad patterns of national or local history required for eligibility under NRHP Criterion A, WHR Criterion C, and Lakewood Landmark Criterion A.1; or with the lives of significant persons required for eligibility under NRHP Criterion B, WHR Criterion C, and Lakewood Landmark Criterion A.2. The utilitarian wood-framed warehouses do not embody distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction required to qualify under NRHP Criterion C and Lakewood Landmark Criteria A.3 and A.5. The warehouses are not likely to yield information important to understanding history or prehistory required for eligibility under NRHP Criterion D and Lakewood Landmark Criterion A.4. The corner location on a busy street may make warehouses a fairly identifiable visual feature in Lakewood, but the buildings do not impart a distinctive quality or identity to the community nor are they associated with significant historical events or historic themes, with important or prominent persons in the community or county, or recognized by local citizens for substantial contribution to the neighborhood or community required for consideration under Lakewood Landmark Criterion B.

Integrity

Warehouse #1 has fair to low integrity. The warehouse’s location appears original, but the physical setting has changed since its construction as part of a gravel pit operation. The gravel pit is no longer extant, and 100th Street Southwest was extended through the original property. The area has experienced significant commercial development since the period of initial construction. The building’s basic design appears original, although some windows are boarded up and others may have been added later. The condition of the original materials is not known with certainty. The corrugated metal siding and some fenestration appear original; other components such as the metal roof, picture windows are later replacements. Evidence of workmanship is largely limited to basic construction methods of the twentieth century such as nailed wood framing, and mass-produced materials such as pre-cut lumber, nailed and bolted connections, corrugated metal siding, plywood, and metal roofing. The warehouse no longer serves its original purpose, so its integrity of feeling is diminished. The warehouse has no known association with an important historic event or person.

Warehouse #2 also has fair to low integrity. The warehouse’s location appears original, but the physical setting has changed since its construction as part of a gravel pit operation. The gravel pit is no longer extant, and 100th Street Southwest was extended through the original property. The area has experienced significant commercial development since the period of initial construction. The building’s basic design appears original, although a strip of siding material on the front elevation may cover original fenestration. The condition of the original materials is not known with certainty. The T1-11 siding, roll up garage doors, and roofing are likely later replacements. Evidence of workmanship is largely limited to basic construction methods of the twentieth century such as nailed wood framing, and mass-produced materials such as pre-cut lumber, nailed and bolted connections,

T1-11 siding, and built up roofing materials. The building's siding is a patchwork of different materials. The warehouse no longer serves its original purpose, so its integrity of feeling is diminished. The warehouse has no known association with an important historic event or person.

8.3 Adverse Effects Assessment

The Section 106 process requires an assessment of the potential effect an undertaking or project may have on historically significant properties. There is only one historically significant property within the APE. It is a section of the NPRR alignment that was determined eligible for the NRHP in 2010 under Criterion A “for the profound influence the rail line had in economic and residential development in the Pacific Northwest,” and under Criterion B for its associations with E. S. “Skookum” Smith, a NPRR engineer (Chasteen 2008:4). The eligibility was limited to the alignment rather than the physical equipment, which had been routinely replaced since the original period of construction (Chasteen 2008:4–5).

The Public Land Survey System data listed for the Northern Pacific rail alignment in the HPI does not specifically include all of the area covered by the APE (the track alignment in S1, T19N, R2E is not listed in the HPI). Because this appears to be an omission, HRA assumes that since sections immediately to the south and north of the APE are eligible, the connecting segment (S1 T19N R2E) between S12 T19N R2E and S36 T20N R2E (listed segments) is also eligible.

The Current and Potential Future Projects do not appear to constitute an adverse effect on a historic property because the proposed construction will not alter the integrity of the railroad alignment. Although the character-defining features and integrity of the existing rail alignment are not specifically detailed in the HPI, the third track, temporary buildings, maintenance shop, and parking proposed under the Current Project construction plan and the washing facility to follow under the Potential Future Project maintain the existing track and rail alignment, and preserve its historic function as an operational rail line. In the case of a historic rail alignment—not the rail line itself—not all of the standard criteria of a potential adverse integrity assessment apply. Without physical equipment, evaluation of original materials, design, and feeling are problematic or not possible. The basic alignment grade or design, original alignment location, and association with the Northern Pacific Prairie Line and E. S. Smith will be unaffected by the Project. The immediate setting on the railroad right-of-way is consistent with the period of original construction, although substantial changes in land use on either side have occurred since the early twentieth century. The Current and Potential Future Projects will add some support structures that are visually consistent with the many warehouses and commercial buildings along this section.

9. Summary and Recommendations

9.1 Archaeological Resources

[REDACTED] No archaeological resources were observed within the Potential Future Project portion of the APE. Sediments observed during subsurface survey in both the Current and Potential Future Project areas were: 1) highly disturbed and represented no potential contain significant undisturbed archaeological deposits or 2) were glacially deposited and therefore had no potential to contain archaeological deposits.

The cultural isolate, a fence post, is very and is not considered to be historically significant. As a result, it will not be adversely affected by the project. HRA recommends no further archaeological survey work take place for the Sounder Yard Expansion Project unless the project undergoes substantial design changes and expands beyond the currently APE.

9.2 Architectural Resources

HRA identified eighteen BSOs in the Potential Future Project APE; sixteen of the eighteen had been previously recorded and determined ineligible for the NRHP and WHR by DAHP. HRA surveyed and evaluated the two previously unrecorded BSOs consisting of two warehouses on the Lakes Auto Wrecking property at 4046 100th Street Southwest. HRA recommends that neither of the two BSOs is eligible for the NRHP, WHR, or Lakewood Landmark register.

In addition, HRA evaluated the Project's potential to adversely affect the historic NPRR alignment, an NRHP eligible property located within the APE (DAHP 2010). HRA recommends that the Project will not pose an adverse effect to the NPRR alignment. HRA updated the current HPI for the alignment to include the Public Land Survey System information for the project area. No further action is required for architectural resources in the APE. If the Project undergoes substantial design changes and expands beyond the current APE, further architectural study may become necessary.

9.3 Accidental Discovery of Archaeological Resources

In the event that archaeological deposits are inadvertently discovered during construction in any portion of the APE, ground-disturbing activities in the vicinity of the find should be halted immediately, and Sound Transit should be notified immediately. Sound Transit will contact DAHP, as well as other agencies and affected Tribes, as appropriate.

9.4 Discovery of Human Remains

Any human remains that are discovered during construction of the Project will be treated with dignity and respect.

If ground-disturbing activities encounter human skeletal remains during the course of construction, then all activity that may cause further disturbance to those remains **must** cease, and the area of the find must be secured and protected from further disturbance. In addition, the finding of human skeletal remains **must** be reported to the county coroner **and** local law enforcement in the most expeditious manner possible. The remains should not be touched, moved, or further disturbed.

The county coroner will assume jurisdiction over the human skeletal remains, and make a determination of whether those remains are forensic or non-forensic. If the county coroner determines the remains are non-forensic, they will report that finding to the DAHP. DAHP will then take jurisdiction over those remains and report them to the appropriate cemeteries and affected tribes. The State Physical Anthropologist will make a determination of whether the remains are Indian or non-Indian, and report that finding to any appropriate cemeteries and the affected tribes. The DAHP will then handle all consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

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Appendix A: Cultural Isolate (CONFIDENTIAL)



STATE OF WASHINGTON

ARCHAEOLOGICAL ISOLATE INVENTORY FORM

Smithsonian Number:

45PI1304

***County:** Pierce

***Date:** 6/10/13 ***Compiler:** Alexander Stevenson and Matthew Sneddon

ISOLATE DESIGNATION

Isolate Name: Fence Post

Field/ Temporary ID: HRA-2082-1

***Site Type:** Historic Isolate

ISOLATE LOCATION

***USGS Quad Map Name:** Tacoma South

***Legal Description:** T20 N R 2 E/W: E Section(s): 36

Quarter Section(s): SE

***UTM: Zone 10 Easting 538539 Northing 5224327**

Latitude: 47.171326

Longitude: -122.491451

Elevation (FT/M):

Other Maps: none

Type: n/a

Scale: n/a

Source: n/a

Drainage, Major: none

Drainage, Minor: Chambers Creek **River Mile:** none

Aspect: none

Slope: 0

***Location Description:** This isolate is located in Pierce County Washington within the city limits of Lakewood on property owned by Sound Transit. The site is roughly 200 feet north of 100th Street Southwest and approximately 100 feet east of the Sound Transit rail alignment.

Approach (For Relocation Purposes): Starting in Tacoma proceed 6.2 miles on Interstate 5 (I-5) south. Take exit 127 for South Tacoma Way, proceed on the off ramp for roughly 0.4 miles. Merge onto Washington State Highway 512 (WA-512) westbound. Proceed for approximately 200 feet on WA-512 westbound and turn right (north) onto South Tacoma Way. Proceed on South Tacoma Way for 0.2 miles. Turn left (west) onto 100th Street Southwest. Drive on 100th Street Southwest for 0.4 miles. Park and walk north of 100th Street Southwest approximately 200 feet to the isolate.

ISOLATE DESCRIPTION

***Narrative Description:** The site consists of a fence post built with two wooden railroad ties set in the ground near the chain link fence that borders the Burlington Northern Santa Fe (BNSF) property near the track crossing at 100th Street Southwest (Figures 1 and 2). One tie is driven vertically into the ground and braced by another tie connected at roughly a 45 degree angle. Both ties are treated with creosote, well weathered, and each have a single metal rail tie plate secured with metal spikes. The rusty barbed wire wrapped around the vertical post hangs loosely as it is no longer connected to another post.

***Vegetation (On Site):** grasses

Local:

Regional:

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

Water Resources (Type): Chambers Creek **Distance:** 0.64 mi (1.0 km) **Permanence:** permanent

***Method of Collection(s):** None

***Location of Artifacts (Temporary/Permanent):** n/a

ISOLATE AGE

***Component:** Historic

***Dates:** pre-1950

***Dating Method:** observation

Phase: n/a

Basis for Phase Designation: observation

ISOLATE RECORDERS**Observed by:** Matthew Sneddon**Address:** 1904 Third Avenue, Suite 240, Seattle WA 98101***Date Recorded:** 5/29/13***Recorded by** (*Professional Archaeologist*): Alexander Stevenson***Affiliation:** Historical Research Associates***Affiliation Phone Number:** 206-343-0226***Affiliation Address:** 1904 Third Avenue, Suite 240, Seattle WA 98101***Affiliation E-mail:** astevenson@hrassoc.com**Date Revisited:** n/a**Revisited By:** n/a**ISOLATE HISTORY****Previous Work** (*Done on Area Where Isolate was Found*): none**LAND OWNERSHIP*****Owner:** Sound Transit***Address:** 401 South Jackson Street, Seattle, WA 98104***Tax Lot/ Parcel No:** **5215001570****RESEARCH REFERENCES*****Items/Documents Used In Research** (*Specify*):

USGS MAP

*Quad Name: Tacoma South

*Series: 7.5 minute

*Date: 2011

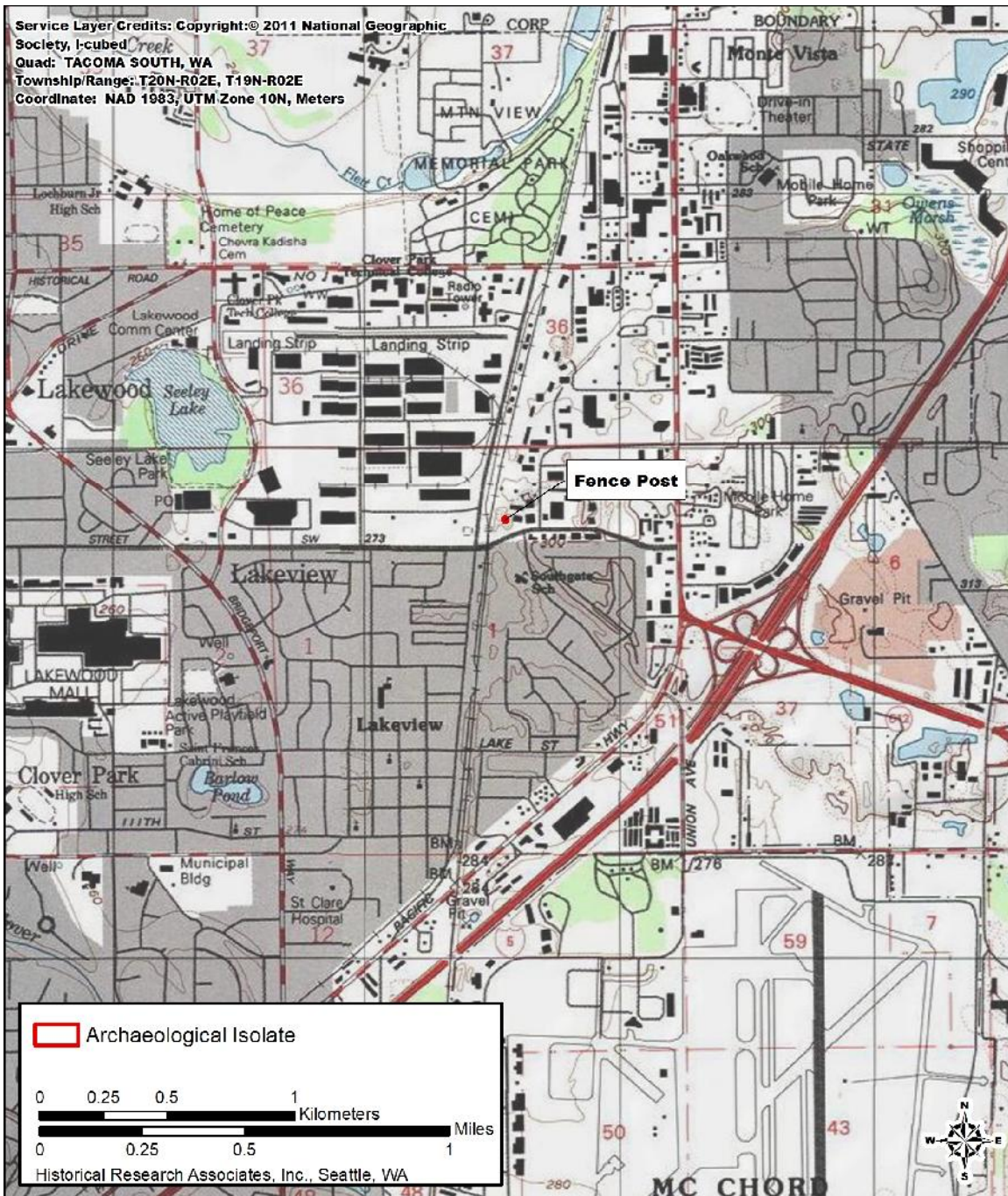


Figure 1. Fence post location

PHOTOGRAPH(S)

***Photograph Description(s):**



Figure 2. Fence post

Appendix B: Historic Property Inventory Forms



Historic Inventory Report

Location

Field Site No. _____ DAHP No. _____

Historic Name:

Common Name: 4046 100th Street SW Warehouse 1

Property Address: 4046 100th SW, Lakewood, WA 98499

Comments:

Tax No./Parcel No. 0219011113

Plat/Block/Lot

Acreage 1.96

Supplemental Map(s) _____

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T19R02E	01			Pierce	TACOMA SOUTH

Coordinate Reference

Easting: 1144890

Northing: 674752

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Sounder Lakewood Yard Expansion Project Date Recorded: 05/29/2013

Field Recorder: M. Sneddon

Owner's Name: Lakes Auto Wrecking

Owner Address: 4046 100th Street SW

City: Lakewood

State: WA

Zip: 98499

Classification: Building

Resource Status:

Comments:

Survey/Inventory

Within a District? No

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:



Historic Inventory Report

Description

Historic Use: Commerce/Trade - Warehouse	Current Use: Commerce/Trade - Warehouse		
Plan: Rectangle	Stories: 1	Structural System: Balloon Frame	
Changes to Plan: Intact	Changes to Interior: Unknown		
Changes to Original Cladding: Unknown	Changes to Windows: Moderate		
Changes to Other: Unknown			
Other (specify):			
Style:	Cladding:	Roof Type:	Roof Material:
Other - Utilitarian	Metal - Corrugated	Gable - Side Gable	Metal - Standing Seam
Foundation:	Form/Type:		
Concrete - Poured	Utilitarian		

Narrative

Study Unit	Other
None	
Date of Construction:	1952 Built Date
	Builder:
	Engineer:
	Architect:

Property appears to meet criteria for the National Register of Historic Places: No
 Property is located in a potential historic district (National and/or local): No
 Property potentially contributes to a historic district (National and/or local): No



Historic Inventory Report

Statement of Significance:

Lakes Auto Wrecking Warehouse #1 is likely incorrectly listed in Pierce County tax parcel records as constructed in 1976. Aerial photographs show a structure at this location in 1957 (USGS 1957) in the same configuration and size, and the building's materials appear older than 38 years old. Warehouse #1 was likely built in conjunction with Warehouse #2 in 1952 by the Harrison Brothers Company, a contracting company that operated a gravel pit located on the original, much larger property (Pierce County 2013; Metsker 1960). The warehouse was likely associated with gravel mining and later, the auto service industry. Gravel mining was an important part of road building projects and concrete production, but a fairly common industry in and around developing urban areas in the twentieth century. A 1951 Washington State mining directory lists 125 sand and gravel operations in Washington, and 12 in the greater Tacoma area alone (Stebbins 1951:14-15, 22). A gravel pit is still in operation approximately 1.5-miles north of the Lakes Auto Wrecking property (McClain's Soil Supply 2013). Similarly, automotive service industries including auto wrecking, repair, painting, and car wash have been well represented in Lakewood since the 1960s (Polk 1960:225-26). The buildings lack any known direct associations with events that have made a significant contribution to the broad patterns of national or local history required for eligibility under NRHP Criterion A and WHR Criterion C; or with the lives of significant persons required for eligibility under NRHP Criterion B and WHR Criterion C. The utilitarian wood-framed warehouses do not embody distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction required to qualify under NRHP Criterion C. The warehouses are not likely to yield information important to understanding history or prehistory required for eligibility under NRHP Criterion D.

Description of Physical Appearance:

Lakes Auto Wrecking Warehouse #1 is one of three structures in an auto wrecking and repair compound. The single-story, wood-framed warehouse has a rectangular plan of 3,000 square feet with a side gable roof of moderate pitch. The metal roof appears relatively new and has close eaves and verges. West elevation has several multi-light, fixed pane, metal frame windows that are currently painted over or boarded up. Sections of the corrugated metal siding on the west elevation are missing in places, especially on the southwest corner. Two sets of large fixed pane picture windows flank a pedestrian door on the north elevation. The north end is sided with plywood, and three of the four windows are boarded up. The east elevation faces the main yard and has roll up garage doors and a few pedestrian doors. A small shed is attached to the south elevation; fencing and vegetation prevented a closer look at other materials and features.

Major Bibliographic References:

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Photos



Warehouse 1, oblique of north and west elevations
2013



Warehouse 1, north elevation
2013



Historic Inventory Report

Location

Field Site No. _____ DAHP No. _____

Historic Name:

Common Name: 4046 100th Street SW Warehouse 2

Property Address: 4046b 100th St SW, Lakewood, WA 98499

Comments:

Tax No./Parcel No. 0219011113

Plat/Block/Lot

Acreage 1.96

Supplemental Map(s) _____

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T19R02E	01			Pierce	TACOMA SOUTH

Coordinate Reference

Easting: 1144947

Northing: 674694

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Sounder Lakewood Yard Expansion Project Date Recorded: 05/29/2013

Field Recorder: M. Sneddon

Owner's Name: Lakes Auto Wrecking

Owner Address: 4046 100th Street SW

City: Lakewood

State: WA

Zip: 98499

Classification: Building

Resource Status:

Comments:

Survey/Inventory

Within a District? No

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:



Historic Inventory Report

Description

Historic Use: Commerce/Trade - Warehouse	Current Use: Commerce/Trade - Warehouse		
Plan: Rectangle	Stories: 1	Structural System: Balloon Frame	
Changes to Plan: Intact	Changes to Interior: Unknown		
Changes to Original Cladding: Moderate	Changes to Windows: Unknown		
Changes to Other: Unknown			
Other (specify):			
Style: Other - Utilitarian	Cladding: Wood - T 1-11	Roof Type: Shed	Roof Material: Asphalt / Composition - Built Up
Foundation: Concrete - Poured	Form/Type: Utilitarian		

Narrative

Study Unit	Other
None	
Date of Construction: 1952	Built Date: Builder: Engineer: Architect:

Property appears to meet criteria for the National Register of Historic Places: No

Property is located in a potential historic district (National and/or local): No

Property potentially contributes to a historic district (National and/or local): No

Statement of Significance: Warehouse #2 was built in 1952, likely by the Harrison Brothers Company, a contracting company that operated a gravel pit located on the original, much larger property (Pierce County 2013; Metsker 1960). The warehouse was likely associated with gravel mining and later, the auto service industry. Gravel mining was an important part of road building projects and concrete production, but a fairly common industry in and around developing urban areas in the twentieth century. A 1951 Washington State mining directory lists 125 sand and gravel operations in Washington, and 12 in the greater Tacoma area alone (Stebbins 1951:14-15, 22). A gravel pit is still in operation approximately 1.5-miles north of the Lakes Auto Wrecking property (McClain's Soil Supply 2013). Similarly, automotive service industries including auto wrecking, repair, painting, and car wash have been well represented in Lakewood since the 1960s (Polk 1960:225-26). The buildings lack any known direct associations with events that have made a significant contribution to the broad patterns of national or local history required for eligibility under NRHP Criterion A and WHR Criterion C; or with the lives of significant persons required for eligibility under NRHP Criterion B and WHR Criterion C. The utilitarian wood-framed warehouses do not embody distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction required to qualify under NRHP Criterion C. The warehouses are not likely to yield information important to understanding history or prehistory required for eligibility under NRHP Criterion D.



Historic Inventory Report

Description of Physical Appearance:	Lakes Auto Wrecking Warehouse #2, built in 1952, is one of three structures in an auto wrecking and repair compound. The single-story, wood-framed warehouse has a rectangular plan of 3,240 square feet with a low pitched shed roof. The built-up roof has projecting eaves and exposed rafters. Two solid pedestrian doors and a boarded up, metal frame and sash two-light sliding window are interspersed between four metal roll-up garage doors of various sizes that dominate the front, north, elevation. Most of the front elevation is sided with T1-11 except for a strip of unknown material that may cover an original ribbon of fenestration. Signage that reads "Imports & Japanese Engine" is attached to a section of the stripping. Other elevations are solid walls of vertical shiplap wood siding.
Major Bibliographic References:	Dunkelberger, Steve and Walter Neary. Lakewood: Images of America. Charleston, SC: Arcadia, 2005. McClain's Soil Supply. McClain's Soil Supply Location, electronic resource, http://www.mcclainsoilsupply.com/ , accessed June 4, 2013. Pierce County. Pierce County Geographic Information System. Tax Parcel 0219011113 (Lakes Auto Wrecking), electronic resource, http://matterhorn3.co.pierce.wa.us/publicgis/ , accessed June 2, 2013. Polk, R.L. Polk's Tacoma Suburban Directory. Monterey Park, California: R.L. Polk & Co. Publishers, 1960. Stebbins, Robert H. Directory of Washington Mining Operations, 1951. Olympia, Washington: Department of Conservation and Development, Division of Mines and Geology, 1951. United States Department of the Interior, National Park Service. How to Apply the National Register Criteria for Evaluation. rev. ed. Washington, D.C: US Department of the Interior, 1997. US Geological Survey (USGS). 1941 Aerial photograph AR1S00000040181. Electronic resource, http://earthexplorer.usgs.gov/ , accessed May 27, 2013. _____. 1957 Aerial photograph ARA550460010085. Electronic resource, http://earthexplorer.usgs.gov/ , accessed May 27, 2013. _____. 1968 Aerial photograph AR1VCBA00020243. Electronic resource, http://earthexplorer.usgs.gov/ , accessed May 27, 2013.

Photos



4046 100th Street SW Warehouse 2, north elevation
2013