



## Appendix F - ENVIRONMENTAL HEALTH TECHNICAL REPORT ADDENDUM

# **Environmental Health Technical Report Addendum Yesler Terrace Redevelopment Project Seattle, Washington**

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Prepared for

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## 1.0 INTRODUCTION

Landau Associates previously prepared the *Environmental Health Technical Report* (Landau Associates, 2010) to support preparation of the Environmental Health elements of the Draft Environmental Impact Statement (DEIS) for the proposed Yesler Terrace Redevelopment project located on the south slope of First Hill in Seattle, Washington (Figure 1). The *Environmental Health Technical Report* is included as Appendix I to the DEIS.

This *Environmental Health Technical Report Addendum* provides additional information and analysis of the Preferred Alternative to support preparation of the Final Environmental Impact Statement (FEIS) for the project. This report addendum describes the affected environment and existing environmental conditions at the site, the impacts from existing hazardous materials related to future site redevelopment under the Preferred Alternative, potential mitigation measures that may be implemented to address these impacts, and any significant unavoidable adverse impacts.

The Seattle Housing Authority (SHA) is proposing the redevelopment of Yesler Terrace, a public housing community located near the intersection of Yesler Way and Broadway in Seattle's First Hill neighborhood. Yesler Terrace currently contains 561 units, housing approximately 1,200 residents. Redevelopment is proposed to create a mixed-income, mixed-use community that is intended to better serve existing and future residents. The project would include a mix of housing, office, commercial, and community service uses, as well as parks and open space, and street and utility infrastructure improvements. It is anticipated that the redevelopment of Yesler Terrace would take approximately 15 to 20 years to complete.

For descriptive purposes, the Yesler Terrace site has been divided into sectors (Figure 2). Descriptions of the NW, NE, SW, SE, and East of Boren (EOB) Sectors are provided in the DEIS. The Preferred Alternative also includes three additional properties, located east of 12<sup>th</sup> Avenue and east of the EOB Sector, that make up the East of 12<sup>th</sup> Sector. The NW, NE, SW, and SE Sectors that make up the Planned Action area are also referred to as the West of Boren Sectors. The EOB and East of 12<sup>th</sup> Sectors are outside of the Planned Action area.

In the Preferred Alternative, all existing onsite buildings in the West of Boren and East of Boren Sectors would be demolished except for the Steam Plant and Yesler Community Center buildings. In the East of 12<sup>th</sup> Sector, the King County Archive building and the associated warehouse would be demolished. The Seattle Urban League building and Baldwin Apartment buildings would remain but would be rehabilitated for residential uses.

The existing street grid would be reconfigured to enhance the connections to surrounding neighborhoods and provide an internal circulation loop of secondary rights-of-way, which would connect all of the site sectors without the need to travel on primary rights-of-way.

The southern portion of the alley north of Spruce Street between 9<sup>th</sup> Avenue and Terry Avenue (the northern portion of the alley was previously vacated) would be vacated. In addition, the following road segments would be vacated under the Preferred Alternative (Figure 3):

- Terry Avenue
- Spruce Street
- A portion of 8<sup>th</sup> Avenue S between Yesler Way and Washington Street

- Service road around the Steam Plant (portion not within new 9<sup>th</sup> Avenue alignment)
- S Washington Street from 10<sup>th</sup> to 12<sup>th</sup> Avenue S
- S Main Street west of 10<sup>th</sup> Avenue S
- Stub of 9<sup>th</sup> Avenue S south of S Main Street.

The following streets would be dedicated as new rights-of-way under the Preferred Alternative (Figure 4):

- E Fir Street would be dedicated from Broadway to 8<sup>th</sup> Avenue
- S Washington Street would be dedicated from 8<sup>th</sup> Avenue S to 10<sup>th</sup> Avenue S
- 10<sup>th</sup> Avenue S would be dedicated from S Washington Street to S Main Street
- Additional right-of-way adjacent to 10<sup>h</sup> Avenue and 10<sup>th</sup> Avenue S would be dedicated to widen the existing right-of-way
- Additional right-of-way adjacent to Yesler Way and E Yesler Way would be dedicated to widen the right-of-way.

The descriptions of known environmental conditions are based on available data from existing reports, a review of historical and regulatory information, and a site reconnaissance. Based on the available information, the conditions described in this report represent the known and potential areas of contamination within the study areas. However, other areas of contamination not listed herein may be discovered during future site investigations or site redevelopment activities. No subsurface explorations or laboratory tests were conducted by Landau Associates as part of this study. The information contained in this report was developed to identify possible constraints to proposed site redevelopment due to contaminated soil and groundwater impacts, identify data needs to further define these constraints as part of the future design and construction process, and support conceptual-level cost estimating associated with mitigative measures.

A discussion of the regulatory programs that may be relevant during project planning and redevelopment activities is presented below, followed by a summary of environmental conditions for the East of 12<sup>th</sup> Sector. Refer to the DEIS for a discussion of environmental conditions for the West of Boren and EOB Sectors.

## 1.1 REGULATORY BACKGROUND

Issues related to the potential presence of hazardous material at the Yesler Terrace site will need to be addressed according to the Washington State Department of Ecology (Ecology) Dangerous Waste Regulations and Model Toxics Control Act (MTCA) cleanup regulation. The applicability of each of these regulations is discussed in the DEIS.

## 2.0 PREFERRED ALTERNATIVE

This section provides the following elements from the environmental health analysis of the Preferred Alternative:

- Existing conditions for East of 12<sup>th</sup> Sector
- Construction, operation, and indirect impacts
- Cumulative impacts

- Proposed mitigation measures
- Significant unavoidable adverse impacts.

Refer to the DEIS for a summary of the above-listed elements for Alternatives 1 through 4.

## 2.1 AFFECTED ENVIRONMENT

This section summarizes the existing conditions for the East of 12<sup>th</sup> Sector at the Yesler Terrace site and the surrounding area related to the presence or potential presence of contaminants and/or hazardous materials. Existing conditions are described within the East of 12<sup>th</sup> Sector and for properties that are near the site that have a potential to impact redevelopment activities (Figure 2).

The East of 12<sup>th</sup> Sector is composed of three individual properties: the King County Records site (KC Records site), the Baldwin Apartments property (Baldwin property), and the Seattle Urban League property (SUL property). The KC Records site is bordered by the following: on the east by 13<sup>th</sup> Avenue; on the south by E Yesler Way; on the west by a parking lot associated with a curtain manufacturing facility, restaurants, and an automobile service station; and on the north by E Fir Street. The Baldwin property is bordered on the east by the SUL property, on the south by residential development, on the west by 13<sup>th</sup> Avenue, and on the north by E Fir Street. The SUL property is bordered on the east by 14<sup>th</sup> Avenue, on the south by E Yesler Way, on the west by residential development and the Baldwin property, and on the north by E Fir Street.

Landau Associates conducted an environmental site assessment for the East of 12<sup>th</sup> Sector in 2011. The results of the assessment are summarized in the technical memorandum titled, Focused Phase I Environmental Site Assessment (Focused Phase I ESA), which is provided as Attachment 1. The Focused Phase I ESA presents information obtained during a review of historical and regulatory information and a site reconnaissance, and ranks sites of potential concern within the East of 12<sup>th</sup> Sector and in the surrounding area. Sites of potential concern were ranked in three categories as follows:

- Category A: Sites that have either been identified as *recognized environmental conditions* for the East of 12<sup>th</sup> Sector due to known releases adjacent to and upgradient of the subject property and there has been no cleanup conducted. There is potential for encountering contamination at/adjacent to these sites during construction.
- Category B: Sites that have been identified as *recognized environmental conditions* for the subject property due to: 1) historically operated in the East of 12<sup>th</sup> Sector as a dry cleaner with no reported releases; 2) located hydraulically upgradient, not adjacent to but within close proximity to the East of 12<sup>th</sup> Sector and have had a contaminant release to soil and groundwater with an unknown cleanup status; 3) located adjacent to the subject property with a confirmed contaminant release to soil that was reportedly cleaned up; or 4) located within close proximity and hydraulically crossgradient to the subject property with a confirmed contaminant release to soil and an unknown cleanup status. The potential for encountering contamination from these sites during redevelopment activities is considered low.
- Category C: These sites are either: 1) adjacent to the subject property and have been the location of historical dry cleaners or historical auto stations or 2) have had a confirmed contaminant release to soil and groundwater that has been cleaned up and have received a "No Further Action" determination from Ecology. The potential for

encountering contamination from these sites during redevelopment activities is considered very low.

Sites ranked “A” are considered to have the highest relative potential to have contamination that could be encountered during redevelopment activities, and sites ranked “C” are considered to have the lowest potential for contamination, relative to other sites. Sites of potential concern that were identified in the Focused Phase I ESA as unlikely to affect redevelopment activities (Category C) are mentioned briefly in this report, but not discussed in detail. For additional information regarding the specific locations and historical uses for sites ranked in Category C, refer to Table 1 and Figure 2 of the Focused Phase I ESA (Attachment 1). For sites of potential concern that were ranked in Category A and B, a discussion has been included below along with our assessment of their likelihood to impact redevelopment activities within the East of 12<sup>th</sup> Sector.

### 2.1.1 West of Boren and East of Boren Sectors

Historical site activities, current uses, and environmental conditions for the West of Boren and East of Boren Sectors are the same as those described in the DEIS.

### 2.1.2 East of 12<sup>th</sup> Sector

This section presents a summary of historical site activities, current uses, and sites of potential concern that have been identified for the East of 12<sup>th</sup> Sector.

#### Historical Site Activities

In the late 1800s, the KC Records site was undeveloped and was part of a larger property used as a garden. Sometime prior to 1949, the site was developed with five residential apartment buildings as part of the Fir Street Housing Project, which was a 28-unit apartment complex. By 1954, the apartment complex had been demolished and King County had developed the site with two large warehouses. The warehouses have been used by King County as a records storage facility and archives, an evidence room for the King County Sheriff’s office, and for storage of miscellaneous equipment. Both warehouse buildings at the KC Records site previously underwent asbestos-containing building materials (ACBM) and lead-based paint (LBP) abatement and/or removal. Specific details and the date of this abatement were unavailable (Adams, T., 2011, personal communication).

The Baldwin property was reportedly vacant and undeveloped until the construction of the Baldwin Apartments building in 1918 (Krafft & Krafft, 2007). The Baldwin Apartments building was used for residential housing until early 2010, when the building was condemned due to electrical issues, a leak in the roof, and problems with the natural gas-fueled boiler (Fani, J. 2011, personal communication).

In the late 1800s, the SUL property was an undeveloped portion of a property used as a botanical nursery. In 1910, the SUL building was constructed and it has been used for various operations that have included retail sales, a restaurant, residential housing, and office space. Based on information from the Environmental Data Resources (EDR) regulatory database report (Attachment 4 of the attached Focused Phase I ESA technical memorandum), the retail uses within the SUL building may have included historical laundry/dry cleaner operations. Due

to its potential former use as a laundry/dry cleaner facility, the SUL property was identified in the Focused Phase I ESA with a Category B ranking, indicating that the site is of potential concern; however, the potential for encountering contamination from this site during the planned redevelopment activities if the existing structure remains in place is considered low. Dry cleaning operations are of concern because they have historically involved the use of solvents that can impact soil and groundwater if released to the environment. In addition, a coal-fired boiler was historically used at the SUL building, but is no longer used and was buried in place in the northwestern corner of the building (Chuta, J., 2011, personal communication).

The Universal Auto Body & Services Inc. (Universal Auto) site is located adjacent to the west of the northern portion of the KC Records site (not within the Yesler Terrace site) at 1209 E Fir Street. The site was identified in the Focused Phase I ESA with a Category A ranking, indicating that there would be a potential for encountering contamination adjacent to this property during redevelopment activities. Historical Sanborn Fire Insurance maps and the EDR regulatory database report indicate that the site has operated as an automobile gasoline and/or repair station since the early 1940s. The site is listed on multiple regulatory agency databases and is identified as having had a confirmed release of petroleum hydrocarbons and a suspected release of non-halogenated solvents and metals to the storm drain or sewer. The site is also listed as having a suspected release of petroleum hydrocarbons, non-halogenated solvents, and metals to soil. Soil sampling results confirmed a release of petroleum hydrocarbons and lead to soil, as described below. In 1993, Ecology received a report that management at the Universal Auto site (former TD Auto Body & Repair) had been dumping hazardous materials in the yard behind the building (Ecology, 1993). The hazardous materials reportedly dumped included solvents, paint thinners, lacquer and enamel thinners, bonding material, used motor oil, and antifreeze. By the end of 2001, representatives from the King County Local Hazardous Waste Program and Public Health – Seattle had conducted multiple site visits and taken three soil samples due to observations of soil staining in the southern portion of the property. In December 2001, three soil samples were collected from the soil slope located on the southern side of the building at depths ranging from 6 to 10 inches. The samples were analyzed for extended diesel-range total petroleum hydrocarbons (TPH-Dx), volatile organic compounds (VOCs), and total metals. Heavy oil was detected in all three samples at concentrations of 760 parts per million (ppm), 1,700 ppm, and 3,200 ppm. Lead was detected in all three samples at concentrations of 160 ppm, 120 ppm, and 1,000 ppm. VOCs were not detected in any of the three samples. The concentrations of heavy oil (3,200 ppm) and lead (1,000 ppm) in one of the three samples are greater than the MTCA Method A cleanup levels for unrestricted land uses of 2,000 ppm and 250 ppm, respectively. Based on the available information, there has been no cleanup at the Universal Auto property.

The B & B Auto Repair Seattle site is located approximately 225 feet (ft) northwest of the KC Records site (not within the Yesler Terrace site; northwest of the intersection of 12<sup>th</sup> Avenue and E Fir Street). The site was identified in the Focused Phase I ESA with a Category B ranking, indicating a site of potential concern; however, because of the site's location the potential for encountering contamination from this site during redevelopment activities is considered low. Historical Sanborn Fire Insurance maps and the EDR regulatory database report indicate that the site has operated as an automobile gasoline and/or repair station from 1930 through 1986. The site reportedly had two underground storage tanks (USTs) on site and both were removed. The site is listed as having a petroleum hydrocarbon release to soil and groundwater and is identified as a Leaking Underground Storage Tank (LUST) facility, on which cleanup has started. The current status of cleanup activities at this site is not known.



Garda Company (formerly Armored Transport of Seattle) is located adjacent to the southeast of the SUL property (not within the Yesler Terrace site; southeast of the intersection of 14<sup>th</sup> Avenue and E Yesler Way). The site was identified in the Focused Phase I ESA with a Category B ranking, indicating a site of potential concern; however, because of the site's location the potential for encountering contamination from this site during redevelopment activities is considered low. Historical Sanborn Fire Insurance maps and the EDR regulatory database report indicate that the site operated as an automobile gasoline and/or repair station between 1944 and 1970. The site has operated as an armored car depot since at least the early 1990s. Onsite Enterprises Inc. submitted a UST decommissioning report for the site to Ecology in October 1991 (Onsite Enterprises, 1991). The report indicated that there were two 6,000-gallon (unleaded gasoline and waste oil) and one 8,000-gallon (diesel) USTs removed from beneath the parking lot located in the northern portion of the site. The report indicated that 200 cubic yards of contaminated soil were removed from the site for remediation and confirmation soil samples were collected. A total of 26 soil samples were collected at locations that included the excavation sidewalls, near fuel pipe connections, beneath fuel island dispensers, and from stockpiled soil. The soil samples were selectively analyzed for gasoline-range TPH (TPH-G); benzene, toluene, ethylbenzene, and xylenes (BTEX); TPH-D; oil-range TPH (TPH-O); and/or leachable metals. Fourteen of the 26 soil samples were analyzed for TPH-G, TPH-D, and BTEX. Four of the 14 samples had benzene concentrations that were above the MTCA Method A soil cleanup level for unrestricted land uses with concentrations ranging from 0.036 ppm to 15.0 ppm. Concentrations of toluene, ethylbenzene, xylenes, and TPH-G were above the MTCA Method A soil cleanup levels for unrestricted land uses in 1 of 14 samples at concentrations of 14.0 ppm, 19.0 ppm, 53.0 ppm, and 780 ppm, respectively. Concentrations of TPH-D and metals in the samples were either not detected or below the MTCA Method A soil cleanup levels for unrestricted land uses. Onsite Enterprises estimates that after the excavation was complete, slight TPH-G contamination extended to the west and southwest of the excavation limits. Groundwater at the site during the time of the investigation ranged from 8 ft to 15 ft below ground surface.

The Northshore Hawaiian B.B.Q. & Bar (formerly Lloyd's Rocket Gas Station) site is located 250 ft to the southwest of the KC Records site (not within the Yesler Terrace site; southwest of the intersection of 12<sup>th</sup> Avenue and E Yesler Way). The site was identified in the Focused Phase I ESA with a Category B ranking, indicating a site of potential concern; however, because of the site's location the potential for encountering contamination from this site during redevelopment activities is considered low. Historical Sanborn Fire Insurance maps and the EDR regulatory database report indicate that the site operated as a laundry/dry cleaner in the mid-1940s and as an automobile service station from the early 1950s through the early 1990s. The site is listed on multiple regulatory agency databases and is identified as having had a confirmed release of petroleum hydrocarbons to soil and groundwater. The site has reportedly had six USTs that were installed in 1964 and that were removed in 1997. The six USTs consisted of four 4,000-gallon gasoline USTs, one 6,000-gallon diesel UST, and one 300-gallon waste oil UST. The tanks were all reportedly in good condition at the time of removal with the exception of one of the 4,000-gallon gasoline USTs that had a hole in the bottom. According to a UST removal and site assessment report prepared by Galloway Environmental Inc. in 1997, 18 of the 24 soil samples collected from the excavations, pump islands, and from stockpiled soil during the UST removal contained petroleum hydrocarbon concentrations greater than the MTCA Method A soil cleanup levels for unrestricted land uses (Galloway Environmental, 1997). A summary of the analytical results indicates that the concentrations of TPH-G, TPH-D, TPH-O, and BTEX in soil were above MTCA Method A cleanup levels in effect at the time for one or more sample

locations. The Ecology site status indicates that a remedial action is in progress and there is no additional information available for the site.

Other historical land uses on properties that are adjacent to the East of 12<sup>th</sup> sector (not within the Yesler Terrace site) include retail, residential, manufacturing, and institutional. Other historical automobile service stations and historical laundry/dry cleaner facilities with a Category C ranking (indicating a low potential to affect construction activities) have operated adjacent to the north, south, east and west of the East of 12<sup>th</sup> Sector. For additional details on historical land uses on sites with a Category C ranking refer to the Focused Phase I ESA in Attachment 1.

## Current Use

The KC Records site is developed with two warehouse buildings, which are currently used for records storage and archives. The Baldwin Apartments building is located at the Baldwin property and is currently vacant. The SUL building is currently used as office space by the Seattle Urban League. The SUL property parking lot is located adjacent to the north of the SUL building. For a description of current land uses on properties adjacent to the East of 12<sup>th</sup> Sector, refer to Table 1 and Figure 2 in the Focused Phase I ESA (Attachment 1).

## Environmental Conditions

The Baldwin Apartments building and the SUL building were constructed prior to 1920; therefore, it is likely that ACBM and LBP are present within both buildings. Future uses or remodeling plans for the Baldwin and SUL buildings will need to take into account the potential presence of ACBM and LBP.

Based on the EDR regulatory database report, a laundry/dry cleaner facility may have operated within the SUL building; however, because there have been no reported releases of hazardous materials and there are no planned ground-disturbing activities at the SUL property, the potential presence of a historical laundry/dry cleaner at the SUL property is not considered to be an environmental concern for redevelopment activities.

There is confirmed soil contamination at the Universal Auto site (located adjacent to the west of the KC Records site) likely resulting from illegal dumping of hazardous materials that reportedly included solvents, paint thinners, lacquer and enamel thinners, bonding material, used motor oil, and antifreeze. Based on topography, the Universal Auto site is located hydraulically upgradient from the KC Records site; therefore, any contaminants in groundwater have the potential to migrate onto the KC Records site. Current plans for the KC Records site under the Preferred Alternative call for demolition of the warehouse buildings and construction of residential housing. Under this alternative, a site-specific health and safety plan would be necessary that meets the safety requirements of WAC 296-843, Hazardous Waste Operations, and WAC 296-155, Safety Standards for Construction Work, to minimize the potential for workers to be exposed to hazardous materials during demolition and construction and to address appropriate handling and disposal of any soil with contaminant concentrations greater than the MTCA Method A cleanup levels for unrestricted land uses. Primary potential exposure pathways to construction workers that should be addressed in the health and safety plan include direct contact with contaminated soil, groundwater, and petroleum product; inhalation of hazardous compounds present in construction-generated dust; and inhalation of volatile petroleum compounds.

As described above, the B & B Auto Repair Seattle and the Northshore Hawaiian B.B.Q. & Bar sites have both had confirmed releases of petroleum products to soil and groundwater. Remedial actions are underway at both sites; however, the current status of these activities is not known. Neither site is adjacent to the East of 12<sup>th</sup> Sector. Based on topography, the B & B Auto Repair Seattle site is potentially hydraulically upgradient and the Northshore Hawaiian B.B.Q. & Bar is potentially hydraulically crossgradient. The potential for contaminants in groundwater to migrate onto the KC Records site from these sites is considered low.

The Garda Company site is located adjacent to the southeast of the SUL property. There has been a confirmed release of petroleum products to soil at this site. Remedial actions that were completed did not remove all TPH-contaminated soil; however, because the two sites are separated by the E Yesler Way and the 14<sup>th</sup> Avenue rights-of-way and because there is no reported groundwater contamination, it is unlikely that contaminants would have migrated from the Garda Company site to the SUL property. Additionally, no ground-disturbing activities are planned for the SUL property as part of the Preferred Alternative; therefore, no impacts to redevelopment activities are anticipated.

## 2.2 IMPACTS

This section describes potential impacts to human health and the environment from hazardous materials as a result of the Yesler Terrace redevelopment activities under the Preferred Alternative.

The following impacts are described for the Preferred Alternative:

- Construction Impacts: Short-term impacts that take place during construction
- Operation Impacts: Long-term impacts that take place during the operational life of the development
- Indirect Impacts: All other impacts not related specifically to construction or operation of the development

### 2.2.1 Preferred Alternative

The Preferred Alternative would include mixed-use development consisting of residential, office, neighborhood commercial, and institutional uses. This section describes the impacts to the West of Boren, EOB, and East of 12<sup>th</sup> Sectors under the Preferred Alternative.

#### West of Boren and East of Boren Sectors

Under the Preferred Alternative, the existing Steam Plant building is proposed to be rehabilitated and utilized for neighborhood services uses. As described in the DEIS Section 3.6.1, the types of material burned to fuel the Steam Plant have not been fully documented. The residual material within the smokestack and the stack itself may contain potentially hazardous materials. Testing of the residual material and the smokestack would be conducted prior to any rehabilitation activities that would affect the smokestack. Proper characterization of any hazardous materials identified within the smokestack would be performed to select an appropriate offsite disposal site. Construction activities on the Yesler Terrace site under the Preferred Alternative should include contingencies for appropriate site-specific health and safety procedures that meet the requirements of WAC 296-843, Hazardous Waste Operations, to

minimize the potential for workers to be exposed to hazardous materials from this source during construction.

With the exception of the Steam Plant building rehabilitation, the Preferred Alternative does not raise any new or different issues related to environmental health for the West of Boren or EOB Sectors. The potential impacts associated with the Preferred Alternative are, therefore, similar to those discussed for the DEIS Alternatives.

## East of 12<sup>th</sup> Sector

This section discusses the specific impacts of the Preferred Alternative that apply to the East of 12<sup>th</sup> Sector and are in addition to the impacts described for the sectors East and West of Boren in the DEIS.

### Construction Impacts

The Preferred Alternative would include redevelopment on the KC Records site. As described above in Section 2.1.2, hazardous materials including solvents, paint thinners, lacquer and enamel thinners, bonding material, used motor oil, and antifreeze were reportedly dumped in an area that is adjacent to the west of the KC Records site. In areas where illegal dumping has occurred, contaminant (i.e., heavy oil and lead) concentrations in soil or groundwater may be above the MTCA Method A soil cleanup levels for unrestricted land uses. The presence of heavy oil, lead, or other contaminants in soil or groundwater would pose a health risk for construction workers during site redevelopment. Planning for construction should include contingencies for appropriate site-specific health and safety procedures that meet the requirements of WAC 296-155 to minimize the potential for workers to be exposed to hazardous materials during construction. In addition, due to the residential uses proposed for the KC Records site under the Preferred Alternative, additional characterization, removal, and proper disposal of soil with contaminant concentrations greater than the MTCA Method A cleanup levels for unrestricted land uses would be necessary. If groundwater contamination is encountered, then characterization, remediation, and/or monitoring would be necessary in accordance with MTCA cleanup standards.

There is likely ACBM and LBP present within the Baldwin Apartments building and the SUL building; therefore, any remodeling of those structures could disturb these materials. Exposure to asbestos and LBP could present health and safety issues for workers.

### Operation Impacts

Operation impacts for the Preferred Alternative for the East of 12<sup>th</sup> Sector are the same as those described for the sectors East and West of Boren in the DEIS.

### Indirect Impacts

Indirect impacts for the Preferred Alternative for the East of 12<sup>th</sup> Sector are the same as those described for the sectors East and West of Boren in the DEIS.

## 2.3 MITIGATION

There are no known impacts associated with hazardous materials located in the Yesler Terrace site that could not be mitigated. In addition to the mitigation measures described for the sectors East and West of Boren in the DEIS, the following mitigation measures would be required to ensure there would be no significant impacts to humans or the environment under redevelopment activities of the Preferred Alternative in the East of 12<sup>th</sup> Sector.

- Additional characterization, removal, and proper disposal of soil with lead, heavy oil, or other contaminant concentrations greater than the MTCA cleanup levels for unrestricted land uses would be necessary.
- During construction, if groundwater contamination is encountered (i.e., contaminant concentrations greater than MTCA Method A cleanup levels or other applicable standards), then characterization, remediation, and/or monitoring would be necessary in accordance with MTCA cleanup standards.
- Building remodeling on the Baldwin Apartment building and the SUL building must be conducted after a hazardous building materials survey has been completed to identify the presence of such materials (e.g., ACBM or LBP) and remove or stabilize them prior to remodeling activities. In addition, ACBM or LBP abatement records for the KC Records site, if available, would need to be reviewed prior to the demolition of the warehouses. If it is determined there is any ACBM or LBP remaining at the KC Records site, removal or stabilization would be needed prior to demolition.
- At the Steam Plant, residual material within the smokestack and the stack itself may contain potentially hazardous materials. Testing of the residual material and the smokestack would be performed prior to any rehabilitation activities that would affect the smokestack. Proper characterization of any hazardous materials identified within the smokestack would be conducted to select an appropriate offsite disposal site.

## 2.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

With implementation of the mitigation measures listed in Section 2.4, no significant unavoidable adverse impacts are expected for any of the alternatives.

## 3.0 UPDATES OF THE EIS ANALYSIS

There are no updates of the EIS analysis for the environmental health element of the DEIS or the Environmental Health Technical Report.

## 4.0 ERRATA

No errata to the environmental health element of the DEIS or the Environmental Health Technical Report have been identified.

## 5.0 USE OF THIS REPORT

Landau Associates has prepared this environmental health technical report addendum for the exclusive use of the Seattle Housing Authority and the CollinsWoerman project team for specific application to preparation of the Environmental Health section of the Final Environmental Impact

Statement for the proposed Yesler Terrace Redevelopment project in Seattle, Washington. Use of this report by others or for another project is at the user's sole risk. Within the limitations of scope, schedule, and budget, Landau Associates' services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau Associates makes no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

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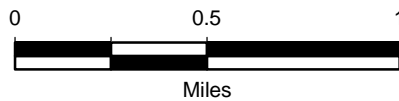
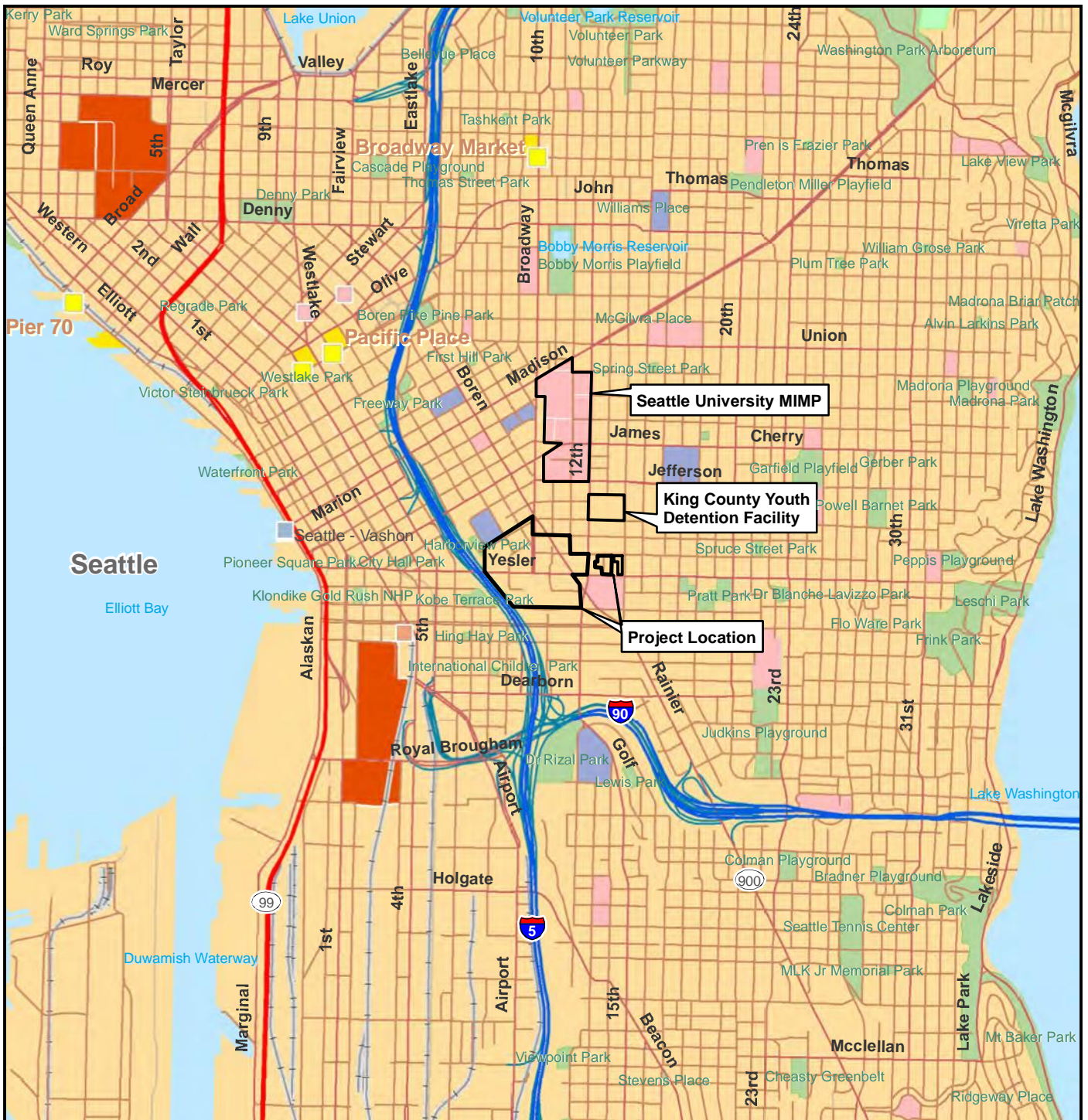
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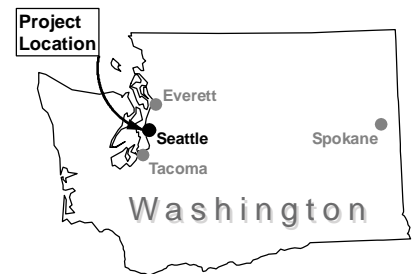
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Data Source: ESRI 2008



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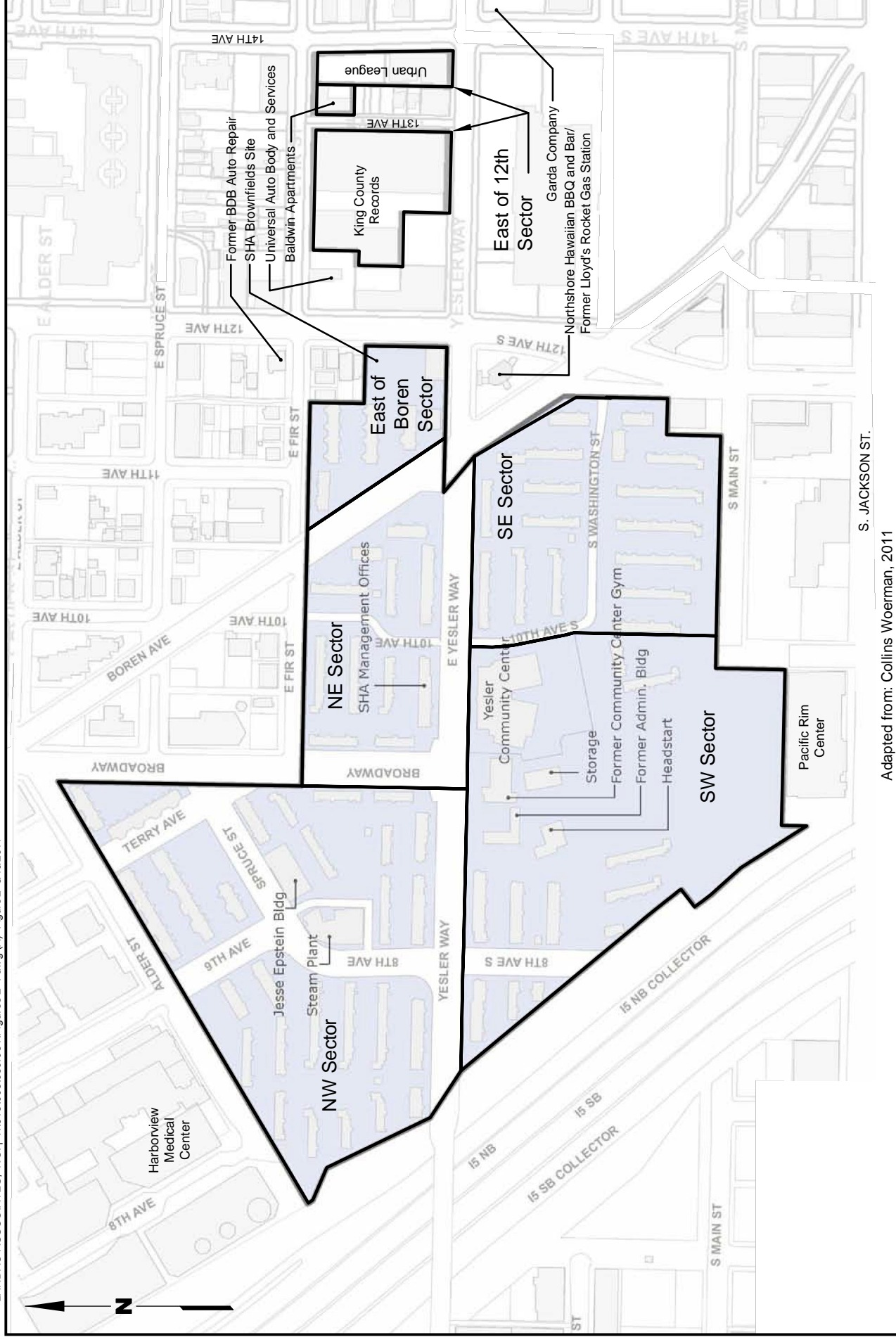


Yesler Terrace Redevelopment  
Seattle, Washington

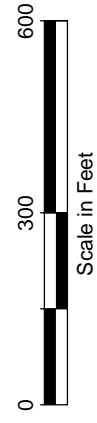
Vicinity Map

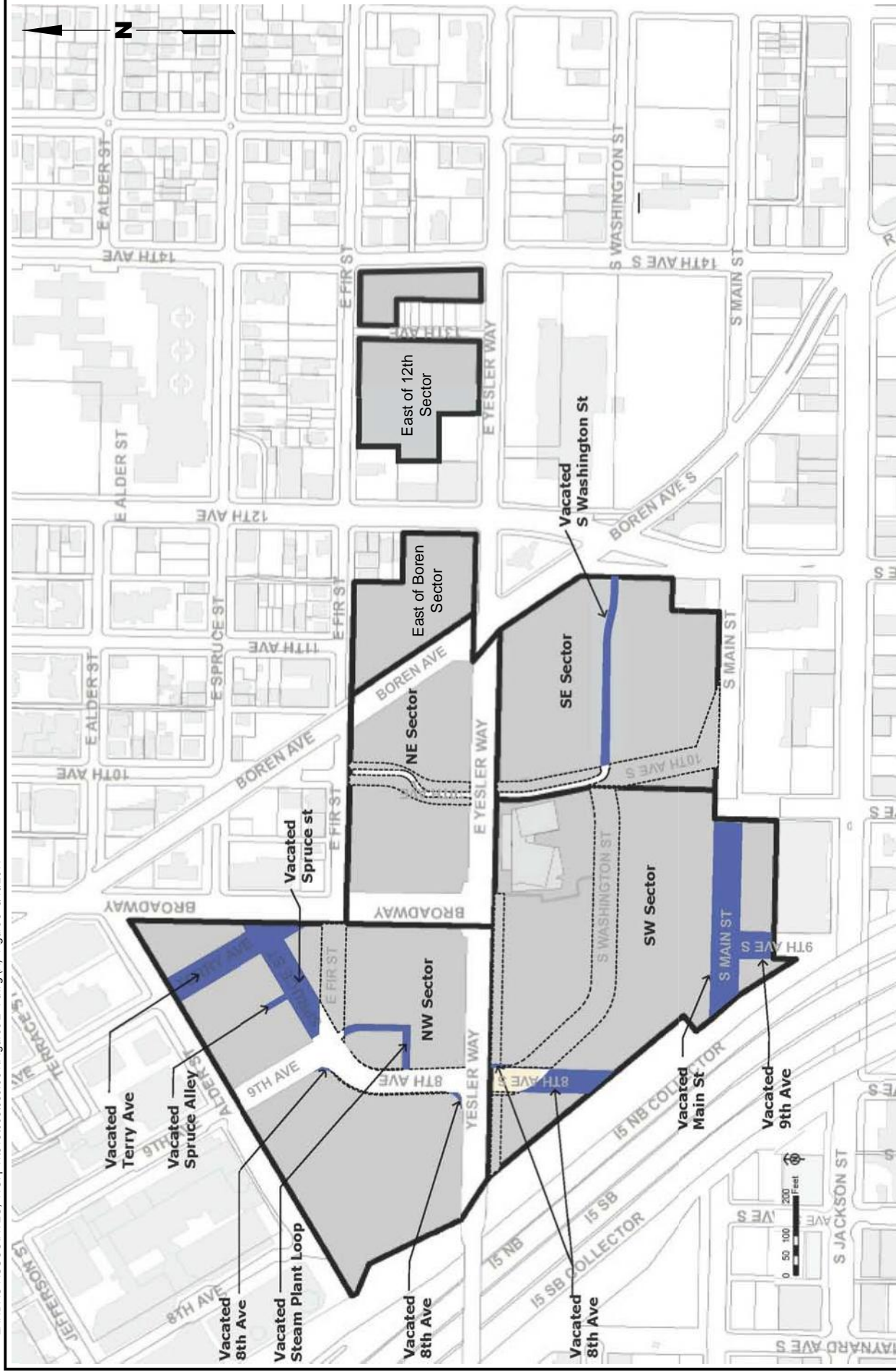
Figure  
1





Adapted from: Collins Woerman, 2011





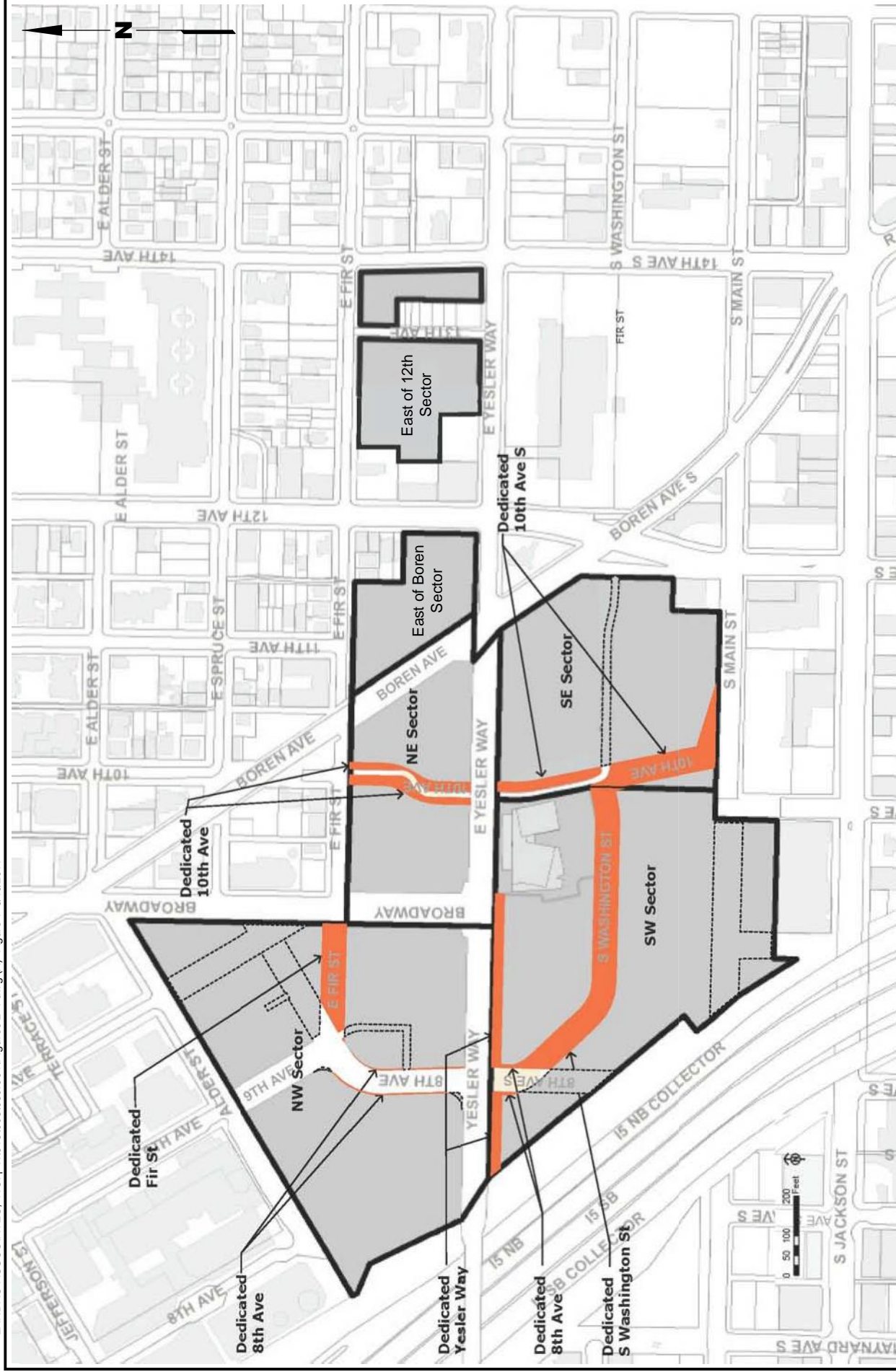
Adapted from: Collins Woerman, 2010

### Preferred Alternative Right-of-Way Vacations

Yesler Terrace  
Redevelopment  
Seattle, Washington

Figure  
**3**





Adapted from: Collins Woerman, 2010

**Preferred Alternative  
Right-of-Way Dedications**

Yesler Terrace  
Redevelopment  
Seattle, Washington


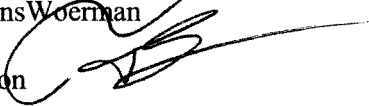
Figure  
**4**

# **Focused Phase I Environmental Site Assessment**

## TECHNICAL MEMORANDUM

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TO: Harold Moniz, AICP, CollinsWoerman

FROM: Mark Brunner, Tim Syverson  

DATE: March 4, 2011; Revised April 11, 2011

RE: **FOCUSED PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR THE  
KING COUNTY RECORDS SITE, BALDWIN APARTMENTS PROPERTY, AND THE  
SEATTLE URBAN LEAGUE PROPERTY  
SEATTLE HOUSING AUTHORITY – YESLER TERRACE  
SEATTLE, WASHINGTON**

### INTRODUCTION

The Seattle Housing Authority (SHA) is evaluating redevelopment of three parcels (subject property) in Seattle, Washington as part of the preferred alternative of the final environmental impact statement for redevelopment of the Yesler Terrace housing project (Figure 1). Based on the location in central Seattle and due to the long history of various land uses in the area, a focused Phase I Environmental Site Assessment (ESA) has been prepared to identify and evaluate environmental conditions in and adjacent to the subject property that may represent liabilities to SHA and adversely affect redevelopment.

As outlined below, Landau Associates conducted a focused Phase I ESA to evaluate and document the history of use and current conditions on the subject property, and the potential for the presence of soil or groundwater contamination that could impact redevelopment. Landau Associates conducted the focused assessment in general accordance with the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, E 1527-05 (as currently applied in the State of Washington). The goal of the assessment process outlined in ASTM E 1527-05 is to identify *recognized environmental conditions*, which are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the subject property or into the ground, groundwater, or surface water of the subject property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies. Our assessment for the subject property is considered a focused Phase I ESA, because only selected elements of the Phase I ESA process were conducted. Therefore, this assessment

should not be considered an ASTM E 1527-05-compliant Phase I ESA. The following sections provide the results of the historical data review and site reconnaissance, identify sites of potential concern located on the subject property and in the surrounding area, and present data gaps identified during this assessment.

A review of readily available geologic and hydrogeologic information for the subject property and surrounding area indicates that groundwater, where encountered, is generally between 5 and 15 feet (ft) below the ground surface and appears to be perched above glacial till and pre-Olympia soils and within coarser interbeds within these units. U.S. Geological Survey (USGS) maps of the area indicate that the topography generally slopes to the south. Based on the topography at the subject property and the surrounding area and a previous groundwater monitoring report for the SHA Brownfields site (located 175 ft to the west of the subject property), it is anticipated that groundwater flow is generally to the southeast, south, and southwest (GeoEngineers 2010).

## **HISTORICAL AND REGULATORY DATA REVIEW**

Landau Associates collected information to document the current and historical use(s) of the properties in the subject project area to identify conditions that could pose liabilities to SHA during redevelopment. This included review of topographic maps, aerial photographs, Sanborn Fire Insurance maps (Sanborn maps), listings from a subcontracted database service (Environmental Data Resources, Inc.) of confirmed and suspected contaminated sites abstracted from U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and tribal environmental databases, as prescribed by ASTM. In addition, the King County Assessor's office, local health department (Public Health – King County), the City of Seattle fire and building departments, and Ecology were contacted for information they have on environmental conditions in the subject project area. The data collected are summarized in the following sections. Properties of potential environmental concern in the subject project area, based on a review of the regulatory database report and the Sanborn maps, are summarized in Table 1 and shown on Figure 2.

### **King County Assessor**

Landau Associates reviewed information available through the King County Assessor's office for each of the parcels located within the subject property (King County website 2010). Information obtained from the review (parcel number, addresses, size of parcel, current use, number of buildings, year of construction, and notes) were used to prepare this technical memorandum. The following parcels/addresses are within the subject property (Figure 2):

- King County Records Site (KC Records site) at 1215 East Fir Street (Parcel No. 8061000045)

- Seattle Urban League property (SUL property) at 1310 East Yesler Way (Parcel No. 0007600192)
- Baldwin Apartments property (Baldwin property) at 124 13<sup>th</sup> Avenue (Parcel No. 0007600184).

## Aerial Photographs

Landau Associates reviewed historical aerial photographs of the subject property for the years 1946, 1956, 1969, 1974, 1985, 1998, 2002, and 2007. Aerial photographs were obtained from King County (KCGIS website 2009) and Aero-Metric, Inc. Copies of the aerial photographs are provided in Attachment 1. Historically and/or environmentally significant findings from the aerial photograph review are summarized in the table below:

### SUMMARY OF AERIAL PHOTOGRAPHS

Year	Project/Project Area Use
1946	<p><i>Subject Property</i> – The KC Records site appears to be developed with five buildings that based on size and shape appear to be apartment buildings. On the Baldwin property there appears to be a medium-sized multi-story building. On the SUL property there also appears to be a medium-sized multi-story building.</p> <p><i>Adjacent Properties</i> – The adjacent properties to the KC Records site are as follows: to the west there appear to be one or two small buildings and two medium-sized buildings; to the north (from west to east), a medium-sized building, four or five small buildings, and another medium-sized building; to the east (from north to south), a medium-sized multi-story building (Baldwin property), two or three small buildings, and another medium-sized building; and to the south (from west to east), four small buildings and two medium-sized buildings. The adjacent properties to the Baldwin property are as follows: to the west is the KC Records site; to the north, a medium-sized building (also identified as being adjacent to the northeast of the KC Records site); to the east, one or two small buildings and a vacant lot or parking lot; and for a description of properties adjacent to the south refer to the description of properties adjacent to the east of the KC Records site. The adjacent properties to the SUL property are as follows: to the west are the properties described as adjacent to the east of the KC Records site; to the north are the properties described as adjacent to the east of the Baldwin property; to the east is one medium-sized building; to the south (from west to east) are one medium-sized building (also identified as being located adjacent to the south of the KC Records site), two small buildings, and a small structure with an adjacent building (east of 14<sup>th</sup> Avenue) and a small building (the configuration appears to be a possible gasoline/auto service station).</p>
1956	<p><i>Subject Property</i> – On the KC Records site there are no longer five buildings, instead there is one large building in the western portion of the property and another large building in the eastern portion of the property. On the Baldwin and the SUL properties there are no significant changes from the 1946 aerial photograph.</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 1946 aerial photograph.</p>
1969	<p><i>Subject Property</i> – There are no significant changes from the 1956 aerial photograph.</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 1956 aerial photograph, with the exception that the structure (identified above as a possible gasoline station) located adjacent to the southeast of the SUL property is no longer visible (however, the small building that was identified on that same property still remains) and the adjacent property to the east of the Baldwin property appears to be a parking lot (the one or two small buildings identified in the 1946 and 1956 aerial photographs have been removed).</p>
1974	<p><i>Subject Property</i> – There are no significant changes from the 1969 aerial photograph.</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 1969 aerial photograph, with the exception that the adjacent property located to the east of the SUL property is vacant (the medium-sized building identified in the 1946, 1956, and 1969 photographs has been removed).</p>

Year	Project/Project Area Use
1985	<p><i>Subject Property</i> – There are no significant changes from the 1974 aerial photograph.</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 1974 aerial photograph, with the exception that to the northwest of the KC Records site there is an additional medium-sized building (where there were formerly two small buildings) and adjacent to the southwest of the KC Records site there is vacant land (the two small buildings identified in the 1946, 1956, 1969, and 1974 photographs have been removed).</p>
1998	<p><i>Subject Property</i> – There are no significant changes from the 1974 aerial photograph.</p> <p><i>Adjacent Properties</i> – Due to the quality of the photograph, a detailed description of the adjacent properties cannot be given; however, in general there do not appear to be significant changes from the 1985 aerial photograph, with the exception that adjacent to the south of the KC Records site and the SUL property there is a large building (all buildings west of 14<sup>th</sup> Avenue identified prior to 1998 have been removed).</p>
2002	<p><i>Subject Property</i> – There are no significant changes from the 1998 aerial photograph.</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 1998 aerial photograph, with the following exceptions: to the north of the KC Records site one of the small buildings has been replaced with a medium-sized building; to the south of the Baldwin property there is now a vacant area where there were formerly one or two buildings; to the east of the SUL property, a medium-sized building occupies what was formerly a vacant lot; and to the southeast of the SUL property (east of 14<sup>th</sup> Avenue) there is a medium-sized building and parking lot where there was formerly a small building present.</p>
2007	<p><i>Subject Property</i> – There are no significant changes from the 2002 aerial photograph.</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 2002 aerial photograph, with the exception that adjacent to the south of the Baldwin property there is a medium-sized building (where there was formerly vacant land) and adjacent to the east of the SUL property there is an additional medium-sized building.</p>

The aerial photograph review indicated that the subject property and surrounding area were developed with a mix of uses prior to 1946. The KC Records site appeared to be developed with multi-family residential buildings prior to 1946 to 1956, after which the site was redeveloped with two large warehouse-type buildings. The Baldwin property and the SUL property each had a single medium-sized building from prior to 1946 to 2007. Properties adjacent to the subject property were developed primarily with small and medium-sized buildings through 1998. After 1998, a large building was constructed adjacent to the south of the KC Records site and the SUL property. A possible gasoline/auto service station was identified on the adjacent property to the southeast of the SUL property (east of 14<sup>th</sup> Avenue) from prior to 1946 through 1998. No *recognized environmental conditions* were identified for the subject property during the aerial photograph review. However, as discussed below, the former possible gasoline/auto service station located to the southeast of the SUL property is considered a site of potential concern based on its proximity.

## Topographic Maps

Landau Associates reviewed the USGS 30-minute series Seattle, Washington Quadrangle topographic map for the year 1897, 15-minute series Seattle, Washington Quadrangle map for the year 1909, and the 7.5-minute series Seattle South, Washington Quadrangle maps for the years 1949, 1968, 1973, and 1983. The findings of the review are discussed below. Copies of the topographic maps are provided in Attachment 2.



Due to the scale of the 1897 and 1909 maps, specific details in the subject project vicinity are not shown; however, it appears the project area is developed with roads and buildings. On the 1949 map, the subject project area is shaded red (indicating a developed urban area). On the 1968, 1973, and 1983 maps there are no significant changes shown.

Overall, the topographic map review shows that the subject project area has been an urban area since at least 1897. There were no *recognized environmental conditions* identified for the subject property during the topographic map review.

### Sanborn Fire Insurance Maps

Landau Associates reviewed Sanborn Fire Insurance maps of the subject project area for the years 1893, 1904, 1905, 1916, 1949, 1950, and 1969. The findings of the map review are discussed below. Copies of the Sanborn maps are provided in Attachment 3. Historically and/or environmentally significant findings from the Sanborn map review are summarized below and in Table 1, and shown on Figure 2:

#### SUMMARY OF SANBORN FIRE INSURANCE MAPS

Year	Project/Project Area Use
1893	<p><i>Subject Property</i> – There are no buildings shown on the KC Records site and the western portion of the KC Records site is labeled “garden.” The Baldwin property is vacant. There do not appear to be any buildings located on the SUL property; however, the property appears to be the southern portion of the property that a botanical nursery is located on.</p> <p><i>Adjacent Properties</i> – There are no buildings located on the adjacent properties to the west (area labeled “garden”) and north (vacant land) of the KC Records site. On the adjacent properties located to the south and southeast of the KC Records site there are vacant land, residential buildings, and buildings that are labeled with an “S” for a retail store. Adjacent properties located to the north, northeast, and south of the Baldwin property are residential or vacant. The adjacent property to the southeast of the Baldwin property is occupied by the “John Leitha, Nursery” and has a large greenhouse, multiple small outbuildings, and a 25-ft diameter aboveground storage tank (AST) located in a “tank house.” There are two furnaces located in the greenhouse. The AST appears to be located immediately adjacent to the northwest of the SUL property. Adjacent properties to the west, south, and east of the SUL property are either residential or vacant land.</p>
1904 & 1905	<p><i>Subject Property</i> – There is no significant change from the 1893 map, with the exception that the western portion of the KC Records site is no longer labeled “garden.”</p> <p><i>Adjacent Properties</i> – There are no significant changes from the 1893 map, with the exception that a building labeled “Chinese Laundry” is located adjacent to the south of the KC Records site. In addition, the “John Leitha, Nursery” is no longer shown on the map and the greenhouse is no longer present; however, the small buildings or structures that were once associated with the nursery are still present and are vacant. The “tank house” that once housed the AST in the 1893 map is now crossed out, indicating it may have been turned into a stable.</p>
1916	<p><i>Subject Property</i> – The subject property is not shown on the 1916 map.</p> <p><i>Adjacent Properties</i> – Only properties south of Yesler Way (adjacent to the south of the KC Records site and the SUL property) are shown on the 1916 map. Adjacent to the south of the KC Records site, there are buildings labeled “F” for flat, a building labeled “Sheet Metal Works,” a building labeled “Chinese Hand Laundry,” and multiple residential and retail buildings. Adjacent to the south of the SUL property, there are residential and retail buildings.</p>