Final Revised Cleanup Action Plan
North Lot Property
Seattle, Washington

September 27, 2012

Prepared for

North Lot Development, LLC

and

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LIST OF ABBREVIATIONS AND ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CAP	Cleanup Action Plan
DCA	Disproportionate Cost Analysis
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
ft	Feet
MCL	Maximum Contaminant Level
MTCA	Washington State Model Toxics Control Act
NLD	North Lot Development
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PPA/CD	Prospective Purchaser Agreement/Consent Decree
Property	North Lot Property
RCW	Revised Code of Washington
RI	Remedial Investigation
SWPPP	Stormwater Pollution Prevention Plan
TPH	Total Petroleum Hydrocarbons
TPH-D	Diesel-Range Total Petroleum Hydrocarbons
TPH-G	Gasoline-Range Total Petroleum Hydrocarbons
TPH-O	Motor Oil-Range Total Petroleum Hydrocarbons
WAC	Washington Administrative Code

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1.0 INTRODUCTION

This revised cleanup action plan (Revised CAP) has been prepared to document certain potential changes to the initial CAP (Landau Associates 2011a) for the North Lot Property (Property). The revisions herein affect only the cleanup action for the east parcel of the Property. The Property is located in the south end Central Business District, southeast of the intersection of South King Street and Occidental Avenue South in Seattle, Washington (Figure 1).

The initial CAP for the Property was approved by the Washington State Department of Ecology (Ecology) based on the development plan submitted by North Lot Development LLC (NLD), the current owner of the Property. 255 S. King Street LP is currently negotiating with NLD regarding the proposed purchase of the east parcel of the Property. After the proposed purchase, 255 S. King Street LP would execute a development plan for the east parcel of the Property that would include construction of a high-rise hotel and commercial/retail building with one level of below-ground parking and associated uses.

On April 27, 2012, 255 S. King Street LP sent a letter to Ecology (Foster Pepper 2012) requesting permission to become a party to the existing Prospective Purchaser Agreement/Consent Decree (PPA/CD; Ecology 2009) for the Property. Ecology responded with a desired protocol for evaluating and negotiating the proposed remedial activities to be performed by 255 S. King Street LP to accommodate its proposed development plan for the east parcel. In accordance with that protocol, a draft Feasibility Study (FS) Addendum to address the proposed changes in the cleanup action for the east parcel (Landau Associates 2012) was submitted to Ecology on June 22, 2012. Ecology subsequently provided comments following its review of the draft FS Addendum (Ecology 2012), and the FS Addendum and this Revised CAP were revised to address the comments received from Ecology. This Revised CAP is submitted to Ecology in accord with the same protocol requested by Ecology for negotiations regarding the east parcel.

The 2011 Remedial Investigation (RI) and FS reports (Landau Associates 2011b,c) and initial CAP for the Property were prepared to be consistent with NLD's development plan at the time the reports were prepared. NLD is developing the west parcel of the Property as planned, and no changes are proposed to the RI/FS or CAP related to the west parcel.

255 S. King Street LP's proposed excavation for construction of the below-ground parking and associated uses represents a "substantial change" (as defined in Section XVI of the PPA/CD) from the development plan identified by NLD for the east parcel. The FS Addendum and this Revised CAP for the east parcel of the Property have been solely prepared to document the proposed changes in the cleanup action for the east parcel resulting from the change in the proposed development plan. Negotiations addressing proposed amendments to the PPA/CD to reflect 255 S. King Street LP's development plan for the east parcel will proceed in conjunction with completion of the FS Addendum and this Revised CAP.

The primary elements of the cleanup action for the west parcel of the Property (including soil excavation and focused treatment in the northwest corner of the Property) have already been completed pursuant to the initial CAP, and development of a commercial and residential building podium on the west parcel is currently underway. Therefore, this Revised CAP is focused on the cleanup action proposed by 255 S. King Street LP for the east parcel of the Property.

The proposed development activities by 255 S. King Street LP would include additional soil excavation by 255 S. King Street LP for the construction of the below-grade parking garage and associated uses. The cleanup of the east parcel of the Property would be conducted as part of the proposed development activities.

The initial CAP describes the history and physical conditions at the Property, and identifies the Property-specific cleanup standards. The information regarding the Property history, physical conditions, and cleanup standards has not changed since 2011, and is therefore applicable to this Revised CAP. This information is summarized in the sections below, as appropriate. This Revised CAP specifically identifies the elements of 255 S. King Street LP's proposed cleanup action for the east parcel of the Property, and the associated monitoring to be conducted on the east parcel of the Property to document that the cleanup activities have been completed.

The following sections present a summary of the information specified by the Model Toxics Control Act (MTCA) [Washington Administrative Code (WAC) 173-340-380] to be included in the Revised CAP for the east parcel of the Property. The information presented in this Revised CAP for the east parcel of the Property is based on the evaluations and analyses developed and presented in the RI and FS reports, the FS Addendum, and the initial CAP. As documented in the FS Addendum, the proposed cleanup action for the east parcel would comply with WAC 173-340-360.

Property cleanup is being conducted as part of development activities and in accordance with MTCA. The cleanup on the east parcel outlined in this Revised CAP would be completed by 255 S. King Street LP as part of its proposed development, which includes construction of a high-rise hotel and commercial/retail building with one level of below-ground parking and associated uses. The additional soil excavation required as part of 255 S. King Street LP's proposed development would include excavation and off-Property disposal of a significant volume of low-level contaminated soil from the east parcel. The east parcel surface would be capped by the building foundation, and added measures would be implemented to prevent contact with shallow contaminated soil outside the footprint of the building foundation (i.e., concrete pavement in walkways and driveways or soil cover in landscaped areas). The design for the proposed development would maximize the size of the building footprint within the east parcel leaving minimal area for walkways or driveways and landscaping. The cleanup action for the east

parcel would also include vapor mitigation measures for the below-grade parking garage and associated uses, as well as institutional controls, groundwater monitoring, and contingent groundwater treatment.

1.1 SUMMARY OF DEVELOPMENT PROJECT

As noted above, the primary elements of the cleanup action for the west parcel of the Property (including soil excavation and focused treatment in the northwest corner of the Property) have already been completed pursuant to the initial CAP, and development of a commercial and residential building podium on the west parcel is currently underway. Pursuant to the PPA/CD, NLD has provided Ecology with monthly updates regarding the status of the cleanup action for the west parcel, and a west parcel-specific cleanup action completion report will be submitted to Ecology to document the cleanup action activities as part of a request for a Partial Certificate of Completion.

The east parcel of the Property currently remains paved pending potential commencement of development activities. As discussed above, the development proposed by 255 S. King Street LP for the east parcel would include a high-rise hotel and commercial/retail building with one below-ground level of parking and associated uses. The specifics of the design for the high-rise building are still in development. However, the anticipated additional excavation required for construction of the below-ground parking garage and associated uses would be a substantial change in the development plan for the east parcel and in the associated cleanup action for the east parcel.

As outlined in the FS Addendum, the proposed development plan for the east parcel would include excavation and off-Property disposal of soil from 0 to approximately 17.5 feet (ft) below ground surface (BGS) within the building footprint. The current shoring plan for the proposed project involves installation of a steel sheet pile wall around the perimeter of the building footprint to aid in construction, including the soil excavation and associated dewatering, with the sheet pile wall remaining in place as part of the building structure. As noted above, the size of the building footprint within the parcel would be maximized leaving limited area for walkways or driveways and landscaping. The excavation would be deeper than 17.5 ft BGS in localized areas for installation of pile caps, elevator pits, grade beams, and other building components. The proposed conceptual schematic design for the east parcel development is provided in Appendix A; the conceptual east parcel pile and excavation exhibit is provided in Appendix B.

1.2 PROPERTY DESCRIPTION AND HISTORY

The Property is known as the "North Lot Property" and is located in Seattle, Washington's south end Central Business District adjacent to CenturyLink Field and Event Center, as shown on Figure 1. The Property consists of 3.85 acres currently owned by NLD, and is located southeast of the intersection of

South King Street and Occidental Avenue South in Seattle, Washington (Figure 2). The west parcel of the Property is currently under development; the east parcel of the Property consists of a paved parking lot, which is currently used for commuter parking and parking for events at CenturyLink Field and Event Center.

Based on a Phase I Environmental Site Assessment completed by Landau Associates (2007), the Property was originally undeveloped tideflats of Elliott Bay. The Property was filled in the late 1890s and early 1900s and was operated as a rail yard from the late 1800s until the late 1960s. The fill material underlying the Property is composed of remnants of the former rail yard operations and construction debris (i.e., brick, metal, and concrete). Prior to filling, the area that includes the Property was initially developed with streets, buildings, and railroad tracks elevated on and supported by pilings. Several sets of railroad tracks were formerly present on the Property. Structures associated with the rail yard included engine maintenance buildings, paint shops, track switching areas, and materials storage areas. In addition, two gasoline stations were formerly located in the northwestern portion of the Property at different times between the late 1930s and approximately 1966. King County purchased the Property in the 1970s to facilitate construction of the Kingdome stadium to the south of the Property, which was later demolished and replaced with the current CenturyLink Field and Event Center development.

The Property has been used as a parking lot since the 1970s (Landau Associates 2007). The Property is served by various utilities including a stormwater drainage system that consists of a series of storm drain pipelines running north to south across the Property. A storm drain pipeline also runs approximately northwest to southeast on the east parcel of the Property. The King County main storm drain runs along King Street to the north of the Property, and the King County combined sewer main runs along Occidental Avenue to the west of the Property. Relevant historical Property features on the east parcel are shown on Figure 3. Existing Property features on the east parcel include asphalt paving, the stormwater drainage system, site lighting, and below-grade utilities on and adjacent to the Property (Figure 4).

1.3 PROPERTY CHARACTERIZATION

The environmental investigations conducted at the Property from 2008 through 2010 are summarized in the 2011 RI and FS reports. The investigations conducted to date to characterize soil and groundwater conditions at the Property include the Phase II investigation, the RI field investigation, the supplemental investigation, and the data gaps investigation. An investigation of soil vapor in the northwestern portion of the Property was also conducted as part of the FS (Landau Associates 2011c). The investigations of the Property have included a review of the Property's industrial history to confirm that the investigations included all areas likely to have contamination; an evaluation of soil and

groundwater conditions; and laboratory analysis of soil, groundwater, and soil vapor samples to document the nature and extent of contamination.

The investigations included the sampling of soil, soil vapor, and/or groundwater from more than 70 borings and the installation and sampling of 20 groundwater monitoring wells. The soil, groundwater, and soil vapor samples collected during the various investigations were submitted for selected laboratory analysis for a comprehensive list of analytical parameters including:

- Total petroleum hydrocarbons (TPH)
- Gasoline-range total petroleum hydrocarbons (TPH-G)
- Diesel-range total petroleum hydrocarbons (TPH-D)
- Motor oil-range total petroleum hydrocarbons (TPH-O)
- Metals (including arsenic, cadmium, chromium, copper, lead, mercury, and zinc)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX)
- Polycyclic aromatic hydrocarbons (PAHs)
- Semivolatile organic compounds
- Volatile organic compounds
- Polychlorinated biphenyls (PCBs)
- Dioxins/furans.

Soil quality was evaluated in the RI by area based on the operational history and the findings of the various investigations. The areas on the west parcel of the Property requiring remedial action have been addressed by the completed cleanup action elements during the building construction that is currently underway. The locations where soil samples were collected on the east parcel of the Property and the areas of soil contamination to be addressed, based on the RI and FS, are shown on Figure 5. The constituents of concern identified in the RI for the east parcel of the Property include TPH, benzene, PAHs, and arsenic. The analytical data indicated that the extent of impacts to groundwater from the soil contamination at the Property is limited and that contamination in groundwater did not pose a threat to human health or the environment.

The Property consists of heterogeneous fill that was placed over the native tideflat surface to allow development of the area in the vicinity of the Property. The soil contamination in the east parcel of the Property includes one distinct, localized area of creosote-like material present at the base of the fill in the northeastern corner of the east parcel. Within this localized area, the contaminant concentrations are above the cleanup levels due to the creosote-like material, which is a remnant of historical operations. Property-wide concentrations of PAHs and arsenic that are associated with the heterogeneous fill material are also above the cleanup levels. PAHs have been detected in various shallow soil samples (0 to 2 ft BGS), but are also anticipated to be dispersed throughout the fill.

As mentioned above, the extent of impacts to groundwater from soil contamination appears to be limited. There is no evidence of soil contaminants leaching to groundwater, or of contaminants in groundwater migrating off-Property at concentrations greater than the cleanup levels. On the east parcel of the Property, arsenic was the only analyte detected in groundwater at concentrations greater than the cleanup level at multiple locations. The locations where arsenic has been detected at concentrations greater than the cleanup level in the east parcel are hydraulically upgradient of much of the Property, and, as discussed in the RI report, the arsenic concentrations are the result of migration from off-Property sources.

As identified in the RI and FS reports, concentrations of benzene and gasoline above the cleanup levels are locally present in deeper (approximately 20 ft BGS) soil and groundwater in the northeastern portion of the Property adjacent to the creosote layer at the base of the fill material. These concentrations of benzene and gasoline pose a potential vapor intrusion threat to users of the below-ground parking garage proposed for the east parcel. As discussed in Section 3.1.2, the potential for vapor intrusion would be addressed as part of the planned building construction.

In summary, the nature and extent of contamination on the east parcel of the Property is discussed in the 2011 RI and FS reports, based on the operational history of the Property and the analytical results for the soil and groundwater samples, and is as follows:

- Creosote-like material was encountered at the base of the fill material in the northeastern portion of the east parcel, and where creosote-related constituents have locally been detected in soil and groundwater
- Various constituents have been detected in soil across the east parcel (and Property-wide) that are interpreted to be related to the presence of the fill placed over the native tideflat surface during the development of the area or that may be related to activities that occurred Property-wide, such as the rail yard operations.

Groundwater elevations have been measured Property-wide six times (November 24, 2008; January 16, 2009; June 3, 2009; August 25, 2009; February 24, 2010; and April 22, 2010). Groundwater elevations at wells located at the Union Station site, which is located to the east and hydraulically upgradient of the Property, were also collected during the June 3, 2009; February 24, 2010; and April 22, 2010 monitoring events. In February 2010, information from the King Street Center building located at 201 South Jackson Street (immediately to the north of the Property) verified the presence of a foundation drain system at the building. The drain system passively collects groundwater along the building foundation. The water that collects in the drain system is pumped to the sanitary sewer system for disposal. The groundwater elevation contours for all six monitoring events are provided on Figures 6 through 11.

2.0 CLEANUP ACTION SELECTION

The RI findings were used in the FS to develop and evaluate remedial alternatives for cleanup of the Property. The FS defines cleanup standards, identifies and evaluates six cleanup action alternatives, and identifies a preferred cleanup action alternative that is protective of human health and the environment per MTCA requirements. The FS Addendum describes the proposed changes to the cleanup action alternative selected in the FS based on the change in the development plan for the east parcel of the Property proposed by 255 S. King Street LP. The following sections describe the cleanup levels, points of compliance, and cleanup action alternatives developed and evaluated in the FS and FS Addendum, with a focus on the east parcel of the Property.

2.1 PROPERTY CLEANUP LEVELS

Cleanup levels were developed for the Property in the RI and FS and have been applied to the cleanup action on the west parcel of the Property. As noted in the FS Addendum, these cleanup levels would also be applied to the cleanup action for the east parcel of the Property.

Pre-development conditions at the Property presented a limited risk to users of the Property because contaminated soil was and is capped by the existing asphalt pavement, and groundwater in the Property area is not used as a potable water source. However, as discussed in the RI report, preliminary soil cleanup levels were identified for the detected constituents. For all constituents except lead and TPH, MTCA Method B soil cleanup levels were developed based on the most stringent of the constituent concentrations in soil protective of groundwater as drinking water and marine surface water, and protective of human health based on direct contact (Method B standard formula values for carcinogens and non-carcinogens). In accordance with MTCA, the MTCA Method A soil cleanup levels were used for lead, TPH-G, TPH-D, and TPH-O. Cleanup levels for arsenic, copper, and mercury were adjusted upward to the natural background concentration in soil. Cleanup levels for noncarcinogens were evaluated based on total Property risk and were adjusted downward, where necessary, to achieve a hazard index for the Property equal to or less than 1. Cleanup levels for carcinogens were also evaluated based on total Property risk; adjustment of the cleanup levels for carcinogens for total Property risk was not necessary. Table 1 summarizes cleanup levels for soil. A remediation level for benzene in soil on the west parcel of the Property of 780 milligrams per kilogram was also developed, based on the potential for vapor intrusion to buildings due to benzene in shallow soil (see Table 2). Additional information regarding cleanup level development is provided in Appendix F of the FS report (Landau Associates 2011c).

Due to the proposed below-ground parking garage on the east parcel of the Property and the presence of benzene in deeper soil, the proposed building construction would include measures to address potential vapor intrusion into the below-ground garage. Additionally, compliance monitoring would be conducted (see Appendix C) to document indoor air quality within the garage and to allow for evaluation of potential mitigation measures, if warranted, to protect users of the below-ground garage. These issues are discussed in both the FS Addendum and in Section 3.1.2 of this Revised CAP.

The Property is located within 1,100 ft of Elliott Bay and groundwater at the Property, where not affected by the King Street Center foundation drains, generally flows toward Elliott Bay. As noted above, groundwater in the Property area is not used as a potable water source and the City of Seattle would require connection to the city water system as part of Property development. However, the MTCA Method B groundwater cleanup levels based on drinking water use and discharge to marine surface water, or the MTCA Method A groundwater cleanup levels for petroleum hydrocarbons, were used to identify groundwater cleanup levels for constituents detected at the Property. The MTCA Method B groundwater cleanup levels were developed based on the most stringent of the federal or state maximum contaminant levels (MCLs), state primary and secondary MCLs, protection of marine surface water, and the MTCA Method B standard formula values. The MTCA Method A groundwater cleanup levels were used for TPH-G, TPH-D, and TPH-O. Cleanup levels for non-carcinogens were evaluated based on total Property risk and were adjusted downward, where necessary, to achieve a hazard index for the Property equal to or less than 1. Adjustment of cleanup levels for carcinogens for total Property risk was not necessary. Total risk adjustment tables are provided in Appendix F of the FS report (Landau Associates 2011c). Table 3 summarizes the groundwater cleanup levels developed for constituents detected at the Property.

2.2 POINT OF COMPLIANCE

Under MTCA, the point of compliance is the point or points where the cleanup levels must be attained. The standard point of compliance where soil cleanup levels protective of direct human contact must be met is throughout a site from the ground surface to 15 ft below the ground surface, in accordance with WAC 173-340-740(6)(d). The standard point of compliance where soil cleanup levels protective of groundwater must be met is throughout the soil column, in accordance with WAC 173-340-740(6)(b). For the Property, the proposed soil point of compliance established in the FS is throughout the soil column throughout the Property. As noted in the FS Addendum, the soil point of compliance established in the FS remains applicable to the proposed development plan for the east parcel.

The standard point of compliance for groundwater is throughout groundwater at the Property, including the east parcel. The proposed conditional point of compliance for groundwater is the Property boundary or as close to the Property boundary as practicable. For a conditional point of compliance [in

accordance with WAC 173-340-720(8)(c, d)], there must be a demonstration that it is not practicable to meet the cleanup levels throughout the site in a reasonable restoration timeframe and that all practicable methods of treatment are to be used in the site cleanup. As established in the FS and in the FS Addendum, the proposed cleanup action alternative is permanent to the maximum extent practicable, and meets the above two criteria. Therefore, the proposed conditional point of compliance for groundwater is the Property boundary for most of the Property and as close to the Property boundary as practicable in the northeastern portion of the Property. Due to the presence of the creosote-like material along the northeastern Property boundary, it is not feasible to install a compliance monitoring well in the creosote-like material, so the proposed conditional point of compliance for the northeastern portion of the east parcel would be as close to the Property boundary as practicable, and would be the Property boundary for the remainder of the east parcel. The compliance monitoring plan (Appendix C) identifies the approach to document groundwater quality at the conditional point of compliance and indoor air quality within the parking garage level of the proposed structure on the east parcel of the Property.

2.3 EVALUATED CLEANUP ACTION ALTERNATIVES

The development of cleanup action alternatives included analysis of technologies and process options potentially applicable to conditions at the Property. Potential general response actions and remedial technologies were identified based on the known site conditions, media impacted, contaminant types, and best professional judgment regarding applicable remedial technologies. The identified remedial technologies were screened in the FS on the basis of effectiveness, implementability, and cost. Screened technologies included institutional controls, containment, removal/excavation, and treatment.

Each of the cleanup action alternatives developed for the Property was developed to be protective of human health and the environment, consistent with the MTCA regulations, and suitable for integration into the proposed NLD development plan for the Property at the time the FS was completed. Each alternative is comprehensive and considers the Property and its future use as a whole, but includes the use of separate cleanup action technologies for the different areas of concern. The six alternatives incorporate the most viable cleanup action technologies within the general response action categories of containment, source removal (i.e., excavation), treatment, and institutional controls. The six alternatives developed and evaluated in the FS are:

- Alternative 1: Containment including a Vapor Barrier
- Alternative 2: Hotspot Excavation and Containment
- Alternative 3: Hotspot Excavation, Focused Treatment of Residual Gasoline/Benzene, Containment, and Added Measures to Prevent Contact with Shallow Contaminated Soil Outside the Footprints of the Building Foundations

- Alternative 4: Hotspot Excavation, Focused Treatment of Residual Gasoline/Benzene, Focused Treatment of Creosote Area, and Containment
- Alternative 5: Hotspot Excavation, Focused Treatment of Residual Gasoline/Benzene, Excavation of Fill Material across the Property to 5 ft BGS, and Containment
- Alternative 6: Complete Excavation of Fill Material.

The FS Addendum documents the proposed changes to Alternative 3 that are necessary based on the change in the proposed development plan for the east parcel of the Property. The revised Alternative 3 would include additional excavation to approximately 17.5 ft BGS on the east parcel of the Property, with installation of a vapor barrier to protect users of the below-ground garage, as discussed in further detail in Section 3.0. Additional soil would also be excavated to a depth of 5 ft BGS in any landscaped areas outside the building footprint that are not capped with concrete.

3.0 PROPOSED CLEANUP ACTION

The selection of the preferred alternative in the FS included an extensive and detailed disproportionate cost analysis (DCA). The DCA was conducted as part of the comparative analysis of the cleanup action alternatives to determine which alternative is permanent to the maximum extent practicable for the Property. Based on the evaluations in the FS, including the DCA, the preferred cleanup action alternative for the Property is Alternative 3. Alternative 3 was deemed to be compatible with the development planned for the Property at the time the FS was completed. The potential purchase of the east parcel of the Property by 255 S. King Street LP has necessitated revisions to Alternative 3 to address the revised development plan for the east parcel of the Property.

As described in the FS Addendum, the revised Alternative 3 includes additional excavation and removal of low-level contaminated soil to accommodate the below-ground parking garage, but remains consistent with MTCA requirements. The revised Alternative 3 for the east parcel of the Property includes excavation of shallow fill material to approximately 17.5 ft BGS, a surface cap over the entire parcel, and added measures (i.e., excavation to 5 ft BGS or capping with concrete) to prevent contact with shallow contaminated soil outside the footprints of the building foundations within the east parcel boundary. The revised Alternative 3 for the east parcel also includes institutional controls, mitigation and monitoring for potential vapor intrusion, groundwater monitoring, and contingent groundwater treatment.

3.1 COMPONENTS OF THE PROPOSED CLEANUP ACTION

The components of the revised alternative for the east parcel of the Property are discussed in the following sections. The conceptual model for the proposed cleanup action is shown on Figure 12.

3.1.1 CONSTRUCTION SOIL EXCAVATION

Project construction would include removal and off-Property disposal of soil across the east parcel to a depth of approximately 1.5 ft BGS (including existing asphalt, associated subgrade, and shallow soil/fill) to prepare the parcel for development. Additional below-grade excavation on the east parcel would include excavation to approximately 17.5 ft BGS in the area of the building footprint. The excavation would go deeper in localized areas for installation of pile caps, elevator pits, grade beams, and other building components, primarily within the footprint of the building foundation. Based on current construction estimates, approximately 33,400 cubic yards (measured in place) of existing surface material would be excavated as part of the proposed construction. This volume does not include the 1.5 ft of material that would be excavated as part of the preparation for east parcel construction or the additional soil that would be excavated below 17.5 ft BGS in localized areas for the below-ground building

components listed above. As discussed in Section 3.1.3, additional soil would also be excavated to a depth of 5 ft BGS in any landscaped areas outside the building footprint that are not capped with concrete. Excavated material, including shallow contaminated soil, removed during construction would be disposed of off-Property consistent with MTCA and other applicable regulations.

3.1.2 VAPOR BARRIER AND INDOOR AIR SAMPLING

A vapor barrier would be integrated with the building design and installed during construction (in conjunction with the building foundation's water barrier) to mitigate the potential for vapor intrusion into the below-ground parking garage proposed for the east parcel. The ventilation system for the below-ground parking garage would also be designed to allow for proper ventilation and to allow the space to be operated under positive pressure. The compliance monitoring plan would include baseline indoor air sampling and analysis to document conditions following construction and to assess the need for additional mitigation or monitoring, as warranted, to protect users of the below-ground garage and associated uses (see Appendix C).

3.1.3 SURFACE CAP AND ADDED MEASURES TO PREVENT CONTACT WITH CONTAMINATED SOIL OUTSIDE THE BUILDING FOUNDATIONS

The contaminated soil remaining in place on the east parcel following cleanup and development would primarily be contained beneath the building foundation that would be completed as part of east parcel development. As noted above, the size of the building footprint within the parcel would be maximized leaving limited area outside the building footprint for walkways or driveways and landscaping. These areas of shallow contaminated soil within the east parcel boundary outside of the footprint of the building foundation would be addressed by added measures that are considered to be equally effective in containing the contaminated soil and preventing potential human contact with shallow soil. The landscaped areas outside of the building foundation footprint within the Property boundary would be excavated to 5 ft BGS and backfilled with clean soil, and all other areas outside of the building foundation footprint within the Property boundary would be capped with concrete.

3.1.4 REQUIRED INSTITUTIONAL CONTROLS

Institutional controls would be implemented to assure the continued protection of human health and the environment. Institutional controls include restrictions on disturbance of the surface cap, on the installation of wells on the east parcel of the Property, except as part of the cleanup action, and on the use of site groundwater as drinking water. A deed restriction documenting these limitations would be used for the east parcel after acquisition by 255 S. King Street LP.

Institutional controls would also include periodic reviews of east parcel conditions and preparation of status reports on the effectiveness of the cleanup action over time. This periodic review and reporting is a requirement of MTCA (WAC 173-340-420). Periodic reviews are planned to occur every 5 years after the initiation of the cleanup action per MTCA. A cleanup action report for the west parcel only will be submitted to Ecology to document the cleanup action activities as part of a separate request for a Partial Certificate of Completion.

3.1.5 GROUNDWATER COMPLIANCE MONITORING

The groundwater compliance monitoring plan included with this Revised CAP is consistent with the compliance monitoring plan presented in the initial CAP and includes the groundwater monitoring for both the west and east parcels. As required by the MTCA regulations, monitoring is included in the proposed cleanup action to assess contaminant concentrations in groundwater and document groundwater flow direction. The groundwater compliance monitoring plan is provided in Appendix C. The groundwater compliance monitoring would include the installation of additional groundwater monitoring wells, groundwater monitoring and sample collection at the new wells and existing wells, and laboratory analysis of groundwater samples.

Groundwater sample analytical parameters and laboratory methods would consist of the following:

- BTEX by U.S. Environmental Protection Agency (EPA) Method 8021
- TPH-G and TPH-D by Ecology-approved Methods NWTPH-Gx and NWTPH-Dx
- PAHs by EPA Method 8270 Selected Ion Monitoring
- Dissolved metals including arsenic and lead by EPA Method 200.8, cadmium, chromium, copper, and zinc by EPA Method 6010B, and mercury by EPA Method 7470A.

The list of analytical parameters and laboratory methods for groundwater sample analysis are provided in Tables 1 and 2 of Appendix C, respectively.

The proposed installation and development of the new monitoring wells (two on the west parcel and two on the east parcel, as discussed below) would be coordinated with the construction schedules for development on both parcels. Compliance reports including the monitoring data for the Property (both parcels) would be submitted to Ecology approximately 6 to 8 weeks following receipt of the final analytical data, according to the schedule presented below.

During the first 5 years, sampling and analysis of monitoring wells would occur quarterly for Year 1 and then annually for the next 4 years of monitoring; however, the frequency of monitoring may be adjusted based on the groundwater analytical results and whether analytes are detected at concentrations greater than the cleanup levels. If the detected concentration of one or more constituents is

greater than the cleanup level, the well would be re-sampled and the data re-evaluated. If the re-sampling indicates one or more constituents at a concentration greater than the cleanup level, then a remediation contingency plan would be developed, approved by Ecology, and implemented. After 5 consecutive years with no exceedances, both the monitoring frequency and the number of sampling locations would be reduced, as appropriate, based on site conditions at the time and upon approval from Ecology. Groundwater compliance monitoring would conclude after 30 years with no exceedances of the cleanup levels. All changes to the groundwater compliance monitoring schedule would be approved in advance by Ecology based on the evaluation of site conditions at the time.

3.1.6 GROUNDWATER TREATMENT CONTINGENCY

A contingency for groundwater treatment is included in the proposed cleanup action for the east parcel of the Property. Under current Property conditions, contamination in groundwater does not pose a threat to human health or the environment; therefore, groundwater treatment options were not evaluated in the cleanup alternatives.

In the event that compliance groundwater monitoring shows a significant increase in contaminant concentrations in groundwater, or evidence of off-Property migration of groundwater with contaminant concentrations greater than the cleanup levels, or a significant change in site conditions, then groundwater treatment options would be evaluated to prevent contaminated groundwater from migrating beyond the conditional point of compliance. One potential treatment option for potential evaluation as part of the contingency plan is the installation of extraction wells along the Property boundary to collect groundwater before it flows off the Property. Collected groundwater could be treated using a granular-activated carbon treatment system and pumped into the sanitary sewer system for further treatment and disposal.

Groundwater treatment is included only as a contingency; as noted above, under current conditions groundwater does not pose a threat to human health or the environment. A concept-level contingency plan would be prepared, along with the other plans developed, for implementation of the cleanup action, as described in Section 6.0.

3.1.7 HAZARDOUS SUBSTANCES REMAINING AT THE PROPERTY

Following implementation of the proposed cleanup action, hazardous substances remaining on the east parcel of the Property would include the following:

- Low concentrations of arsenic and PAHs would remain in soil (fill material), from a depth of a minimum of 1.5 ft BGS to the contact with the native soils at approximately 23 ft BGS; however, the soil would be contained beneath the improvements placed as part of development, preventing direct contact with the contamination. The volume of soil remaining with low concentrations of arsenic and PAHs would be further reduced by the

excavation for the below-ground parking garage that is contemplated as part of east parcel development.

- Creosote-like material would remain in place in the northeastern portion of the Property. There is no evidence of migration of the creosote-like material, and none is expected in the future.
- Localized deeper (i.e., about 20 ft BGS) groundwater contamination by PAHs and petroleum hydrocarbons due to the presence of the creosote-like material would remain in the northeastern portion of the east parcel. However, as discussed above, there is no evidence of off-Property migration of contaminated groundwater and there is no risk of contact with the contaminated groundwater due to use restrictions. As noted, the planning for construction would account for the presence of the deeper contamination in the northeastern portion of the east parcel.
- The proposed cleanup action would include the measures described in the preceding sections to prevent direct contact with contaminated soils remaining in place, limit the potential for off-Property migration of contaminants in groundwater, and address the potential for vapor intrusion. These measures would include a surface cap and additional measures to prevent contact with contaminated soil outside the footprints of the building foundations within the Property boundary (including additional excavation to 5 ft BGS or installation of impervious concrete surface), institutional controls, groundwater compliance monitoring and contingent groundwater treatment, and mitigation and monitoring for potential vapor intrusion.

3.2 COMPLIANCE WITH MODEL TOXICS CONTROL ACT THRESHOLD REQUIREMENTS

The proposed cleanup action for the east parcel of the Property would comply with MTCA threshold requirements, including protection of human health and the environment, compliance with cleanup standards, compliance with applicable state and federal laws, and inclusion of a provision for compliance monitoring. The proposed east parcel cleanup action would protect human health and the environment through permanent measures to control potential exposure to contaminated soil as part of development. The proposed cleanup action and development on the east parcel would include excavation and removal of contaminated soil to approximately 17.5 ft BGS in the area of the proposed building footprint, a surface cap over the entire east parcel, added measures to prevent contact with shallow contaminated soil outside the footprints of the building foundations within the east parcel boundary, institutional controls, mitigation and monitoring for potential vapor intrusion, groundwater monitoring, and contingent groundwater treatment. Cleanup levels would be achieved at the points of compliance upon completion of the cleanup action. The cleanup action would be conducted in compliance with applicable local, state, and federal laws. Protection, performance, and confirmational monitoring programs would be implemented to verify adequate protection of human health and the environment during and after development to confirm compliance with the cleanup standards.

4.0 JUSTIFICATION FOR SELECTING THE CLEANUP ACTION

The proposed cleanup action for the east parcel of the Property would effectively and permanently protect human health and the environment by:

- Protecting human health by preventing direct contact with contaminated soil through excavation and capping
- Providing for enhanced containment measures (via additional excavation to 5 ft BGS or concrete capping) in areas outside of footprints of the building foundations within the Property boundary
- Providing for groundwater compliance monitoring
- Providing for contingent groundwater treatment
- Providing for vapor intrusion assessment and mitigation
- Providing for institutional controls.

The primary risk associated with the Property (direct exposure to contaminated soils) would be effectively controlled through the excavation to approximately 17.5 ft BGS within the building footprint on the east parcel, capping within the building footprint by the building foundation, development (excavation of shallow contaminated soil to approximately 1.5 ft BGS outside of the building footprint), added protective containment measures (additional excavation to 5 ft BGS in landscaped areas or concrete capping in areas outside the building foundations), vapor intrusion assessment and mitigation (as warranted), and institutional controls. There is no evidence of off-Property migration of contaminants in groundwater, and on-Property groundwater would not be used as a drinking water source given the availability of a municipal water supply and regulations prohibiting development of water supply wells in this area.

The proposed cleanup action is consistent with the development contemplated by 255 S. King Street LP for the east parcel of the Property. Figure 13 shows the conceptual model for the east parcel prior to incorporation of the proposed cleanup action; Figure 14 shows the conceptual model for the east parcel following incorporation of the remedial action elements included in the proposed cleanup action and the proposed construction elements associated with Property development (i.e., excavation to approximately 17.5 ft BGS and construction of the planned buildings and physical improvements).

The proposed cleanup action on the east parcel of the Property would effectively achieve the Property remedial action objectives and cleanup standards, further limit the potential for exposure to contaminated soil and groundwater, and provide permanent protection of human health and the environment from potential risks posed by the Property.

5.0 APPLICABLE STATE AND FEDERAL LAWS

In accordance with MTCA, all cleanup actions must comply with applicable state and federal laws [WAC 173-340-710(1)]. MTCA defines applicable state and federal laws to include legally applicable requirements and those requirements that are relevant and appropriate. Collectively, these requirements are referred to as applicable or relevant and appropriate requirements (ARARs). This section provides a brief overview of potential ARARs for the cleanup action for the east parcel of the Property, and is consistent with ARARs described in the initial CAP, which address the entire Property. The primary ARAR is the MTCA cleanup regulation (Chapter 173-340 WAC), which outlines requirements for the development of cleanup standards, and procedures for development and implementation of a cleanup under MTCA. The other ARARs that may be applicable to the cleanup action include the following:

- Washington Hazardous Waste Management Act [Chapter 70.105 Revised Code of Washington (RCW)] and its implementing regulations, Dangerous Waste Regulations (Chapter 173-303 WAC). These regulations establish a comprehensive statewide framework for the planning, regulation, control, and management of dangerous waste. The regulations designate those solid wastes that are dangerous or extremely hazardous to human health and the environment. The management of excavated contaminated soil from the Property would be conducted in accordance with these regulations to the extent that any dangerous wastes are discovered or generated during the cleanup action.
- Washington Solid Waste Management Act (Chapter 70.95 RCW) and its implementing regulation, Criteria for Municipal Solid Waste Landfills (Chapter 173-351 WAC). These regulations establish a comprehensive statewide program for solid waste management including proper handling and disposal. The management of any contaminated soil removed from the Property would be conducted in accordance with these regulations to the extent that this soil could be managed as solid waste instead of dangerous waste.
- Hazardous Waste Operations (Chapter 296-843 WAC). These requirements establish safety requirements for workers conducting investigation and cleanup operations at sites containing hazardous materials. These requirements would be applicable to onsite cleanup activities and would be addressed in a site health and safety plan prepared specifically for these activities.
- Federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) Permit and State Construction Stormwater General Permit. Construction activities that disturb one or more acres of land typically need to obtain an NPDES Construction Stormwater General Permit from Ecology. A substantive requirement would be to prepare a stormwater pollution prevention plan (SWPPP) prior to the earthwork activities. The SWPPP would document planned procedures designed to prevent stormwater pollution by controlling erosion of exposed soil and by containing soil stockpiles and other materials that could contribute pollutants to stormwater.

6.0 IMPLEMENTATION SCHEDULE AND RESTORATION TIMEFRAME

The proposed cleanup action would be conducted as part of construction for east parcel development by 255 S. King Street LP, and would be implemented following completion of the sale of the east parcel to 255 S. King Street LP and filing of a Proposed Amendment to the PPA/CD in Superior Court. The cleanup activities would begin with the removal and off-Property disposal of the approximately 1.5 ft of surface material from the east parcel that would be excavated as part of site preparation. The soil excavation within the building footprint would be conducted following removal of the surface material. The remaining cleanup action elements would be implemented as appropriate, as development construction progresses, and as outlined in the schedule provided in Appendix D.

Construction design and engineering plans would be prepared to support implementation of the cleanup action. These plans would include: a soil and water handling and disposal plan, a SWPPP, a dust suppression plan, a health and safety plan for construction workers, and engineering plans for the protective cap. Plans would also be developed to manage long-term operation and maintenance (O&M) of the protective cap, and to provide a conceptual-level outline of contingent groundwater treatment. The O&M plans would include routine evaluation of the storm drain pipes and other underground conduits associated with the Property to ensure the structure integrity as the subsurface piping ages. These plans would be completed prior to implementation of the cleanup action.

The restoration timeframe is expected to be the time at which development of the east parcel of the Property is complete. At that time, excavation of contaminated soil as described in Section 3.1.1, installation of the vapor barrier as described in Section 3.1.2, and the surface cap or additional excavation/capping measures as described in Section 3.1.4 would be completed. Institutional controls and groundwater and vapor intrusion compliance monitoring would begin following the completion of construction on the east parcel of the Property.

Groundwater compliance monitoring as mentioned above and described in Appendix C would begin following completion of construction on the both the west and east parcels, which includes the installation of the additional compliance groundwater monitoring wells. Capping (via installation of building foundations and added concrete in areas outside of the building foundation footprints), would be accomplished in conjunction with the construction for the east parcel development. The contingency for groundwater treatment would remain in effect for the duration of the groundwater compliance monitoring.

The vapor intrusion assessment and monitoring outlined in Appendix C would be initiated following the completion of the below-ground garage, and would be implemented per the compliance monitoring schedule.

7.0 PROPOSED DEVELOPMENT SCHEDULE

255 S. King Street LP and NLD are negotiating a final Purchase and Sale Agreement for the east parcel of the Property. Separately, 255 S. King Street LP and NLD are negotiating jointly with Ecology on a Consent Decree that will supersede the PPA/CD. 255 S. King Street LP and NLD have proposed that negotiations for the new Consent Decree, the review and approval of the technical documents, and the related public participation plan be completed by October-November 2012. The real estate transaction for the east parcel will close prior to the execution and filing of the new Consent Decree in King County Superior Court.

A proposed schedule was outlined in the formal request that 255 S. King Street LP submitted to Ecology to become a party to the existing PPA/CD (Foster Pepper 2012). Ecology responded with a desired protocol for evaluating and negotiating the proposed remedial activities to be performed by 255 S. King Street LP, and with a desired protocol for negotiating and finalizing a new Consent Decree that will supersede the existing PPA/CD. The anticipated schedule is as follows, with slight adjustments from the schedule proposed in the formal request:

- April 2012: Formal Submission of Request to Amend PPA/CD and Initiation of Negotiations – Completed
- May 2012 – October 2012: Negotiations to Formulate and Finalize New Consent Decree that will Supersede the Original PPA/CD and that will have both NLD and 255 S. King Street LP as Parties
- June 2012 – July 2012: Submittal of Draft FS Addendum to Ecology and Ecology Review of Document – Completed
- July 2012: Submittal of Draft Revised CAP to Ecology – Completed
- July 2012: Receipt of Ecology comments to Draft FS Addendum and preparation of Revised Draft FS Addendum and 2nd Draft of Revised CAP – Completed
- August 2012: Submittal of Revised Draft FS Addendum to Ecology and Ecology Review of Document – Completed
- August 2012: Submittal of 2nd Draft Revised CAP to Ecology and Ecology Review of Document – Completed
- September 2012: Development of Public Participation Plan and State Environmental Policy Act Notice
- September 2012: Finalize FS Addendum and Revised CAP and Ecology review of Document
- October – November 2012: Public Notice and Responsiveness Summary; Finalize Consent Decree and Exhibits
- November – December 2012: Completion of the Sale of the East Parcel to 255 S. King Street LP
- November – December 2012: Lodging of New Consent Decree in King County Superior Court

- July 2013: Initiation of East Parcel Development, including Implementation of Remedial Action.

8.0 USE OF THIS REPORT

This report was prepared for the exclusive use of 255 S. King Street LP, NLD, and applicable regulatory agencies, for specific application to the North Lot Property, including review by the public. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our 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. We make no other warranty, either express or implied. This document was prepared under the supervision and direction of the undersigned.

LANDAU ASSOCIATES, INC.

Colette M. Griffith
Project Engineer

Timothy L. Syverson, L.G.
Senior Associate Geologist

CMG/TLS/ccy

9.0 REFERENCES

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Ecology. 2009. Letter: *Prospective Purchaser Agreement/Consent Decree – Qwest Field – North Lot, Seattle*. From Jay J. Manning, Director, Washington State Department of Ecology, to Kevin Daniels, Present, Daniels Development Co., LLC. April 22.

Foster Pepper. 2012. Letter: *Formal Request to Become a Party to Existing Prospective Purchaser Agreement/Consent Decree for North Lot Development Site*. From Ken Lederman, Foster Pepper PLLC, to Dori Jaffe, Ecology Division, Office of the Attorney General, and Russ Olsen, Voluntary Cleanup Program, Washington State Department of Ecology. April 27.

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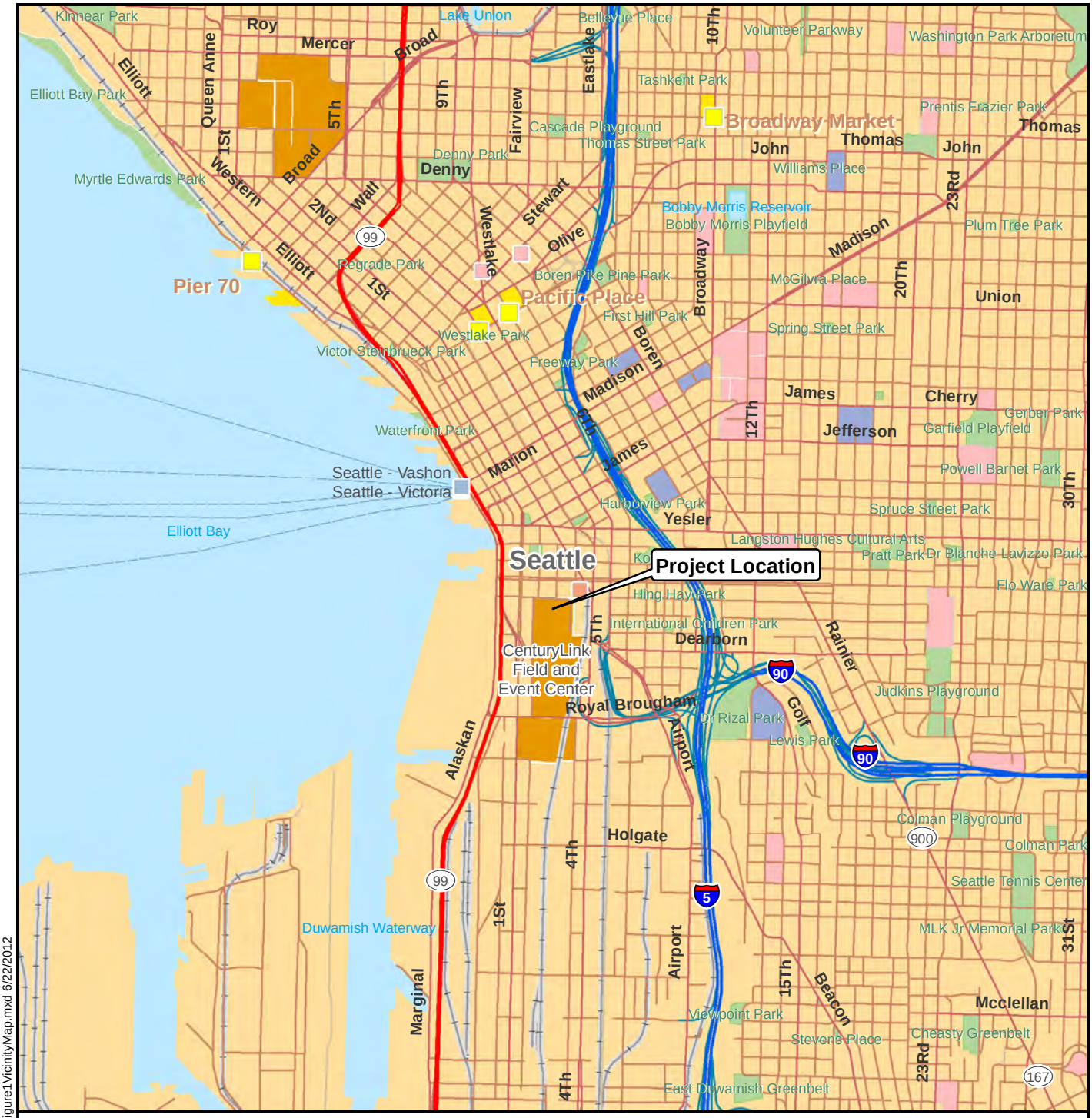
Landau Associates. 2007. Report: *Phase I Environmental Site Assessment, Qwest Field North Lot, Seattle, Washington*. Prepared for Nitze Stagen & Co., Inc. and Opus Northwest LLC. March 28.



Data Source: ESRI 2008

Y:\Projects\1307001\010.011\MapDocs\Revised CAP\Figure1VicinityMap.mxd 6/22/2012

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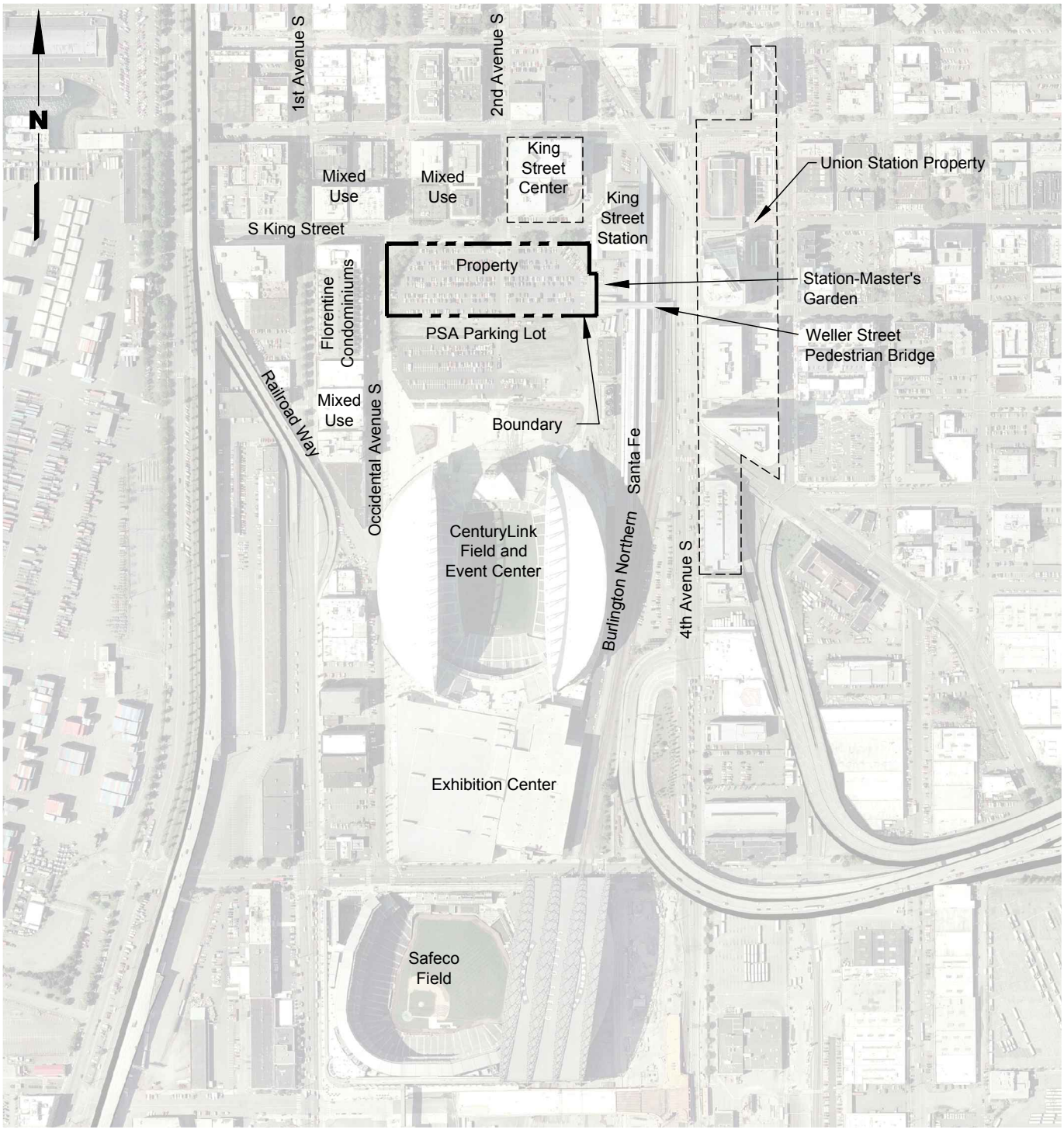
North Lot Development Property Seattle, Washington	**Vicinity Map**	Figure 1



LANDAU ASSOCIATES, INC. | V:\1307\001\010.013\Figure 2.dwg (A) "Figure 2" 6/22/2012

LANDAU ASSOCIATES

North Lot Development Property Seattle, Washington	**Property Plan and Surrounding Area**	Figure 2

Historical Property Features
(Landau Associates 2007)

1. Car Shop
2. Locomotive House
3. Turn Table
4. Blacksmith
5. Machine Shop
6. Car Repair & Paint Shop
7. Machine Shop
8. Blacksmith Shop
9. Railroad Turntable
10. Round House
11. Engine House
12. Round House
13. Gasoline Stations

Present Features

- Property Boundary
- Fence Line

Data Source: Triad Boundary Survey, King County

Note
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 50 100
Scale in Feet

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North Lot Development Property Seattle, Washington	**Historical Property Features**	Figure 3

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Legend

- Fence Line
- Storm Drain
- Utilities and Other Features

Y:\Projects\130700\1010.013\Figure4EastParcelUtilitySitePlan.mxd 9/27/2012

Note
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 50 100
Scale in Feet

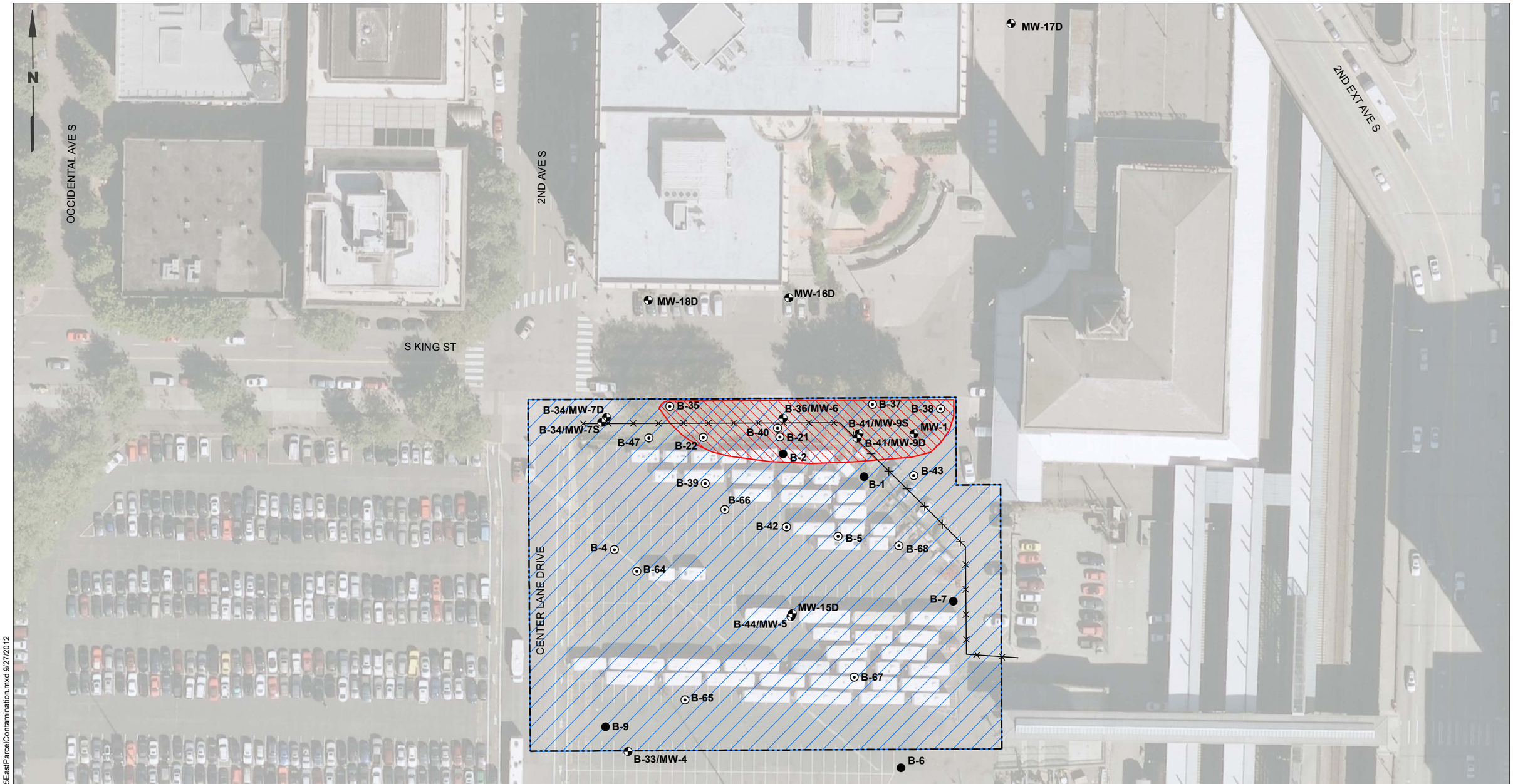
Data Source: Triad Boundary Survey, King County

LANDAU ASSOCIATES

North Lot Development Property
Seattle, Washington

East Parcel Plan and Existing Features

Figure 4



Legend

- Direct-Push Soil Boring and Monitoring Well Location
- Direct-Push Soil Boring Location
- Direct-Push Soil Boring and Groundwater Sample Location
- Fence Line
- Property Boundary

Approximate Extent of Contaminant Concentrations in Soil Greater than the Cleanup Levels:

- Creosote-Like Material; Localized Concentrations Greater than MTCA Method B Cleanup Levels
- cPAHs and Metals Concentrations Greater than MTCA Method B Cleanup Levels

0 60 120

Scale in Feet

Data Source: Triad Boundary Survey, King County

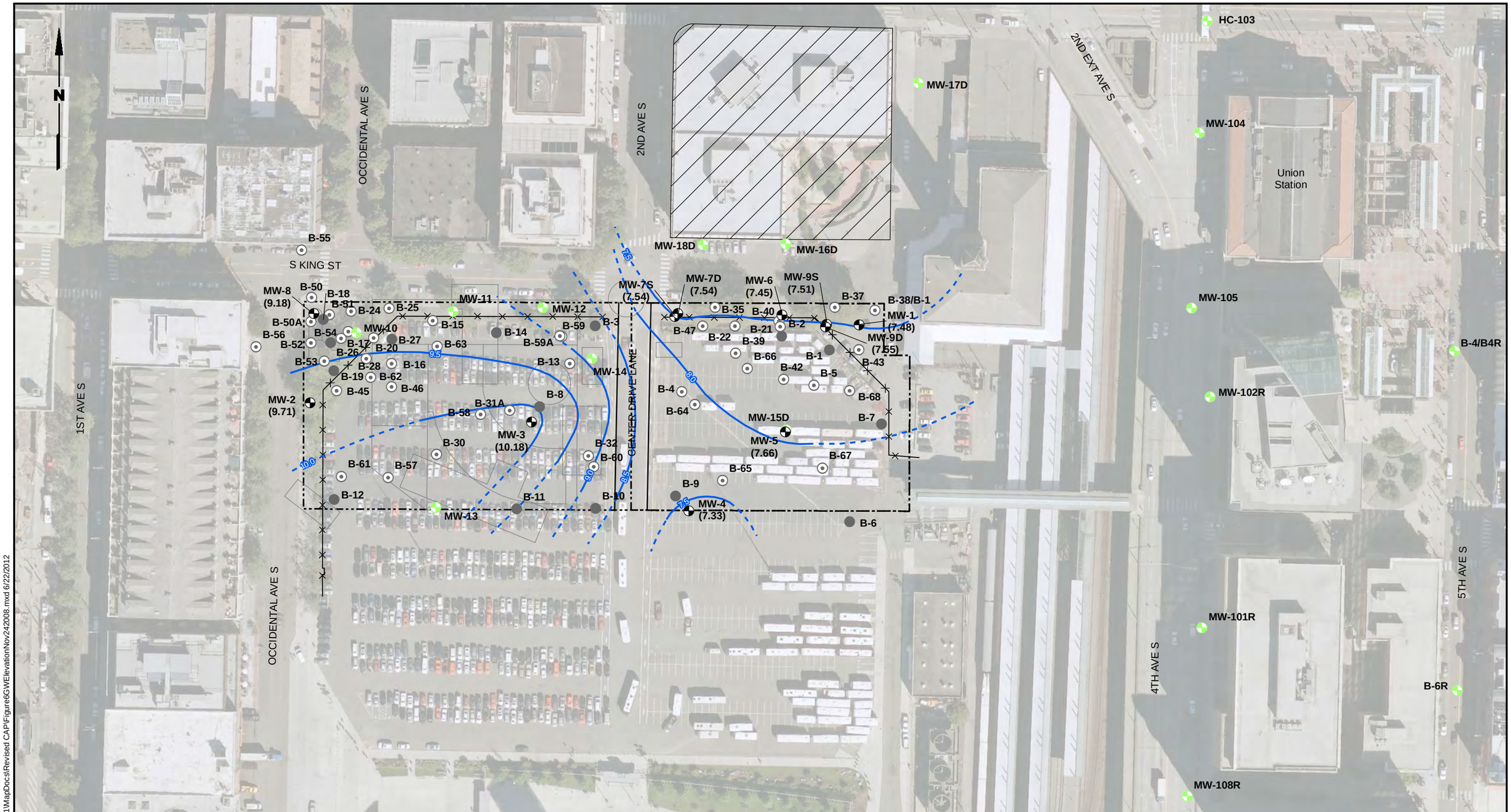
Notes

1. Cleanup alternatives that address remedial action for areas of contamination defined above are evaluated in the FS.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Y:\Projects\130700\1010.013\Figure5EastParcelContamination.mxd 9/27/2012

LANDAU ASSOCIATES

North Lot Development Seattle, Washington	**East Parcel Areas of Soil Contamination Exceeding Cleanup Levels**	Figure 5



Legend

- MW-4 (7.33) — Direct-Push Soil Boring and Monitoring Well Location with Groundwater Elevation (ft)
- Direct-Push Soil Boring and Monitoring Well Location
- Direct-Push Soil Boring Location
- Direct-Push Soil and Groundwater Sample Location
- Historical Building Outlines
- Fence Line
- Property Boundary
- 7.5 — Groundwater Elevation Contour (ft)
- Area Bounded by Foundation Drain

Notes

1. Includes groundwater elevation data from wells MW-1 through MW-9. Wells MW-10 through MW-18D not yet installed. Union Station wells to the east not measured for this round.
2. Refer to Figure 3 for Historical Property Features Legend.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 110 220

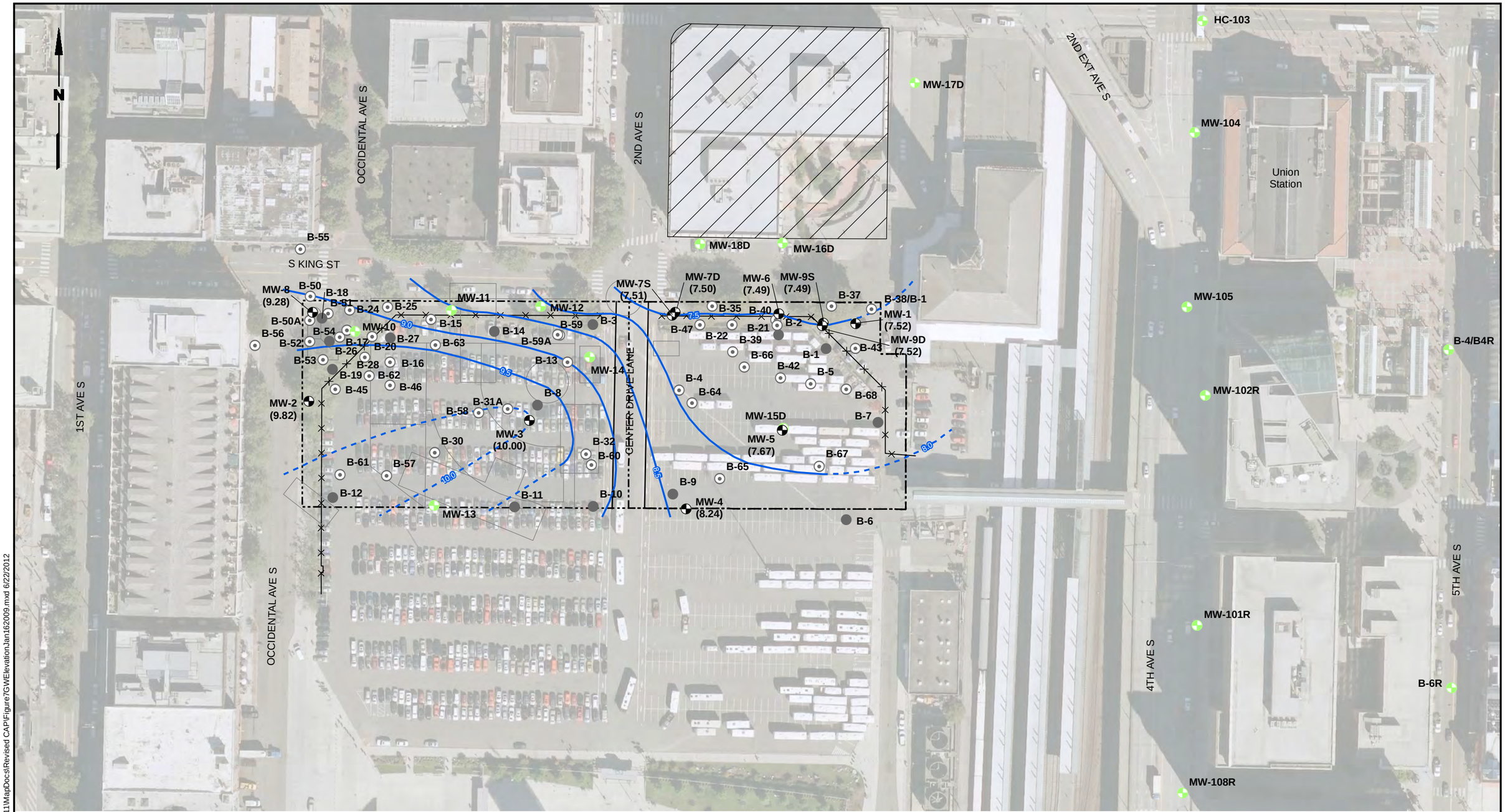
Scale in Feet

Data Source: Triad Boundary Survey, King County

LANDAU ASSOCIATES

North Lot Development Property Seattle, Washington	**Groundwater Elevation Contours for November 24, 2008**	Figure 6

Y:\Projects\130700\1010.011\MapDocs\Revised CAP\Figure6GWElevationNov242008.mxd 6/22/2012



Y:\Projects\130700101010.011\MapDocs\Revised CAP\Figure7GWElevationJan162009.mxd 6/22/2012

Legend

- MW-4 (8.24) — Direct-Push Soil Boring and Monitoring Well Location with Groundwater Elevation (ft)
- Direct-Push Soil Boring and Monitoring Well Location
- Direct-Push Soil Boring Location
- Direct-Push Soil and Groundwater Sample Location
- Historical Building Outlines
- Fence Line
- Property Boundary
- 8.5 — Groundwater Elevation Contour (ft)
- Area Bounded by Foundation Drain

Notes

1. Includes groundwater elevation data from wells MW-1 through MW-9. Wells MW-10 through MW-18D not yet installed. Union Station wells to the east not measured for this round.
2. Refer to Figure 3 for Historical Property Features Legend.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

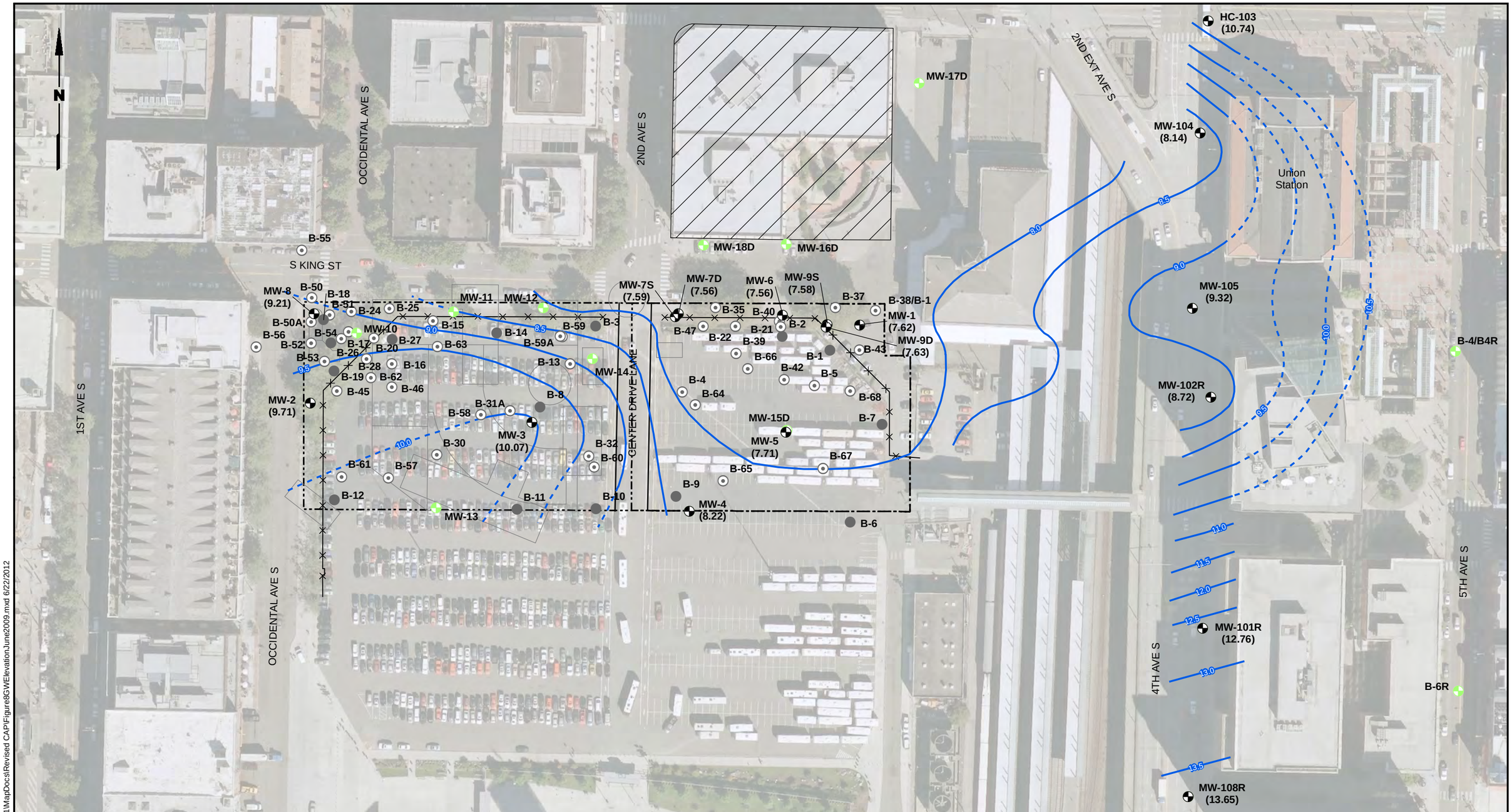
0 110 220

Scale in Feet

Data Source: Triad Boundary Survey, King County

LANDAU ASSOCIATES

North Lot Development Property Seattle, Washington	**Groundwater Elevation Contours for January 16, 2009**	Figure 7



Y:\Projects\13070010\10.011\MapDocs\Revised CAP\Figure8GWElevationJune2009.mxd 6/22/2012

Legend

- MW-4 (8.22) — Direct-Push Soil Boring and Monitoring Well Location with Groundwater Elevation (ft)
- Direct-Push Soil Boring and Monitoring Well Location
- Direct-Push Soil Boring Location
- Direct-Push Soil and Groundwater Sample Location
- Historical Building Outlines
- Fence Line
- Property Boundary
- 8.5 — Groundwater Elevation Contour (ft)
- Area Bounded by Foundation Drain

Notes

1. Includes groundwater elevation data from wells MW-1 through MW-9. Wells MW-10 through MW-18D not yet installed.
2. Refer to Figure 3 for Historical Property Features Legend.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 110 220
Scale in Feet

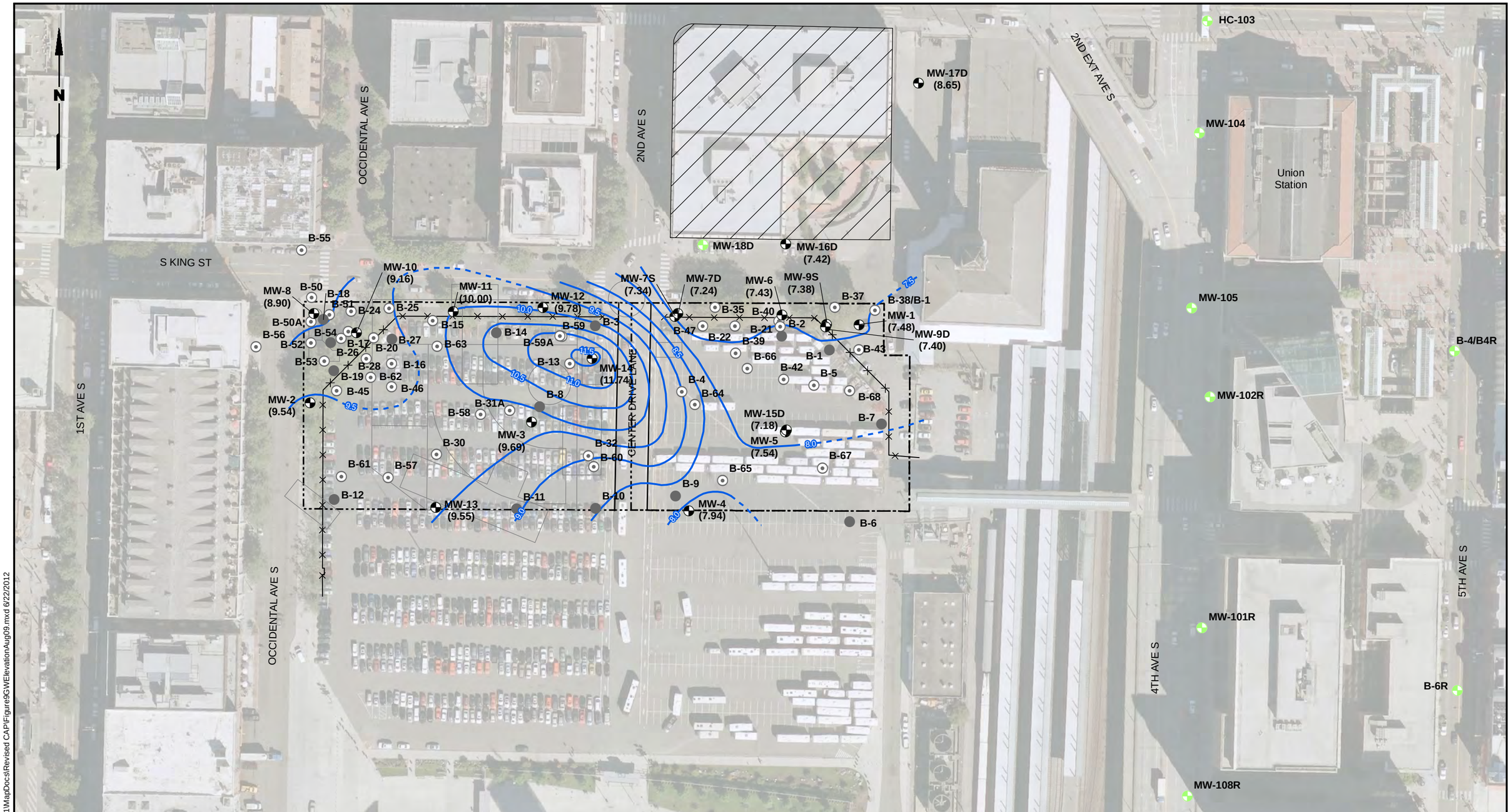
Data Source: Triad Boundary Survey, King County

LANDAU ASSOCIATES

North Lot Development Property
Seattle, Washington

Groundwater Elevation Contours for June 3, 2009

Figure 8



Y:\Projects\1307001\010.011\MapDocs\Revised CAP\Figure9GWElevationAug09.mxd 6/22/2012

Legend

- MW-4 (7.94) — Direct-Push Soil Boring and Monitoring Well Location with Groundwater Elevation (ft)
- Direct-Push Soil Boring and Monitoring Well Location
- Direct-Push Soil Boring Location
- Direct-Push Soil and Groundwater Sample Location
- Historical Building Outlines
- Fence Line
- Property Boundary
- 8.5 — Groundwater Elevation Contour (ft)
- Area Bounded by Foundation Drain

Notes

1. Includes groundwater elevation data from wells MW-1 through MW-17D. Union Station wells to the east were not measured for this round.
2. Refer to Figure 3 for Historical Property Features Legend.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

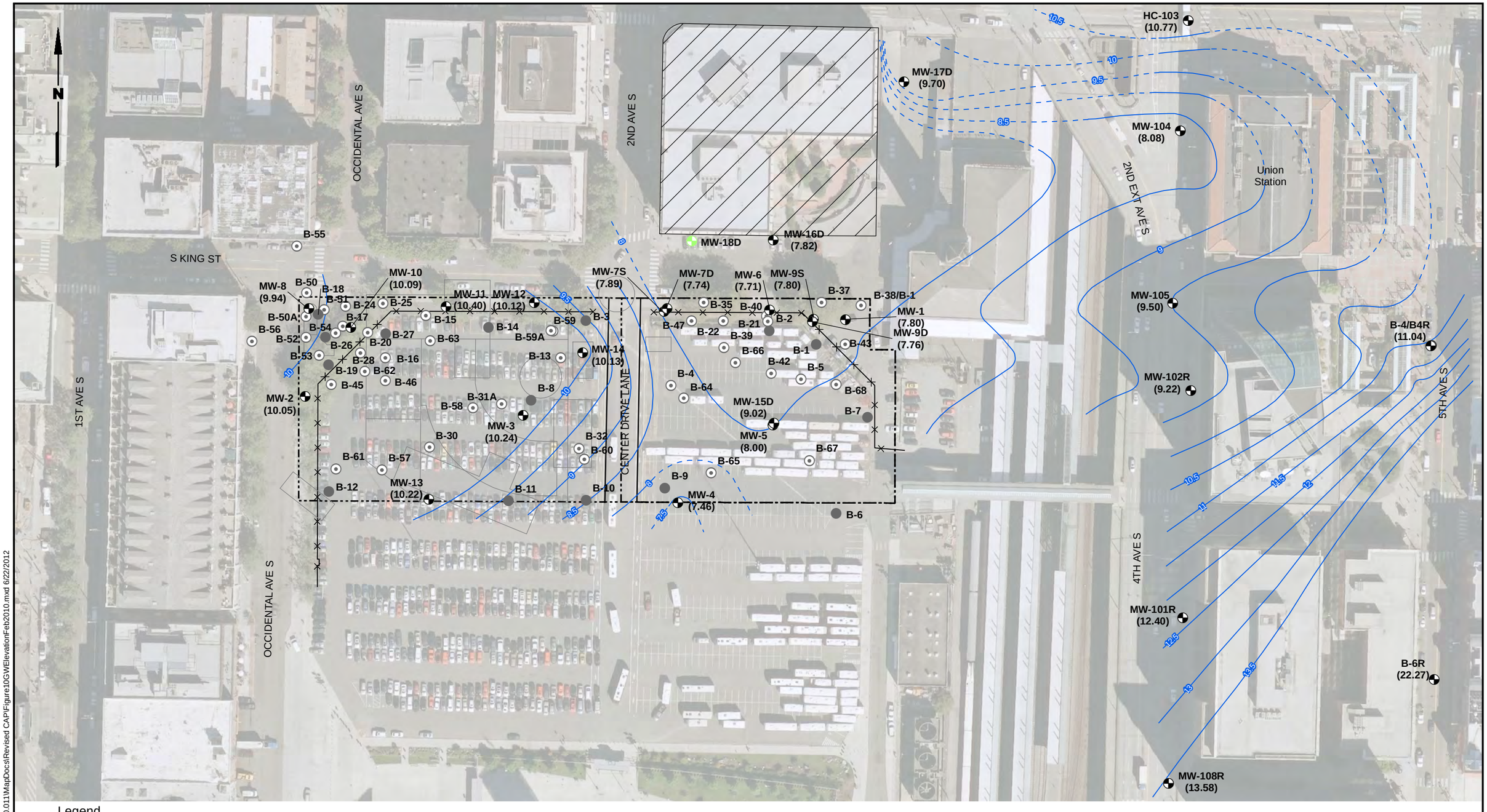
0 110 220

Scale in Feet

Data Source: Triad Boundary Survey, King County

LANDAU ASSOCIATES

North Lot Development Property Seattle, Washington	**Groundwater Elevation Contours for August 25, 2009**	Figure 9



Legend

- MW-4 (7.46) — Direct-Push Soil Boring and Monitoring Well Location with Groundwater Elevation (ft)
- Direct-Push Soil Boring and Monitoring Well Location
- Direct-Push Soil Boring Location
- Direct-Push Soil and Groundwater Sample Location
- Historical Building Outlines
- Fence Line
- Property Boundary
- 7.5 — Groundwater Elevation Contour (ft)
- Area Bounded by Foundation Drain

Notes

1. Includes groundwater elevation data from wells MW-1 through MW-17D and the Union Station wells to the east.
2. Refer to Figure 3 for Historical Property Features Legend.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

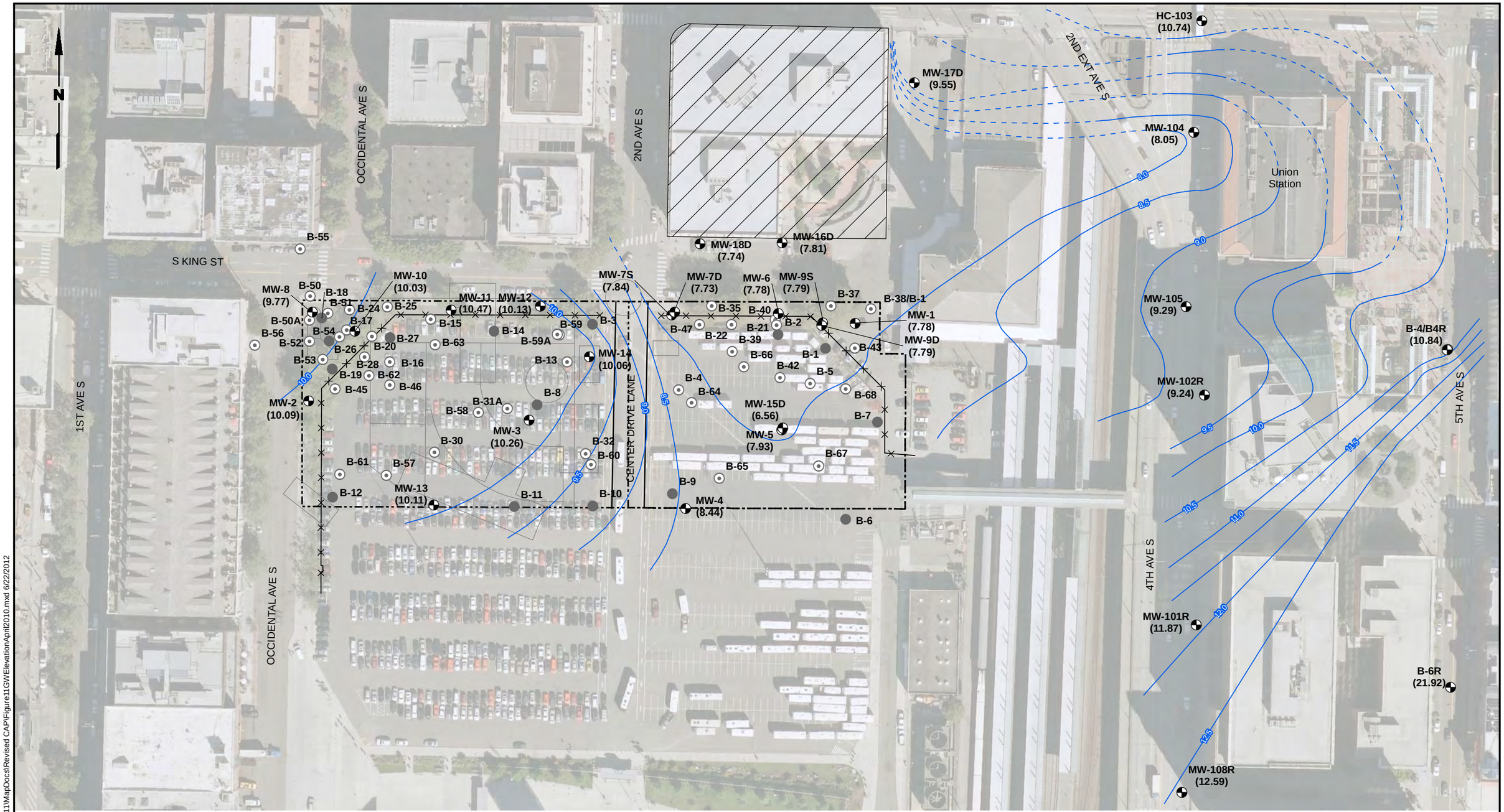
0 110 220
Scale in Feet

Data Source: Triad Boundary Survey, King County

LANDAU ASSOCIATES

North Lot Development Property Seattle, Washington	**Groundwater Elevation Contours for February 24, 2010**	Figure 10

Y:\Projects\130700\1010.011\MapDocs\Revised CAP\Figure10GWElevationFeb2010.mxd 6/22/2012



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Legend

- MW-4 (7.46) — Direct-Push Soil Boring and Monitoring Well Location with Groundwater Elevation (ft)
- Direct-Push Soil Boring Location
- Direct-Push Soil and Groundwater Sample Location
- Historical Building Outlines
- Fence Line
- Property Boundary
- 8.5 — Groundwater Elevation Contour (ft)
- Area Bounded by Foundation Drain

Notes

1. Includes groundwater elevation data from wells MW-1 through MW-18D and the Union Station wells to the east.
2. Refer to Figure 3 for Historical Property Features Legend.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 110 220

Scale in Feet

Data Source: Triad Boundary Survey, King County

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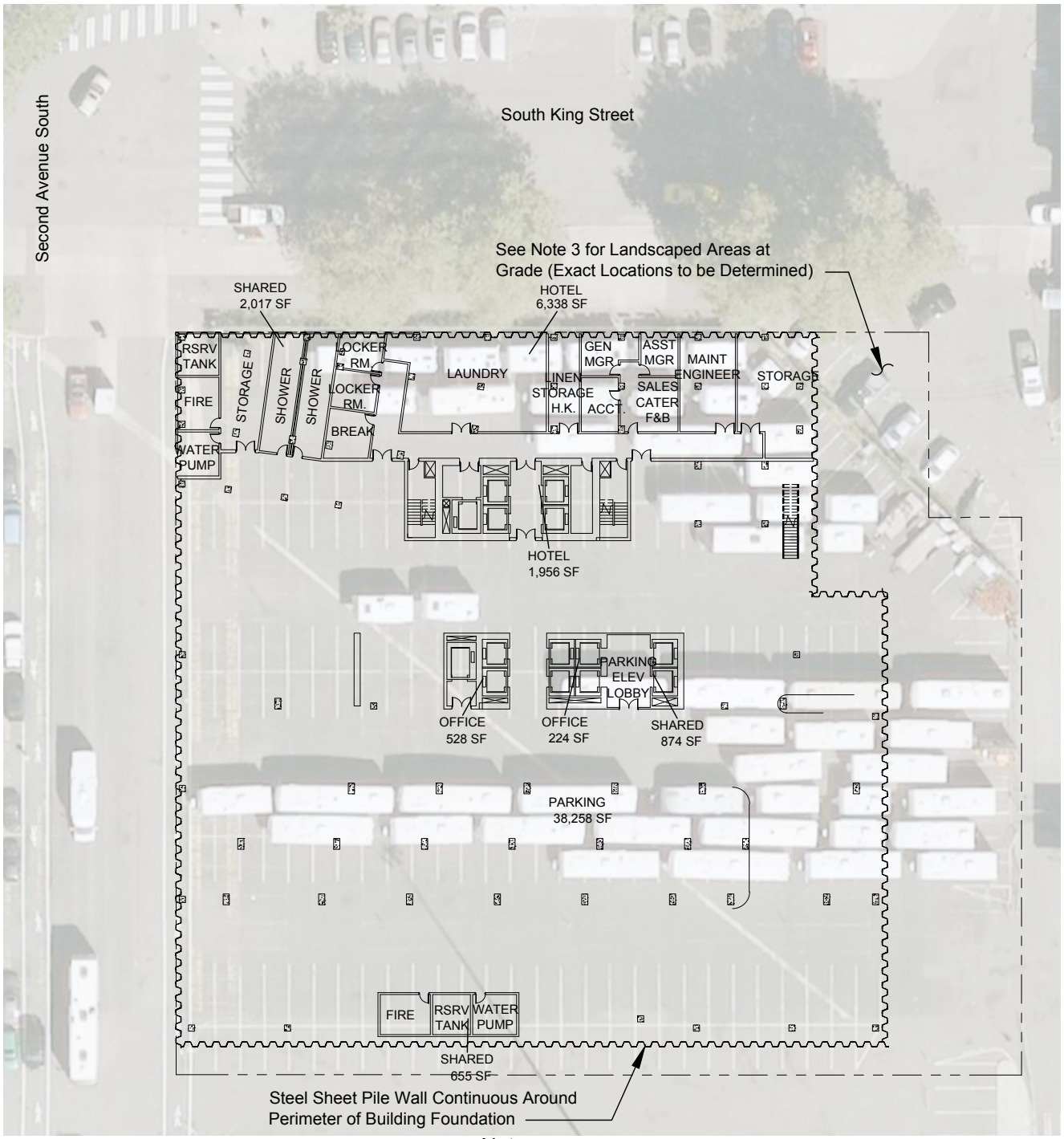
North Lot Development Property
Seattle, Washington

Groundwater Elevation Contours for April 22, 2010

Figure 11



Notes

1. Excavation within building footprint for below-ground parking garage shall be approximately 17.5 ft.
2. Approximately 18 inches of material to be removed across entire site. Cap non-landscaped areas outside of building footprint with concrete.
3. Landscaped areas - excavate to 5 ft BGS and provide membrane. Fill with clean soil.
4. Scope of work is within property line.

0 50 100

Scale in Feet

Base map source: 300 South King Street LP Team (June 5th, 2012)

North Lot | V:\1307\001\010.013\Figure 12.dwg (A) "Figure 12" 9/27/2012

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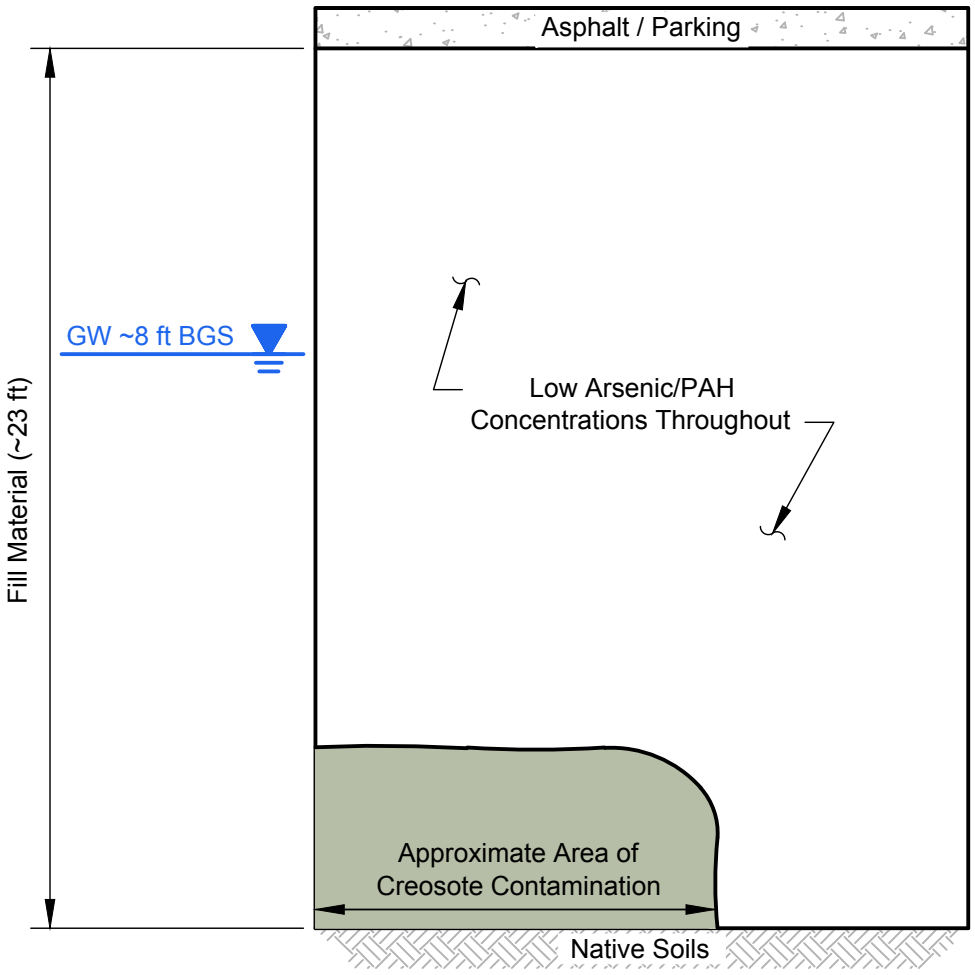
North Lot Development Property Seattle, Washington	**Conceptual East Parcel Plan Development**	Figure 12



North Lot | V:\1307\001\010.013\Figure 13_14.dwg (A) "Figure 13" 9/27/2012

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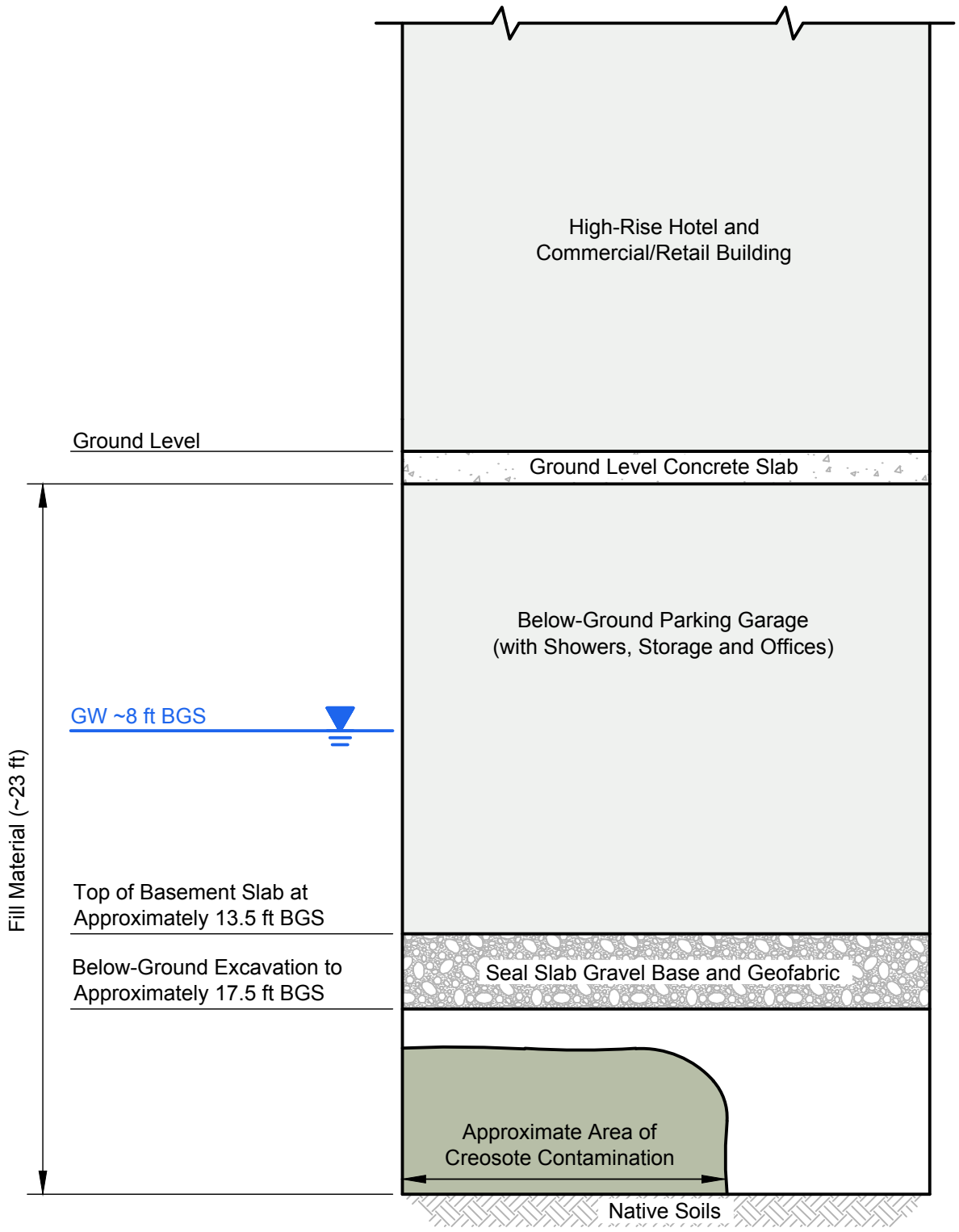
North Lot
Development Property
Seattle, Washington

Conceptual East Parcel Cross Section: Current Property Conditions

Figure
13



Note

1. Seal slab base layer and garage wells will include water and vapor barrier.

North Lot | V:\1307\001\010.013\Figure 13_14.dwg (A) "Figure 14" 9/27/2012

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North Lot
Development Property
Seattle, Washington

**Conceptual East Parcel
Cross Section: Post-Revised
Development Plan**

Figure
14

TABLE 1
SOIL CLEANUP LEVELS FOR DETECTED CONSTITUENTS
NORTH LOT DEVELOPMENT
SEATTLE, WASHINGTON

Analyte	Protection of Groundwater and Marine Surface Water (Fixed Parameter 3-Phase Model) mg/kg	Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use For soil from 0 - 15 ft BGS Standard Formula Values Carcinogen mg/kg	Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use For soil from 0 - 15 ft BGS Standard Formula Values Non-carcinogen mg/kg	Preliminary Cleanup Levels (Before adjustment for background) mg/kg	Background Soil Metals Concentrations Puget Sound Region 90th Percentile mg/kg	Preliminary Cleanup Levels (After adjustment for background) mg/kg	Preliminary Cleanup Levels (After adjustment for total site risk) mg/kg	Final Cleanup Levels in Final Units	Units	Range of Laboratory Reporting Limits for Project Samples
TPH										
Gasoline-Range Petroleum Hydrocarbons	(b) (c)		30 (b,c)	30		30		30	mg/kg	5 mg/kg
Diesel-Range Petroleum Hydrocarbons	(b)		2,000 (b)	2,000		2,000		2,000	mg/kg	5 mg/kg
Motor Oil-Range Petroleum Hydrocarbons	(b)		2,000 (b)	2,000		2,000		2,000	mg/kg	10 mg/kg
TOTAL METALS										
Arsenic	0.034	0.67	24	0.034	7	7		7	mg/kg	5 mg/kg
Chromium	1,000,000		120,000 (d)	120,000	42 (e)	120,000		120,000	mg/kg	0.5 mg/kg
Lead	1,620		250 (b)	250	17	250		250	mg/kg	2 mg/kg
Cadmium	0.69		80	0.69	1	0.69		0.69	mg/kg	0.2 mg/kg
Zinc	100		24,000	100	86	100		100	mg/kg	1 mg/kg
Copper	1.07		3,000	1.07	36	36		36	mg/kg	0.2 mg/kg
Mercury	0.026		24	0.026	0.07	0.07		0.07	mg/kg	0.05 mg/kg
BTEX										
Benzene	0.0045	18.0	320	0.0045		0.0045		25 (h)	µg/kg	12.5 - 25 µg/kg
Toluene	4.60		6,400	4.6		4.6	0.58	580	µg/kg	12.5 - 25 µg/kg
Ethylbenzene	6.10		8,000	6.1		6.1	2.4	2,400	µg/kg	12.5 - 25 µg/kg
Total Xylenes	15.0		16,000	15		15		15,000	µg/kg	12.5 - 50 µg/kg
PAHs										
Naphthalene	4.5		1,600	4.5		4.5		4,500	µg/kg	58 - 64 µg/kg
2-Methylnaphthalene	(a)		320	320		320		320,000	µg/kg	58 - 64 µg/kg
1-Methylnaphthalene	(a)					---		---		58 - 64 µg/kg
Acenaphthylene	(a)					---		---		58 - 64 µg/kg
Acenaphthene	98		4,800	98		98	25	25,000	µg/kg	58 - 64 µg/kg
Fluorene	100		3,200	100		100	79	79,000	µg/kg	58 - 64 µg/kg
Phenanthrene	(a)					---		---	µg/kg	58 - 64 µg/kg
Anthracene	2,300		24,000	2,300		2,300		2,300,000	µg/kg	58 - 64 µg/kg
Fluoranthene	630		3,200	630		630	49	49,000	µg/kg	58 - 64 µg/kg
Pyrene	660		2,400	660		660	140	140,000	µg/kg	58 - 64 µg/kg

TABLE 1
SOIL CLEANUP LEVELS FOR DETECTED CONSTITUENTS
NORTH LOT DEVELOPMENT
SEATTLE, WASHINGTON

Analyte	Protection of Groundwater and Marine Surface Water (Fixed Parameter 3-Phase Model) mg/kg	Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use For soil from 0 - 15 ft BGS Standard Formula Values		Preliminary Cleanup Levels (Before adjustment for background) mg/kg	Background Soil Metals Concentrations Puget Sound Region 90th Percentile mg/kg	Preliminary Cleanup Levels (After adjustment for background) mg/kg	Preliminary Cleanup Levels (After adjustment for total site risk) mg/kg	Final Cleanup Levels in Final Units	Units	Range of Laboratory Reporting Limits for Project Samples
		Carcinogen mg/kg	Non-carcinogen mg/kg							
Benzo(a)anthracene	(f)	(g)		(g)		(g)		(g)	µg/kg	58 - 64 µg/kg
Chrysene	(f)	(g)		(g)		(g)		(g)	µg/kg	58 - 64 µg/kg
Benzo(b)fluoranthene	(f)	(g)		(g)		(g)		(g)	µg/kg	58 - 64 µg/kg
Benzo(k)fluoranthene	(f)	(g)		(g)		(g)		(g)	µg/kg	58 - 64 µg/kg
Benzo(a)pyrene	0.23	0.14		0.14		0.14		140	µg/kg	58 - 64 µg/kg
Indeno(1,2,3-cd)pyrene	(f)	(g)		(g)		(g)		(g)	µg/kg	58 - 64 µg/kg
Dibenz(a,h)anthracene	(f)	(g)		(g)		(g)		(g)	µg/kg	58 - 64 µg/kg
Benzo(g,h,i)perylene	(a)					---		---		58 - 64 µg/kg
Dibenzofuran	(a)		160	160		160		160,000	µg/kg	58 - 64 µg/kg
SVOCs										
Phenol	22		48,000	22		22		22,000	µg/kg	58 - 180 µg/kg
4-Methylphenol	(a)					---		---		58 - 180 µg/kg
Di-n-butylphthalate	57		8000	57		57		57,000	µg/kg	58 - 180 µg/kg
Carbazole	0.32	50		0.32		0.32		320	µg/kg	58 - 180 µg/kg
DIOXINS/FURANS										
2,3,7,8-TCDD	0.00000027	0.000011		0.00000027		0.00000027		0.27	ng/kg	

TABLE 1
SOIL CLEANUP LEVELS FOR DETECTED CONSTITUENTS
NORTH LOT DEVELOPMENT
SEATTLE, WASHINGTON

Notes:

Screening level based on lowest of soil concentrations for protection of groundwater and protection of human direct contact (Method B standard formula values for carcinogens and non-carcinogens).

Cleanup levels are developed for all constituents detected above laboratory reporting limits in soil.
Shading indicates basis for cleanup level.
--- = No screening criteria available.
mg/kg = Milligrams per kilogram.
µg/kg = Micrograms per kilogram.
ng/kg = Nanograms per kilogram.

(a) Values for K_{oc} and Henry's Law Constant are not available; therefore, cleanup levels protective of groundwater can not be calculated using the three-phase partitioning model.
(b) MTCA Method A soil cleanup levels are used for gasoline-range, diesel-range, motor oil-range petroleum hydrocarbons, and lead.
(c) For gasoline-range petroleum hydrocarbons, if benzene is present. If benzene is not present, screening level is 100 mg/kg.
(d) Value is for chromium III. Based on site history, chormium VI is not expected to be present.
(e) Value is for total chromium.
(f) If toxicity equivalency factors (TEFs) are considered, cleanup levels protective of groundwater for other cPAHs are less than the value for benzo(a)pyrene.
(g) Evaluated using toxicity equivalency quotient (TEQ) based on benzo(a)pyrene.
(h) Final Cleanup Level adjusted upward to the Practical Quantitation Limit (PQL), equal to 10 times the Method Detection Limit (MDL).

TABLE 2
REMEDIATION LEVEL FOR BENZENE IN SOIL
BASED ON POTENTIAL FOR VAPOR INTRUSION
NORTH LOT DEVELOPMENT
SEATTLE, WASHINGTON

Analyte	µg/kg
Benzene	780

µg/kg = Micrograms per kilogram.

Remediation level based on evaulation of soil vapor data and application of Ecology's guidance for evaluating soil vapor intrusion (Ecology 2009b).

TABLE 3
GROUNDWATER CLEANUP LEVELS FOR DETECTED CONSTITUENTS
NORTH LOT DEVELOPMENT
SEATTLE, WASHINGTON

	Protective of Drinking Water							Protective of Marine Surface Water														
	MCL Treatment Technique			WA State Board of Health MCLs		Standard Formula Values		AWQC for Protection of Aquatic Life (a)		National Toxics Rule (b)			National Recommended Water Quality Criteria (c)			Standard Formula Values		Preliminary Cleanup Levels (Before adjustment for background)	Background Groundwater	Preliminary Cleanup Levels (After adjustment for background)	Preliminary Cleanup Levels (After adjustment for total site risk)	Final Cleanup Levels in Final Units	Units	Range of Laboratory Reporting Limits for Project Samples
										AWQC for						Carcinogen	Non Carcinogen							
Analyte	MCL µg/L	Action Level µg/L	MCL Goal µg/L	Primary µg/L	Secondary µg/L	Carcinogen µg/L	Non-carcinogen µg/L	Acute µg/L	Chronic µg/L	Acute µg/L	Chronic µg/L	AWQC for Protection of Human Health µg/L	Protection of Aquatic Life - Acute µg/L	Protection of Aquatic Life - Chronic µg/L	Protection of Human Health µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
TPH																							
Gasoline-Range Petroleum Hydrocarbons							800 (d,e)										800 (d,e)			800		0.8	mg/L	0.25 mg/L
Diesel-Range Petroleum Hydrocarbons							500 (d)										500 (d)			500		0.5	mg/L	0.25 mg/L
Oil-Range Petroleum Hydrocarbons							500 (d)										500 (d)			500		0.5	mg/L	0.5 mg/L
BTEX																								
Benzene	5		0	5		0.8	32					71			51	23	2,000	0.8		0.8		0.8	µg/L	1 µg/L
Toluene	1,000		1,000	1,000			640					200,000			15,000		19,000	640		640	80	80	µg/L	1 µg/L
Ethylbenzene	700		700	700			800					29,000			2,100		6,900	700		700	275	275	µg/L	1 µg/L
Total Xylenes	10,000		10,000	10,000			1,600 (f)											1,600 (f)		1,600 (f)		1,600 (f)	µg/L	1 µg/L
PAHs																								
Naphthalene							160										4,900	160		160		160	µg/L	0.10 - 1.4 µg/L
2-Methylnaphthalene							32											32		32		32	µg/L	0.10 - 1.4 µg/L
1-Methylnaphthalene																				---		---		0.10 - 1.4 µg/L
Acenaphthylene																				---		---		0.10 - 1.4 µg/L
Acenaphthene							960								990		640	640		640	250	250	µg/L	0.10 - 1.4 µg/L
Fluorene							640					14,000			5,300		3,500	640		640	500	500	µg/L	0.10 - 1.4 µg/L
Phenanthrene																				---		---		0.10 - 1.4 µg/L
Anthracene							4,800					110,000			40,000		26,000	4,800		4,800		4,800	µg/L	0.10 - 1.4 µg/L
Fluoranthene							640					370			140		90	90		90	50	50	µg/L	0.10 - 1.4 µg/L
Pyrene							480					11,000			4,000		2,600	480		480	100	100	µg/L	0.10 - 1.4 µg/L
Benzo(a)anthracene						(g)						0.031			0.018	(g)		(g)		(g)		(g)	µg/L	0.10 - 1.4 µg/L
Chrysene						(g)						0.031			0.018	(g)		(g)		(g)		(g)	µg/L	0.10 - 1.4 µg/L
Benzo(b)fluoranthene						(g)						0.031			0.018	(g)		(g)		(g)		(g)	µg/L	0.10 - 1.4 µg/L
Benzo(k)fluoranthene						(g)						0.031			0.018	(g)		(g)		(g)		(g)	µg/L	0.10 - 1.4 µg/L
Benzo(a)pyrene	0.2		0	0.2		0.012						0.031			0.018	0.030		0.012 (g)		0.012 (g)		0.012 (g)	µg/L	0.10 - 1.4 µg/L
Indeno(1,2,3-cd)pyrene						(g)						0.031			0.018	(g)		(g)		(g)		(g)	µg/L	0.10 - 1.4 µg/L
Dibenzo(a,h)anthracene						(g)						0.031			0.018	(g)		(g)		(g)		(g)	µg/L	0.10 - 1.4 µg/L
Benzo(g,h,i)perylene																				---		---		0.10 - 1.4 µg/L
Dibenzofuran							32											32		32		32	µg/L	0.10 - 1.4 µg/L
DISSOLVED METALS																								
Arsenic	10			10		0.058	4.8	69	36	69	36	0.14	69	36	0.14	0.10	18	0.058	5/21.3(i)	5/21.3(i)		5/21.3 (j)	µg/L	0.5 - 10 µg/L
Lead		15	0				15	210	8.1	210	8.1		210	8.1				8.1		8.1		8.1	µg/L	1 µg/L
Chromium	100		100	100			24,000 (h)										240,000	100		100		100	µg/L	5 µg/L
Cadmium	5		5	5			8.0	42	9.3	42	9.3		40	8.8			20	5		5		5	µg/L	2 µg/L
Zinc					5,000		4,800	90	81	90	81		90	81	26,000		17,000	81		81		81	µg/L	10 µg/L
Copper		1,300	1,300	1,300			590	4.8	3.1	2.4	2.4		4.8	3.1			2,700	2.4		2.4		2.4	µg/L	2 µg/L
Mercury	2		2	2			4.8	1.8	0.025	2.1	0.025	0.15	1.8	0.94	0.3			0.025		0.025		0.15 (k)	µg/L	0.1 µg/L
VOLATILES																								
Chloromethane						3.4										130		3		3		3	µg/L	0.2 µg/L
Methylene Chloride	5		0	5		5.8	480					1,600			590	960	170,000	5		5	3	3	µg/L	0.5 µg/L
Acetone							800											800		800	35	35	µg/L	3 µg/L
Carbon Disulfide							800											800		800	350	350	µg/L	0.2 µg/L
Chloroform	80			80		7.2	80					470			470	280	6,900	7.2		7.2		7.2	µg/L	0.2 µg/L
2-Butanone							4,800											4,800		4,800	2,400	2,400	µg/L	2.5 - 3.0 µg/L

TABLE 3
GROUNDWATER CLEANUP LEVELS FOR DETECTED CONSTITUENTS
NORTH LOT DEVELOPMENT
SEATTLE, WASHINGTON

	Protective of Drinking Water							Protective of Marine Surface Water														
	MCL Treatment Technique			WA State Board of Health MCLs		Standard Formula Values		AWQC for Protection of Aquatic Life (a)		National Toxics Rule (b)			National Recommended Water Quality Criteria (c)			Standard Formula Values		Preliminary Cleanup Levels (Before adjustment for background)	Background Groundwater	Preliminary Cleanup Levels (After adjustment for background)	Preliminary Cleanup Levels (After adjustment for total site risk)	Final Cleanup Levels in Final Units	Units	Range of Laboratory Reporting Limits for Project Samples
										AWQC for						Carcinogen	Non Carcinogen							
Analyte	MCL µg/L	Action Level µg/L	MCL Goal µg/L	Primary µg/L	Secondary µg/L	Carcinogen µg/L	Non-carcinogen µg/L	Acute µg/L	Chronic µg/L	Acute µg/L	Chronic µg/L	AWQC for Protection of Human Health µg/L	Protection of Aquatic Life - Acute µg/L	Protection of Aquatic Life - Chronic µg/L	Protection of Human Health µg/L	µg/L	µg/L							
Styrene	100		100	100		1.5	1,600														1.5			0.2 µg/L
1,3,5-Trimethylbenzene							400											400		400		400	µg/L	0.2 µg/L
1,2,4-Trimethylbenzene							400											400		400		400	µg/L	0.2 µg/L
Isopropylbenzene																				---		---		0.2 µg/L
n-Propylbenzene																				---		---		0.2 µg/L
tert-Butylbenzene																				---		---		0.2 µg/L
sec-Butylbenzene																				---		---		0.2 µg/L
4-Isopropyltoluene																				---		---		0.2 µg/L
n-Butylbenzene																				---		---		0.2 µg/L
SEMIVOLATILES																								
Phenol							4,800					4,600,000			1,700,000		1,100,000	4,800		4,800		4,800	µg/L	
4-Methylphenol																				---		---		
Di-n-butylphthalate							1,600					12,000			4,500		2,900	1,600		1,600		1,600	µg/L	
Carbazole						4.4												4.4		4.4		4.4	µg/L	
DIOXINS AND FURANS																				---		---		
2,3,7,8-TCDD	3.0E-05			3.0E-05								1.4E-08			5.1E-09			5.1E-09		5.1E-09		5.1E-03	pg/L	

Notes:

Preliminary cleanup level is based on lowest of federal or state MCL, state secondary MCL, and Method B standard formula values, for carcinogens without federal or state MCLs on the Method B standard formula value, and for carcinogens with federal or state MCLs.

Preliminary cleanup levels are developed for all constituents detected in groundwater or soil.

Shading indicates basis for preliminary cleanup level.

--- = No cleanup level available.

mg/L = Milligrams per liter.

µg/L = Micrograms per liter.

pg/L = Picograms per liter.

(a) Ambient water quality criteria for protection of aquatic life from WAC 173-201A-240.

(b) Ambient water quality criteria for protection of human health from 40 CFR Part 131d (National Toxics Rule).

(c) National Recommended Water Quality Criteria (EPA website 2011).

(d) MTCA Method A groundwater cleanup levels are used for gasoline-range, diesel-range, oil-range petroleum hydrocarbons.

(e) For gasoline-range petroleum hydrocarbons, if benzene is present. If benzene is not present, screening level is 1,000 µg/L (1.0 mg/L).

(f) Screening level is for total xylenes.

(g) Evaluated using toxicity equivalency quotient (TEQ) based on benzo(a)pyrene.

(h) Value is for chromium III. Based on site history, chromium VI is not expected to be present.

(i) Calculated background concentration will be used as the preliminary cleanup level at MW-5 and MW-15D.

(j) A cleanup level of 5 ug/L was agreed upon by Ecology for the western portion of the Property. A background concentration of 21.3 will be used as the cleanup level for the eastern portion of the Property.

(k) The cleanup level for mercury in groundwater was adjusted upward to the practical quantitation limit (PQL). The PQL is equal to 10 times the method detection limit (MDL).

APPENDIX A

North Lot Schematic Design

SCHEME 15 - F.A.R. CALCULATIONS **Date: 05/06/2012**

STADIUM PLACE- West Half of development

Level	Datum Ht.	Residential	Retail (NC)	Parking (NC)	Floor total
0 TO 85 FEET (Unlimited coverage allowed)					
Residential Tower					
Level A	18'-0"	16,649	21,784	34,182	72,615
Level B	27'-0"	9,735		33,268	43,003
Level C	36'-0"	40,031		32,584	72,615
Level D	45'-8"	40,031			40,031
Level 1	55'-4"	51,907			51,907
Level 2	66'-4"	43,837			43,837
Level 3	75'-10"	43,837			43,837
85 TO 120 FEET (65% coveage allowed)					
Level 4	85'-4"	43,837			43,837
Level 5	94'-10"	43,837			43,837
Level 6	104'-4"	43,837			43,837
Level 7	113'-10"	32,663			32,663
120 TO 200 FEET (50% coverage allowed)					
Level 8	123'-4"	29,062			29,062
Level 9	132'-10"	27,739			27,739
Level 10	142'-4"	27,739			27,739
Level 11	151'-10"	27,739			27,739
Level 12	161'-4"	27,739			27,739
Level 13	170'-10"	27,739			27,739
Level 14	180'-4'	27,739			27,739
Level 15	189'-10"	24,443			24,443
Level 16	199'-4"	24,443			24,443
ABOVE 200 FEET (30% coverage allowed)					
Level 17	208'-10"	15,678			15,678
Level 18	218'-4"	12,956			12,956
Level 19	227'-10"	11,603			11,603
Level 20	237'-4"	11,603			11,603
Level 21	247'-8"	11,603			11,603
Roof	258'-0"				
		718,026	**21,784**	**100,034**	
Gross Chargeable:		722,800	Total Gross:		839,844
3.5% Mech. reduction:		25,298			
Total Chargeable:		697,502			
Residential FAR:		**4.16**			
Max Residential FAR:		8.00			

STADIUM TOWERS- East Half of development

Level	Datum Ht.	Level	Datum Ht.	Hotel	Office	Retail (NC)	Parking (NC)	Shared	Floor total
Office Tower		Hotel Tower							
Level A	18'-0"	Lobby	18'-0"	9,012	2,887	14,704	7,157	10,201	43,961
Parking 1	33'-6"	Hotel 02	35'-0"	7,941	1,129		26,543	736	36,349
Parking 2	42'-6"	Hotel 03	48'-0"	13,340	1,118		26,547	736	41,741
Parking 3	51'-6"	Hotel 04	57'-8"	13,332	1,129		26,671	736	41,868
Parking 4	60'-6"	Hotel 05	67'-4"	10,227	1,127		26,339	738	38,431
Conference	75'-6"	Hotel 06	78-0"	29,732	1,118			736	31,586
Club 01	95'-6"	Hotel 07	87'-8"	10,089	1,118	8,144		736	20,087
		Hotel 08	97'-4"	9,831					9,831
Club 02	109'-6"	Hotel 09	107'-0"	9,841	1,118	15,968		354	27,281
		Hotel 10	116'-8"	9,831					9,831
Tower 03	125'-0"	Hotel 11	126'-4"	9,831	18,863			175	28,869
Tower 04	138'-0"	Hotel 12	136'-0"	9,831	18,863			175	28,869
Tower 05	151'-0"	Hotel 13	145'-8"	9,831	18,863			175	28,869
Tower 06	164'-0"	Hotel 14	155'-4"	9,831	18,863			175	28,869
Tower 07	177'-0"	Hotel 15	165'-0"	9,831	18,863			175	28,869
Tower 08	190'-0"	Hotel 16	174'-8"	9,831	18,863				28,694
		Hotel 17	184'-4"	9,831					9,831
		Hotel 18	194'-0"	9,831					9,831
Tower 09	203'-0"	Hotel 19	203'-8"	9,831	18,863			175	28,869
Tower 10	216'-0"	Hotel 20	213'-4"	9,831	18,863			175	28,869
Tower 11	229'-0"	Hotel 21	223'-0"	9,831	18,863			175	28,869
		Hotel 22	232'-8"	9,831					9,831
Restaurant	243'-0"	Hotel 23	242'-4"	9,831	366	14,066			24,263
Roof	258'-0"	Roof	258'-0"	4,311	4,569				8,880
				255,290	**185,446**	**52,882**	**113,257**	**16,373**	
Gross Chargeable:					495,287		Total Gross:		623,248
3.5% Mech. reduction:					17,335				
Total Chargeable:					477,952				
				Commercial FAR:	**2.77**				
				Max Commercial FAR allowed:	4.00				
				Theoretical Max Chargeable:	670,156				

Parcel Area: *167,539*

Proposed coverage:	**70%**
Max. Total Floor Plate:	116,576
Proposed coverage:	**42%**
Max. Total Floor Plate:	71,118
Proposed coverage:	**35%**
Max. Total Floor Plate:	57,931
Proposed coverage:	**27%**
Max. Total Floor Plate:	44,547
Total FAR:	**6.93**
Max Total FAR Allowed:	8.00
FAR Under MUP:	6.69
Exceeding FAR (SF):	39,914
Percentage Residential:	0.53
Residential Needed:	72,181

SCHEME 15 - PROJECT METRICS **Date: 05/06/2012**

HOTEL	Hotel Gross	Hotel Tenant Area	Efficiency
Basement	8,294	6,338	0.76
Lobby	9,012	5,485	0.61
Hotel 02	7,941	5,663	0.71
Hotel 03	13,340	9,718	0.73
Hotel 04	13,332	9,710	0.73
Hotel 05	10,227	6,605	0.65
Hotel 06	36,495	32,881	0.90
Hotel 07	10,089	6,871	0.68
Hotel 08	9,841	6,821	0.69
Hotel 09	9,831	6,811	0.69
Hotel 10	9,831	6,811	0.69
Hotel 11	9,831	6,811	0.69
Hotel 12	9,831	6,811	0.69
Hotel 13	9,831	6,811	0.69
Hotel 14	9,831	6,811	0.69
Hotel 15	9,831	6,811	0.69
Hotel 16	9,831	6,811	0.69
Hotel 17	9,831	6,811	0.69
Hotel 18	9,831	6,811	0.69
Hotel 19	9,831	6,811	0.69
Hotel 20	9,831	6,811	0.69
Hotel 21	9,831	6,811	0.69
Hotel 22	9,831	6,811	0.69
Hotel 23	9,831	6,811	0.69
Total	266,036	192,257	0.72

OFFICE	Office Gross	Multi-Tenant Area	Efficiency	Single Tenant Area	Efficiency
Basement	752				
Lobby	2,887				
Parking 01	1,129				
Parking 02	1,118				
Parking 03	1,129				
Parking 04	1,127				
Conference	1,118				
Club 01	1,118				
Club 02	1,118				
Office 01	18,863	15,377	0.82	17,571	0.93
Office 02	18,863	15,377	0.82	17,571	0.93
Office 03	18,863	15,377	0.82	17,571	0.93
Office 04	18,863	15,377	0.82	17,571	0.93
Office 05	18,863	15,377	0.82	17,571	0.93
Office 06	18,863	15,377	0.82	17,571	0.93
Office 07	18,863	15,377	0.82	17,571	0.93
Office 08	18,863	15,377	0.82	17,571	0.93
Office 09	18,863	15,377	0.82	17,571	0.93
Total	181,263	138,393	0.76	158,139	0.87

RETAIL	Retail Gross	Retail Tenant Area	Efficiency
Basement			
Lobby	14,704	14,704	1.00
Parking 01			
Parking 02			
Parking 03			
Parking 04			
Conference			
Club 01	10,604	10,604	1.00
Club 02	15,968	15,968	1.00
Restaurant	18,709	18,343	0.98
Total	59,985	59,619	0.99

MISC	Parking Gross	Shared Gross
Basement	38,258	3,545
Lobby	7,157	10,201
Parking 01	26,543	736
Parking 02	26,547	736
Parking 03	26,671	736
Parking 04	26,339	738
Conference		736
Club 01		736
Club 02		354
Total	151,515	18,518

PROJECT TOTALS

EFFICIENCY - MULTIPLE OFFICE TENANTS	
Building Gross:	677,317
Tenant Gross:	390,269
Overall Efficiency:	0.58

EFFICIENCY - SINGLE OFFICE TENANTS	
Building Gross:	677,317
Tenant Gross:	410,015
Overall Efficiency:	0.61

PARKING COUNT	
Small:	152
Medium:	57
Large:	159
Barrier Free:	8
Loading Berth:	3
Total:	379

ROOM COUNT	
Total:	278

NOTES

Tenant areas do not include any floor or building common areas, vertical penetrations, or amenities. Areas are measured to the inside of the exterior wall where appliciable

SCHEME 15 - HOTEL ROOM INVENTORY **Date: 05/06/2012**

HOTEL	Type 5 (Embassador)	Type 6 (King)	Type 7 (Double/Queen)	Type 8 (King)	Type X (Compact)
Basement	-	-	-	-	-
Lobby	-	-	-	-	-
Hotel 02	-	-	-	-	-
Hotel 03	-	6	4	3	-
Hotel 04	-	6	4	3	-
Hotel 05	-	-	-	-	24
Hotel 06	-	6	4	3	-
Hotel 07	-	6	4	3	-
Hotel 08	-	6	4	3	-
Hotel 09	-	6	4	3	-
Hotel 10	-	6	4	3	-
Hotel 11	-	6	4	3	-
Hotel 12	-	6	4	3	-
Hotel 13	-	6	4	3	-
Hotel 14	-	6	4	3	-
Hotel 15	-	6	4	3	-
Hotel 16	-	6	4	3	-
Hotel 17	-	6	4	3	-
Hotel 18	-	6	4	3	-
Hotel 19	-	6	4	3	-
Hotel 20	-	6	4	3	-
Hotel 21	-	6	4	3	-
Hotel 22	-	6	4	3	-
Hotel 23	7	-	-	-	-
Total	7	114	76	57	24
Percentage	3%	41%	27%	21%	9%
Grand Total	**278**				

TYPE 5: EMBASSADOR

TYPE 6: KING

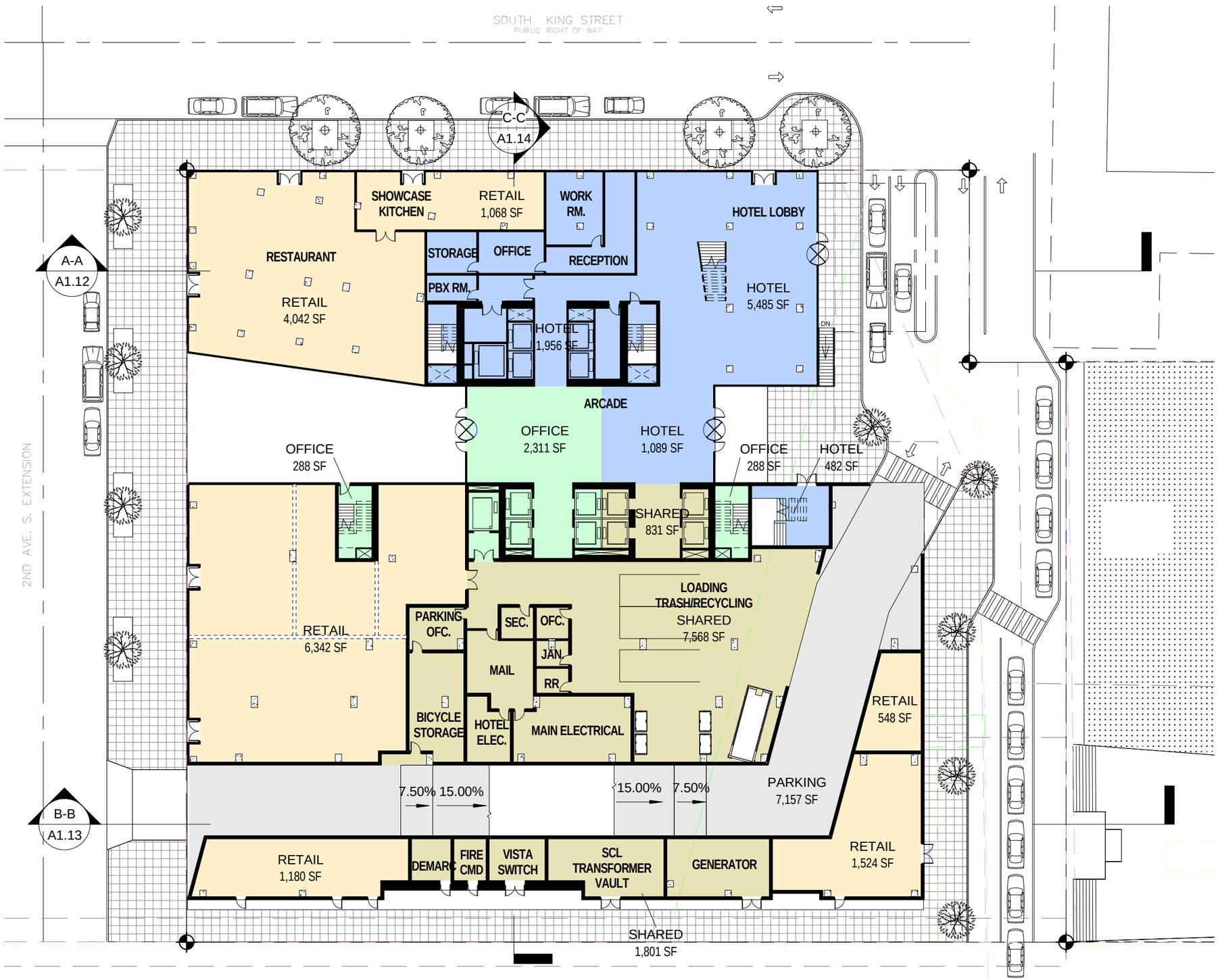
TYPE 7: QUEEN DOUBLE

TYPE 8: KING

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects



SCHEMATIC DESIGN - SCHEME 15 **LOBBY A1.01**

05/06/2012

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects

05/06/2012

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects

LEGEND

- HOTEL
- OFFICE
- SHARED
- PARKING

05/06/2012

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects


87' - 10"
93' - 9"
172.0000000°
HOTEL
7,997 SF
HOTEL
4,834 SF
HOTEL
248 SF
OPEN TO
BELOW
OPEN TO
BELOW
OFFICE
236 SF
OFFICE
427 SF
HOTEL
396 SF
STORAGE
COOLER
ELEC
MECH
SHARED
736 SF
SYS
COMM
JAN
OFFICE
175 SF
PRE-FUNCTION
LOBBY
OFFICE
279 SF
HOTEL
19,257 SF
WOMEN
MEN
BALLROOM A
BALLROOM B
HOTEL
6,763 SF
(DECK AREA)
KITCHEN
80' - 0"
BALLROOM C
AV
ROOM
STAGING
230' - 0"
54' - 10"
30' - 0"
19' - 8"
110' - 6"
LEGEND
HOTEL
OFFICE
SHARED

LEGEND

- HOTEL
- OFFICE
- RETAIL
- SHARED

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON


87' - 10"
93' - 9"
172.0000000°
HOTEL
8,007 SF
61' - 6"
54' - 10"
HOTEL
1,834 SF
SHARED
179 SF
OPEN TO BELOW
OFFICE
236 SF
OFFICE
279 SF
30' - 0"
19' - 8"
214' - 11"
ELEC
MECH
SYS
COMM
JAN
OFFICE
427 SF
OFFICE
175 SF
SHARED
175 SF
OPEN TO
BELOW
RETAIL
15,968 SF
110' - 6"
61' - 3"
62' - 0"
29' - 7"
152' - 11"
LEGEND
HOTEL
OFFICE
RETAIL
SHARED

SCHEMATIC DESIGN - SCHEME 15 | **TYPICAL FLOOR** | **A1.09**

05/06/2012

300 SOUTH KING STREET

300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects


87' - 10"
93' - 9"
172.0000000°
HOTEL
7,997 SF
61' - 6"
54' - 10"
HOTEL
1,834 SF
OFFICE
191 SF
OFFICE
175 SF
30' - 0"
ELEC
MECH
19' - 8"
214' - 11"
SYS
COMM
JAN
RETAIL
14,066 SF
RETAIL
3,125 SF
(DECK AREA)
110' - 6"
RETAIL
1,518 SF
(DECK AREA)
61' - 4"
62' - 0"
29' - 7"
152' - 11"
LEGEND
HOTEL
OFFICE
RETAIL

SCHEMATIC DESIGN - SCHEME 15 **ROOF PLAN A1.11**

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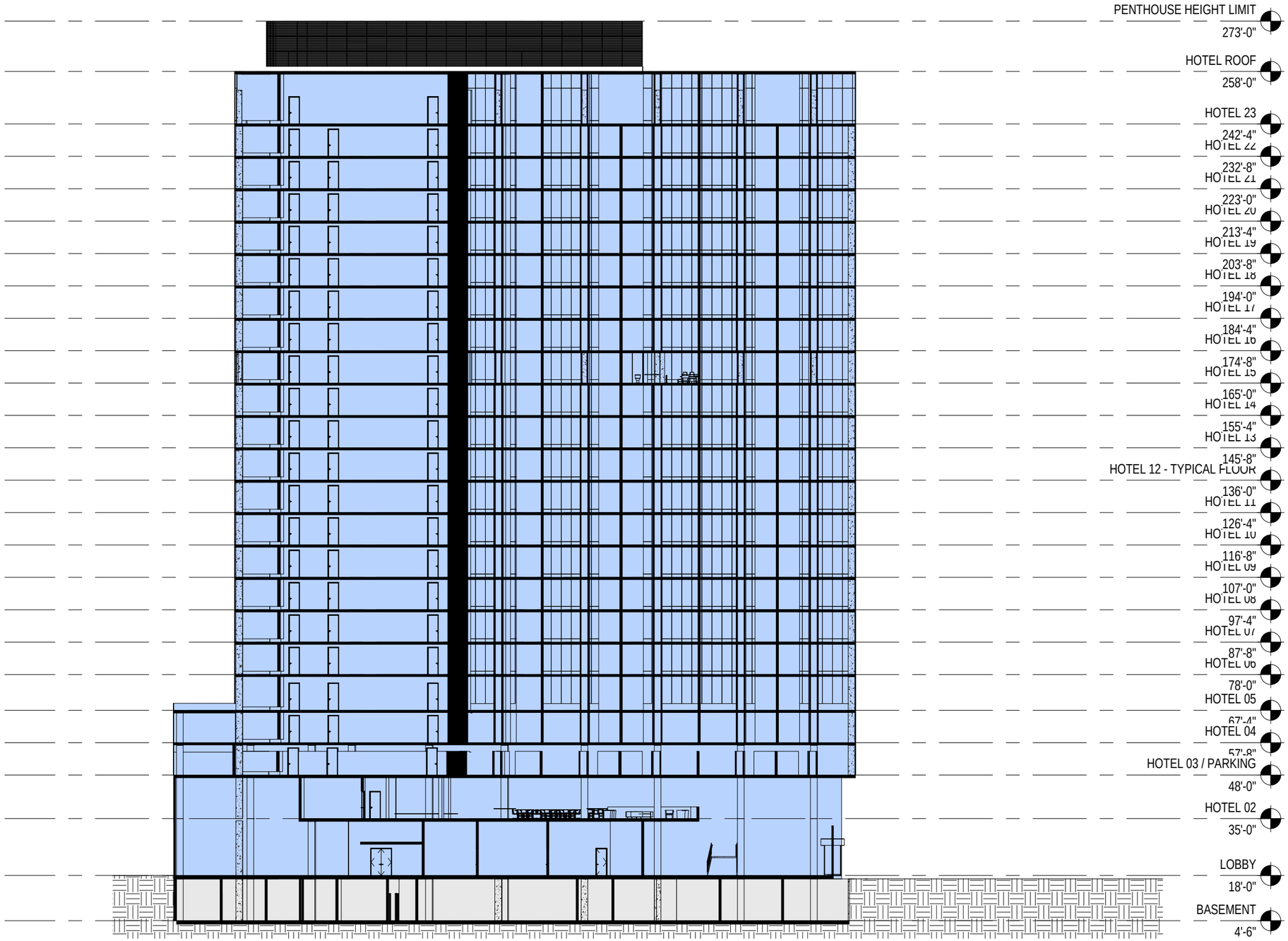

SCHEMATIC DESIGN - SCHEME 15 | **HOTEL E-W SECTION (A-A)** | **A1.12**

05/06/2012

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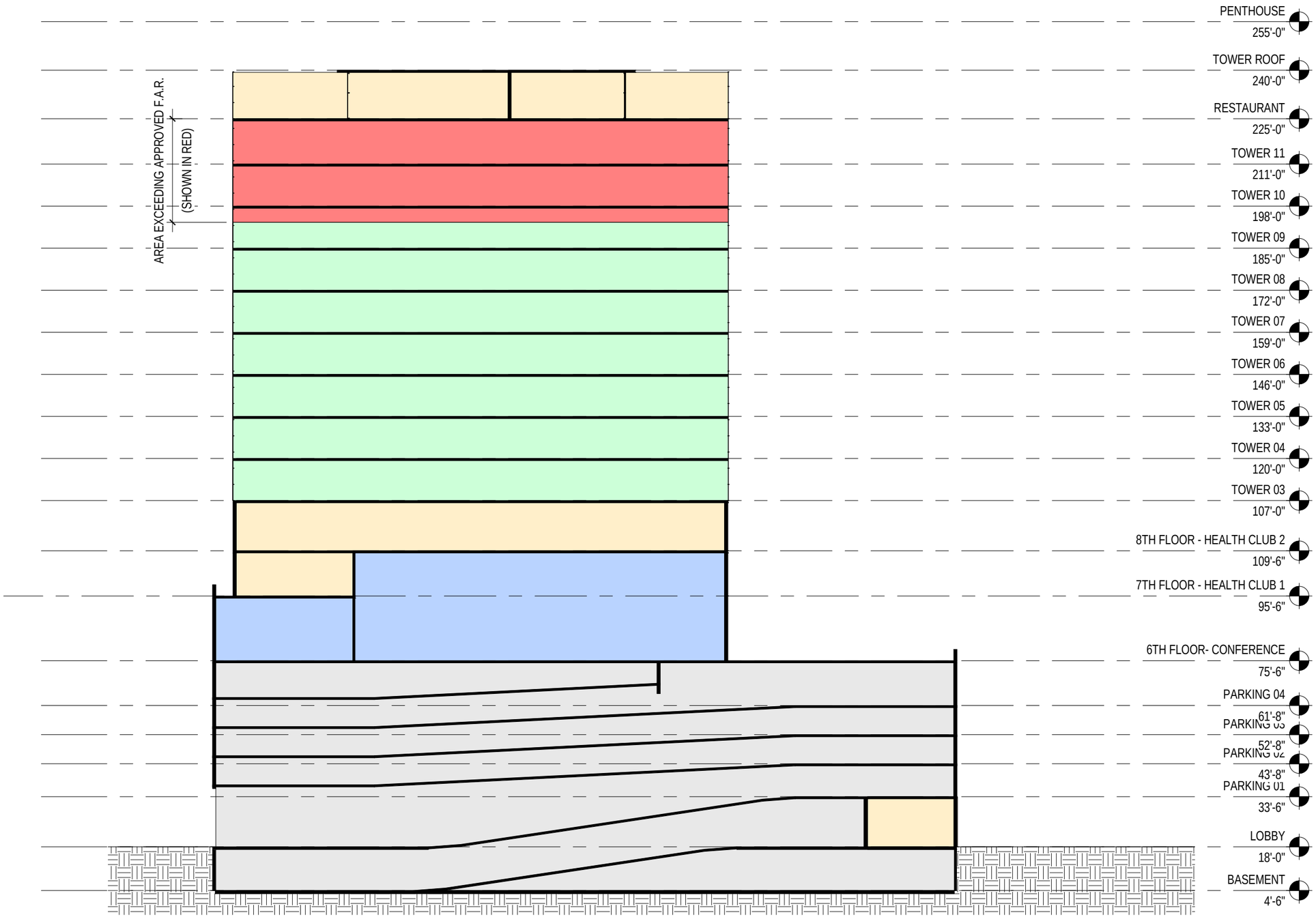

SCHEMATIC DESIGN - SCHEME 15 **OFFICE E-W SECTION (B-B)** **A1.13**

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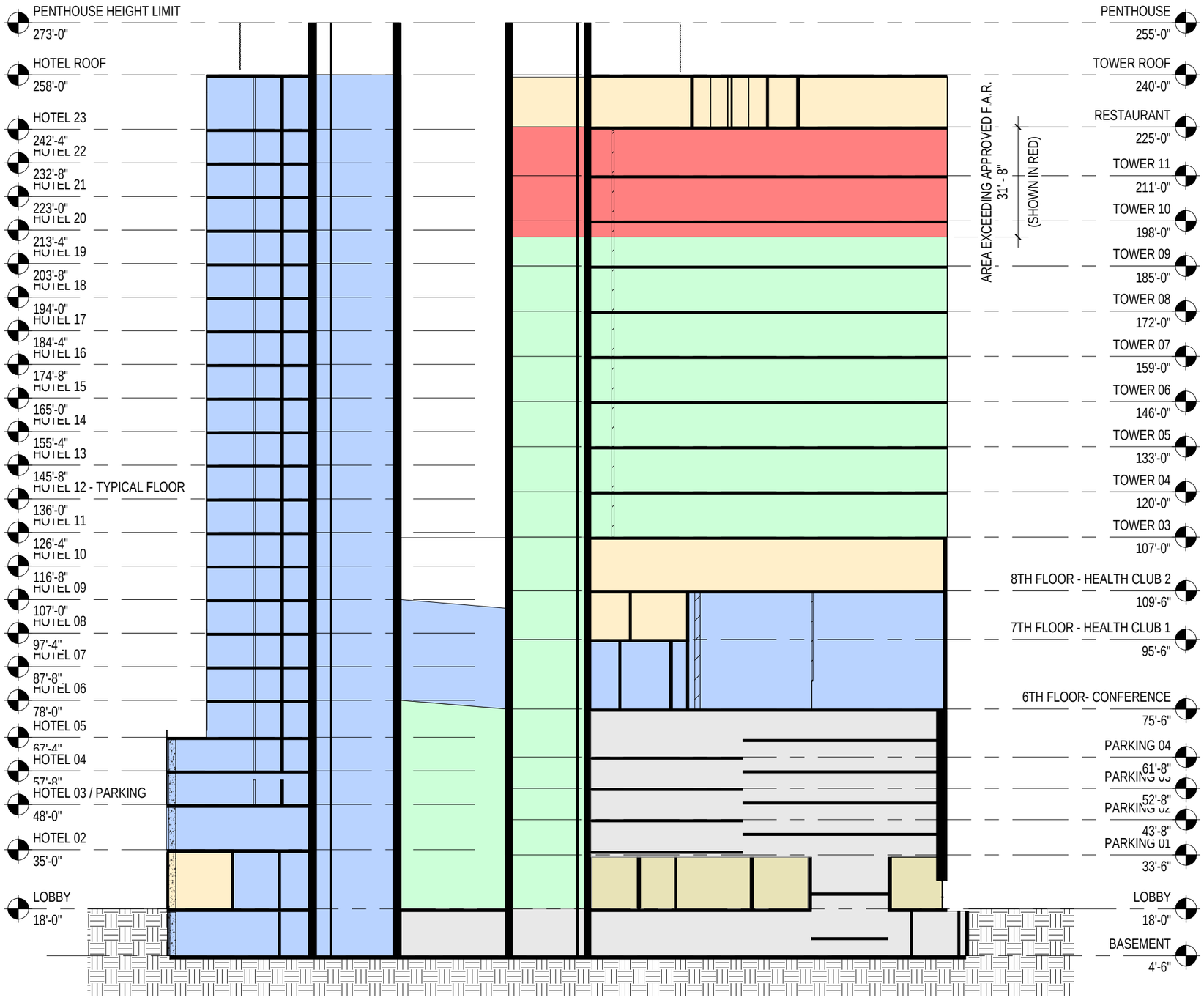

SCHEMATIC DESIGN - SCHEME 15 **N-S SECTION (C-C) A1.14**

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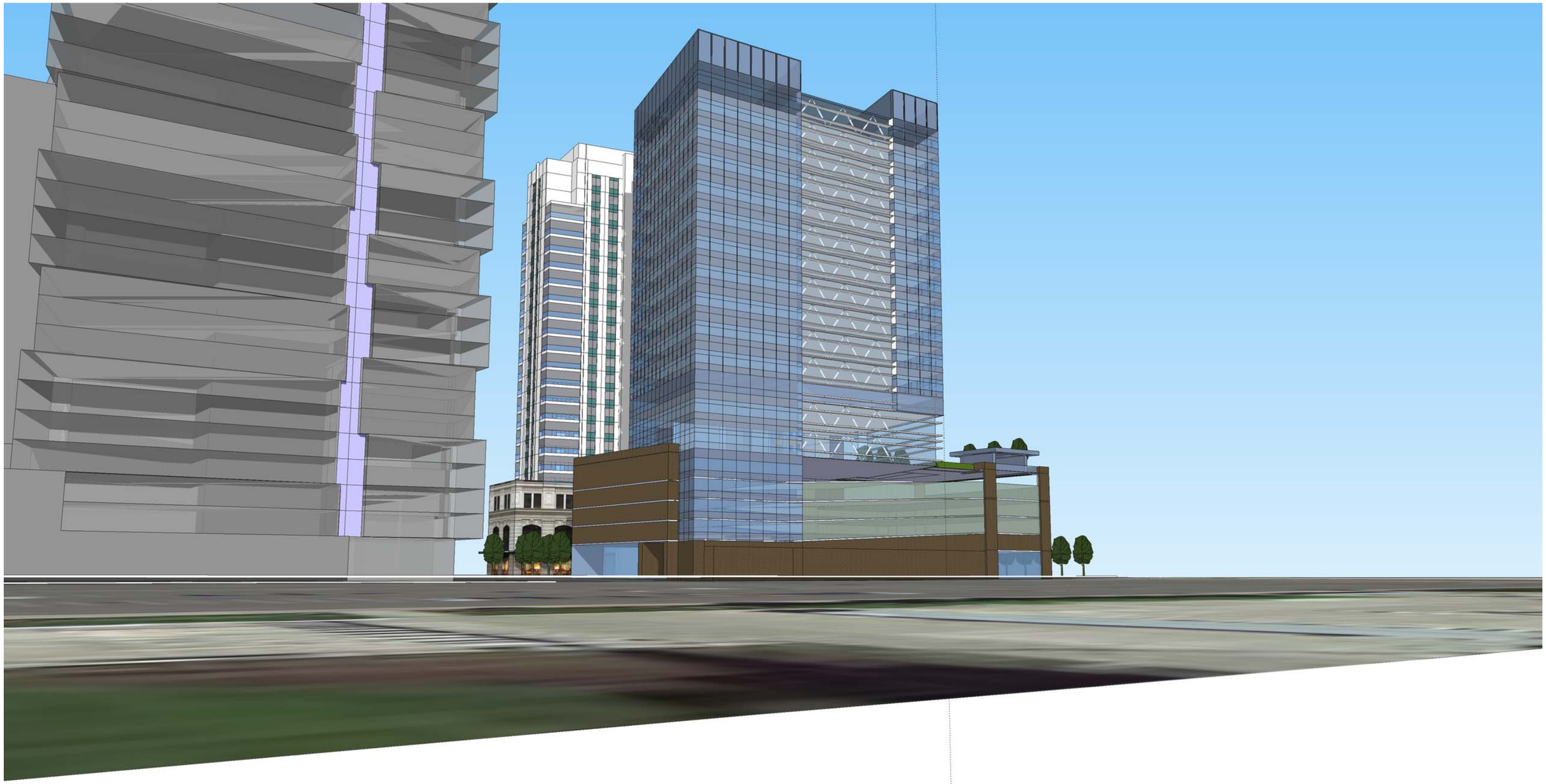


SCHEMATIC DESIGN - SCHEME 15 SW PERSPECTIVE A1.15

05/06/2012

300 SOUTH KING STREET

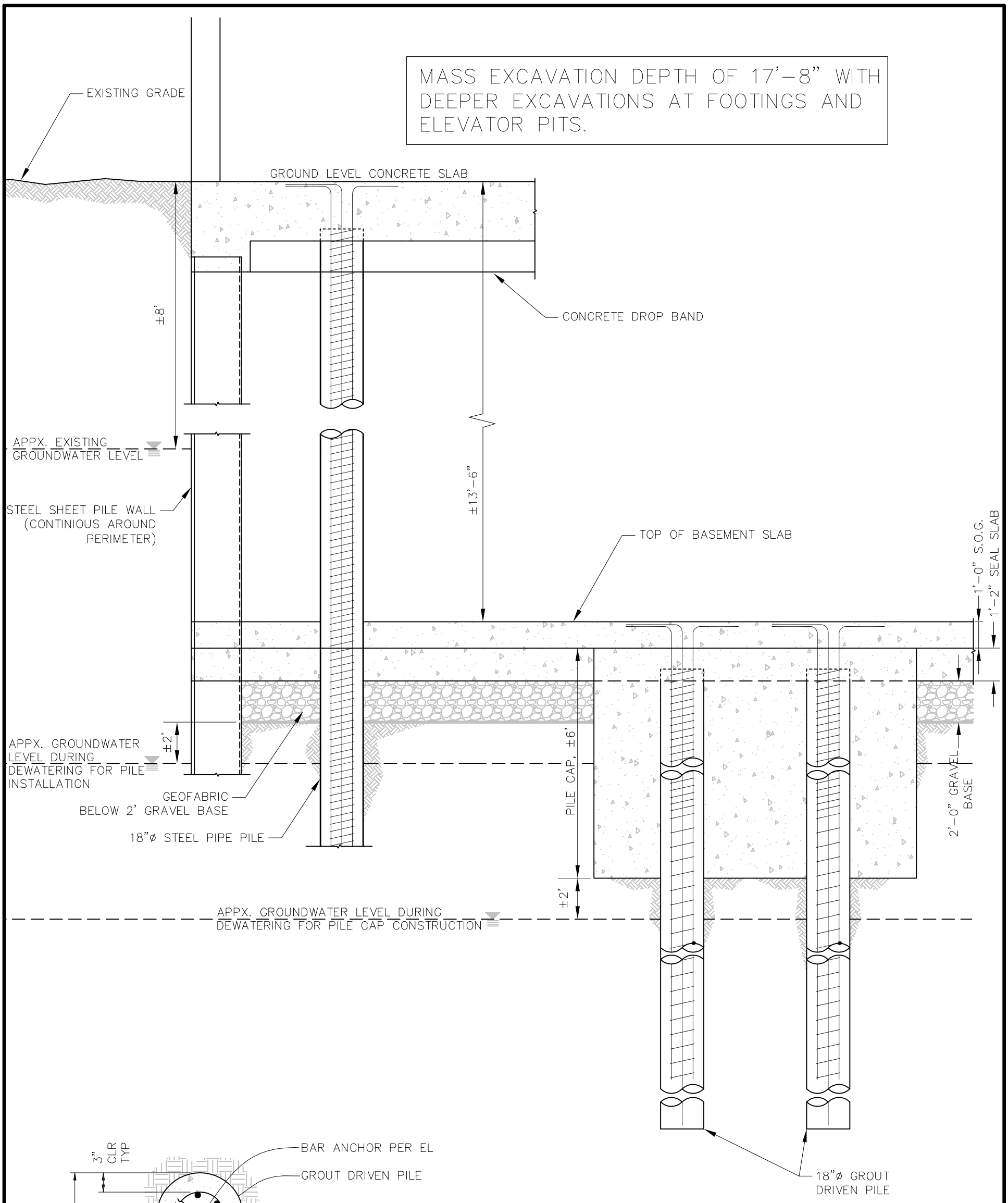
300 S. KING STREET | SEATTLE, WASHINGTON

Freiheit & Ho architects

APPENDIX B

North Lot Pile and Excavation Exhibit

MASS EXCAVATION DEPTH OF 17'–8" WITH DEEPER EXCAVATIONS AT FOOTINGS AND ELEVATOR PITS.



SECTION

R:\2011\0\11090\3\Drawings\Plots\01–3PILEEXHIBIT11090.dwg 5/15/2012 10:42:27 AM PDT

NORTH LOT

PILE AND EXCAVATION EXHIBIT

NOT TO SCALE

D.R. STRONG
CONSULTING ENGINEERS
ENGINEERS PLANNERS SURVEYORS
10604 NE 38th PLACE, SUITE 101
KIRKLAND, WA 98033
425.827.3063 OFFICE
800.962.1402 TOLL FREE
425.827.2423 FAX
www.drstrong.com

APPENDIX C

Compliance Monitoring Plan

Final Compliance Monitoring Plan
North Lot Property
Seattle, Washington

September 27, 2012

Prepared for

North Lot Development, LLC

and

255 S. King Street LP

LANDAU ASSOCIATES
130 2nd Avenue South
Edmonds, WA 98020
(425) 778-0907

TABLE OF CONTENTS

FIGURES

TABLES

INTRODUCTION

This Compliance Monitoring Plan outlines the approach for follow-up groundwater (both the west and east parcels) and indoor air monitoring (east parcel only) as part of the implementation of the preferred remedial action alternative for cleanup of contamination at the North Lot Property (Property), located at the southeastern corner of the intersection of South King Street and Occidental Avenue South in Seattle, Washington (Figure 1). 255 S. King Street LP is currently negotiating with North Lot Development LLC (NLD) regarding the proposed purchase of the east parcel of the Property. NLD conducted the necessary investigations to characterize soil, soil vapor, and groundwater conditions at the Property to complete the Remedial Investigation (RI) report (Landau Associates 2011a) and the Feasibility Study (FS) report (Landau Associates 2011b). The FS report also develops and evaluates remedial action alternatives and identifies the preferred remedial action alternative to address the contamination on the west parcel of the Property consistent with NLD's development plan, and the requirements of the Washington State Model Toxics Control Act (MTCA; Chapter 173-340 WAC). An FS Addendum (Landau Associates 2012) has been submitted to the Washington State Department of Ecology (Ecology) to document the development plan proposed by 255 S. King Street LP following its purchase of the east parcel of the Property and the proposed associated revised cleanup action for the east parcel of the Property. The cleanup action proposed by 255 S. King Street LP as part of its development plan is presented in the revised Cleanup Action Plan for the east parcel.

This monitoring plan was prepared by Landau Associates for NLD and 255 S. King Street LP to detail the proposed groundwater compliance monitoring that would be conducted for the Property (including both the west and east parcels), and the indoor air compliance monitoring associated with the proposed cleanup action for the east parcel. The results of groundwater and indoor air monitoring would provide sufficient information to evaluate and document compliance with MTCA and the Property-specific cleanup levels identified in the FS and FS Addendum.

The groundwater monitoring for the west and east parcels would be conducted concurrently to evaluate groundwater conditions and document that contaminants are not migrating off-Property at concentrations greater than the Property-specific cleanup levels. The indoor air monitoring would evaluate indoor air quality and document that vapor intrusion does not pose a potential threat to users of the below-ground garage that would be constructed as part of the revised development plan for the east parcel.

SITE BACKGROUND

The 3.85-acre property is located in an area of municipal, commercial, and residential properties, as shown on Figure 2. Based on the Phase I Environmental Site Assessment completed by Landau Associates (2007), a rail yard was operated at the Property from the late 1800s until the late 1960s and several sets of railroad tracks were present on the Property. Structures associated with the rail yard included engine maintenance buildings, paint shops, track switching areas, and materials storage areas. In addition, two gasoline stations were formerly located in the northwestern corner of the Property at different times between the late 1930s and approximately 1966. King County purchased the Property in the 1970s to facilitate construction of the Kingdome stadium to the south of the Property. The Kingdome was later demolished and replaced with the current CenturyLink Field and Event Center development. The Property has been used as a parking lot since the 1970s.

SOIL AND GROUNDWATER INVESTIGATIONS

The investigations conducted to date to characterize soil, groundwater, and soil vapor at the Property include the Phase II investigation, the RI field investigation, the supplemental investigation, the data gaps investigation, and the soil vapor investigation. The findings of the Phase I, Phase II, and additional soil and groundwater investigations are included in the RI report (Landau Associates 2011a). The results of the soil vapor investigation are presented in the Focused Soil Vapor Investigation report (Landau Associates 2010). The results of the data gaps and soil vapor investigations are included in the FS report (Landau Associates 2011b).

Based on the investigations conducted for the RI/FS, the extent of impacts to groundwater from soil contamination at the Property appears to be limited. There is no evidence of soil contaminants leaching to groundwater or of contaminants in groundwater migrating off-Property at concentrations greater than the cleanup levels. Therefore, the alternatives that were evaluated in the FS provide for the protection of groundwater through the cleanup of soils and/or through passive measures, such as a cap. Long-term groundwater compliance monitoring and contingent groundwater treatment (if the compliance monitoring indicates off-Property migration of contaminants in groundwater at concentrations greater than the cleanup levels) are included in five of the six remedial action alternatives described in the FS, including the preferred alternative for the west parcel, and in the revised alternative for the east parcel presented in the FS Addendum.

GROUNDWATER COMPLIANCE MONITORING

The groundwater compliance monitoring would include the installation of additional groundwater monitoring wells, groundwater monitoring and sample collection at the new wells and at two existing wells, and laboratory analysis of groundwater samples. These elements are described in further detail below.

GROUNDWATER POINT OF COMPLIANCE

The standard point of compliance for groundwater is throughout groundwater at the Property. The proposed conditional point of compliance for groundwater for protection of surface water quality is the property boundary or as close to the property boundary as practicable. For a conditional point of compliance [in accordance with WAC 173-340-720(8)(c, d)], there must be a demonstration that it is not practicable to meet the cleanup levels throughout the site in a reasonable restoration timeframe and that all practicable methods of treatment are to be used in the site cleanup. As described in Section 8.2.2 of the FS report and Section 3.0 of the FS Addendum, the preferred remedial action alternatives for the west and east parcels are permanent to the maximum extent practicable, and meet these two criteria. Therefore, the proposed conditional point of compliance for groundwater is the Property boundary for most of the Property and as close to the Property boundary as practicable in the northeastern portion of the east parcel where the creosote-like material is present along the Property boundary because it is not feasible to install a compliance monitoring well within the creosote-like material.

The attainment of cleanup levels in groundwater would be evaluated at the conditional point of compliance using a network of monitoring wells.

GROUNDWATER MONITORING WELLS

The compliance monitoring would be conducted using existing off-Property wells MW-16D and MW-18D, and up to four additional wells installed at selected locations based on the existing groundwater flow and analytical data with the screened intervals, as shown in Table 1. The selected locations for the proposed compliance monitoring wells are as follows:

- MW-16D and MW-18D: Two existing off-Property monitoring wells located to the north of the east parcel of the Property and hydraulically downgradient of where the creosote-like material is present at the base of the fill material in the northeastern corner of the Property.
- MW-19: A new monitoring well located along the north Property boundary of the west parcel near the eastern extent of the former gasoline station area.
- MW-20: A new monitoring well located along the north Property boundary of the west parcel, near the northwestern corner of the Property adjacent to the former gasoline station area.

- MW-21: A new monitoring well located along the east Property boundary of the east parcel near the southeastern corner of the Property, hydraulically upgradient of the Property and hydraulically downgradient of upgradient off-Property areas with elevated arsenic concentrations in groundwater.
- MW-22: A new monitoring well located along the east Property boundary of the east parcel near the northeastern corner of the Property, hydraulically upgradient of the Property and hydraulically downgradient of upgradient off-Property areas with elevated arsenic concentrations in groundwater.

The proposed locations of off-Property wells MW-16D and MW-18D, and the four selected new monitoring well locations are shown on Figure 3.

The new monitoring wells would be constructed in accordance with Washington State Minimum Standards for Construction and Maintenance of Wells (WAC 173-160). Qualified field personnel would oversee the drilling and well installation activities, and maintain a detailed record of the well construction. The soil encountered during drilling would be field-screened for evidence of contamination, and soil samples would be collected and archived for possible laboratory analysis if evidence of contamination is encountered. All of the new wells would be shallow monitoring wells and would be constructed with 2-inch-diameter, flush-threaded, Schedule 40 polyvinyl chloride (PVC) pipe and 10-foot screens with 0.020-inch machine-slotted casing, and filter pack material consisting of pre-washed, pre-sized number 10/20 silica sand. The well screens would be placed from 5 to 15 feet (ft) below ground surface to intersect the water table. The filter pack would be placed from the bottom of the well to approximately 2 ft above the top of the screen. Filter pack material would be placed slowly and carefully to avoid bridging of material. A bentonite seal would be placed above the filter pack material to within about 3 ft of the ground surface. Grout would be used to backfill the boring to the subgrade for placement of the protective cover. The well installation depths, screen intervals, and sampling parameters are shown in Table 1.

The groundwater monitoring wells would be developed to improve their hydraulic connection with groundwater to obtain representative water samples and water elevations measurements. The wells would be developed at least 24 hours after completion to avoid compromising the surface seal. The wells would be developed by appropriate combinations of surging, bailing, or pumping.

GROUNDWATER MONITORING WELL SAMPLING

The new monitoring wells and existing wells MW-16D and MW-18D would be sampled using a peristaltic pump and single-use polyethylene tubing. Low-flow sampling techniques (EPA/540/S-95/504) would be used. Samples would be collected directly from the sampling equipment into laboratory-supplied containers and stored on ice in a cooler. Groundwater samples collected for metals analysis would be field-filtered using a 0.45-micron inline filter. Groundwater samples collected from monitoring

wells would be designated with the well number (e.g., CMW-19) and the date the sample was collected in month day year format (e.g., CMW-19-072212). The samples would be logged on a chain-of-custody form and submitted to an Ecology-accredited laboratory following proper chain-of-custody protocols. The transportation and handling of samples would be accomplished in a manner that protects the integrity of the samples. Samples would be delivered or sent by courier to the laboratory within 24 hours of sample collection.

Groundwater samples would be submitted to the laboratory and analyzed for the list of constituents shown in Table 1, and by the analytical methods shown in Table 2. These consist of benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8021; gasoline-range total petroleum hydrocarbons (TPH-G) and diesel-range total petroleum hydrocarbons (TPH-D) by Ecology-approved Methods NWTPH-Gx and NWTPH-Dx; polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270 SIM; and dissolved metals (i.e., arsenic, cadmium, chromium, lead, mercury, copper, and zinc) by EPA Method 200.8 except mercury, which would be analyzed by EPA Method 7471.0.

EQUIPMENT DECONTAMINATION AND MANAGEMENT OF INVESTIGATION-DERIVED WASTE

All non-disposable sampling equipment would be decontaminated between uses. Downhole drilling and sampling equipment would be decontaminated between uses at each boring location. Any visible contamination would be removed with paper towels prior to decontamination. Soil and decontamination and purge water generated during the field activities would be contained in labeled drums for storage on site pending the results of the laboratory analysis of the groundwater samples. Soil and water would be disposed of appropriately at a permitted facility based on the analytical results for the groundwater samples and available soil analytical data from previous Property investigations. Disposable equipment and clothing would be disposed of as solid waste.

GROUNDWATER SAMPLING QUALITY ASSURANCE/QUALITY CONTROL

The accuracy of the data would be determined through recovery of spiked surrogates, matrix spikes, duplicates, and spiked laboratory control samples. Control limits for spike recovery would be laboratory acceptance limits generated according to EPA guidelines. Blind field duplicates would be collected at a frequency of 1 per 20 samples, so 1 blind duplicate sample would be submitted per groundwater sampling event. The duplicate would be collected by alternately filling sample containers for the original sample and the corresponding duplicate sample for every container filled to decrease the variability between duplicates. One laboratory-supplied trip blank would also be included with each cooler shipped to the laboratory.

INDOOR AIR MONITORING

Samples of indoor air would be collected for laboratory analysis from the below-ground garage of the proposed building on the east parcel to document indoor air quality and assess the potential for vapor intrusion of contaminants due to the presence of the creosote-like material in the subsurface in the northeastern portion of the east parcel. An initial round of baseline samples would be collected following completion of the construction of the below-ground garage and then samples would be collected for three subsequent quarters for a total of four rounds of monitoring. The analytical results for the indoor air samples would be compared to applicable cleanup levels and the need for mitigation and or additional sampling and analysis would be evaluated. The proposed indoor air sampling methodology is discussed below.

INDOOR AIR SAMPLE COLLECTION AND QUALITY ASSURANCE PROCEDURE

Each round of indoor air sampling would consist of the collection of one 8-hour, time-weighted average (TWA) sample from each of two proposed locations within the below-ground garage area: one sample from the parking area and one sample from an office or other use area within the garage. The TWA samples would be collected using 6-L laboratory-certified evacuated Summa canisters that are integrated passive air samplers. Each Summa canister would be equipped with a pressure gauge and a calibrated critical orifice air flow controller. One location would require a co-locator attachment from the laboratory, so that a duplicate sample can be collected. To sample air from the receptor breathing space, the canister inlet valves would be placed approximately 3 ft above floor surface for an office or other work area location where receptors would typically be seated, and approximately 5 ft above floor surface in the parking area, where receptors would typically be standing. Canisters would be clearly labeled with signs indicating the purpose of the canisters and that the canisters are not to be interfered with or moved.

The TWA Summa canisters would be evacuated to a vacuum pressure of 25 to 30 inches mercury (Hg) by the laboratory prior to sampling in the field, and would be used to collect a sample over an 8-hour period. A final vacuum pressure reading greater than ambient (i.e., zero inches Hg) indicates a valid sample; however, canister closure would be targeted for 5 inches Hg to provide a margin of safety. Canister pressures would be checked within 1 to 2 hours after beginning sampling to evaluate whether the air flow controllers are functioning properly. Observed hourly pressure loss greater than one-eighth of the initial pressure would be considered indicative of a faulty flow controller. Any canisters observed to have a faulty flow controller would be replaced with a backup canister and flow controller.

INDOOR AIR LABORATORY ANALYSIS

Following sample collection, the Summa canisters would be shipped under chain-of-custody protocols to TestAmerica (or to a comparable air specialty laboratory) for analysis for benzene using EPA Method TO-15 low-level analysis. The indoor air analytical results would be compared to the MTCA Method B air cleanup level of 0.32 micrograms per cubic meter.

Following the four rounds of sampling, the data would be evaluated to assess the potential threat to users of the below-ground garage due to vapor intrusion and the need for any further monitoring or mitigation, if warranted. Background sources of benzene are common in indoor air, especially in newly-constructed buildings and parking garages. A detection of benzene above the indoor air cleanup level would not necessarily indicate that vapor intrusion is impacting indoor air. If indoor air cleanup levels are exceeded during more than one consecutive sampling event, mitigation (such as adjusting the ventilation system) or an alternative sampling approach may be initiated (such as performing isotope analysis on sub-slab soil gas and indoor air samples during subsequent indoor air sampling events). The alternative sampling approach would provide additional data to evaluate whether vapor intrusion is resulting in the concentrations observed in the indoor air.

REPORTING

Following completion of groundwater and indoor air monitoring activities, and after receipt from the laboratory, the analytical results would be tabulated and subjected to a quality assurance/quality control review. The findings of the groundwater and indoor air compliance monitoring would be incorporated into compliance reports for submittal to Ecology. The groundwater and indoor air compliance monitoring results would be presented to Ecology in separate compliance reports to allow for the different compliance monitoring schedules.

PROJECT SCHEDULE

The proposed installation and development of the four new monitoring wells would be coordinated with the development schedules for each portion of the Property to avoid having newly installed wells damaged or destroyed during subsequent construction. The initial well installation is anticipated to require about 3 to 4 days in the field. Sampling and analysis of the six monitoring wells is anticipated to require 2 days in the field for each sampling event. Receipt of the analytical results is anticipated approximately 2 weeks after sample submittal, based on a standard turnaround time from the laboratory. Groundwater compliance reports would be submitted to Ecology approximately 6 to 8 weeks following receipt of the final analytical data, according to the schedule presented below.

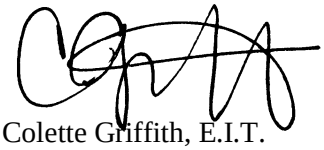
Sampling and analysis of monitoring wells during the first 5 years is anticipated to occur quarterly for the first year and then annually for the next 4 years of monitoring; however, the frequency of monitoring would be determined based on the groundwater analytical results and whether analytes are detected at concentrations greater than the cleanup levels. If a well sample indicates a detected concentration of one or more constituents greater than the respective cleanup level, the well would be re-sampled and the data re-evaluated. If the re-sampling indicates one or more constituents at concentrations greater than the applicable cleanup level, then a remediation contingency plan would be developed and implemented. After 5 consecutive years with no analyte detections greater than the cleanup levels, both the monitoring frequency and the number of sampling locations would be reduced, as appropriate, based on site conditions at the time and upon approval from Ecology. Groundwater compliance monitoring would conclude after 30 years with no analyte detections greater than the cleanup levels. All changes to the groundwater compliance monitoring schedule would be approved in advance by Ecology based on the evaluation of site conditions at the time.

The indoor air sampling would be coordinated with the development schedule for the east parcel. As discussed above, the first indoor air sampling event would take place following completion of the below-ground garage in the building on the east parcel. Samples would be collected from two locations within the basement of the building for four quarters. After four quarters of sampling have been completed, the sample analytical results would be evaluated. If the benzene concentration in one or more of the indoor air samples is greater than the cleanup level for two consecutive rounds, mitigation, additional monitoring, and/or alternative sampling measures would be initiated to address the detected concentrations and evaluate whether the concentrations above the cleanup level are associated with vapor intrusion as described above. If indoor air benzene concentrations are below the cleanup level—or demonstrated to be associated with non-vapor intrusion background sources—the indoor air compliance monitoring would be discontinued following the initial four rounds of sampling. All changes to the indoor air compliance monitoring schedule would be approved in advance by Ecology based on the evaluation of site conditions at that time.

* * * * *

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

LANDAU ASSOCIATES, INC.



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CMG/TLS/ccy

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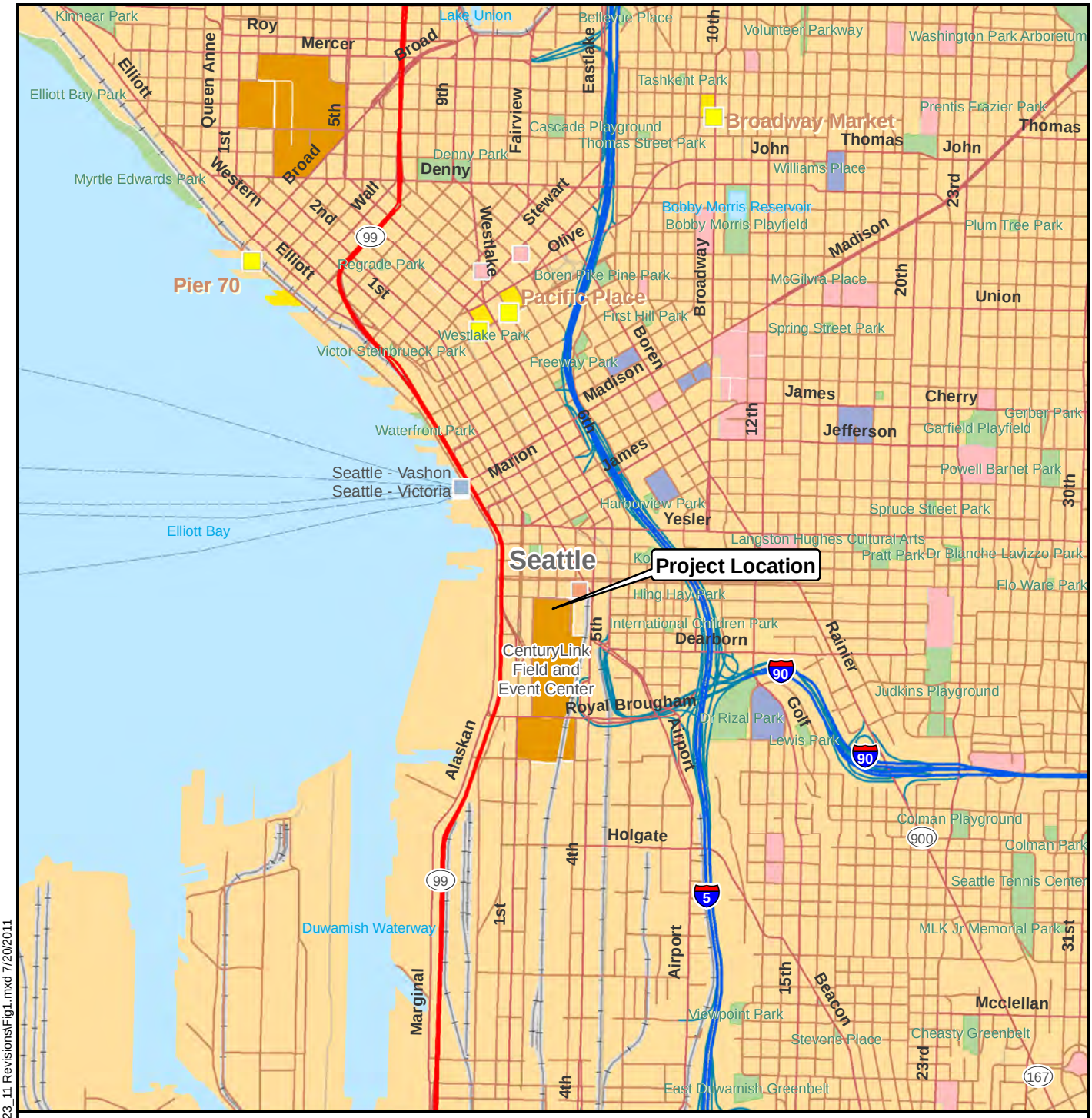

Data Source: ESRI 2008

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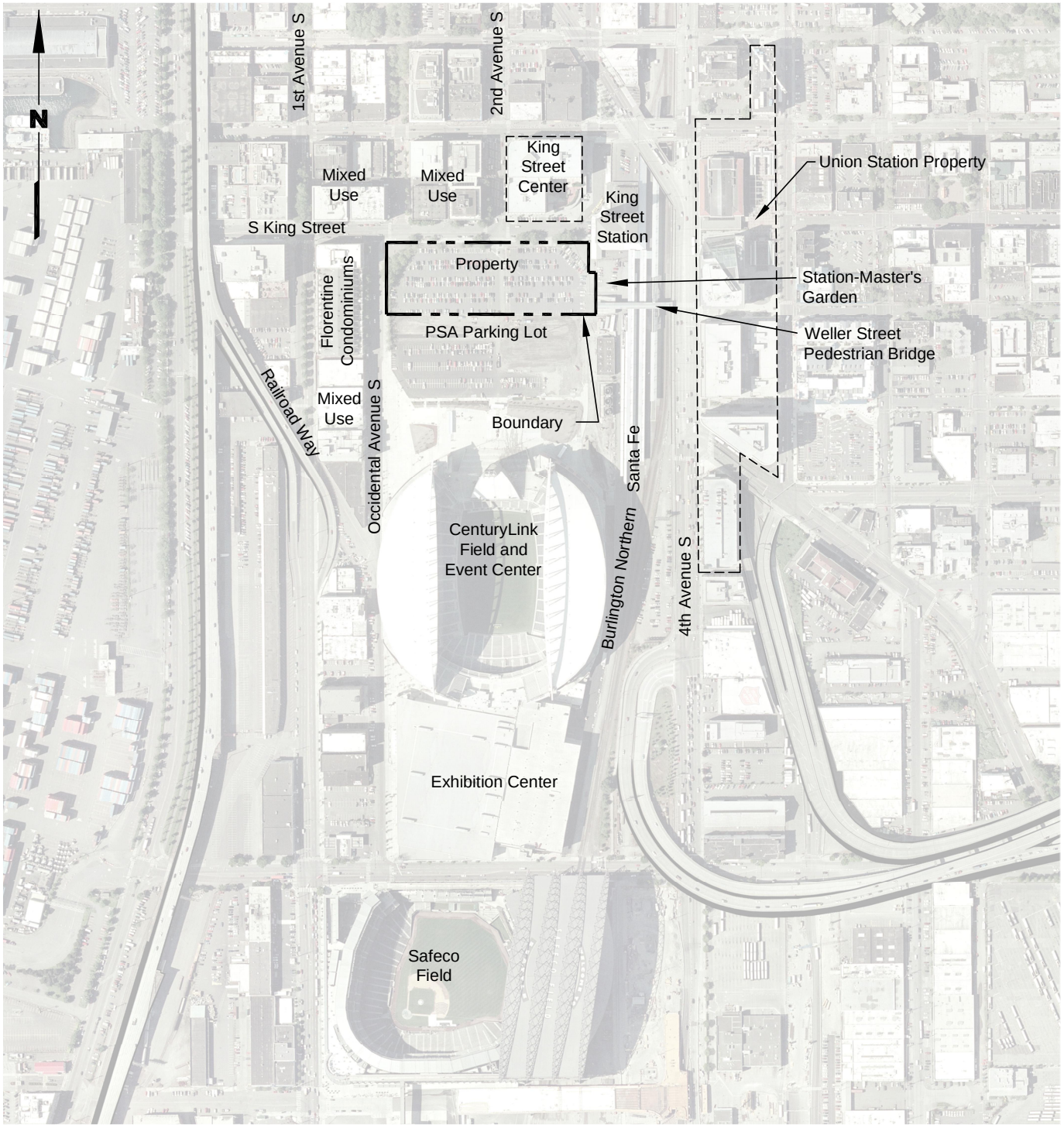
North Lot Development Seattle, Washington	**Vicinity Map**	Figure 1



Qwest Field | V:\1014\050\Conceptual\Figure 2.dwg (A) "Figure 2" 7/20/2011

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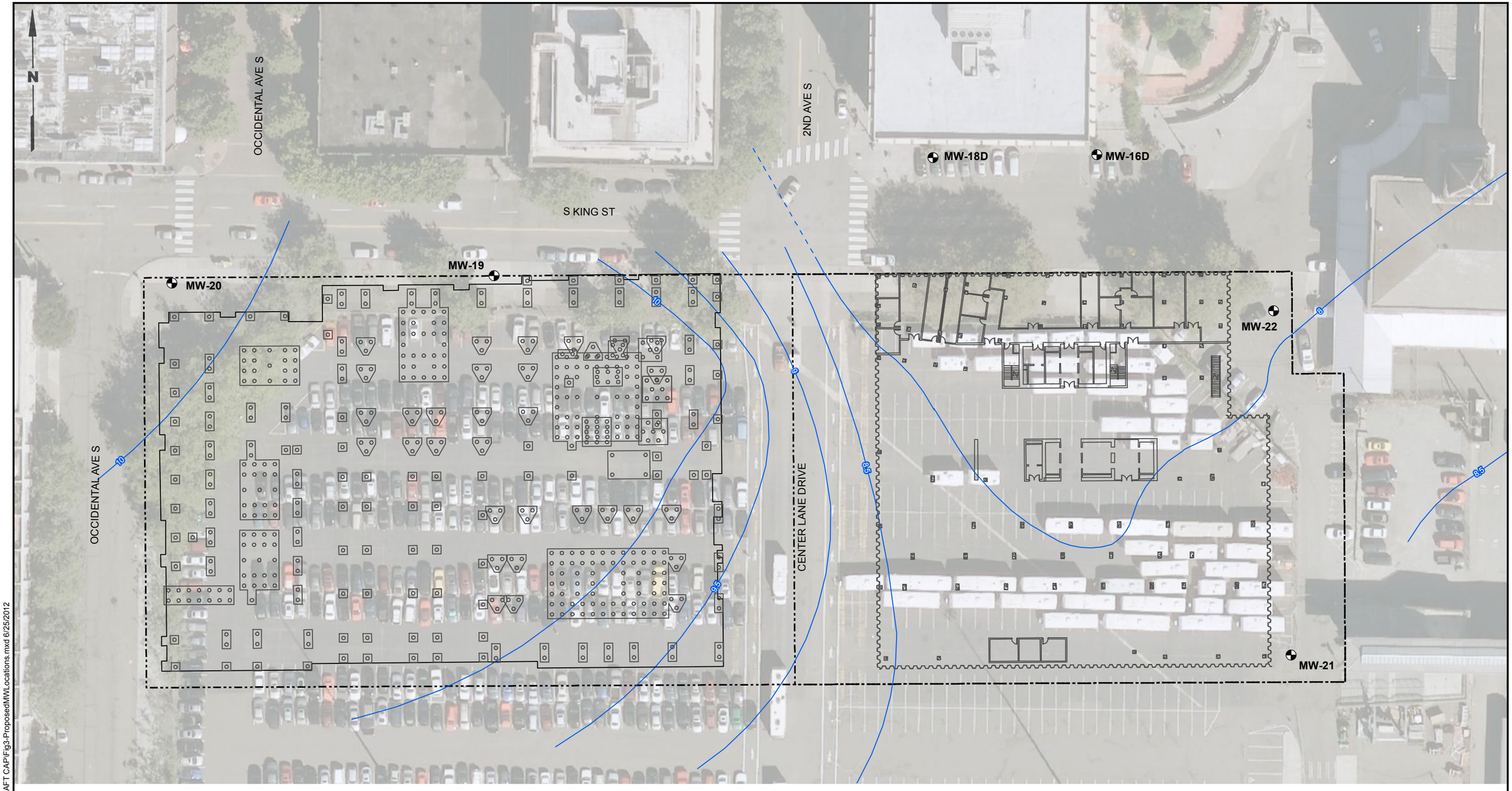
North Lot Development
Seattle, Washington

Property Plan and Surrounding Area

Figure
2



Legend

- Proposed Monitoring Well Location
- Property Boundary
- 9.5 Groundwater Elevation Contour (ft)

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.
2. Building foundation plans from North Lot Development CAD files, dated February 25, 2011.

Data Source: Triad Boundary Survey, King County

0 60 120

Scale in Feet

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North Lot Development Seattle, Washington	**Proposed Compliance Monitoring Well Locations**	Figure 3

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TABLE C-1
SAMPLING LOCATION AND ANALYSIS MATRIX
NORTH LOT DEVELOPMENT - SEATTLE, WASHINGTON

Sample Location	Sample Depth/ Screened Interval	Drilling Method for Well Installation	Constituents for Analysis				
			BTEX (a)	TPH-G (b)	TPH-D (c)	PAHs (d)	Metals (e)
MW-16D (f)	12 to 22 ft	NA	✓	✓	✓	✓	✓
MW-18D (f)	12 to 22 ft	NA	✓	✓	✓	✓	✓
MW-19, -20, -21, and -22	5 to 15 ft	HSA	✓	✓	✓	✓	✓

Notes:

(a) BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
(b) TPH-G = Gasoline-range Petroleum Hydrocarbons
(c) TPH-D = Diesel-range Petroleum Hydrocarbons
(d) PAHs = Polycyclic Aromatic Hydrocarbons
(e) Metals = Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, and Zinc
(f) Existing off-Property monitoring well
NA = Not applicable; well already installed.
HSA = Hollow-Stem Auger

TABLE C-2
ANALYTICAL METHODS
NORTH LOT DEVELOPMENT - SEATTLE, WASHINGTON

Analysis	Medium	Analytical Method	Reporting Limits (a)
Metals (b)	Water	200.8/6010B/7470A	0.02 to 20 µg/L
PAHs (c)	Water	8270D-SIM	1.0 µg/L
TPH-G (d)	Water	NWTPH-Gx	0.25 mg/L
TPH-D (e)	Water	NWTPH-Dx	0.25 mg/L
BTEX (f)	Water	8021	1 µg/L

Notes:

(a) Target reporting limits
(b) Metals = Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, and Zinc
Metals analysis by EPA Method 200.8 (arsenic and lead), EPA Method 6010B (cadmium, chromium, copper, and zince), and EPA Method 7470A (mercury).
(c) PAHs = Polycyclic Aromatic Hydrocarbons
(d) TPH-G = Gasoline-range Petroleum Hydrocarbons
(e) TPH-D = Diesel-range Petroleum Hydrocarbons
(f) BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
µg/L = Micrograms per liter
mg/kg = Milligrams per kilogram

APPENDIX D

Cleanup Action Construction Schedule

TABLE D-1
CLEANUP ACTION CONSTRUCTION SCHEDULE
EAST PARCEL – NORTH LOT PROPERTY
SEATTLE, WASHINGTON

Activity/Area	Description	Duration
EAST PARCEL		
Under Building Footprint	• East block building footprint – Drive sheet piles and mass excavation – Additional excavation for obstructions, utilities, piles, pile caps, elevator pits – Construct concrete barrier	10 months after start of east block construction
Sidewalk Area Outside Building Footprint/ Landscape Scope	• North, West, South Sidewalk – Remove 5 feet of soil in landscape/planter areas o Place barrier at bottom and backfill with clean soil – Construct concrete barrier	24 months after start of construction
Sidewalk Area Outside Building Footprint/ Landscape Scope	• East Sidewalk – Remove 5 feet of soil in landscape/planter areas o Place barrier at bottom and backfill with clean soil – Construct concrete barrier	24 months after start of construction
Private Drive	• East Sidewalk – Remove 5 feet of soil in landscape/planter areas o Place barrier at bottom and backfill with clean soil – Construct concrete barrier	24 months after start of construction
Note: Preparation for construction will include removal of approximately 18 inches of surface material (asphalt, gravel, soil) across the east parcel.		