

September 9, 2020

Ms. Tena Seeds
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington 98008-5452

**RE: RESPONSE TO ECOLOGY COMMENTS ON TECHNICAL MEMORANDUM,
SUPPLEMENTAL SUBSURFACE INVESTIGATION AND FOUNDATION
ELEMENTS
BLOCK 38 WEST SITE
500 THROUGH 536 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON
FARALLON PN: 397-019**

Dear Ms. Seeds:

Farallon Consulting, L.L.C. (Farallon) has prepared this letter on behalf of City Investors IX L.L.C. (City Investors IX) in response to Washington State Department of Ecology (Ecology) comments regarding the proposed supplemental subsurface investigation for the alley east-adjacent to the property at 500 through 536 Westlake Avenue North, Seattle, Washington (Block 38 West Property). The proposed supplemental subsurface investigation and foundation design elements are associated with the redevelopment of the Block 38 West Property and independent interim action being performed under the auspices of Agreed Order No. DE 17963 between Ecology and City Investors IX (AO). The Block 38 West Site as defined under the AO is where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

On August 12, 2020, Ecology provided comments on the Technical Memorandum regarding Supplemental Subsurface Investigation and Foundation Elements, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington dated June 15, 2020 from Ms. Suzy Stumpf and Mr. Clifford T. Schmitt of Farallon to Ms. Tena Seeds of Ecology (Technical Memorandum). Ecology comments were clarified during an August 21, 2020 conference call between Ecology and Farallon. During the call, Ecology clarified that an addendum to the Technical Memorandum was not required, and that preparation of a response table and supporting documentation was sufficient to address Ecology's comments on the proposed scope of work. The following topics were discussed during the conference call:



Ecology-required documentation to support alley improvements associated with redevelopment of the Block 38 West Property. The supplemental subsurface investigation in the alley will be conducted on September 12 and 13, 2020. The laboratory analyses of soil samples collected during the supplemental subsurface investigation will be expedited, and data will be tabulated to support preparation of the necessary document(s) required by the AO to present and obtain Ecology's approval of an interim remedial action for soil associated with the alley improvements for the Block 38 West Property development. City Investors IX and Farallon are working with Ecology regarding the schedule for the necessary document(s).

Evaluation of groundwater conditions in the alley. Ecology agreed that groundwater conditions cannot be evaluated until the construction dewatering system has been shut down and groundwater elevations recover to static conditions. The *Agency Review Draft Remedial Investigation Work Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington* dated July 20, 2020 prepared by Farallon presents the scope of work for evaluating groundwater conditions in the alley for both the Shallow and Intermediate Water-Bearing Zones once static conditions have been attained.

Clarification of constituents of concern and proposed laboratory analyses. Farallon clarified that metals were not constituents of concern for the Block 38 West Site, and were not detected at concentrations exceeding screening levels at the Block 38 West Property. The proposed metals analyses were included as analytes for the alley soil sampling events solely to support the characterization and disposal of investigation-derived waste. Ecology requested that additional select analytes in soil be analyzed to support Ecology's understanding of potential impacts in the alley, and to what extent those impacts will be removed during the alley improvements associated with the Block 38 West Property Improvements. City Investors will be glad to include the requested analytes in order to assist Ecology, but reiterates that these metals are not constituents of concern for the Block 38 West Site and appear to be associated with fill material brought to the alley decades before City Investors or its affiliate had any ownership interest in either Block 38 East or Block 38 West.

SUPPORTING DOCUMENTATION

The following documentation is being submitted in support of the response to Ecology comments:

- Attachment A, *Block 38 West Site, Seattle WA, Agency Review Comments* dated August 12, 2020 containing City Investors IX and Farallon Response to Comments dated September 2, 2020.
- Attachment B, Figures 3, 19, 20, and 22 through 24 from the *Agency Review Draft Remedial Investigation Work Plan, Block 38 West Property, 500 through 536 Westlake Avenue, Seattle, Washington* dated July 20, 2020 prepared by Farallon.
- Attachment C, updated Figure 1 and Table 1 from Attachment A, Sampling and Analysis Plan (SAP), of the Technical Memorandum, and new SAP Table 1A, *Proposed Analyte List*, to provide additional detail for proposed soil analyses for each boring by elevation.



CLOSING

Please contact the undersigned at (425) 295-0800 if you have questions or need additional information.

Sincerely,

Farallon Consulting, L.L.C.

A handwritten signature in blue ink, appearing to read "Suzy Stumpf".

Suzy Stumpf, P.E.
Senior Design Engineer

cc: Bob Warren and Tamara Cardona, Washington State Department of Ecology

Attachments: Attachment A, Agency Review Comments
Attachment B, Figures from RI Work Plan
Attachment C, Figure and Table from SAP

SES:bjj

ATTACHMENT A
AGENCY REVIEW COMMENTS

RESPONSE TO ECOLOGY COMMENTS
Block 38 West Site
Seattle, Washington

Farallon PN: 397-019

Attachment A**Block 38 West Site, Seattle, WA****Agency Review Comments****Document:** Technical Memorandum: *Supplemental Subsurface Investigation and Foundation Elements* (Farallon, June 15, 2020)**Comment Date:** August 12, 2020**Response Comments Date:** September 2, 2020

Section and Paragraph	Page No.	Review Comment	Response to Comments
Intro, 2 nd paragraph	2	Regarding the scope of work for the alley, any cleanup in the alley will be considered part of the final cleanup action for the Site or it can be a separate interim action under the Agreed Order - see Section VII, Part E. Either way, a work plan will need to be prepared that will be subject to public review and comment prior to Ecology approval and performance of the cleanup work.	During a conference call on August 21, 2020, Ecology and Farallon discussed the schedule challenges of completing an interim action workplan with a public comment period prior to the development work planned in the alley in January 2021. City Investors IX plans to prepare the necessary document(s) required by the AO to implement and document the interim remedial action to be performed in connection with the alley improvements for the Block 38 West Site.
Intro, 2 nd paragraph	2	The last sentence is confusing. Assuming you mean that the proposed soil borings in the alley will also be included as part of the RI; they won't be part of the proposed RI Work Plan scope of work as they will already be done.	The proposed borings are part of the independent interim action scope of work and the results will be incorporated into the remedial investigation for the Block 38 West Site.
Block 38 West Property Description, 2 nd paragraph	2	A description of the ground surface elevation at/surrounding the Block 38 West property and adjacent alley is needed for reference when discussing elevations of planned structures, etc. A cross-section illustrating this would also be helpful.	Street elevations adjacent to the Block 38 West Property vary from an approximate elevation of 41 feet North American Vertical Datum of 1988 (NAVD88) on Republican Street adjoining the southern portion of the Block 38 West Property to an approximate elevation of 31 feet NAVD88 on Mercer Street adjoining the northern portion of the Block 38 West Property. The alley bisecting Block 38 is accessed from Mercer Street and descends from street level to an approximate elevation of 25 feet NAVD88. These elevations can be seen in Attachment B which provides elevation contours, Figure 3 and existing cross-sections C-C' and D-D' that extend east of the Block 38 West Property into the alley, which are presented in Figures 19 and 20 from the Agency Review Draft Remedial Investigation (RI) Work Plan.
Background, 3 rd paragraph	3	By reviewing the proposed work in this plan, Ecology is not approving the estimated extent of contamination shown in the figures nor any other statement defining the extent of the contamination. Ecology is strictly reviewing the proposed locations of the borings in the alley; not the additional data interpretation that will ultimately belong in the remedial investigation.	Comment noted.

Attachment A

Block 38 West Site, Seattle, WA

Agency Review Comments

Document: Technical Memorandum: *Supplemental Subsurface Investigation and Foundation Elements* (Farallon, June 15, 2020)

Comment Date: August 12, 2020

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Section and Paragraph	Page No.	Review Comment	Response to Comments
Background, 3 rd paragraph	3	Why are groundwater measurements and groundwater sampling analytical results left out of this memo? Shallow groundwater conditions are relevant to the shallow soil conditions at the Site.	As discussed on Farallon’s call with Ecology on August 21, 2020, shallow groundwater is not present at this time due to construction dewatering associated with the independent interim action and will not return to static levels prior to the proposed interim remedial action in the alley. Shallow Water-Bearing Zone conditions will be evaluated as part of the remedial investigation for the Block 38 West Site as described in the Agency Review Draft RI Work Plan. Attachment B, Figure 24 from the Agency Review Draft RI Work Plan shows the proposed locations of monitoring wells in the Shallow Water-Bearing Zone. Shallow groundwater conditions will be evaluated upon completion of the independent interim action and shut down of the construction dewatering system.
Background, 3 rd paragraph	3	The potential use of MTCA Method B levels as screening levels (SLs) will be protective of which pathway? Some compounds have multiple Method B cleanup levels associated with them. Explain which ones you would choose and why.	MTCA Method A cleanup levels are being used as screening levels for COCs identified in soil at the Block 38 site as they are common petroleum compounds: GRO, DRO, ORO, benzene, total naphthalenes and cPAHs. For those petroleum-related compounds and other constituents for which a MTCA Method A cleanup level is not available, a Method B screening level for soil protective of direct contact is planned to be used as none of these chemicals have been detected in groundwater at concentrations exceeding MTCA Method B groundwater cleanup levels (i.e., Method B soil screening levels protective of groundwater are not applicable based on empirical evidence). Upon completion of the remedial investigation the proposed cleanup levels will be developed for the Block 38 West Site.
Background, 3 rd paragraph	3	Ecology should not have to request the laboratory analytical reports. They should be provided to Ecology as soon as the data are validated.	Validated data will be provided within 60 days after completion of the alley subsurface investigation field activities as required by the AO. As discussed with Ecology on August 21, 2020, draft laboratory reports can be provided to Ecology to support their review and the project schedule.

Attachment A**Block 38 West Site, Seattle, WA****Agency Review Comments****Document:** Technical Memorandum: *Supplemental Subsurface Investigation and Foundation Elements* (Farallon, June 15, 2020)**Comment Date:** August 12, 2020**Response Comments Date:** September 2, 2020

Section and Paragraph	Page No.	Review Comment	Response to Comments
Soil, 1 st paragraph	3	Figures 4 through 9 include other data outside of the eastern sidewall of the Block 38 West excavation, the alley, and the western sidewall of the Block 38 East excavation. Please note that, through this review, Ecology is not evaluating the sufficiency of that data for the purpose of a remedial investigation.	Comment noted.
Soil, 2 nd paragraph	3	What is the approximate depth interval (ft bgs, relative to the alley) for the soil impacts at the eastern sidewall of the Block 38 West excavation? This would be helpful to have in addition to the elevation information for reference purposes.	Tables 1 through 3 provide both depth below ground surface and elevation for soil samples collected from the eastern sidewall of the Block 38 West Property and in the alley. Assuming an approximate surface elevation of 26 to 23 feet NAVD88 from north to central portion of alley, soil impacts were detected from 2 to 10 feet bgs. Attachment B provides existing cross-sections C-C' and D-D', Figures 19 and 20 from the Agency Review Draft RI Work Plan for reference.
Soil, 2 nd paragraph	3, 4	In addition to the DRO, ORO, and cPAHs exceeding screening levels in the alley, GRO also exceeded at location PH-12. What is the approximate depth below ground surface at the soil exceedance locations in the alley? Cadmium also exceeded at some locations in the western sidewall samples at Block 38 East.	<p>Alley: GRO, DRO, ORO and cPAHs exceeding soil screening levels in the alley are 3 to 4 feet bgs. Vertical limits of petroleum hydrocarbons adjacent to location PH-12 have not been defined and further characterization of GRO impacts at this location is part of the proposed scope.</p> <p>Block 38 East Property: Cadmium is not a COC for the Block 38 West Property and was not detected at concentrations above the laboratory practical quantitation limits during previous investigations conducted on the Block 38 West Property. Block 38 East Property soil laboratory analytical results detected cadmium at concentrations exceeding the cleanup level for the Block 38 East Site at one test pit location in the alley west of EX-19-W5 and location P-4 adjacent to the west sidewall was removed during the cleanup action.</p>
Soil, 3 rd paragraph	4	I am not sure there is sufficient information to determine the extent of contamination. Make it clear that "available information" regarding the extent and characterization of COCs in soil will be provided in the RI Work Plan.	Comment noted. City Investors IX understands that Ecology will review the conceptual site model and associated data presented in the Agency Review Draft RI Work Plan.

Attachment A**Block 38 West Site, Seattle, WA****Agency Review Comments****Document:** Technical Memorandum: *Supplemental Subsurface Investigation and Foundation Elements* (Farallon, June 15, 2020)**Comment Date:** August 12, 2020**Response Comments Date:** September 2, 2020

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Groundwater, 1 st sentence	4	It would be helpful to have a brief recap of groundwater occurrence included for reference so that I don't have to go digging for it in a previous document. Please include in future documents where this information is relevant.	The information regarding the occurrence of groundwater will be provided in future documents for ease of reference.
Conceptual Site Model Summary	4	This is not a CSM Summary and the title of this section is misleading. The CSM should include info on sources and releases, fate and transport, potential exposure pathways and receptors, and other pertinent info regarding land uses/zoning, other site specific concerns, etc. Either that information should be added, or this section should be taken out or called something else ("Summary of Known Conditions"?).	Comment noted. As discussed with Ecology on August 21, 2020 a revised Technical Memorandum is not required.
Conceptual Site Model Summary, 1 st paragraph	5	What are the approximate elevations and corresponding depths below the alley ground surface for the 5- to 10-foot-thick zone of impacted soil? When was the contaminated soil removed from the Block 38 East and West properties?	Approximate elevations 25-15 feet NAVD88. The excavation associated with the independent interim action on the Block 38 West Property occurred from February to June 2020. The excavation associated with the cleanup action on the Block 38 East Property occurred in 2008.
Conceptual Site Model Summary, 4 th paragraph	5	COCs are listed for soil. What about COCs for groundwater?	Collection of shallow groundwater is not feasible at this time due to construction dewatering associated with the independent interim action. Therefore, COCs for groundwater were not presented under this scope of work, but are provided in the Agency Review Draft RI Work Plan.
Data Gap Specific to Proposed Subsurface Investigation, 1 st paragraph	5	I disagree with your interpretation of contamination extents along the Block 38 West eastern sidewall and Block 38 East western sidewall, based on the following: <ul style="list-style-type: none"> Neither G4-ESW nor L4-ESW were sampled at the 20' elevation, so these locations are not appropriate for defining the southern and northern extents of ORO and cPAHs. Based on the data, location H4-ESW2 is more appropriate for defining the southern extent of ORO at the 20' elevation along the B38W sidewall since it is less than the screening level there, and location M4-ESW would be more appropriate to define the northern extent of ORO at the 20' elevation along the sidewall since it is ND. 	Block 38 West Property <ul style="list-style-type: none"> ORO - Agreed that H4-ESW2 and M4-ESW can be used to define the southern and northern extent, respectively, of soil with detected concentrations of ORO exceeding the screening level at elevation 20 feet NAVD88 on the eastern sidewall of the Block 38 West Property. cPAHs – Agreed that D4-ESW and M4-ESW can be used to define the southern and northern extent, respectively, of soil with detected concentrations of cPAHs exceeding the screening level at elevation 20 feet NAVD88 on the eastern sidewall of the Block 38 West Property.

Attachment A

Block 38 West Site, Seattle, WA

Agency Review Comments

Document: Technical Memorandum: *Supplemental Subsurface Investigation and Foundation Elements* (Farallon, June 15, 2020)

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		<ul style="list-style-type: none"> For cPAHs, since E4-ESW, F4-ESW, and G4-ESW were not analyzed at the 20' elevation (and H4-ESW2 exceeded the SL), location D4-ESW would be more appropriate to define the southern extent of cPAHs at/near the impacted 20' elevation along the sidewall since the concentration there was less than the SL at the 19' elevation. To define the northern extent for cPAHs along the B38W sidewall, M4-ESW would be more appropriate since the concentration there at 20' was less than the SL. ORO is only defined along the northern portion of the Block 38 East boundary. Unfortunately, there are no ORO data for the central and southern sample locations on the Block 38 East sidewall, so ORO at the impacted elevation in that area is unknown. cPAHs appear to be better defined. <p>While I agree with the proposed alley investigation locations in this memo, your interpretation of the contaminant extents along the east and west sidewalls of the two excavations needs more clarification.</p>	<p>Block 38 East Property</p> <ul style="list-style-type: none"> Due to utilities and structural limitations it is not likely feasible to evaluate conditions along the western sidewall of the Block 38 East Property during the proposed activities in the alley. Additional information regarding access and limitations in the alley will be developed with the necessary document(s) required by the AO to implement and document the interim remedial action to be performed in connection with the alley improvements for the Block 38 West Site. During a conference call on August 21, 2020, Ecology and Farallon discussed the fact that metals are not COCs for the Block 38 West Property and Site. Metals analyses will support waste characterization for disposal purposes. However, based on Ecology's request, additional select analytes in soil will be analyzed to support Ecology's understanding of potential impacts in the alley and to what extent those impacts will be removed by the alley improvements associated with the Block 38 West Property construction project.
Data Gap Specific to..., 2 nd paragraph	5	Interpretation of data gaps regarding the lateral extents of contaminants within the alley to the east and west needs additional clarification. The eastern and western edges of the south half of the alley are not defined for DRO and ORO (nor GRO in the area around PH-12) due to lack of petroleum data from the sidewalls of the two property excavations.	GRO, DRO and ORO impacts at PH-12 are not defined vertically but are defined at approximate elevation 21 to 20 feet NAVD88 to the north by H4-ESW2, to the east/northeast by PH-13 and to the south by PH-11A. Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.
Data Gap Specific to..., 3 rd paragraph	5	What elevation(s) define the top of the wood waste layer? Was that 22' to 18.5' (i.e., 1 foot above the excavated depth of the impacted soil)?	Correct, based on the <i>Cleanup Action Report, Interurban Exchange 2</i> dated October 28, 2008 for the Block 38 East Property.
Supplemental Subsurface Investigation, 1 st paragraph	6	What are the approximate elevations of the 5- to 10-foot thick zone of impacted soil extending across the alley? Is it at ~25 to 15 ft NAVD88? A cross section would be useful to illustrate this zone.	Correct, approximately 25 to 15 feet NAVD88. Attachment B provides existing cross-sections C-C' and D-D', and Figures 19 and 20 from the Agency Review Draft RI Work Plan are

Attachment A

Block 38 West Site, Seattle, WA

Agency Review Comments

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			provided for reference. The cross sections extend east of the Block 38 West Property into the alley.
Supplemental Subsurface Investigation, 2 nd paragraph	6	<p>This is the first mention of metals-impacted soil that needs to be investigated. Metals weren't discussed in the data gaps section and should have been included on a figure.</p> <p>According to the data in Table 3, the elevated metals concentrations were generally at elevation 22', and concentrations were below the screening levels at elevation 20' and lower. Similar conditions observed for other COCs. During the alley supplemental investigation, you should also sample and analyze soil at the 22'-23' elevation as well as the 20' and deeper elevations.</p>	<p>During a conference call on August 21, 2020, Ecology and Farallon discussed the fact that metals are not COCs for the Block 38 West Site. Metals analyses will support waste characterization for disposal purposes.</p> <p>However, based on Ecology's request, additional select analytes in soil will be analyzed to support Ecology's understanding of potential impacts in the alley and to what extent those impacts will be removed by the alley improvements associated with the Block 38 West Property construction project.</p>
Supplemental Subsurface Investigation, 4 th paragraph	6	The use of "potential" regarding lab analysis of the soil samples to be collected is vague and implies that some may not be analyzed for certain compounds. All of the samples from each of the proposed elevations and from a shallower elevation (~22-23 ft) should be analyzed for all of the analytes listed here. If there are any that would potentially not be analyzed, please provide explanation and justification for that.	Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.
Supplemental Subsurface Investigation, 5 th paragraph	6	Please explain what are the steps if the limits of the contamination cannot be defined (mostly vertically) with this work. Would there be additional actions?	The vertical extent of COCs (ORO and cPAHs) impacts in soil at the eastern sidewall of the Block 38 West Property was defined at elevation 15 feet NAVD88. Although not anticipated based on the thickness of the soil fill layer observed on the Block 38 West Property if COCs are detected in soil at concentrations exceeding the screening levels at the maximum depth explored then additional investigation will be required to define the extent of COC contamination in the alley. The monitoring wells proposed in the alley under the remedial investigation would provide an opportunity to collect deeper soil samples when they are installed.
Building Foundation Elements	7	Drago Wrap specifications indicate that it protects against VI. However, the attached design figures indicate that the area covered by the Drago Wrap is not "all encompassing". Please demonstrate with a figure the extent covered by the Drago Wrap, or the updated	The building design was revised to wrap or encompass the entire building foundation with the Drago Wrap. Attachment B provides the vertical and lateral extent of the Drago Wrap vapor barrier, Figure 22 from the Agency Review Draft RI Work Plan.

Attachment A

Block 38 West Site, Seattle, WA

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		membrane, if that is the case. We can't give approval of this work plan until we receive an updated figure showing that.	
Building Foundation Elements	3	While the Hycrete 1000 System may be suitable as a water vapor barrier, I don't believe there are specifications that qualify it as a chemical vapor barrier. If this is to be used as a barrier to prevent intrusion of VOC vapors, you will need to provide Ecology with the manufacturer's chemical vapor resistance specifications for this product to demonstrate that it is protective.	Please see comment above. Based on correspondence with the manufacturer the building design was revised to include a vapor barrier around the entire building foundation, including both horizontal and vertical foundation elements.
Figure 9 (cPAHs in soil)		I disagree with the inferred extent of cPAHs that had exceeded the SL on the Block 38 West property. Conditions in the area between FMW-130 and the eastern property boundary are unknown with respect to cPAHs at the impacted elevation of ~20-ft NAVD88. Soil from this area (including the sidewalls) was not analyzed for cPAHs at elevations shallower than 15 ft NAVD88. Can you provide more information to justify the cPAH boundary that is shown?	City Investors is amenable to updating the extent of the cPAH impacts east to sidewall sample, D4-ESW.
Table 1 (soil analytical for TPH, BTEX)		DRO and ORO should be combined for a single value to compare to the screening level for this project. For this and future documents, please add a column for DRO+ORO.	Future soil analytical tables will include a column for DRO+ORO.
Attachment A – Sampling and Analysis Plan Comments			
Section 1.1, 3 rd bullet	1-1	No wells are included in the proposed scope for this work plan.	Typo. No monitoring wells are proposed for this scope of work.
Section 2.1, 4 th bullet	2-1	In addition to collecting samples from elevations of 20, 15, and 10 ft NAVD88, please also collect samples from the ~22-23 ft elevation for lab analysis, to be in the zone consistent with previously detected exceedances	A sample depth of 22.5 ft elevation was added to the 4 th bullet based on previously detected cPAH TEC exceedances observed in this interval. Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.
Section 3.1, 2 nd paragraph	3-1	Same comment as above – include samples from ~22-23 ft elevation	Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.
Section 3.1, 3 rd paragraph	3-1	Samples for volatile analysis should be sampled in accordance with EPA Method 5035A. It is not clear in this document (nor in the	A sentence was added to the 3 rd paragraph stating that soil for volatile analysis will be collected in accordance with EPA Method

Attachment A**Block 38 West Site, Seattle, WA****Agency Review Comments****Document:** Technical Memorandum: *Supplemental Subsurface Investigation and Foundation Elements* (Farallon, June 15, 2020)**Comment Date:** August 12, 2020**Response Comments Date:** September 2, 2020

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		attached SOPs) that the proposed samples for volatile analyses will be collected as such.	5035A. SOP SL-01 provides procedures for sampling volatile organic compounds as outlined on page 2 (PDF page 75), 1 st sub-bullet, and on page 4 (PDF page 77), 8 th main bullet.
Section 5.1, 1 st paragraph	5-1	This scope indicates that the soil samples “may” be analyzed for “one or more” of the analytes listed. Based on the data gaps identified, all proposed samples from the 20-, 15-, and 10-ft elevations should be analyzed for all of the analytes listed here. In addition, and as noted in previous comments, shallower samples from all of the proposed locations from ~22-23 ft elevation should also be analyzed for all analytes listed.	Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.
Section 5.1, 1 st paragraph, 1 st bullet	5-1	Do you mean 8021B for the BTEX analysis? I don’t believe there is a 8021D.	The method was corrected to 8021B.
Section 5.1, 1 st paragraph, 5 th bullet	5-1	What metals are included in the MTCA metals? Also, there are references to EPA 6010 and EPA 7471B in the SAP tables. Those should be included as potential methods used for metals analysis.	MTCA metals include arsenic, cadmium, total chromium, lead, and mercury. The metals method of 200.8 specified in the 5 th bullet has been deleted as it is the method for analyzing metals in waters and EPA Methods 6010D and 7471B were added.
Section 8.1, 2 nd paragraph	8-1	Why “potential” analysis? Explain why any of the samples would not be analyzed.	Potential analysis refers to selection of analytes for each boring location based on the existing data set and not analyzing all of the Block 38 West Site COCs for soil for every sample location and interval. Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.
Table 1		This table is too vague regarding scope and rationale. It should list the proposed locations and provide justification for each of the samples being analyzed and their proposed analyses; be more specific in the rationale for each sample location, depth, and corresponding analyses (e.g., “to delineate southern and vertical extent of cPAHs”, to delineate western extent of lead at the 22-ft elevation near previous sample location XX”).	Please see Attachment C, Revised Figure 1 and Table 1 from the Sampling and Analysis Plan. Each proposed boring has been numbered, sample collection intervals refined and the proposed analytes for each boring provided for review.

Attachment A

Block 38 West Site, Seattle, WA

Agency Review Comments

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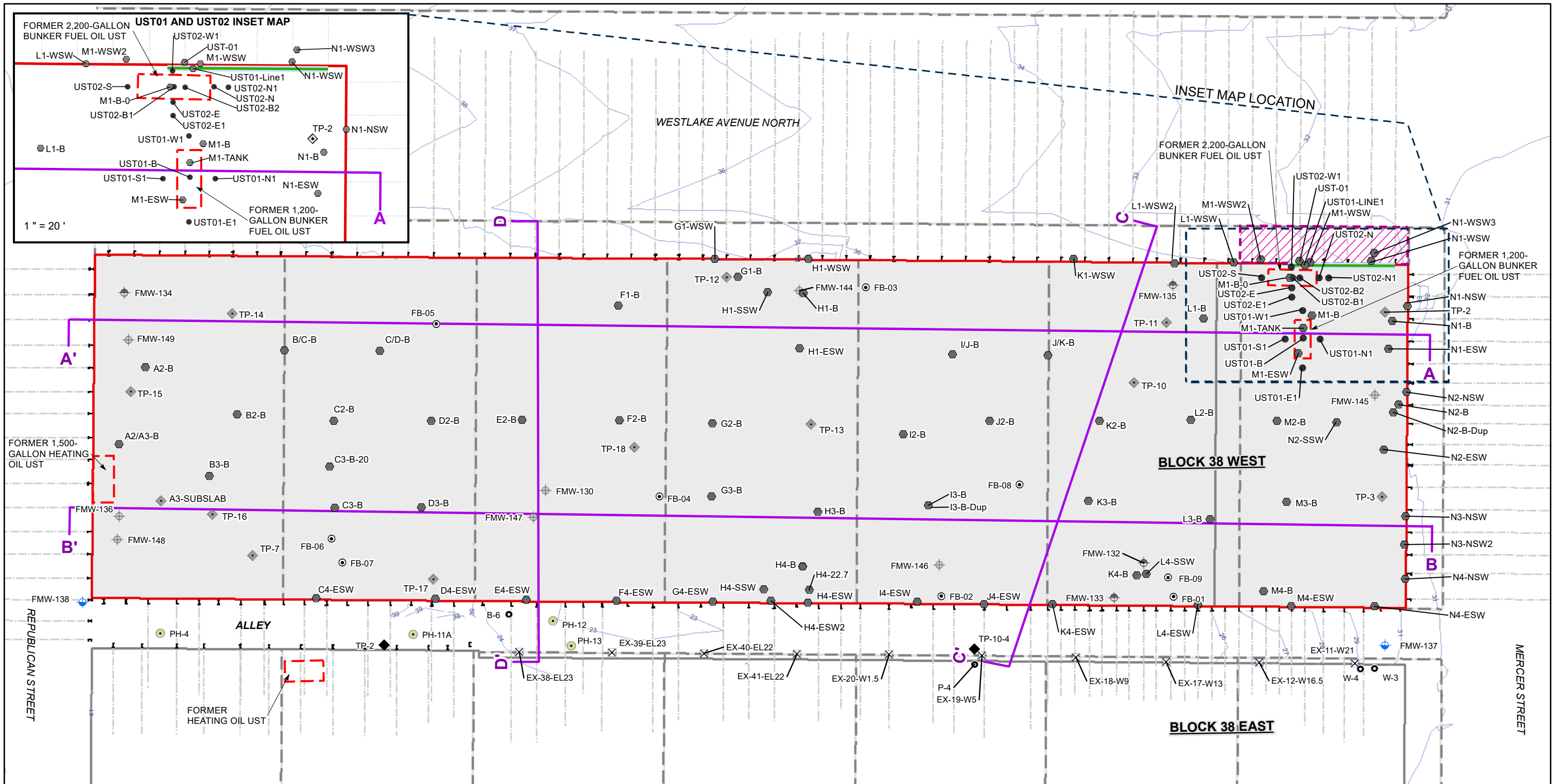
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		It is not clear whether all of the proposed samples will be analyzed for all analytes or if some will not be analyzed for certain ones. If you are proposing that some won't be analyzed for certain compounds, you need to identify which samples those are and justify why certain analytes would or would not be analyzed.	
Table 1		Regarding the analytes and methods listed: GRO analytical method is listed as NWTPH-Dx; should be NWTPH-Gx. List out the metals included in MTCA metals – are they the five metals listed in Table 2? Also include the other possible analytical methods for metals that are indicated in Table 3.	The GRO analytical method has been corrected in Table 1 to NWTPH-Gx (Attachment C). The metals have been listed out in Table 1 (arsenic, cadmium, total chromium, lead, and mercury) and the EPA Method revised to 6010D/7471B instead of the waters Method 200.8 (Attachment C)
Appendix A – SOP SL-01, Sample Collection and Processing, 9 th bullet	4	The language is too vague regarding when to use EPA Method 5035A. The sampling procedure for collecting VOC soil samples for the investigation scope in this work plan should be clearer about using EPA Method 5035A.	Soil for volatile analysis will be collected in accordance with EPA Method 5035A.

ATTACHMENT B
FIGURES FROM RI WORK PLAN

RESPONSE TO ECOLOGY COMMENTS
Block 38 West Site
Seattle, Washington

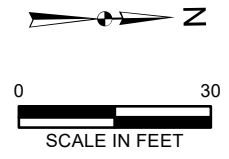
Farallon PN: 397-019



- LEGEND**
- DEEP OUTWASH AQUIFER
 - ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
 - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
 - ⊙ BORING (FARALLON)
 - BORING (GEOENGINEERS)
 - ⊗ EXCAVATION BORING (FARALLON)
 - ◆ TEST PIT (GEOENGINEERS)
 - POT HOLE (FARALLON)
 - UST SAMPLE LOCATION (FARALLON)
 - EXCAVATION SAMPLE LOCATION (FARALLON)
 - ◆ TEST PIT (FARALLON)

- PIPING DISCOVERED IN SIDEWALL WITH SIGNS OF LEAKING PRODUCT AND IMPACTED SOIL BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- KING COUNTY PARCELS
- LOT LINE
- LINE OF CROSS SECTION
- PILE
- TIEBACK

CDF = CONTROLLED DENSITY FILL
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Baker City

California
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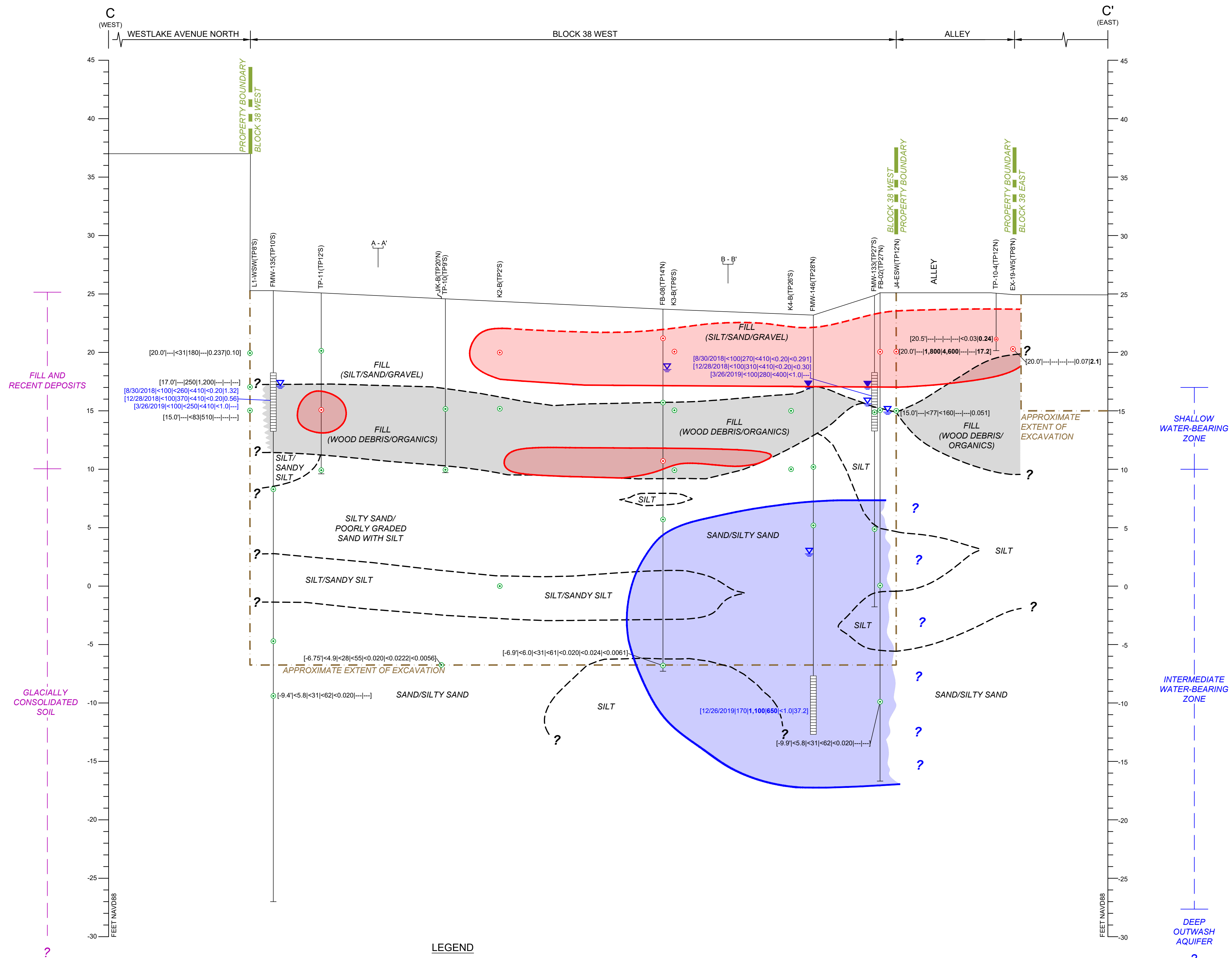
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NOTES:
 1. ALL LOCATIONS ARE APPROXIMATE.
 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

FIGURE 3
 SITE PLAN AND SOIL SAMPLE LOCATIONS
 BLOCK 38 WEST SITE
 SEATTLE, WASHINGTON

FARALLON PN: 397-019



FILL AND RECENT DEPOSITS

GLACIALLY CONSOLIDATED SOIL

SHALLOW WATER-BEARING ZONE

INTERMEDIATE WATER-BEARING ZONE

DEEP OUTWASH AQUIFER

LEGEND

- BORING OR MONITORING WELL LOCATION TRANSPOSED (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE
- INDICATES CONCENTRATIONS OF ONE OR MORE COC EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS
- INDICATES CONCENTRATIONS OF COCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- STATIC GROUNDWATER ELEVATION (12/31/2019)
- GROUNDWATER ELEVATION AT TIME OF DRILLING
- WELL SCREEN INTERVAL

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

[12/26/2019]170[1,100]650[<1.0]37.2 GROUNDWATER ANALYTICAL RESULT [DATE SAMPLED]GRO[RO]RO[BENZENE]TOTAL NAPHTHALENES

ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SOIL ANALYTICAL RESULT [ELEVATION IN FEET NAVD88]GRO[RO]RO[BENZENE]TOTAL NAPHTHALENES[PAH TEC]

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

DRO = TPH AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE

gPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

BOLD = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVELS (MTCA METHOD A CLEANUP LEVELS)

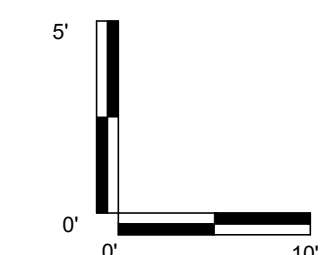
--- = SAMPLE NOT ANALYZED FOR CONSTITUENT

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

COC = CONSTITUENT OF CONCERN

- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER
- ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS



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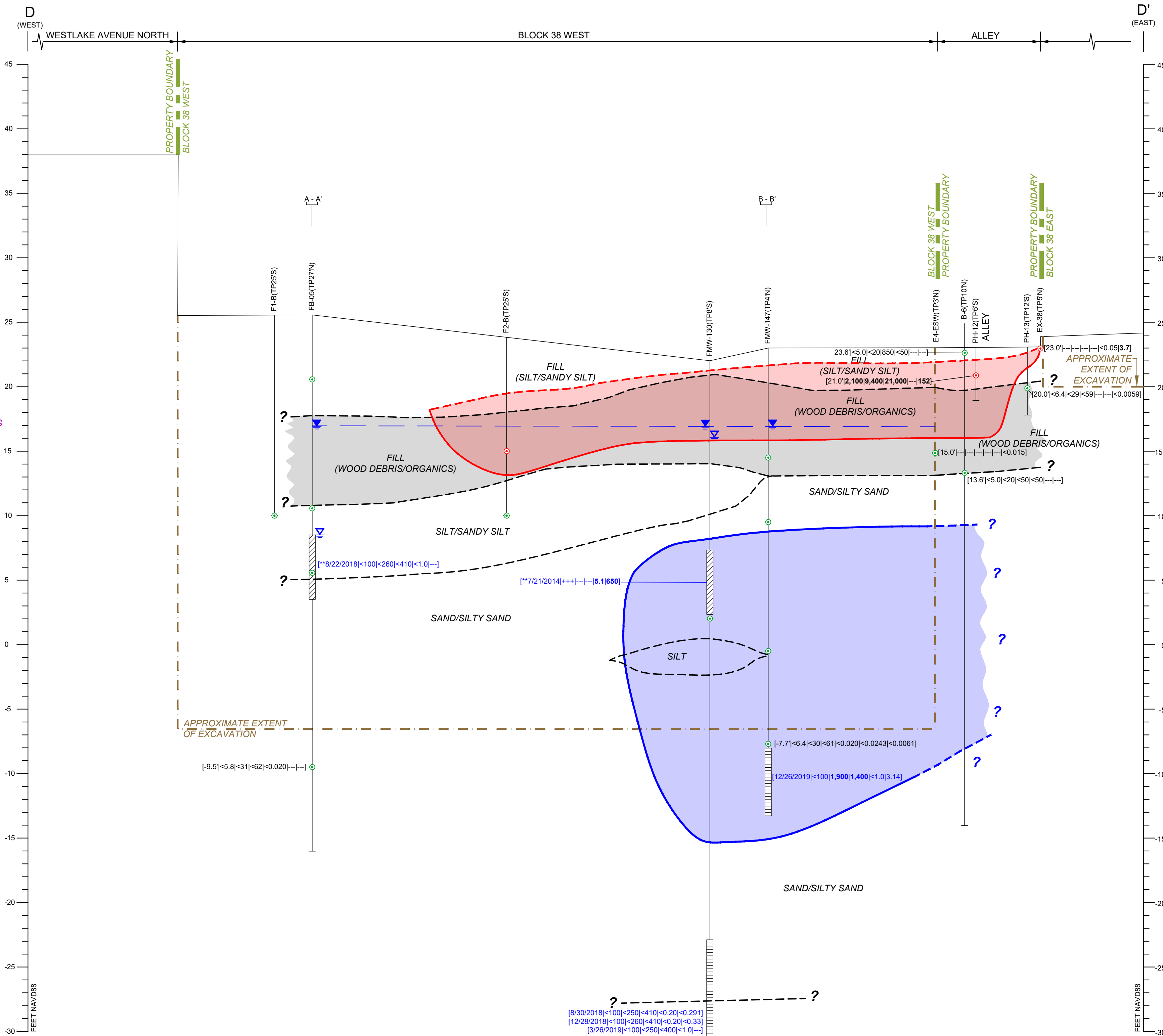
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FIGURE 19

CROSS SECTION C-C'
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON

FARALLON PN:397-019

Drawn By: NM Checked By: CS Date: 6/23/2020



FILL AND RECENT DEPOSITS

GLACIALLY CONSOLIDATED SOIL

SHALLOW WATER-BEARING ZONE

INTERMEDIATE WATER-BEARING ZONE

DEEP OUTWASH AQUIFER

LEGEND

- ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)
- GROUNDWATER ANALYTICAL RESULT [DATE SAMPLED][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES]
- DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER
- ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
- GRO REPORTED AT CONCENTRATION OF 2,100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION WAS NOT SIMILAR TO A TYPICAL GAS
- SOIL ANALYTICAL RESULT [ELEVATION IN FEET NAVD88][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES][cPAH TEC]
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
- DRO = TPH AS DIESEL-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE
- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION
- BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVELS (MTC METHOD A CLEANUP LEVELS)
- = SAMPLE NOT ANALYZED FOR CONSTITUENT
- < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
- COC = CONSTITUENT OF CONCERN
- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER
- ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS

- BORING OR MONITORING WELL LOCATION TRANSPOSED (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE
- INDICATES CONCENTRATIONS OF ONE OR MORE COC EXCEEDED THE APPLICABLE MTC SCREENING LEVELS
- INDICATES CONCENTRATIONS OF COCS ANALYZED DID NOT EXCEED THE APPLICABLE MTC SCREENING LEVELS
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- STATIC GROUNDWATER ELEVATION (MOST RECENT)
- GROUNDWATER ELEVATION AT TIME OF DRILLING
- TEMPORARY SCREEN INTERVAL
- WELL SCREEN INTERVAL

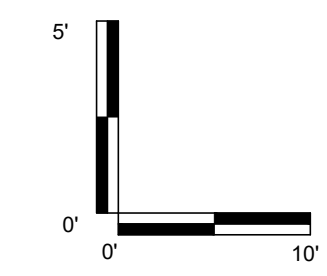
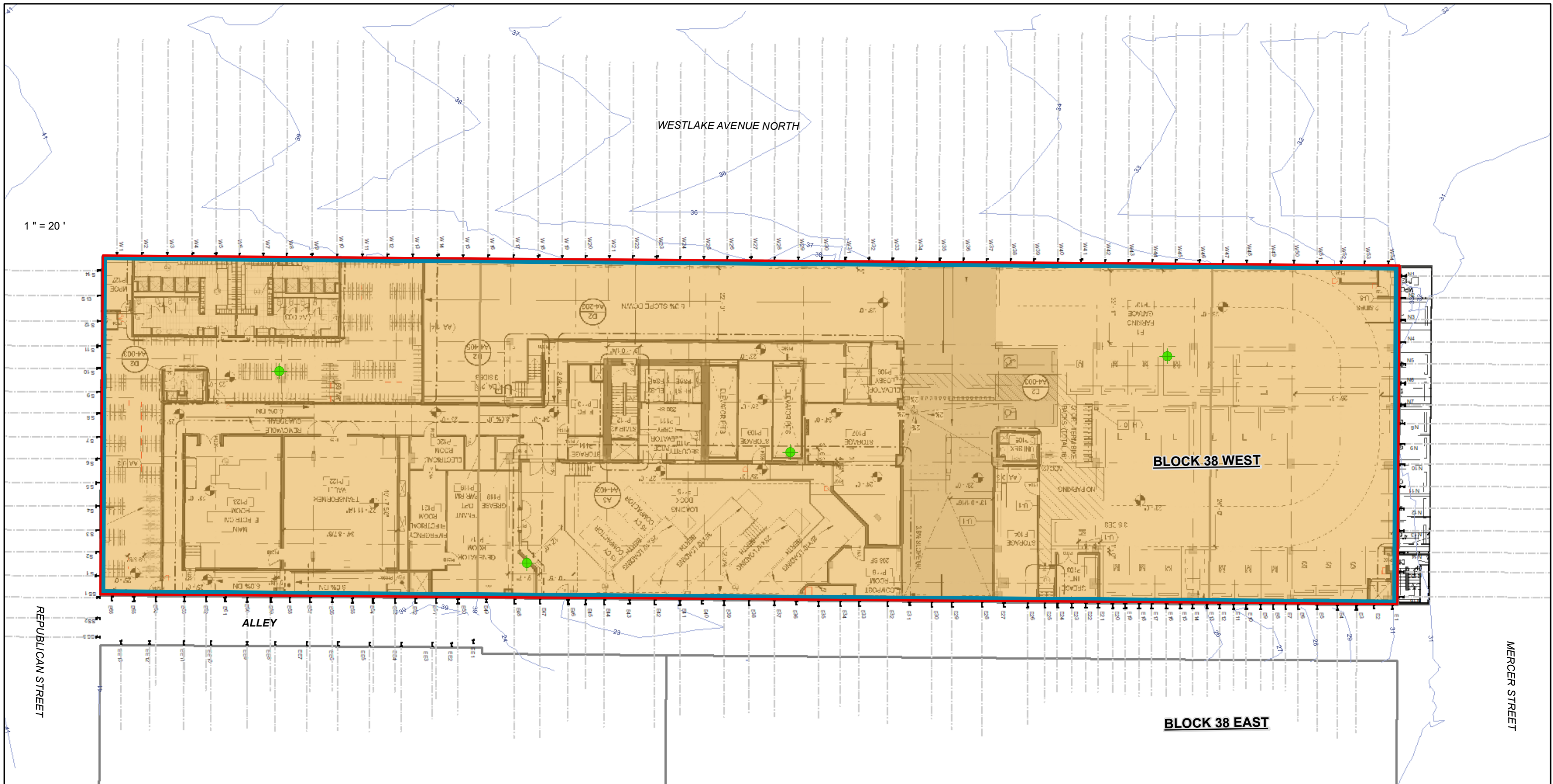









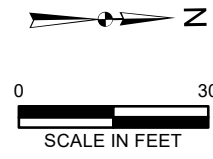
FIGURE 20
CROSS SECTION D-D'
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON



LEGEND

-  PROPOSED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL INSIDE BUILDING
-  VERTICAL EXTENT OF VAPOR BARRIER WILL EXTEND FROM BASE TO TOP OF SHORING WALL; HYCRETE WATERPROOF CONCRETE TO EXTEND TO ELEVATION 20.0 FEET NAVD88
-  HORIZONTAL EXTENT OF VAPOR BARRIER WILL EXTEND ACROSS FOUNDATION; BARRIER TO BE PLACED ON TOP OF RAT SLAB FOUNDATION PRIOR TO POURING THE MAT SLAB FOUNDATION WITH TOP 12-INCHES CONSISTING OF HYCRETE WATERPROOF CONCRETE
-  PROPERTY BOUNDARY
-  KING COUNTY PARCELS
-  PILE
-  TIEBACK

NOTES:
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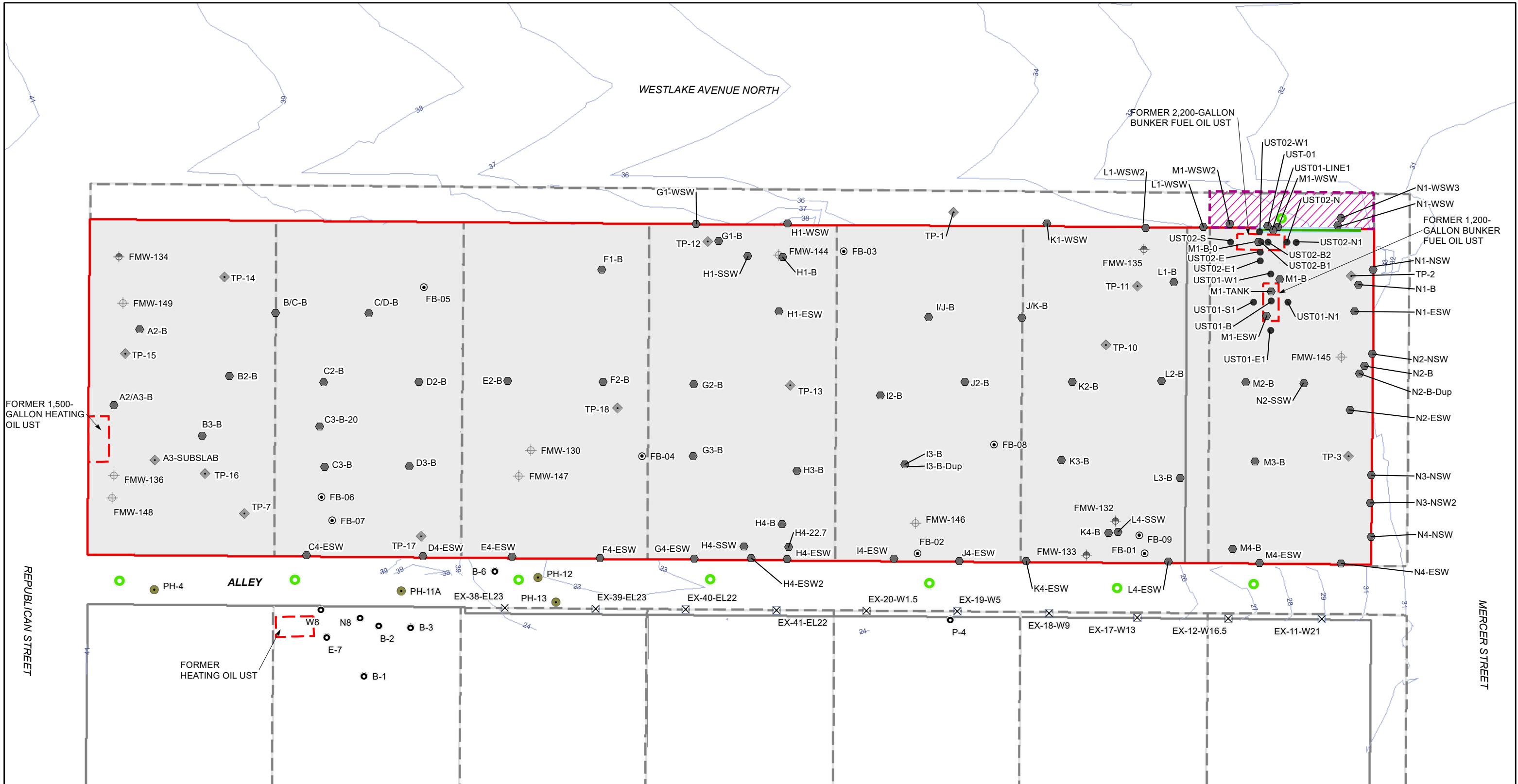
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FIGURE 22
 SITE PLAN - VAPOR BARRIER EXTENT
 BLOCK 38 WEST SITE
 SEATTLE, WASHINGTON

FARALLON PN: 397-019


ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



- LEGEND**
- PROPOSED BORING LOCATION
 - DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
 - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
 - BORING (FARALLON)
 - BORING (GEOENGINEERS)
 - EXCAVATION BORING (FARALLON)
 - POT HOLE (FARALLON)
 - UST SAMPLE LOCATION (FARALLON)
 - EXCAVATION SAMPLE LOCATION (FARALLON)
 - TEST PIT (FARALLON)
 - PIPING DISCOVERED IN SIDEWALL WITH SIGNS OF LEAKING PRODUCT AND IMPACTED SOIL BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs
 - FORMER UNDERGROUND STORAGE TANKS (USTs)
 - MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
 - KING COUNTY PARCELS
 - LOT LINE

- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)
- PIPING DISCOVERED IN SIDEWALL WITH SIGNS OF LEAKING PRODUCT AND IMPACTED SOIL BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- KING COUNTY PARCELS
- LOT LINE

CDF = CONTROLLED DENSITY FILL
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



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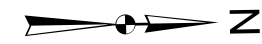
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FIGURE 23

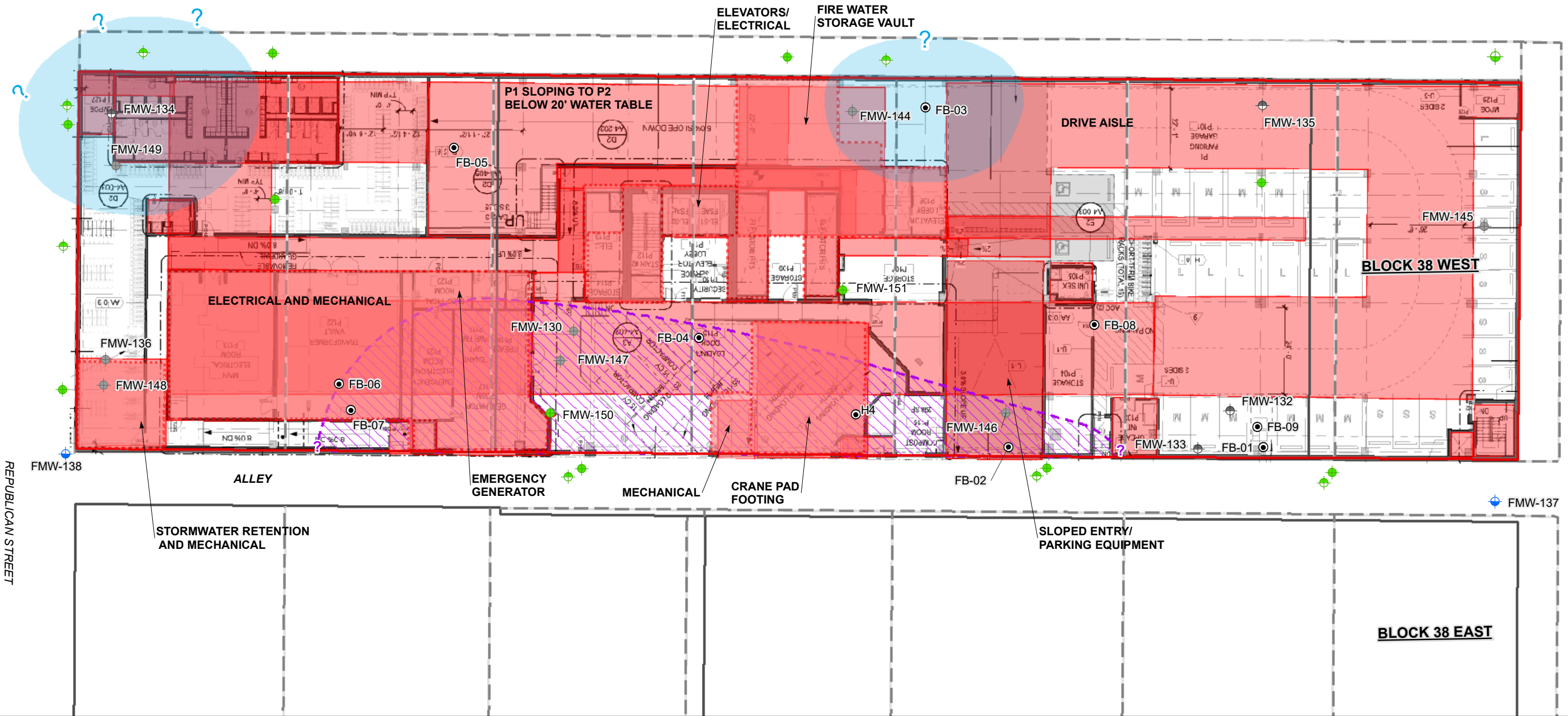
**PROPOSED BORING LOCATIONS
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON**

FARALLON PN: 397-019

NOTES:
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 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



WESTLAKE AVENUE NORTH



LEGEND

- BORING
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- ⊕ DEEP OUTWASH AQUIFER MONITORING WELL
- ⊕ PROPOSED FUTURE SHALLOW WATER-BEARING ZONE MONITORING WELL
- ⊕ PROPOSED FUTURE INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- ⊕ PROPOSED FUTURE DEEP OUTWASH AQUIFER MONITORING WELL

- ▨ AREAS WITH BUILDING CODE OR ACCESS RESTRICTIONS
- ▨ DRO AND/OR ORO DETECTED AT CONCENTRATIONS EXCEEDING SCREENING LEVELS (? ESTIMATED EXTENT INFERRED)
- ▨ DRO AND/OR ORO DETECTED AT CONCENTRATIONS EXCEEDING SCREENING LEVELS IN SHALLOW WATER-BEARING ZONE (? ESTIMATED EXTENT INFERRED)

- LOT LINE
- ▭ PROPERTY BOUNDARY
- ▭ KING COUNTY PARCEL BOUNDARY

THE LOCATION OF PROPOSED EASTERN SHALLOW WATER-BEARING ZONE MONITORING WELLS WILL BE EVALUATED UPON COMPLETION OF SUPPLEMENTAL SUBSURFACE INVESTIGATION IN THE EAST-ADJACENT ALLEY.

- DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS

NOTES:
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FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



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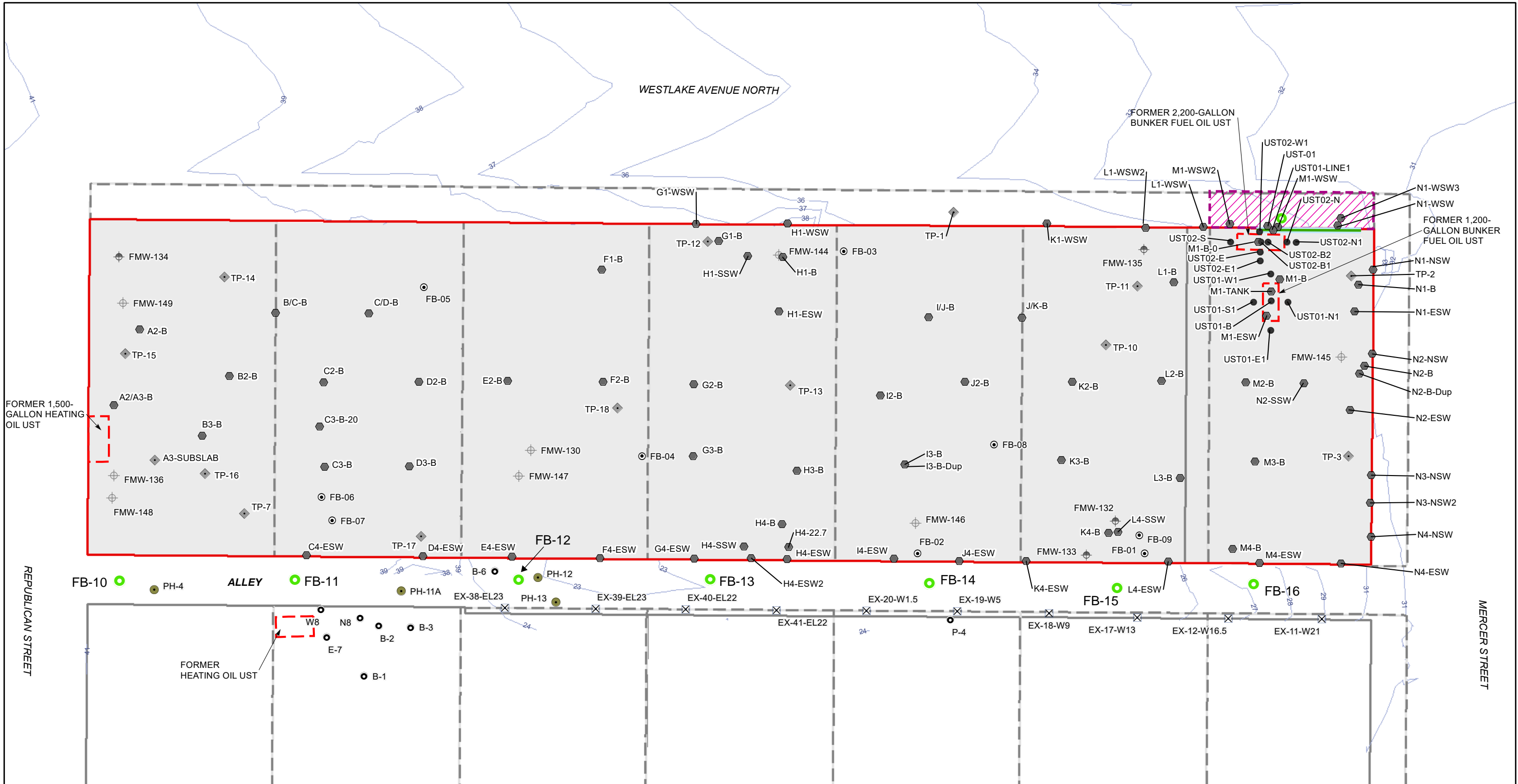
FIGURE 24
PROPOSED MONITORING WELL LOCATIONS
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON

FARALLON PN: 397-019

ATTACHMENT C
FIGURE AND TABLE FROM SAP

RESPONSE TO ECOLOGY COMMENTS
Block 38 West Site
Seattle, Washington

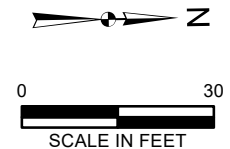
Farallon PN: 397-019



- LEGEND**
- PROPOSED BORING LOCATION
 - ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
 - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
 - ⊙ BORING (FARALLON)
 - BORING (GEOENGINEERS)
 - ⊗ EXCAVATION BORING (FARALLON)
 - POTHOLE (FARALLON)
 - UST SAMPLE LOCATION (FARALLON)
 - EXCAVATION SAMPLE LOCATION (FARALLON)
 - ◆ TEST PIT (FARALLON)
 - PIPING DISCOVERED IN SIDEWALL WITH SIGNS OF LEAKING PRODUCT AND IMPACTED SOIL BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs
 - FORMER UNDERGROUND STORAGE TANKS (USTs)
 - MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
 - KING COUNTY PARCELS
 - LOT LINE

- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- ◆ TEST PIT (FARALLON)
- PIPING DISCOVERED IN SIDEWALL WITH SIGNS OF LEAKING PRODUCT AND IMPACTED SOIL BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- KING COUNTY PARCELS
- LOT LINE

CDF = CONTROLLED DENSITY FILL
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



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 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

FIGURE 1
PROPOSED BORING LOCATIONS
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON

FARALLON PN: 397-019

**Table 1
Scope of Work and Rationale
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019**

Location	Rationale	Scope	Analytes and Methods
FB-10	Evaluation of the vertical and lateral extent of cPAHs at the southern portion of alley.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs by EPA 8270D SIM
FB-11	Evaluation of the vertical extent of cPAHs at the southern portion of alley.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs by EPA 8270D SIM; 2) GRO by NWTPH-Gx if detected in boring FB-12; and, 3) Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analyses indicates the presence of GRO.
FB-12	Evaluation of the vertical extent of cPAHs and petroleum hydrocarbons at the southern portion of alley. As requested by Ecology collection of soil samples to evaluate for vertical and lateral extent of naphthalenes and lead previously detected in soil at concentrations exceeding screening levels in the western sidewall of the Block 38 East Property.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs and total naphthalenes (1-methylnaphthalene, 2-methylnaphthalene, and naphthalene) by EPA 8270D SIM; 2) GRO by NWTPH-Gx; 3) Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analysis indicates the presence of GRO; 4) DRO and ORO by NWTPH-Dx; and, 5) Lead by EPA Method 6010D (not a COC for the Block 38 West Site).
FB-13	Evaluation of the vertical extent of cPAHs and vertical and lateral extent of ORO at the central portion of alley. As requested by Ecology collection of soil samples to evaluate for vertical and lateral extent of total naphthalenes, lead and cadmium previously detected in soil at concentrations exceeding screening levels in the western sidewall and test pit adjacent to the western sidewall of the Block 38 East Property, respectively.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs and total naphthalenes (1-methylnaphthalene, 2-methylnaphthalene, and naphthalene) by EPA 8270D SIM; 2) GRO by NWTPH-Gx; 3) Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analysis indicates the presence of GRO; 4) DRO and ORO by NWTPH-Dx; and 5) Lead and cadmium by EPA Method 6010D (not COCs for the Block 38 West Site).
FB-14	Evaluation of the vertical extent of cPAHs at the central portion of alley and vertical and lateral extent of DRO and ORO. As requested by Ecology collection of soil samples to evaluate for vertical and lateral extent of total naphthalenes, lead and cadmium previously detected in soil at concentrations exceeding screening levels in the western sidewall and test pit adjacent to the western sidewall of the Block 38 East Property, respectively.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs and total naphthalenes (1-methylnaphthalene, 2-methylnaphthalene, and naphthalene) by EPA 8270D SIM; and, 2) DRO and ORO by NWTPH-Dx; and 3) Lead and cadmium by EPA Method 6010D (not COCs for the Block 38 West Site).
FB-15	Evaluation of the vertical and lateral extent of cPAHs and ORO. As requested by Ecology collection of soil samples to evaluate for vertical and lateral extent of lead and cadmium previously detected in soil at concentrations exceeding screening levels in the western sidewall and test pit adjacent to the western sidewall of the Block 38 East Property, respectively.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs by EPA 8270D SIM; 2) DRO and ORO by NWTPH-Dx; and, 3) Cadmium by EPA Method 6010D (not a COC for the Block 38 West Site).
FB-16	Evaluation of the vertical and lateral extent of cPAHs and ORO at the northern portion of alley.	Advance boring up to a depth of 15 feet bgs, corresponding to an elevation of 10 feet NAVD88. Collect and retain soil samples at 2.5 foot intervals (elevations 22.5, 20, 17.5, 15, 10 feet NAVD88). Analyze the 22.5, 20, 17.5 foot samples for specified analytes and if the deepest sample exceeds screening levels then next soil sample interval will be analyzed. Abandon borings with bentonite chips and concrete or asphalt to match surrounding grade.	1) cPAHs by EPA 8270D SIM; and, 2) DRO and ORO by NWTPH-Dx.
Waste Disposal Characterization	Composite soil samples from investigation derived waste to support waste profiling and disposal.	Waste disposal support.	1) Arsenic, cadmium, total chromium, lead, and mercury by EPA Method 6010D/7471B.

Table 1
Scope of Work and Rationale
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Location	Rationale	Scope	Analytes and Methods
----------	-----------	-------	----------------------

NOTES:

bgs = below ground surface
cPAHs = carcinogenic polycyclic aromatic hydrocarbons
DRO = total petroleum hydrocarbons (TPH) as diesel-range organics
EPA = U.S. Environmental Protection Agency
GRO =TPH as gasoline-range organics
NAVD88 = North American Vertical Datum of 1988
MTCA = Washington State Model Toxics Control Act Cleanup Regulation
ORO = TPH as oil-range organics
RCRA = Resource Conservation and Recovery Act
SIM = Selective Ion Mode

**Table 1
Scope of Work and Rationale
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019**

Location	Sample Elevation Depth (feet NAVD88)	GRO	DRO	ORO	BTEX	Naphthalenes	cPAHs	Lead	Cadmium	Comments
FB-10	22.5						X			
	20						X			
	17.5						X			
	15									Potential additional analyses pending results of sample at 17.5 feet NAVD88.
	10									Potential analyses pending results of sample at 15 feet NAVD88.
FB-11	22.5									No a collection of 22.5 foot sample for analysis of cPAHs due to known impacts at elevation 22 feet NAVD88 in boring PH-4.
	20						X			No analysis of cPAHs due to known impacts at elevation 20 feet NAVD88 in boring PH-11A. GRO by NWTPH-Gx if detected in boring FB-12; and benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analyses indicates the presence of GRO.
	17.5						X			GRO by NWTPH-Gx if detected in boring FB-12; and benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analyses indicates the presence of GRO.
	15									Potential additional analyses pending results of sample at 17.5 feet NAVD88.
	10									Potential additional analyses pending results of sample at 15 feet NAVD88.
FB-12	22.5					X		X		No proposed analysis of petroleum hydrocarbons and PAHs due to known impacts at elevation 21 feet NAVD88 in boring PH-12.
	20	X	X	X			X			Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analysis indicates the presence of GRO. Total naphthalenes and lead analyses pending results of sample at 22.5 feet NAVD88.
	17.5	X	X	X			X			Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analysis indicates the presence of GRO. Total naphthalenes and lead analyses pending results of sample at 20.0 feet NAVD88.
	15									Potential additional analyses pending results of sample at 17.5 feet NAVD88.
	10									Potential additional analyses pending results of sample at 15 feet NAVD88.
FB-13	22.5					X		X	X	
	20	X	X	X		X	X	X	X	Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analysis indicates the presence of GRO.
	17.5	X	X	X			X			Benzene, toluene, ethylbenzene, and xylenes by EPA 8260D, if GRO analysis indicates the presence of GRO. Lead, cadmium and total naphthalenes analyses pending results of sample at 20.0 feet NAVD88.
	15									Potential additional analyses pending results of sample at 17.5 feet NAVD88.
	10									Potential additional analyses pending results of sample at 15 feet NAVD88.
FB-14	22.5					X	X	X	X	
	20		X	X		X	X	X	X	
	17.5		X	X			X			Lead, cadmium and total naphthalenes analyses pending results of sample at 20.0 feet NAVD88.
	15									Potential additional analyses pending results of sample at 17.5 feet NAVD88.
	10									Potential additional analyses pending results of sample at 15 feet NAVD88.

**Table 1
Scope of Work and Rationale
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019**

Location	Sample Elevation Depth (feet NAVD88)	GRO	DRO	ORO	BTEX	Naphthalenes	cPAHs	Lead	Cadmium	Comments
FB-15	22.5			X			X		X	
	20			X			X		X	
	17.5			X			X		X	
	15									Potential additional analyses of ORO and cPAHs pending results of sample at 17.5 feet NAVD88.
	10									Potential additional analyses of ORO and cPAHs pending results of sample at 15 feet NAVD88.
FB-16	22.5			X			X			
	20			X			X			
	17.5			X			X			
	15									Potential additional analyses of ORO and cPAHs pending results of sample at 17.5 feet NAVD88.
	10									Potential additional analyses of ORO and cPAHs pending results of sample at 15 feet NAVD88.
Waste Disposal Characterization								X	X	Arsenic, cadmium, total chromium, lead, and mercury by EPA Method 6010D/7471B.

NOTES:

bgs = below ground surface

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

EPA = U.S. Environmental Protection Agency

GRO =TPH as gasoline-range organics

NAVD88 = North American Vertical Datum of 1988

MTCA = Washington State Model Toxics Control Act Cleanup Regulation

ORO = TPH as oil-range organics

RCRA = Resource Conservation and Recovery Act

SIM = Selective Ion Mode