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Copied: Everett Cleveland, East Bay Asian Local Development Company
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From: Joshua Graber, CHMM - Senior Project Manager
Elizabeth Kimbrel, PE - Senior Staff Engineer

Date: 1 November 2016

Re: Proposed Sampling Locations
1110 Jackson Street
Oakland, California
Langan Project No.: 750622603

RECEIVED

By Alameda County Environmental Health 9:06 am, Nov 02, 2016

Langan, on behalf of the East Bay Asian Local Development Corporation (EBALDC), has prepared this memorandum transmitting our updated site plan and proposed sampling locations associated the Alameda County Environmental Health department's (ACEH) open fuel leak case RO0003232 located at 1110 Jackson Street development in Oakland, California (site, Figure 1). Per the ACEH's request and in an attempt to facilitate expedited sampling prior to the proposed building occupancy, we are transmitting this site plan with proposed sample locations for preliminary feedback from the ACEH in advance of preparing a complete *Work Plan for Additional Environmental Site Assessment* (Work Plan) for the site. The Work Plan will detail the proposed sample locations, collection procedures and analytical methodologies.

Our proposed sample locations (illustrated on Figure 2) are based on a review of analytical data collected to date and a building survey that was completed at the site on 28 October 2016.

BUILDING SURVEY AND INVENTORY

A building survey and inventory was completed at the site on 28 October 2016 by Langan personnel in the presence of representatives from EBALDC. The building survey and inventory was completed to identify future soil, soil gas, sub-slab and groundwater sample locations as well as potential preferential pathways for vapor migration and appropriate indoor, pathway, and ambient air sample locations. The survey consisted of evaluating all accessible areas with a photoionization detector (PID) capable of measuring volatile organic vapors down to the part per billion (ppb) level. During the survey, the PID was used to assess background indoor air concentrations and possible preferential pathways for soil vapor migration such as gaps and cracks in building foundations, slab penetrations (such as piping and utility lines), floor drains, sumps, fire suppression lines, and sanitary sewer cleanouts. In general, PID readings across the building were consistent with an active construction site and no preferential pathways were registering elevated readings.

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Interior Building Observations

The majority of the first floor of the building is parking, which is openly and naturally ventilated with outside air via the vehicle entrance and exit and grated openings in the walls. The southwestern portion of the first floor is comprised of a lobby, bathrooms and commercial/retail space, which are enclosed. There are stairwells on the northeastern and southeastern corners of the building and a pump room, boiler room, and maintenance room along the eastern side of the building. These internal features are illustrated on Figure 2.

The building is currently undergoing active construction in preparation for occupancy in January 2017. Construction activities currently underway include painting, window installation, elevator servicing, flooring and appliance installation and exterior siding installation. Langan personnel surveyed the interior of the building noting the presence and use of numerous construction materials, including adhesives, paints, and cleaning chemicals (including solvents). Since the site is an active construction site and the first floor is the main parking area, numerous vehicles were observed to be idling and entering/exiting the building. Volatile organic compounds (VOCs) are known to be present in the construction materials currently in active use at the building and in vehicular exhaust. The presence of VOCs related to these activities would likely interfere with indoor air sampling and misrepresent the results.

Langan also noted slab penetrations (including floor drains and sanitary sewer cleanouts), and observed the general condition of the building's concrete slab to be in good condition.

Ventilation Systems

No heating, ventilation, or air conditioning (HVAC) units were operational on the ground floor of the building. We understand that the future tenant will be responsible for installing an HVAC unit prior to occupancy of the commercial, ground level (first floor) unit.

PROPOSED SAMPLE LOCATIONS

Groundwater, soil, soil gas, and sub-slab sampling locations are proposed to further evaluate subsurface conditions below the building footprint. Indoor air and pathway samples will also be proposed based on the results of the groundwater, sub-slab and soil gas data, if warranted. All sample locations are illustrated on Figure 2.

If air sampling is warranted, indoor air sampling locations (identified in Figure 2 with an 'IA' in the sample designation) are proposed in areas normally occupied over the course of a typical business day (i.e. offices, work cubicles and laboratory areas). Pathway sample locations (identified in Figure 2 with a 'PS' in the sample designation) are proposed to evaluate potential vapor intrusion in areas that are either not accessed by workers or are not normally occupied for a full work day (i.e. 8-hour period), such as bathrooms or areas adjacent to preferential pathways. One grab pathway sample (GPS) location is also proposed. The grab pathway sample will be collected from the elevator pit.

Due to the multitude of influences on indoor air quality, two ambient air (AA) samples will be collected on the day that the indoor air and pathway samples are collected. The ambient air

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samples will be collected from the grated opening on the first floor to evaluate outside air entering the parking space and from the garage to evaluate air entering the commercial space.

Sampling Scope

We propose to collect the following samples in the locations proposed on Figure 2.

- Four groundwater samples;
- Up to eight soil samples from the four groundwater borings;
- Five soil gas samples;
- Five sub-slab samples; and
- Eight air samples comprised of ambient air, indoor air, pathway and grab pathway air samples (if necessary, based on sub-slab and soil gas analytical results).

Langan requests any preliminary feedback from the ACEH department on the proposed sample locations and types while the Work Plan is being prepared. We will attempt to incorporate the ACEH's comments into the final Work Plan, if provided by 4 November 2016.

NEXT STEPS

Langan will continue to prepare the Work Plan detailing the preliminary sampling scope and methodology. Once complete we will submit the Work Plan to the ACEH for review and comment. We anticipate completing the Work Plan by 8 November 2016.

Sub-slab Sampling

In an effort to expedite data collection and review, we propose to collect the sub-slab gas samples proposed on Figure 2. These sample locations are proposed at this time to provide data on sub-slab VOC concentrations and because drilling permits are not required for this type of sampling. The sub-slab sampling probes (i.e. Vapor Pins™) will be installed just below the slab and allowed to equilibrate for a period of at least two hours prior to sampling. After the equilibration period, leak testing (using a helium shroud) and shut-in testing will be performed at each location prior to purging and sample collection. We will collect sub-slab samples in accordance with the DTSC's *Advisory Active Soil Gas Investigations* dated July 2015 and further document our procedures in our Work Plan.

One-liter summa canisters will be used for both purging and sample collection along with flow controllers set to a maximum rate of 200 milliliters per minute (mL/min). Sub-slab samples will be analyzed for VOCs by EPA method TO-15 by a certified California analytical laboratory. Samples will be transported under chain of custody (COC) protocol.

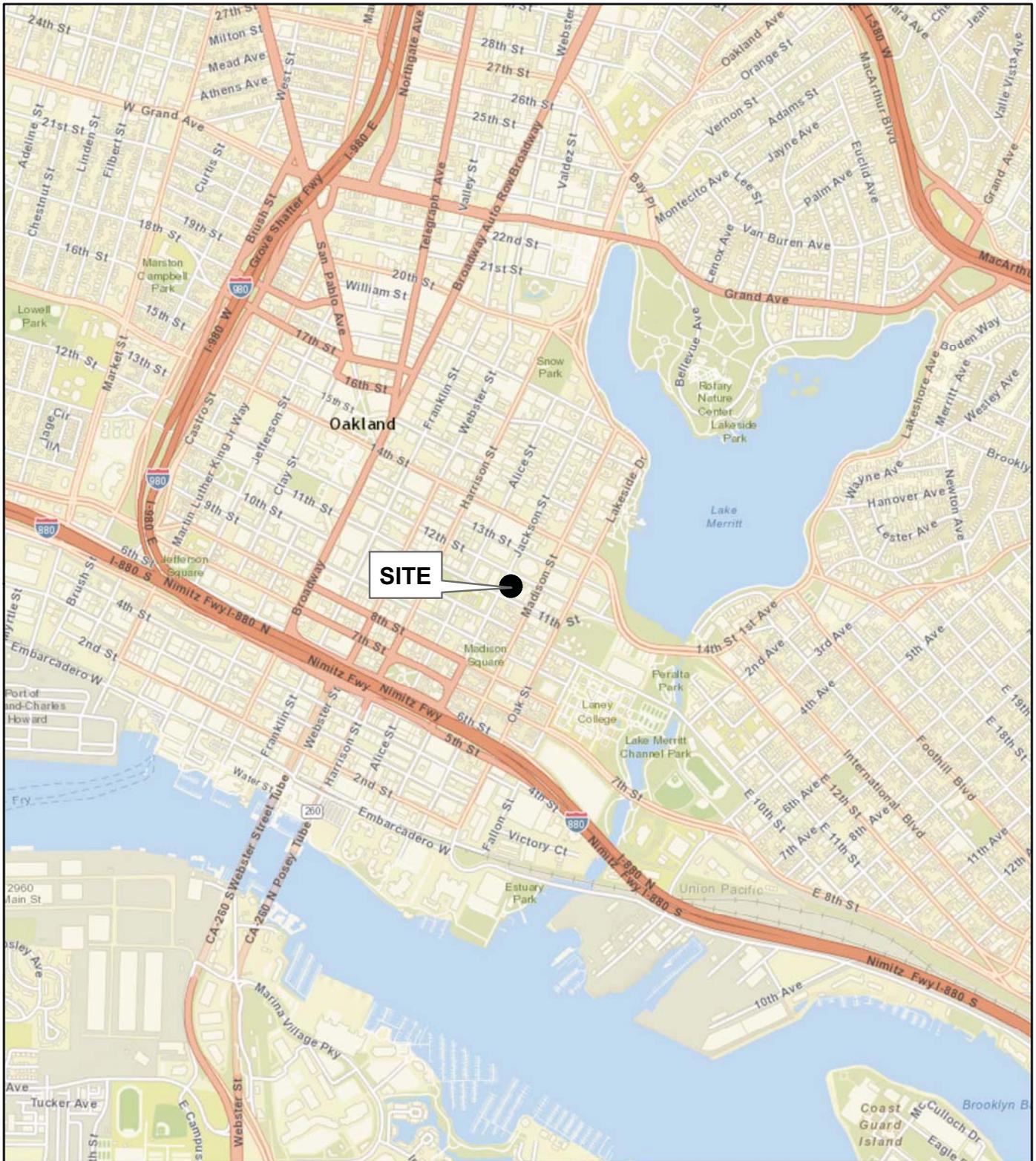
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Our preliminary schedule to start and complete the sub-slab sampling will be 8 November 2016. We will provide the initial results to the ACEH for review when available. If you have any comments on the proposed sub-slab sample locations, please provide them by 4 November 2016.

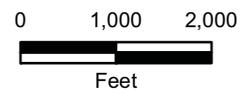
Attachments: Figure 1 - Site Location Map
 Figure 2 – Site Plan with Proposed Sampling Locations

FIGURES



NOTES:

World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online.
Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN.



1110 JACKSON STREET
Oakland, California

SITE LOCATION MAP

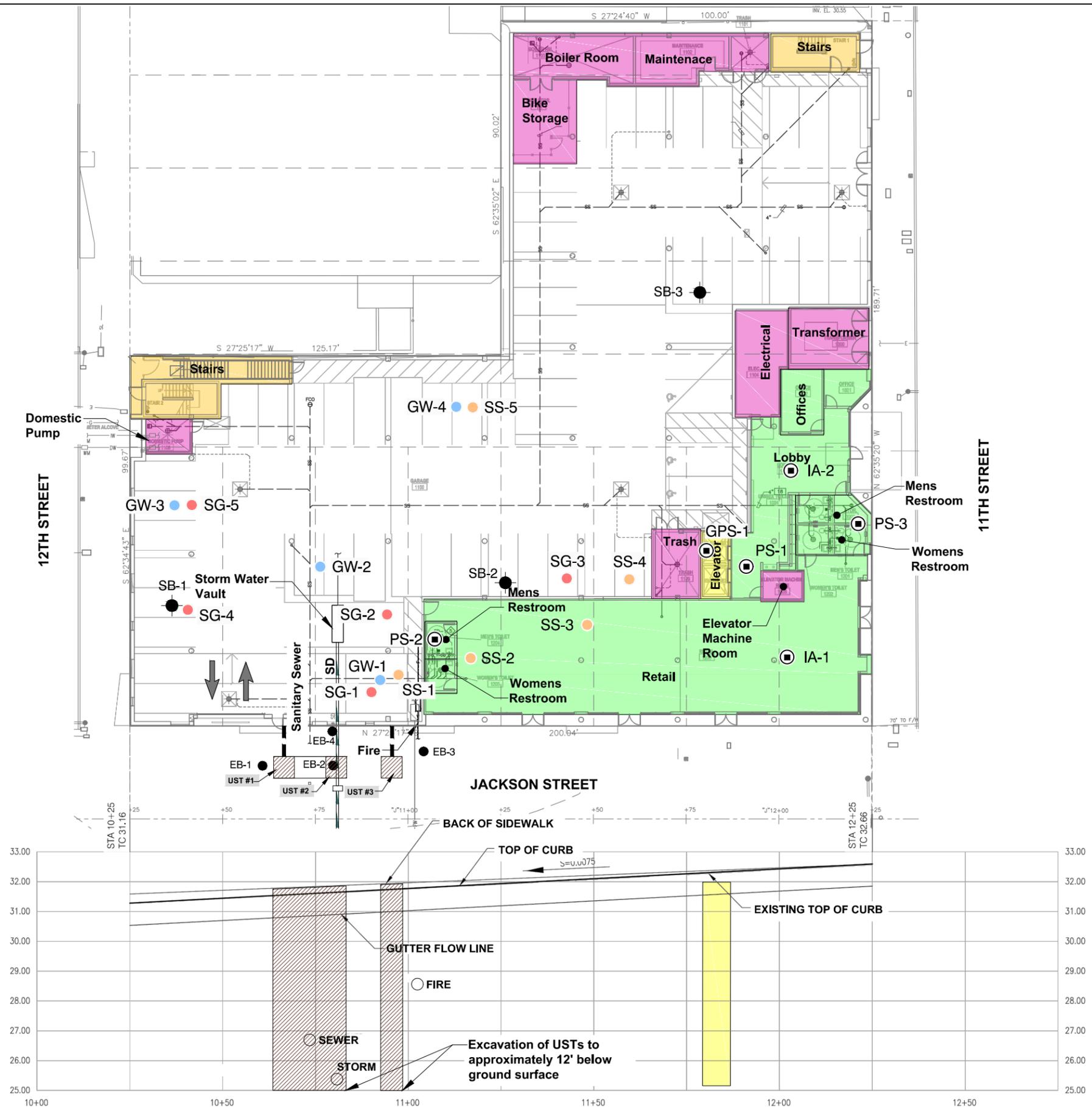
LANGAN TREADWELL ROLLO

Date 09/03/14

Project No. 750622601

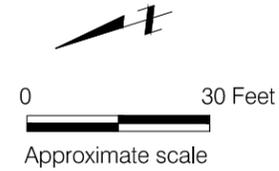
Figure 1

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- EXPLANATION**
- Stair
 - Machine rooms, utility rooms, trash, and storage
 - Elevator
 - Retail lobby/ offices
 - Approximate location of former USTs
 - SS Sanitary sewer
 - SD Storm drain
 - SS-1 ● Proposed sub-slab sample location
 - SG-1 ● Proposed soil gas sampling location
 - GW-1 ● Proposed groundwater sample location
 - Proposed air monitoring location (Indoor air = IA, Pathway samples = PS, Grab pathway sample = GPS)
 - Capped in-place former product pipeline
 - EB-1 ● Grab groundwater sample location
 - SB-1 ● Approximate location of boring conducted by D.R. Horton in 2005

Notes:
 1. Fire and water supply lines are located above ground in building footprint.
 2. Elevator pit constructed with waterproof concrete walls and flooring.
 3. Pipeline was cut at building extent during foundation work. Samples collected beneath former product pipelines during tank removal were non-detect for petroleum hydrocarbons.



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|---|-----------------------|----------|
| 1110 JACKSON STREET Oakland, California | | |
| SITE PLAN WITH PROPOSED SAMPLING LOCATIONS | | |
| Date 10/31/16 | Project No. 750622603 | Figure 2 |
| LANGAN | | |