



AEI Consultants

Environmental & Engineering Services

April 4, 2013

SOIL VAPOR INVESTIGATION WORKPLAN

Property Identification:

1630 Park Street
Alameda, California

RECEIVED

By Alameda County Environmental Health at 9:00 am, Apr 09, 2013

AEI Project No. 298931
ACEHD Fuel Leak Case No. RO0000008

Prepared for:

Foley Street Investments
Attn: Mr. John Buestad
2533 Clement Avenue
Alameda, CA 94501

Prepared by:

AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597
(925) 746-6000

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April 4, 2013

Ms. Karel Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Perjury Statement and Correspondence Transmittal

1600 – 1630 Park Street
Alameda, California 94501
AEI Project No. 298931
ACEH RO#0000008

Dear Ms. Detterman:

I declare under penalty of perjury, that the information and/or recommendations contained in the attached correspondence for the above-referenced site are true and correct to the best of my knowledge.

If you have any questions or need additional information, please do not hesitate to call me or AEI Consultants, Mr. Robert Robitaille at (925) 746-6000.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Buestad', is written over the word 'Sincerely,'.

John Buestad
President

JB/rpr

Attachment: *Soil Vapor Investigation Workplan, April 4, 2013.*

cc: Mr. Robert Robitaille, AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597

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April 4, 2013

Alameda County Environmental Health Department
Attn: Ms. Karel Detterman
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Soil Vapor Investigation Workplan
1630 Park Street
Alameda, California
AEI Project No. 298931
ACEHD Fuel Leak Case No. RO0000008

Dear Ms. Detterman:

AEI Consultants (AEI) has prepared this Soil Vapor Investigation Workplan on behalf of Foley Street Investments (FSI), developer of the subject site (See Figure 1 and Figure 2). This Workplan has been prepared to present the scope of work to close the Low Threat Closure Criteria soil vapor data gaps identified at the property. The property is currently identified as 1630 Park Street and is undergoing a parcel split into proposed "Parcel A" and "Parcel B" parcels prior to the proposed construction of two commercial buildings. The Alameda County Environmental Health Department (ACEHD) is the agency with regulatory oversight of the leaking underground storage tank (LUST) case. The rationale for this soil vapor investigation, including its relevance to the parcel split and development, was discussed in detail in a meeting with the ACEHD case management team on March 29, 2013.

1.0 Project Overview

The development site consisting of 1600 to 1630 Park Street is an irregularly shaped property totaling approximately 1.46 acres. The northern portion is the 1630 Park Street property which has been the subject of a LUST case for over 2 decades. Refer to Figure 2 for a site plan of the development property. Hereinafter, areas of the development site will be referred to as Parcel A and Parcel B.

The development site is currently vacant and was formerly improved with a two-story automobile showroom, service garage and office structure constructed in the 1940's, totaling approximately 11,264 square feet and a parking lot. Good Chevrolet occupied the site from the early 1960s through 2008. In July and August 2012, FSI demolished the onsite structures in preparation for redevelopment. Two slab-on-grade commercial buildings are proposed, with the remainder of the development to be improved with paved at-grade parking areas and landscaping. The location of the proposed building footprints and major site features are shown

in Figure 2. Please refer to AEI's *Interim Source Removal Report and Well Abandonment and Replacement Workplan Addendum* for a detailed description of historical site activities.

2.0 Proposed Investigation

Ongoing soil vapor sampling near the former hydrocarbon plume core has not indicated that residual petroleum hydrocarbons represent a significant threat for vapor intrusion. However, these probes (VP-1 to VP-3) were installed to monitoring vacuum extraction effectiveness and therefore the spatial distribution of data is not sufficient for vapor intrusion assessment on both Parcel A and Parcel B. Therefore, additional soil vapor sampling is proposed to document existing vapor concentrations for evaluation of the potential vapor intrusion condition. Proposed boring locations are shown Figure 3. A summary of the rationale for the sample locations is presented in the following table:

Probe ID	Location	Rationale
SV-1 & SV-2	Beneath the northern portion of the proposed building located on Parcel A.	Investigate possible vapor phase impact at the Parcel A building from residual petroleum present associated with release on Parcel B.
SV-3 to SV-5	Beneath the center to southern portion of the proposed building on Parcel B south of the current vapor probes VP-1 to VP-3.	To investigate soil vapor conditions beneath the proposed building on Parcel B south of the existing vapor probes.
SV-6 & SV-7	Beneath the northern portion of the proposed building on Parcel B.	To investigate soil vapor conditions beneath the proposed building on Parcel B north of the existing vapor probes.

2.1 Permits and Clearances

As required, a subsurface drilling permit will be obtained from the Alameda County Public Works Agency (ACPWA) prior to drilling activities. Prior to beginning drilling activities, Underground Service Alert (USA) will be notified at least three (3) days prior to drilling. Onsite underground utility locations will be reviewed and, if needed, a private utility locating service retained to clear drilling locations.

2.2 Drilling and Soil Vapor Sampling

AEI proposes to advanced seven soil vapor borings (SV-1 though SV-7) at the site and complete each of the vapor borings as a temporary soil vapor monitoring point. The borings will be advanced utilizing direct push techniques with a truck-mounted Geoprobe® (or similar) drill rig and constructed using the open-borehole method. First, the 2-inch diameter hole will be cored using a macro-core sampler lined with an acetate sleeve. The sampler will be driven to a depth of approximately 5 feet below ground surface (bgs) and soil will be continuously collected from each boring within the acrylic liners. Soil samples will be cut from the liners at select intervals based on field observations and organic vapor measurements collected in the field. A sub-sample of each sample collected for potential chemical testing will be placed into a zipper-

locking bag and screened for the presence of organic vapors with a photo-ionization detector (PID). Samples will be sealed with Teflon tape and end caps, labeled with a unique identifier, and stored over water ice. The samples will be submitted to the laboratory and placed on hold pending the results of the soil vapor investigation at which time it will be determined if soil samples will be analyzed.

Upon reaching the target depth, the sampling equipment will be removed and the open borehole will be checked for collapse. Then a soil gas probe will be constructed inside the open borehole. The soil gas sample will be collected using an installed semi-permanent soil gas probe. The probe will be constructed of new 0.25-inch diameter inert tubing connected to a permeable probe tip. The probe tip will be installed in the center of an annular filter pack composed of sand which will be placed between 4 to 5 feet bgs. The probe will then be sealed with a 1-foot layer of dry granular bentonite followed by hydrated granular bentonite to just below ground surface.

After waiting the recommended equilibration time (as defined by the Department of Toxic Substances Control [DTSC]), approximately 2 hours), soil vapor samples will be collected from the soil vapor probes. Prior to collecting the samples, a shut in test will be performed by placing a vacuum on the sampling train above grade. The vacuum will be observed for approximately 1 minute and if the vacuum does not change, it will be determined that no leaks are present in the above ground sampling train. Soil vapor will be initially purged from the tubing using a dedicated purge canister connected via an on-off valve. A total of three purge volumes will be removed from each boring.

Following purging of the sampling lines, a 1 liter Summa canister, which will be connected to the sampling manifold, will be opened and the initial vacuum recorded. Vapor samples will be collected through the regulator at approximately 150 mL/minute. After approximately seven to nine minutes (depending on the down hole vacuum), or -5 in Hg vacuum in the canister, the canister will be closed and removed from the sampling line. Samples will be appropriately labeled and enter onto chain of custody prior to shipping to the laboratory.

During sampling, a leak check gas, isopropyl alcohol, will be used to confirm that the sample train and probe seal are tight and leak free. The tubing will be discarded after each sample.

2.3 Sample Storage and Analyses

Vapor samples will be shipped to a California Department of Health Services Certified laboratory for analysis under chain of custody protocol. The vapor samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) and volatile organic compounds (VOCs) by EPA Method TO15 as well as atmospheric gasses (CO₂, CH₄, nitrogen, and O₂) using Method D 1946-90.

Upon completion of sampling, all temporary tubing and sampling rods will be removed from the borings. The temporary soil vapor monitoring points will be backfilled with cement grout. The grout will be mixed at a ratio of one (1) 94-pound bag of Type II Portland cement to 5-gallons of water.

3.0 Decontamination and Waste Handling

Drilling and sampling equipment used during the investigation will be scrubbed and cleaned with Alconox™ or equivalent detergent and triple rinsed with clean water between borings to minimize the potential for cross-contamination.

Soil cuttings, rinsate, and other investigation-derived wastes (IDWs) will be temporarily stored in sealed 55-gallon drums or sealed 5-gallon buckets in a secure location on-site pending proper disposal. IDW will include soil cuttings, plastic sample liners, and other sampling disposables. Equipment rinse water will also be stored in 55-gallon drums, separate from solid IDW. Upon receipt of analytical results, the waste will be profiled into appropriate disposal or recycling facilities and transported from the site under appropriate manifest. Copies of manifest(s) will be made available once final copies are received from the disposal facility(s).

4.0 Site Safety

AEI will update the existing site specific Health and Safety Plan conforming to Part 1910.120 (i) (2) of 29 CFR. Prior to commencement of field activities, a site safety meeting will be held at a designated command post near the working area each day of fieldwork. The Health and Safety Plan will be reviewed and emergency procedures will be outlined at this meeting, including an explanation of the hazards of the known or suspected chemicals of interest. All site personnel will be in Level D personal protection equipment, which is the anticipated maximum amount of protection needed. A working area will be established with barricades and warning tape to delineate the zone where hard hats, steel-toed shoes and safety glasses must be worn, and where unauthorized personnel will not be allowed. The site Health and Safety Plan will be on site at all times during the project.

5.0 Reporting

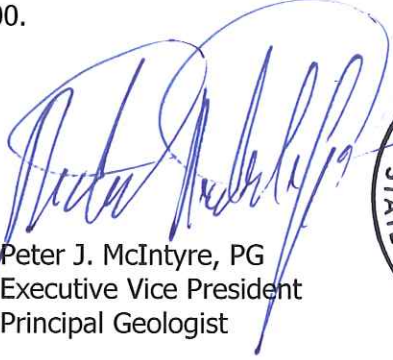
Upon receipt of data, AEI will consolidate the findings of investigation with prior soil vapor data and prepare a summary memo for review by the client and ACEHD. The investigation will be formally reported in a stand-alone document or included in one of the other formal document submittals, to be determined by ongoing discussions with ACEHD. Reports and data presentations will be uploaded into the GeoTracker database, as necessary. The project will be overseen and the documentation signed by an AEI California registered professional geologist or engineer.

6.0 Schedule

Field activities for the soil vapor borings will be permitted upon approval from the ACEHD and are anticipated to be completed in mid-April 2013. AEI welcomes comments and questions from ACEHD staff. Please contact us (925) 746-6000.

Sincerely,
AEI Consultants

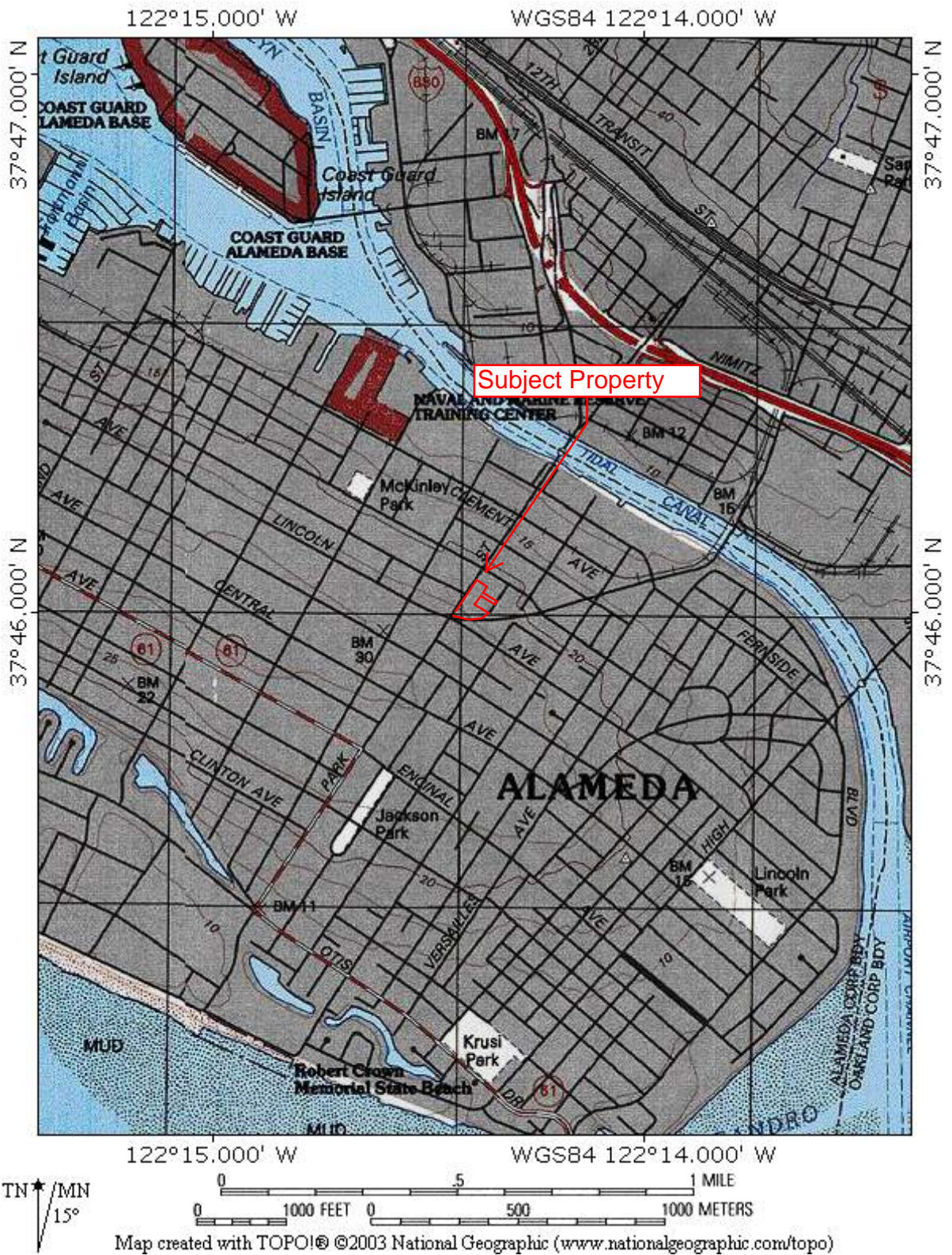

Jeremy Smith
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Distribution:

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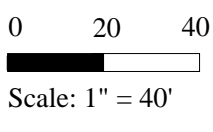
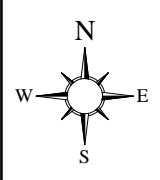
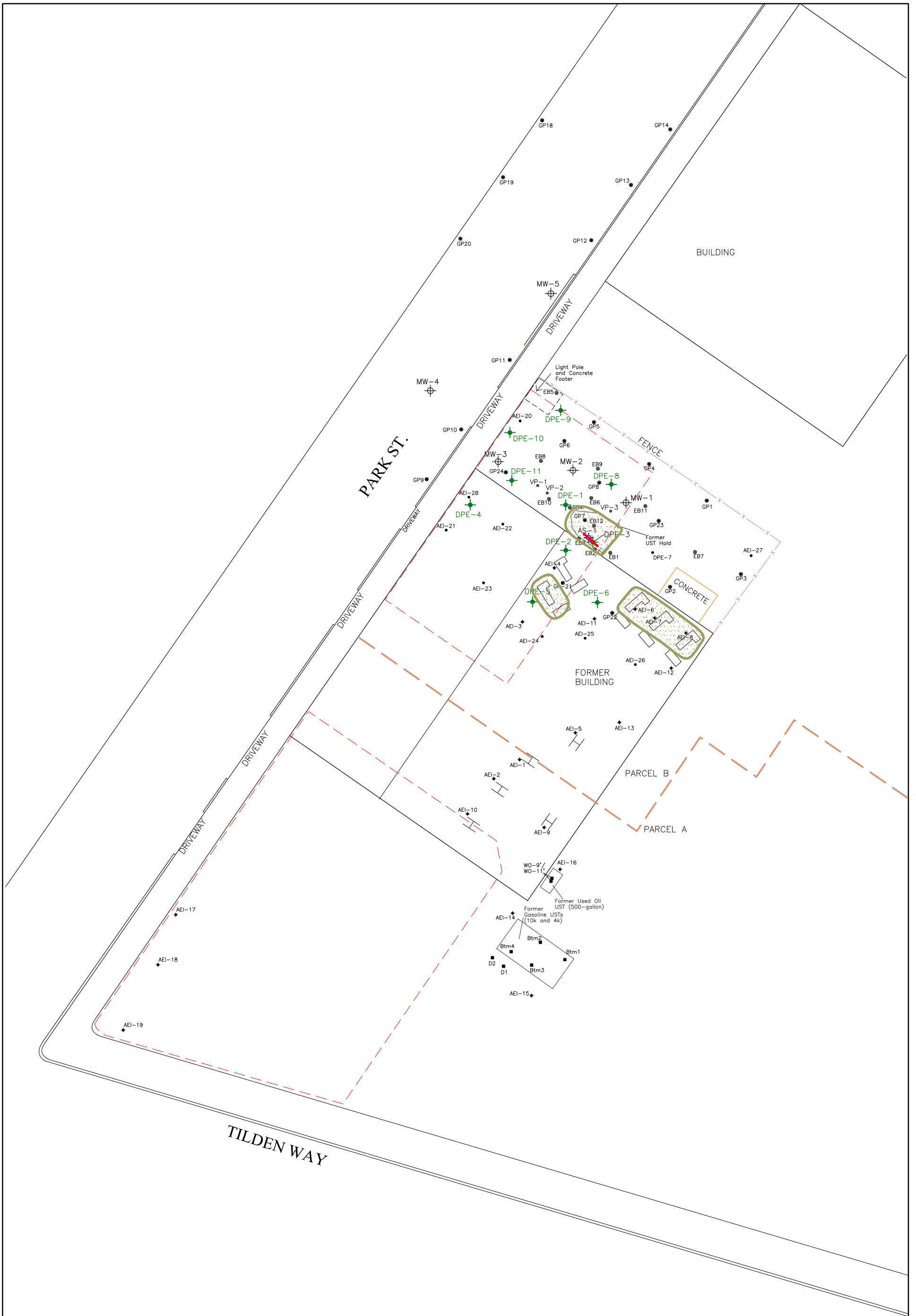


SITE LOCATION MAP

1600-1650 Park Street

Alameda, California 94501





LEGEND

- + Remediation Well (12/11 and 1/12)
- ⊕ Groundwater Monitoring Well
- AEI Soil Boring (1/12)
- ◆ AEI Soil Boring (7/11)
- - - Parcel Split
- - - Proposed Buildings
- U.S.T. Former Hydraulic Lift with Excavation Extents
- H Former Hydraulic Lift
- Grab Soil Sample
- Soil Boring (4/08)
- ⊗ Soil Boring (1/97)
- ⊕ Vapor Probe (12/11)
- ⊖ Abandoned Well

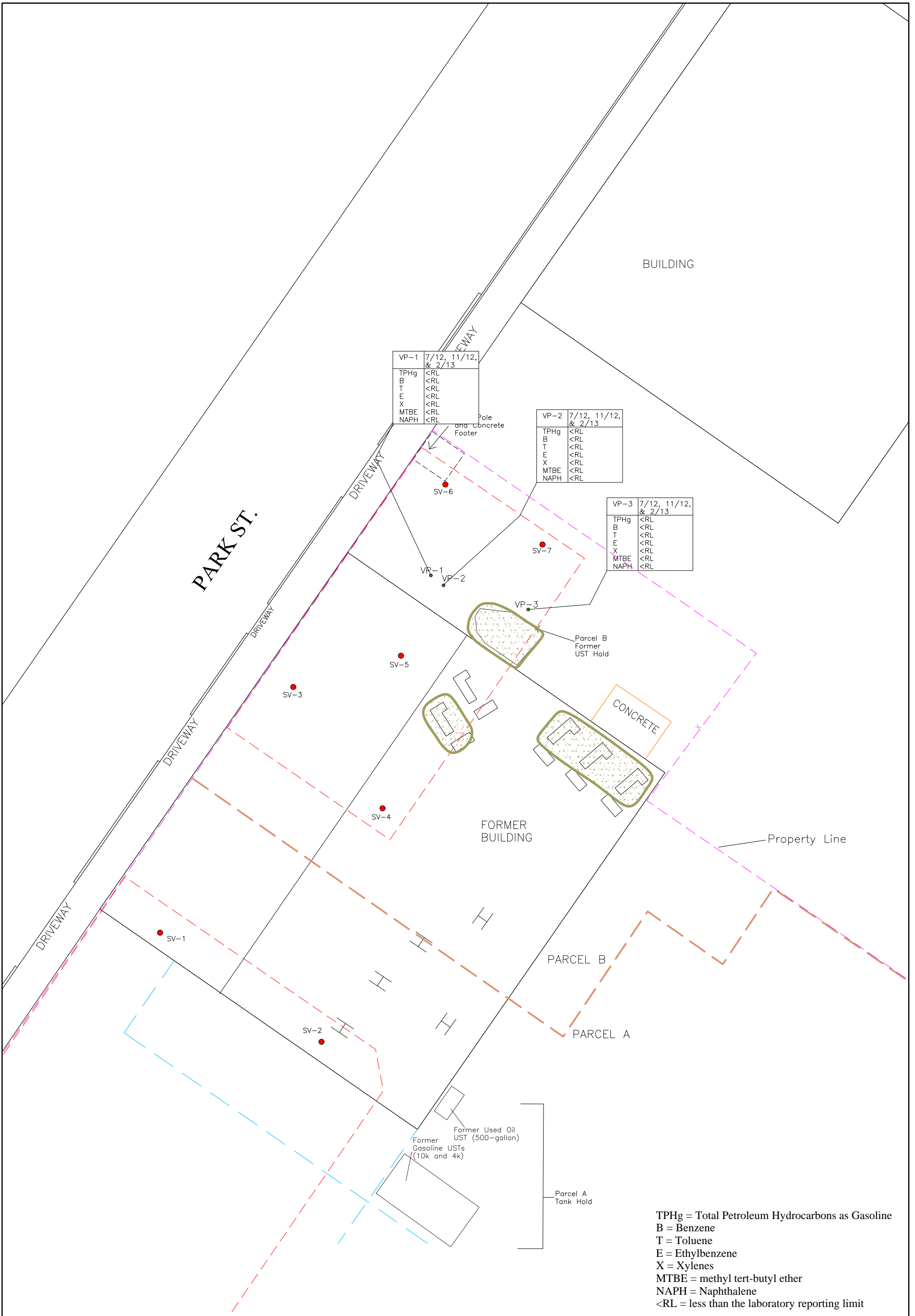
DRAFTED BY JAS 3-9-12
 REVISED BY JAS 3-24-13

AEI CONSULTANTS
 2500 CAMINO DIABLO, WALNUT CREEK

EXTENDED SITE PLAN

1630 PARK STREET
 ALAMEDA, CALIFORNIA

FIGURE 2
 PROJECT NO. 298931



TPHg = Total Petroleum Hydrocarbons as Gasoline
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
 MTBE = methyl tert-butyl ether
 NAPH = Naphthalene
 <RL = less than the laboratory reporting limit

Scale: 1" = 30'

LEGEND

- Vapor Probe (12/11)
- Proposed Vapor Sampling Point
- - - Parcel Split
- Excavation Extents
- Proposed Building Extents
- Former Hydraulic Lift
- Former Hydraulic Lift

DRAFTED BY JAS 3-2-12
 REVISED BY JAS 5-2-12

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 2500 CAMINO DIABLO, WALNUT CREEK

**PROPOSED SOIL
 VAPOR SAMPLE LOCATIONS**

1630 PARK STREET ALAMEDA, CALIFORNIA	FIGURE 3 PROJECT NO. 298931
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