



# Technology, Engineering & Construction, Inc.

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Alameda County  
Environmental Health

December 3, 2007

Donna L. Drogos, PE  
LOP Program Manager  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502

**SUBJECT:      ADDENDUM TO THE LIMITED SUBSURFACE INVESTIGATION REPORT  
                     DATED AUGUST 7, 2005**

**SITE:            3001 – 3007 EAST 12<sup>TH</sup> STREET  
                     OAKLAND, CALIFORNIA 94601**

Dear Donna Drogos,

TEC Accutite is pleased to submit this Addendum to the Limited Subsurface Investigation Report dated August 7, 2007, for the above referenced site. This addendum is provided at the request of Alameda County Environmental Health to facilitate evaluation of the site for clearance/endorsement for unrestricted use.

Thank you for your assistance and cooperation with this project. If you have any questions or concerns, feel free to contact the undersigned at [nsmith@tecaccutite.com](mailto:nsmith@tecaccutite.com) or (650) 616-1230.

Sincerely,  
**TEC Accutite**

Nathan W. Smith  
Project Geologist

**ADDENDUM TO THE  
LIMITED SUBSURFACE INVESTIGATION REPORT  
DATED AUGUST 7, 2007**

**3001 – 3007 EAST 12<sup>TH</sup> STREET  
OAKLAND, CALIFORNIA 94601**

**PREPARED FOR**

**ALAMEDA COUNTY ENVIRONMENTAL HEALTH**

**AND**

**MR. RANDALL WHITNEY  
PACIFIC THOMAS CAPITAL**

**ADDENDUM DATE**

**DECEMBER 3, 2007**



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## **1.0 INTRODUCTION**

TEC Accutite has prepared this addendum in response to a request from Donna Drogos of Alameda County Environmental Health (ACEH) to facilitate evaluation of the subject site located at 3001 – 3007 East 12<sup>th</sup> Street, Oakland, California 94601, herein referred to as “the site”, for clearance/endorsement for unrestricted use.

TEC Accutite conducted a limited subsurface investigation for the site on June 6, 2007. At the request of *Pacific Thomas Capital*, TEC Accutite advanced two soil borings on the site, collected one soil sample and grab groundwater samples from each boring location, and expedited a report of findings by the end of June 2007 (TEC Accutite, August 7, 2007). The limited subsurface investigation detected chromium in soil beneath the site at a concentration above its respective environmental screening level (ESL) and nickel in groundwater beneath the site at a concentration slightly above the respective ESL. As such, the report was submitted to ACEH, who requested additional information, in the form of a telephone conversation and confirmed by email on November 9, 2007, in order to evaluate the site for unrestricted use. This addendum provides additional information, as requested:

- A composite map (Figure 3) of the historical 1950 Sanborn map with the locations of the soil borings;
- A detailed site vicinity map (Figure 4) illustrating the other areas of potential hazardous materials use/locations identified in the *Northgate* Phase I Report, dated May 7, 2007;
- Technical basis for the boring and sampling locations, boring depths and analyses (see section 3.0 - Boring Locations, Sampling Depths, and Sample Analyses);
- References for background metal in soils of the area (see section 4.0 - Background Metal in Soils of the Bay Area), and technical analysis and interpretation of reported data (see section 5.0 – Conclusions and Recommendations).

## **2.0 ENVIRONMENTAL BACKGROUND**

The site is located in an area of mixed industrial, commercial and residential development. A Vicinity Map is presented as Figure 1.

The site consists of an approximate 7,500 square foot parcel located on the west side of East 12<sup>th</sup> Street between 30<sup>th</sup> Avenue and Derby Avenue in Oakland, California. The site consists of two commercial buildings identified as 3005 and 3007 East 12<sup>th</sup> Street and two vacant lots. One vacant lot is between the commercial buildings and the other lot occupies the 3001 East 12<sup>th</sup> Street address. The parcel is identified as Assessor's Parcel Number 025-0693-004, Alameda County, California. A Site Map is presented as Figure 2.

The site is situated at an elevation of approximately 30 feet above sea level. On a regional basis, surface topography slopes gently to the southwest. Reportedly, groundwater in the area is initially encountered at depths of between 10 and 32 feet below surface grade (bsg), with stabilized water levels measured at depths of about 7 to 10 feet bsg, and groundwater in the general vicinity of the site generally flows toward the southeast or southwest (*Northgate Environmental Management, Inc.*, May 7, 2007).

Site history review indicates that the site has historically been occupied by a variety of businesses since the early 1920s, including “hay and fuel” storage, a coal yard, a furniture warehouse, stove repair, an automobile radio shop, a lighting store, and a transmission repair shop. The review by *Northgate Environmental Management, Inc.* indicated that no Recognized Environmental Conditions are associated with the site; however, *Northgate Environmental Management, Inc.* recognized the presence of two onsite and three offsite areas of potential environmental concern and recommended further investigation. These areas and issues include:

- 3001 E. 12<sup>th</sup> Street: Use permit from Oakland Building Department in 2005 for a transmission repair shop;



- 3007 E. 12<sup>th</sup> Street: Sanborn map of 1950 indicates use as a “hay and fuel yard”;
- Property to the adjacent east of the site is an auto repair shop;
- Property located across E. 12<sup>th</sup> Street to the northeast of the site (the Goodwill property) is a closed Leaking Underground Storage Tank (LUST) site with no further action recommended;
- Property located more than 900 feet from the site at 3050 E. 15<sup>th</sup> Street (former Melrose Ford) is a closed Leaking Underground Storage Tank (LUST) site with no further action recommended.

A detailed site vicinity map indicating the locations of these areas of concern is presented as Figure 4.

### **3.0 BORING LOCATIONS, SAMPLING DEPTHS, AND SAMPLE ANALYSES**

This section provides the technical basis for the boring and sampling locations, boring depths and analyses, as requested by ACEH. Additional details of the limited subsurface investigation conducted by TEC Accutite on June 6, 2007 are documented in TEC Accutite’s Limited Subsurface Investigation Report dated August 7, 2007.

The scope of work was to advance two soil borings (B-1 and B-2) on the site and collect & analyze one soil sample and a grab groundwater sample from each boring.

**Boring Locations:** TEC Accutite chose to advance one boring in each vacant lot of the site in an effort to maximize efficiency of the investigation. Groundwater gradients typically follow topography, so the local gradient is presumed to be to the southwest. Boring B-1 was located in the northern vacant lot at 3001 E. 12<sup>th</sup> Street, near the front of the property. Don Salladay of *Pacific Thomas Capital*, who has frequently visited the site since 2001, reports this area used to be occupied by a single-car garage of a structure formerly used as a residence. Locating the boring near E. 12<sup>th</sup> Street served the dual purpose of addressing the concern of the assumed area of the transmission shop (the former single-car garage) and also addressing the offsite concern of potential groundwater impact resulting from the Goodwill site.

Boring B-2 was advanced in the southern vacant lot, between 3005 and 3007 E. 12<sup>th</sup> Street, near the front of the property, in an area which was used as a “hay and fuel yard”, as depicted in the 1950 Sanborn map. A composite map (Figure 3) illustrates the locations of borings B-1 and B-2 in relation to the former “hay and fuel yard”, and boring B-2 is within the boundary of the “hay and fuel yard” area.

**Boring Depth:** Borings were advanced to first encountered groundwater: Boring B-1 was advanced to a depth of 24 feet bsg and boring B-2 was advanced to a depth of 28 feet bsg.

**Depth to Water:** Groundwater was encountered at approximate depths of 24 feet bsg in boring B-1 and 28 feet bsg in boring B-2. First encountered groundwater has been noted on boring logs.

Details for the drilling method and procedures are presented in TEC Accutite’s s Limited Subsurface Investigation Report dated August 7, 2007,

**Sample Analysis:** All soil samples were analyzed for a maximum variety of constituents in an effort to collect as much information about onsite soils as possible, and include: Total Petroleum Hydrocarbons (TPH) as gasoline (g), benzene, toluene, ethylbenzene, and xylenes (BTEX), and Volatile Organics (VOCs) by EPA Method 8260, TPH as diesel (d) and hydraulic fluid/motor oil (mo) by EPA Method 8015M, semi-



volatile compounds for pentachlorophenol (PCP) & polycyclic aromatic hydrocarbon (PAHs) by EPA Method 8270, semi-volatile compounds for polychlorinated biphenyls (PCBs) by EPA Method 8082A, and for metals; cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni), silver (Ag), and zinc (Zn) by EPA Method 6010B. Table 1 summarizes the soil sample analytical results.

#### **Analytical Results:**

- Cr concentrations above the respective Environmental Screening Limit (ESL) were detected in soil in borings B-1 (65 mg/Kg) and B-2 (80 mg/Kg);
- Metal concentrations below ESLs were detected in soil in borings B-1 (110 mg/Kg Ni, 28 mg/Kg Cu, 12 mg/Kg Pb, 64 mg/Kg Zn) and B-2 (110 mg/Kg Ni, 32 mg/Kg Cu, 8.3 mg/Kg Pb, 51 mg/Kg Zn);
- TPHg, TPHd, BTEX, VOCs, semi-volatile compounds for PCP & PAHs, and Ag were not detected at or above their respective method reporting limits in any soil samples of this project.
- Metals were detected in grab groundwater above the respective ESL in boring B-1 (11 µg/L Ni);
- TPHg, TPHd, TPHmo, BTEX, VOCs, semi-volatile compounds for PCP, PAHs & PCBs, and Cd, Cu, Pb and Ag were not detected at or above their respective method reporting limits in any grab groundwater samples of this project.

#### **4.0 BACKGROUND METAL IN SOILS OF THE BAY AREA**

Metals are naturally occurring in soil and their presence makes it difficult to differentiate between naturally occurring metals and potential industrial or human caused contamination, in some cases. The United States Geology Survey (USGS) conducted a study, published in 1984, to investigate the concentration of 46 elements in soils from sites across the United States (Shacklette and Boerngen, 1984). This study found that concentrations of chromium in soils of the western United States range from 3 to 2,000 milligrams per kilogram (mg/kg); soils in the San Francisco Bay Area range from 100 to 700 mg/kg and contain concentrations of chromium in the upper 13% of the 1,318 samples collected across the country. The study also found that concentrations of nickel in soils of the western United States range from less than 5 to 700 ppm; soils from the San Francisco Bay Area contain concentrations of nickel in the upper 19% of the 1,318 samples collected across the country.

Another study conducted by C. M. Scott in 1995 evaluated soil analytical data to determine the natural background levels of selected metals in soils of northern Santa Clara County, California. The study found that metals have a wide variety in the detected concentrations as well as in geographic distribution. The concentrations of chromium in soils of the study area ranged from non-detectable to 170 milligrams per kilogram (mg/kg), with the standard deviation between 30.5 to 72.0 mg/kg. The concentrations of nickel in soils of study area range from 6 to 145 mg/kg or ppm, with the standard deviation between 46.4 to 101 mg/kg. These results are consistent with low-range findings of USGS study.

The concentrations of chromium and nickel detected onsite are consistent with published background levels of chromium and nickel naturally occurring in soil of the San Francisco Bay area.



## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

- The Phase I completed by *Northgate Environmental Management, Inc.* in 2007, indicated that no Recognized Environmental Conditions are associated with the site; however, *Northgate Environmental Management, Inc.* recognized the presence of two onsite and three offsite areas of potential environmental concern and recommended further investigation.
- 3001 E. 12<sup>th</sup> Street: Use permit from Oakland Building Department in 2005 for a transmission repair shop. Don Salladay, a frequent visitor to the subject property, reports that no such business was ever apparent at this address from 2001 to the structures demolition in 2006; a single-car garage of a structure formerly used as a residence was rarely, if ever, witnessed to be open. Boring B-1 was located in the vicinity of the single-car garage and no petroleum hydrocarbons of any kind were detected in soil and groundwater. As such, TEC Accutite concludes that the former transmission shop does not present an environmental concern.
- 3007 E. 12<sup>th</sup> Street: Sanborn map of 1950 indicates use as a “hay and fuel yard.” Boring B-2 was located in the area of the former “hay and fuel yard” and no petroleum hydrocarbons of any kind were detected in soil and groundwater. No details of structures, tanks or other features are visible on the Sanborn. Sanborn maps usually have structures and features such as tanks and other items of concern. Further, there is indication on other Sanborn maps that the fuel of concern was coal, which if true would not pose an environmental concern. Given these facts and conclusions, TEC Accutite concludes this area does not present an environmental concern.
- Property to the adjacent southeast of the site is an auto repair shop, located cross- to downgradient of the site. The auto repair structure is located approximately 30 feet from the property boundary, and approximately 70 feet from the southern vacant lot. Boring B-2 was located approximately 60 feet from the property boundary and no petroleum hydrocarbons of any kind were detected in soil and groundwater. No evidence of staining or odors was apparent on the surface of the southern vacant lot. No information regarding spills or releases were noted in the 2007 Northgate Phase I for the auto repair shop site. As such, TEC Accutite concludes this area does not present an environmental concern at this time.
- The two, up- to cross gradient, closed fuel leak sites (Goodwill and Melrose Ford) are not of concern for two main reasons: 1) they are closed sites with no further action recommendations; and 2) TPH concentrations are not present at or above the method detection limits for groundwater, that could indicate a migrating plume.
- Soil samples in each boring were selected by PID readings. The highest PID reading in boring B-2 was detected at 14 feet bsg. As such, the 14 feet bsg sample was submitted for analysis. No PID readings were detected above 0.0 in boring B-1; therefore, the sample the area between the vadose zone and the saturated zone, was submitted for analysis. This decision is consistent with former ACEH recommendations regarding other projects.
- The location of boring B-1 near E. 12th Street served the purpose of addressing the concern of the assumed area of the transmission shop (the former single-car garage). The location of boring B-2 near East 12<sup>th</sup> Street served the purpose of addressing the concern of the 1950s “hay and fuel yard”.
- Analytical results of soil indicate concentrations of chromium above the respective ESL from borings B-1 and B-2; however, the concentrations of chromium detected onsite are consistent with published background levels of chromium naturally occurring in soil of the San Francisco Bay area. Historically, no metal working operations or operations associated with metals (i.e.



plating, batteries) have been reported on or in the vicinity of the site. As such, TEC Accutite concludes the metal concentrations detected in onsite soil are naturally occurring and do not present an environmental concern.

- Analytical results of groundwater indicate a concentration of nickel slightly above the respective ESL in boring B-1. Nickel concentrations in groundwater while above the ESL are significantly below the California Maximum Concentration Limit for Drinking Water of 100 ug/L, which is also consistent with the RWQCB Basin Plan.
- TPHg, TPHd, TPHmo, BTEX, VOCs, semi-volatile compounds for PCP, PAHs & PCBs, Cd and Ag were not detected at or above their respective method reporting limits in any soil or groundwater samples of this project. Also, Cu, Pb and Ag were not detected at or above their respective method reporting limits in any grab groundwater samples of this project.
- Based on the above rationale and conclusions presented, TEC Accutite recommends no further action is warranted for the site and the property be un-restricted for the highest and best use.

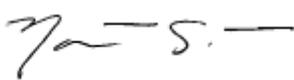
## **6.0 LIMITATIONS**

Our services consist of professional opinions, conclusions and recommendations made today in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties either expressed or implied. TEC Accutite's liability is limited to the dollar amount of the work performed.

This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk. Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Thank you for the opportunity to provide you with our services. If you have any questions or concerns, please call the undersigned at (650) 616-1200.

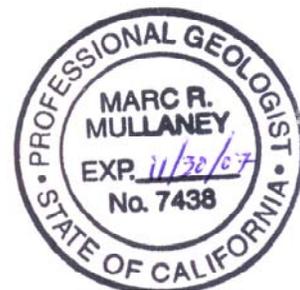
Sincerely,  
**TEC Accutite**



Nathan W. Smith  
Project Geologist



Marc Mullaney, PG# 7438  
Sr. Project Manager



## **7.0 REFERENCES**

- Northgate Environmental Management, Inc., May 7, 2007, "*Phase I Environmental Site Assessment, 3001 – 3007 East 12<sup>th</sup> St., Oakland, CA.*"
- Scott, Christina M., 1995, "*Background Metal Concentrations in Soils in Northern Santa Clara County, California,*" in: "Recent Geologic Studies in the San Francisco Bay Area."
- Shacklette, H. T. and Boerngen, J. G., 1984, "*Element Concentrations in Soils and Other Surficial Materials, Conterminous United States,*" U.S. Geological Survey Professional Paper 1270.
- TEC Accutite, August 7, 2007, "*Limited Subsurface Investigation Report, 3001 – 3007 East 12<sup>th</sup> St., Oakland, CA.*"



## TABLES

**Table 1**  
**Summary of Soil Analytical Results**  
 3001 - 3007 E 12th Street  
 Oakland, California

Sample ID	Depth (feet)	Date	TPHg	TPHd	TPHmo	BTEX	VOC's	PCP & PAH's	PCB's	Metals								
										Cd	Cr	Cu	Pb	Ni	Ag	Zn		
<b>Concentrations in mg/Kg</b>																		
B-1 @ 8fbg	8	6/6/2007	<0.1	<2.0	<4.0	ND	ND	ND	ND	<1.0	<b>65</b>	28	12	110	<1.0	64		
B-2 @ 14fbg	14	6/6/2007	<0.1	<2.0	<4.0	ND	ND	ND	ND	<1.0	<b>80</b>	32	8.3	110	<1.0	51		
<i>ESL</i>			<i>100</i>	<i>100</i>	<i>1,000</i>	<i>var</i>	<i>var</i>	<i>var</i>	<i>0.74</i>	<i>7.4</i>	<i>58</i>	<i>230</i>	<i>750</i>	<i>150</i>	<i>40</i>	<i>600</i>		

**Notes:**

**BOLD** = Concentration exceeds ESL

(fbg) = feet below surface grade

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015.

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015.

TPHmo = Total petroleum hydrocarbons as motor oil by EPA Method 8015.

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8260B.

VOC's = volatile organic compounds including 1,2-Dibromoethane, 1,2-Dichloroethane, Ethyl tert Butyl Ether, Isopropyl ether, Methyl tert-butyl ether, t-Butyl alcohol, tert-amyl methyl ether by EPA Method 8260B.

PCPs & PAH's = semi-volatile compounds by EPA Method 8270C.

PCB's = semi-volatile compounds by EPA Method 8082.

Metals: Cd = Cadmium, Cr = Chromium, Cu = Copper, PB = Lead, Ni = Nickel, Ag = Silver, and Zn = Zinc by EPA Method 6010B.

ND = all individual analytes not detected at or above laboratory detection limits for this method

\* = Aroclor 1016 (PCB) detected by EPA Method 8082; all other analytes ND for this method.

ESL = Environmental Screening Level for subsurface soil (< 3M BGS), groundwater IS a current or potential drinking water resource, Table A-2, commercial/industrial land use (CRWQCB Interim Final – February 2005).

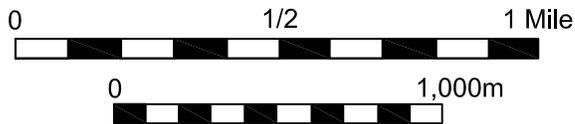
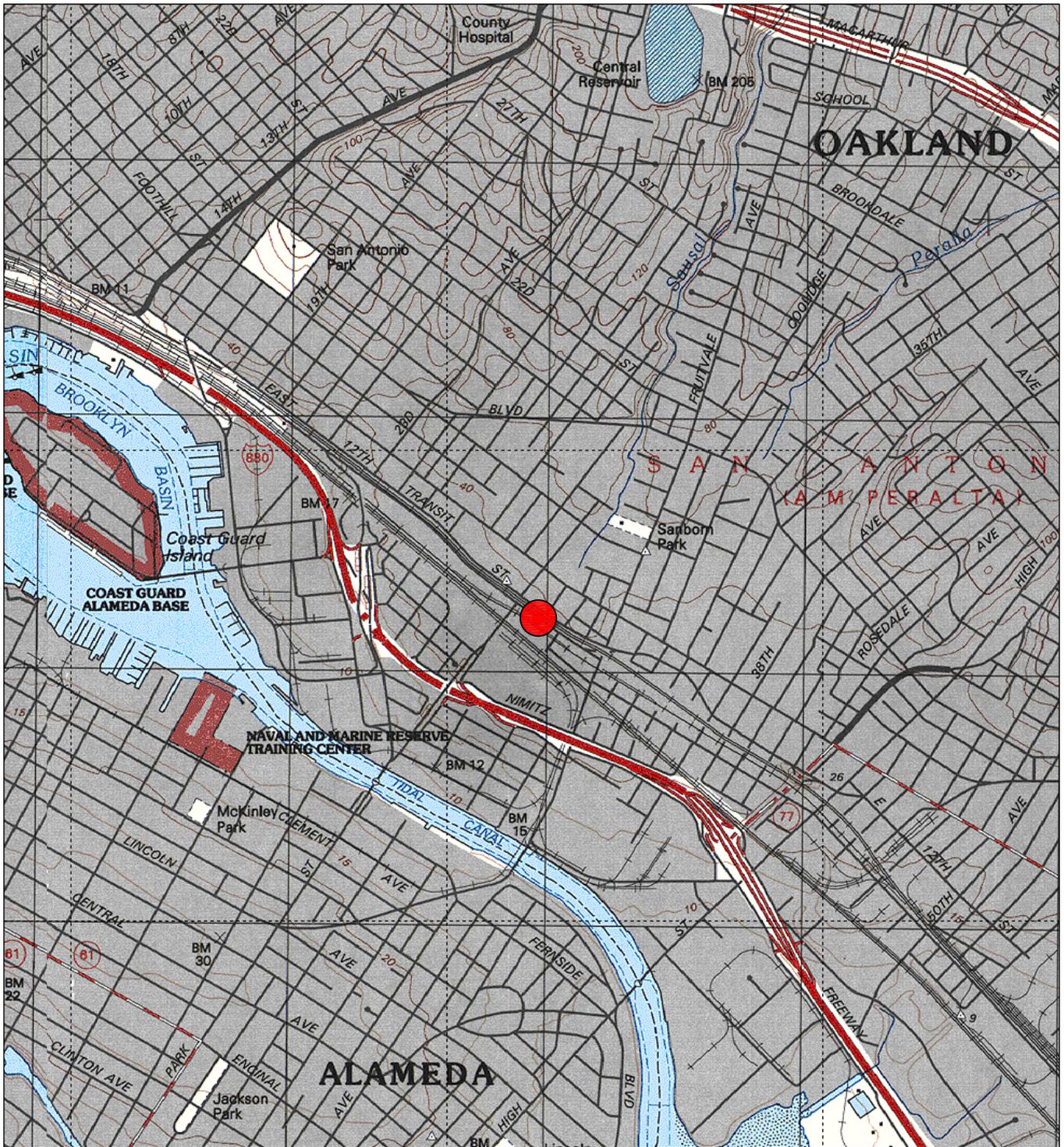
**Table 2**  
**Summary of Grab Groundwater Analytical Results**  
3001 - 3007 E 12th Street  
Oakland, California

Sample ID	Date	TPHg	TPHd	TPHmo	BTEX	VOC's	PCP & PAH's	PCB's	Metals						
									Cd	Cr	Cu	Pb	Ni	Ag	Zn
<b>Concentrations in µg/L</b>															
B-1	6/6/2007	<58	<77	<14	ND	ND	ND	<1.0	<0.2	<2.0	<3.0	<2.0	<b>11</b>	<0.2	8.6
B-2	6/6/2007	<57	<42.4	<21.2	ND	ND	ND	<1.0	<0.2	2**	<3.0	<2.0	7**	<0.2	20
<i>ESL</i>		<i>100</i>	<i>100</i>	<i>100</i>	<i>var</i>	<i>var</i>	<i>var</i>	<i>0.014</i>	<i>1.1</i>	<i>50</i>	<i>3.1</i>	<i>2.5</i>	<i>8.2</i>	<i>0.19</i>	<i>81</i>

**Notes:**

**BOLD** = Concentration exceeds ESL  
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015.  
TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015.  
TPHmo = Total petroleum hydrocarbons as motor oil by EPA Method 8015.  
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8260B.  
VOC's = volatile organic compounds including 1,2-Dibromoethane, 1,2-Dichloroethane, Ethyl tert Butyl Ether, Isopropyl ether, Methyl tert-butyl ether, t-Butyl alcohol, tert-amyl methyl ether by EPA Method 8260B.  
PCPs & PAH's = semi-volatile compounds pentachlorophenol and polycyclic aromatic hydrocarbon by EPA Method 8270C.  
PCB's = semi-volatile compound polychlorinated biphenyls by EPA Method 8082.  
Metals: Cd = Cadmium, Cr = Chromium, Cu = Copper, Pb = Lead, Ni = Nickel, Ag = Silver, and Zn = Zinc by EPA Method 6010B.  
ND = all individual analytes not detected at or above laboratory detection limits for this method  
\*\* = considered an estimated value (reported between Maximum Detection Limit and Reporting Limit)  
var = variable ESL's, unique for each constituent.  
2005).

## FIGURES



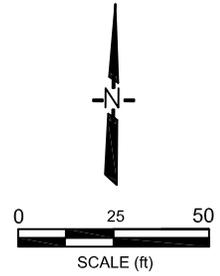
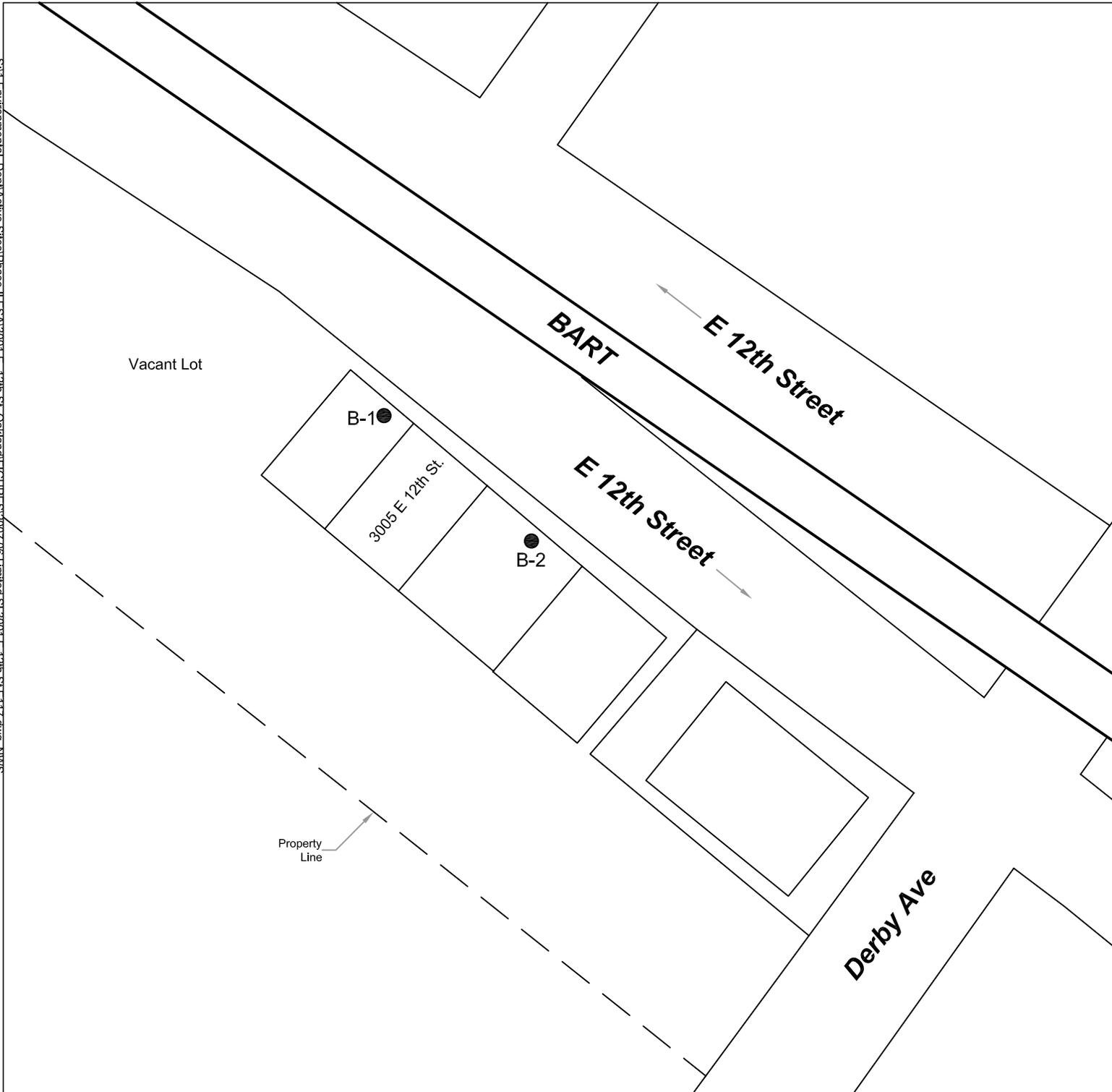
● Site Location
Map By: TOPO!
Date: 06/15/2007
Drafted By: LC

<b>SITE</b>
3001 - 3007 E 12th Street Oakland, California
 262 Michelle Court So. San Francisco, CA 94080 Main: (650) 616-1200 Fax: (650) 616-1244

<b>FIGURE</b>
<b>1</b>

<b>TITLE</b>
<b>Vicinity Map</b>

S:\T Environmental Depictive Sites\Phase II ESA\3001 E 12th St Oakland\FIGURES\2007\_06 Limited SI 3001 E 12th St E117.dwg NWS



**LEGEND**

- B-2 Boring Locations

**SITE**  
 3001 - 3007 E 12th Street  
 Oakland, California

**FIGURE**  
**2**  
**Site Map and Boring Locations**

Revision:	3
Date:	06/22/2007
Drafted By:	LC

**TEC** 262 Michelle Court  
 So. San Francisco, CA 94080  
 Main: (650) 616-1200  
 Fax: (650) 616-1244

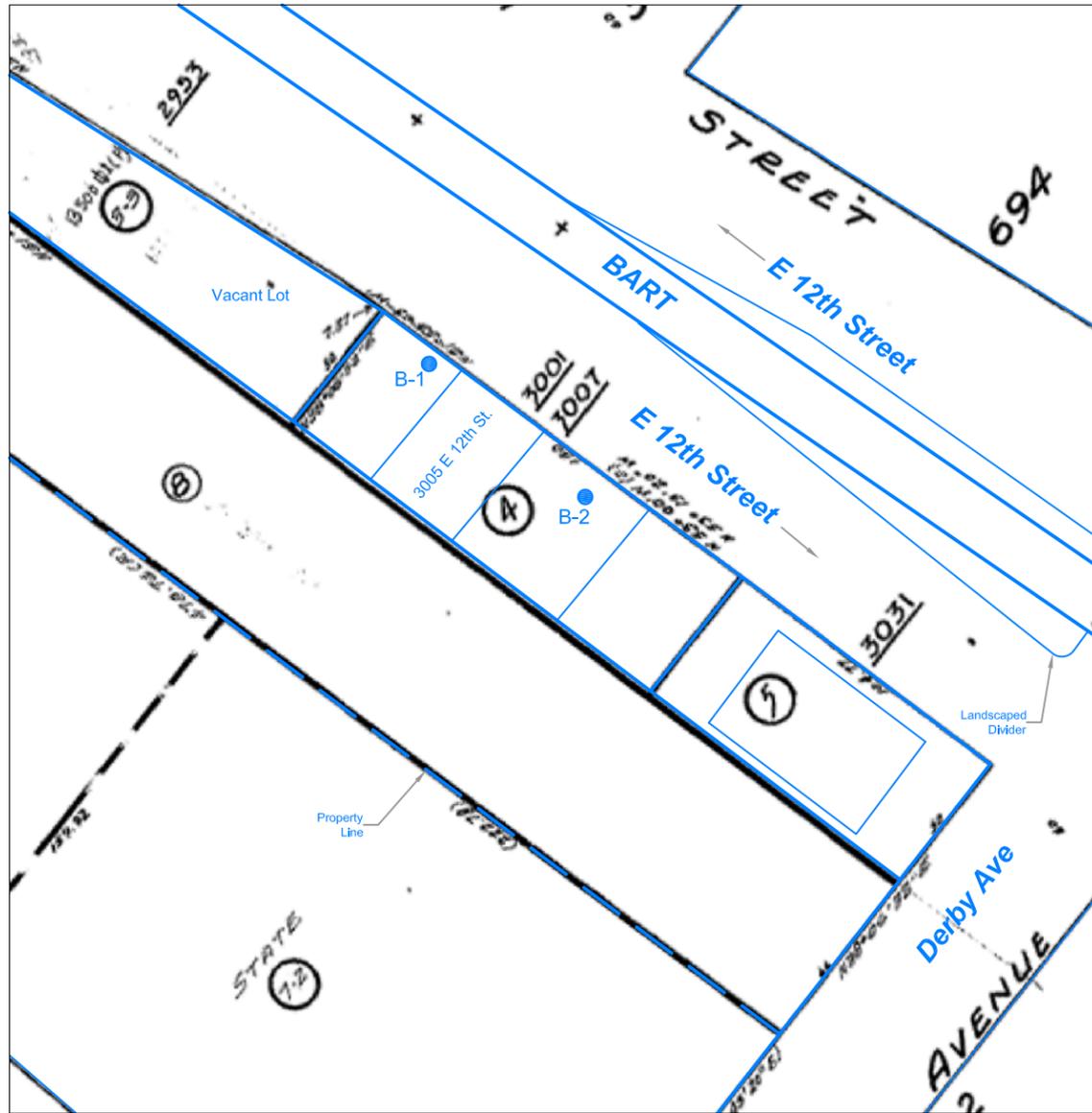


FIGURE #2 SITE MAP TRACED OVER PARCEL MAP

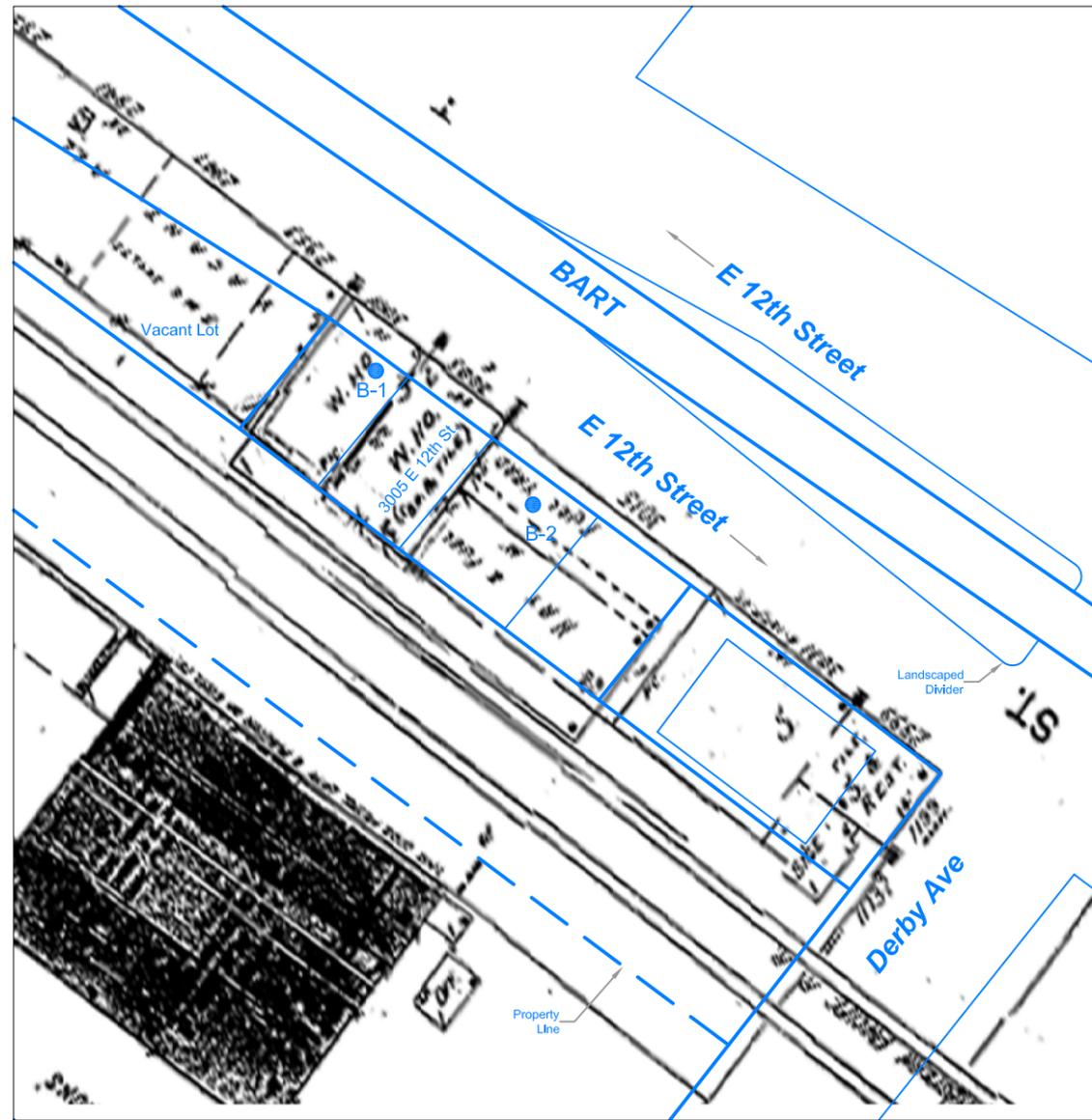
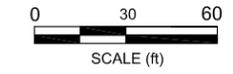


FIGURE #2 SITE MAP TRACED OVER SANBORN MAP



**LEGEND**

B-2 ● Boring Locations

**SITE**  
3001 - 3007 E 12th Street  
Oakland, California

**FIGURE 3**  
**Parcel & Sanborn Composite Site Maps**

Revision:  
Date: 11/13/2007  
Drafted By: LC

**TEC ACCUTITE** 262 Michelle Court  
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