

# CAMBRIA

August 11, 2000

Mr. Larry Seto  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-5677

00 AUG 14 PM 3:51  
PRODUCTION


Re: **LETTER OF TRANSMITTAL**  
**Conduit Study and File Review Report**  
1721 Webster Street  
Oakland, California



Dear Mr. Seto:

Enclosed is our *Conduit Study and File Review Report* for the above referenced site. If you have any questions, please do not hesitate to call me at (510) 420-3340.

Sincerely,  
**Cambria Environmental Technology, Inc.**

  
John A. Riggi  
Project Geologist

Enclosure

cc: Mr. Leland Douglas, 1721 Webster Street, Oakland, California 94612-3411

Oakland, CA  
Sonoma, CA  
Portland, OR  
Seattle, WA

H:\Sb-2004 (UST Fund)\DOUGLAS\1721 Webster\Conduit Study&1750 File Review\CS-FRRptTransmittal.doc

**Cambria  
Environmental  
Technology, Inc.**

1144 65th Street  
Suite B  
Oakland, CA 94608  
Tel (510) 420-0700  
Fax (510) 420-9170

# C A M B R I A

August 8, 2000

Mr. Larry Seto  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-5677

Re: **Conduit Study and File Review Report**  
1721 Webster Street  
Oakland, California  
Cambria Project # 580-0197

Dear Mr. Seto:



On behalf of Mr. Leland Douglas, and as requested by the Alameda County Health Care Services Agency, (ACHCSA), Cambria Environmental Technology, Inc. (Cambria) has prepared this Conduit Study and File Review Report for the above-referenced site. This report was prepared in response to your February 16, 2000, letter to Mr. Douglas and our telephone conversation on February 29, 2000. The site background, conduit study, file review, and Cambria's conclusions are presented below.

## SITE BACKGROUND

**Site Location:** The site is located on 1721 Webster Street between 17th and 19th Streets in downtown Oakland, California (Figure 1). The site is located approximately five miles east of the San Francisco Bay and one half-mile west of Lake Merritt. The site is currently being utilized as a parking garage and is surrounded by other commercially-zoned parcels.

**1992 Tank Removal:** On August 3 and 6, 1992, Parker Environmental Services of Pittsburg, California removed one 1,000-gallon and two 500-gallon gasoline underground storage tanks (USTs). Up to 1,500 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) and up to 12 ppm benzene were detected in tank excavation and sidewall samples.

**1994 Subsurface Investigation:** On July 8 and September 8, 1994, Gen Tech/Piers Environmental, Inc. (Gen Tech) of San Jose, California drilled six exploratory borings (EB-1 through EB-6) and installed three groundwater monitoring wells (MW-1 through MW-3). Up to 650 ppm TPHg and 0.2 ppm benzene were detected at 20 ft depth in soil near the former USTs. Up to 350,000 parts per billion (ppb) TPHg and 10,000 ppb benzene were detected near and immediately down-gradient of the former USTs.

Oakland, CA  
Sonoma, CA  
Portland, OR  
Seattle, WA

**Cambria  
Environmental  
Technology, Inc.**

1144 65th Street  
Suite B  
Oakland, CA 94608  
Tel (510) 420-0700  
Fax (510) 420-9170

**1996 Subsurface Investigation:** In February and May, 1996, Cambria drilled seven geoprobe™ soil borings (SB-A through SB-G) and installed two groundwater monitoring wells (MW-4 and MW-5). Up to 660 ppm TPHg and <0.005 ppm benzene were detected at 20.5 ft depth in soil boring SB-D located down gradient from the former USTs. Up to 63,000 ppb TPHg and 7,400 ppb benzene were detected in groundwater from MW-2 immediately down gradient of the former USTs.

**Oxygen Releasing Compound (ORC) Update:** To enhance the natural bioattenuation of dissolved hydrocarbons, Cambria installed a string of six one-foot ORC socks in well MW-2 on January 8, 1998. Well MW-2 was not purged during ground water monitoring to maintain the effectiveness of the oxygenated well water. Dissolved Oxygen (DO) concentrations have been monitored in MW-2 and in the remaining wells prior to purging. DO concentrations have been significantly higher in well MW-2 compared to other wells.

**Hydrogen Peroxide Injections:** Cambria added a total of 120 gallons of 7.5% hydrogen peroxide solution into site groundwater via monitoring wells MW-2 and MW-3 to decrease dissolved hydrocarbon concentrations. The hydrogen peroxide injection events temporarily increased site groundwater dissolved oxygen concentrations; however, the dissolved oxygen concentrations rapidly decreased once the injection activities were completed. Six weeks after the final hydrogen peroxide injection event, hydrocarbon concentrations at the site increased to near or above historical high concentrations, although the concentrations returned to approximately the same levels recorded prior to the hydrogen peroxide injection during the subsequent monitoring event.

*Probably not enough H<sub>2</sub>O<sub>2</sub> added*


**Ground Water Monitoring:** Since 1994, the depth to groundwater has ranged from approximately 16.8 to 22.2 feet below grade surface (bgs), with groundwater consistently flowing towards the northeast with an approximate gradient of 0.004 ft/ft. Cambria currently monitors groundwater quality on a semi-annual basis.

## CONDUIT STUDY PROCEDURES AND RESULTS

To assess the potential for preferential contaminant migration via potentially higher permeability utility trench backfill, Cambria conducted a conduit study for the site vicinity. The study focused on potential preferential pathways between the sites at 1721 and 1750 Webster Street. To assess the depths and locations of underground utilities located along Webster Street, Cambria contacted underground service alert (USA) to mark for underground utilities. Cambria mapped the location of the USA markings along Webster Street, and visited the East Bay Municipal Utility District (EBMUD) in Oakland, California, and the City of Oakland Department of Public Works to research the underground water, sewer and storm drains conduits in the vicinity of the subject site.

### Storm Drain and Sanitary Sewer Conduits

A 36-inch storm drain conduit exists along Webster Street between 17<sup>th</sup> and 19<sup>th</sup> Street; the storm drain flows to the northeast into an intersecting storm drain conduit along 19<sup>th</sup> Street (Figure 2). The approximate elevation for the bottom of the storm drain trench conduit along 19<sup>th</sup> and Webster Street is 12.92 feet above mean sea level (msl) which is approximately 9 ft bgs.



Three sanitary sewer conduits are located along Webster Street between 17<sup>th</sup> and 19<sup>th</sup> Streets. One sanitary sewer conduit, located approximately 15 feet east of the subject site, has a conduit diameter of 18 inches and flows toward the northeast (depth not indicated on DPW plans). The second sanitary sewer is located approximately 28 feet east of the subject site and flows to the northeast at an approximate bottom of trench elevation of 20.30 feet above msl (approximately 9 feet bgs) near the intersection of 17<sup>th</sup> Street and Webster Street, to an approximate bottom of trench elevation of 12.84 above msl (approximately 9 feet bgs) near the intersection of 19<sup>th</sup> Street and Webster Street. One 18-inch diameter sanitary sewer exists on the east side of Webster Street between 17<sup>th</sup> and 19<sup>th</sup> Street. This conduit also flows to the northeast at an approximate bottom of trench elevation of 15.00 feet above msl (approximately 7 feet bgs) near the intersection of 19<sup>th</sup> Street and Webster Street.

### Water and Telecommunications Conduits

Cambria visited the EBMUD located at 375 Eleventh Street, Oakland, California, to review water line utility locations and depths within the site area. The EBMUD water utility line location map for the site vicinity is presented as Attachment A. **Two EBMUD water utility lines exist along Webster Street between 17<sup>th</sup> and 19<sup>th</sup> Streets.** The water utility conduits are approximately 20-25 feet east of the subject site and exist in the subsurface at an approximately depth of 3-5 feet bgs (Figure 2).

Based on the recorded USA markings during Cambria's March 4, 2000 remediation well installation, there is **one existing telecommunications line in the sidewalk along the west side of Webster Street, and one telecommunications line existing along the center of Webster Street.** The bottom of trench depths for telecommunication conduits is typically 3 to 5 feet bgs (Figure 2).

### Gas and Electric Conduits

Cambria mapped the USA locations of gas and electrical conduits during the March 4, 2000, well installations at the subject site. Gas and electrical conduits are located along the west side of Webster Street, and an electrical conduit exists in the sidewalk along the west side of Webster Street (Figure 2). Gas and electrical conduits are typically located at 3 to 5 feet bgs.

### Conduit Study Conclusions

Our conduit study suggests that hydrocarbon or MTBE migration from the subject site via trench backfill or conduits is *not* occurring. In general, all potential conduits are approximately 5 feet or more above site groundwater.

More specifically, groundwater elevations at the site are generally 6 to 8 feet above msl (depending on seasonal fluctuation), with a maximum groundwater elevation in source area well MW-2 of 8.99 feet above msl on August 11, 1998. Nearby sanitary sewer and storm drain trench elevations are approximately 15 feet above msl, which is approximately 6 feet above the static groundwater level during the maximum groundwater elevation event.

The maximum historical groundwater elevation in well MW-5 was 8.33 feet above msl on February 5, 1998. Sanitary sewer and storm drain conduits near the intersection of 19<sup>th</sup> Street and Webster Street have approximate bottom of trench elevations of 12.84 and 12.92 feet above msl, respectively, which is approximately 4.5 feet above the static groundwater level.

The shallow depth conduits (gas, electric, water, and telecommunications) existing at 3-5 feet below ground surface do not have an effect on the migration of contaminants in groundwater.

### FILE REVIEW PROCEDURES AND RESULTS

To assess the possibilities that the release at 1721 Webster Street has impacted the subsurface groundwater conditions at 1750 Webster Street (Prentiss Properties), Cambria reviewed the case files at the ACHCSA. Cambria contacted the ACHCSA and conducted a file review on April 28, 2000. The findings of the file review are presented below.

- In September 1991, James M. Montgomery Consulting Engineers Inc. (Montgomery) removed a 5,000-gallon UST, and associated fuel piping and dispenser from parcel #1 at 1750 Webster Street (also addressed as 1833 Harrison). A small waste oil tank was believed to exist at the site by Montgomery, based on the presence of what was interpreted to be two underground vent lines. The waste oil tank was not encountered during tank removal and it was believed by Montgomery that the tank did not exist at the site. There is little information regarding the waste oil UST at this site. The site plot plan is presented as Figure 3, which was prepared by Applied Geosciences Inc. (Applied) of San Jose, California.

- A geophysical electromagnetic line locating (EMLL) survey performed on parcel #1 reported three anomalous zones that are probably due to isolated buried metal located in the north half of the survey area (ATC, March 1998). It was also reported that the approximate dimensions of these zones are consistent with utility vaults or small USTs.
- Petroleum hydrocarbons were detected in shallow soil at the 1750 Webster site during the February 1998 soil and groundwater investigation conducted by ATC. The detected hydrocarbons were 6.5 mg/kg total xylenes in soil sample G-2-10, collected at 10 ft bgs.
- Based on groundwater sampling of Prentiss Property wells on February 26, 1999, monitoring well A-3 contained 30,000 µg/L TPHg and also contained a benzene concentration of 160 µg/L. These concentrations are significantly higher than concentrations detected in groundwater from Douglas well MW-4 (located closest to Prentiss Properties well A-3) on February 8, 1999, which were 9,800 µg/L TPHg and no benzene. Both monitoring wells MW-4 and A-3 are screened from 15 ft to 30 ft bgs.
- At the Prentiss site, groundwater samples collected during ATC's, February 8, 1998 subsurface investigation detected MTBE concentrations as high as 2,900 µg/L. Eleven of the twelve groundwater samples collected during ATC's investigation contained detectable MTBE concentrations. The maximum historical MTBE concentration reported at 1721 Webster Street (Douglas) was 560 µg/L, detected in groundwater samples collected from source area monitoring well MW-2 on May 4, 1999. The maximum MTBE concentration detected in Douglas well MW-4, located near 1750 Webster Street (Prentiss), was 300 µg/L on February 8, 1999.
- A former Chevron service station existed on the corner of 17<sup>th</sup> Street and Harrison, located up gradient of 1750 Webster (Prentiss Properties) and cross gradient of 1721 Webster (Douglas Parking). The former Chevron has been identified as a source of groundwater hydrocarbon contamination.

*address, soil & gw data?*

**File Review Conclusions**

Based on the findings of our file review, Cambria concludes the following:

- There was a known former UST located at 1750 Webster Street.
- Subsurface assessment was not completed at 1750 Webster Parcel #1.
- Since the second UST believed to be onsite at 1750 Webster was not discovered during Montgomery's September 1991 UST removal, the potential presence of an additional smaller tank (possibly a 550-gallon waste oil tank) still exists.
- Significant hydrocarbons and MTBE were detected at 1750 Webster.
- Xylenes detected in shallow soil (10 ft bgs) at the 1750 Webster site are not from an offsite source since groundwater is approximately 17-22 ft bgs.
- Hydrocarbon and MTBE concentrations have been detected in groundwater across most of the 1750 Webster site.
- Hydrocarbon and MTBE concentrations are much higher at the 1750 Webster site than at the 1721 Webster site.
- For wells located between the 1721 and 1750 Webster sites, TPHg concentrations are much higher in the 1750 Webster wells, with 30,000 µg/L TPHg in Prentiss well A-3 versus 9,800 TPHg in Douglas well MW-4. Benzene was also detected in Prentiss well A-3 at 160 µg/L, while no benzene was detected in Douglas well MW-4.
- An onsite source or a different offsite source is likely responsible for the contamination at 1750 Webster site.

**REQUEST FOR ADDITIONAL ASSESSMENT**

With no known conduits facilitating offsite hydrocarbon migration, Cambria believes that additional assessment of the 1721 Webster Street Douglas Parking site is not warranted at this time. As illustrated on Figure 2, significant grab sampling and well monitoring has been conducted to define the hydrocarbons at 1721 Webster, including several locations in the street between the 1721 and 1750 Webster Street sites. Furthermore, current efforts are focused on site remediation, and

*Need  
Permanent  
well*


Cambria has commenced implementation of the approved long-term feasibility test. Additional assessment by others seems warranted to further determine if a UST remains at 1750 Webster, Parcel #1, to sample soil and groundwater at 1750 Webster Parcel #1, and to search for other potential offsite sources of hydrocarbons detected at 1750 Webster.


**CLOSING**

If you have any questions or comments concerning this report, please call John Riggi at (510) 420-3340.



Sincerely,  
**Cambria Environmental Technology, Inc.**

  
John A. Riggi  
Project Geologist

  
Bob Clark-Riddell, P.E.  
Principal Engineer



Figures:           1 - Vicinity Map  
                      2 - Conduit Study Map

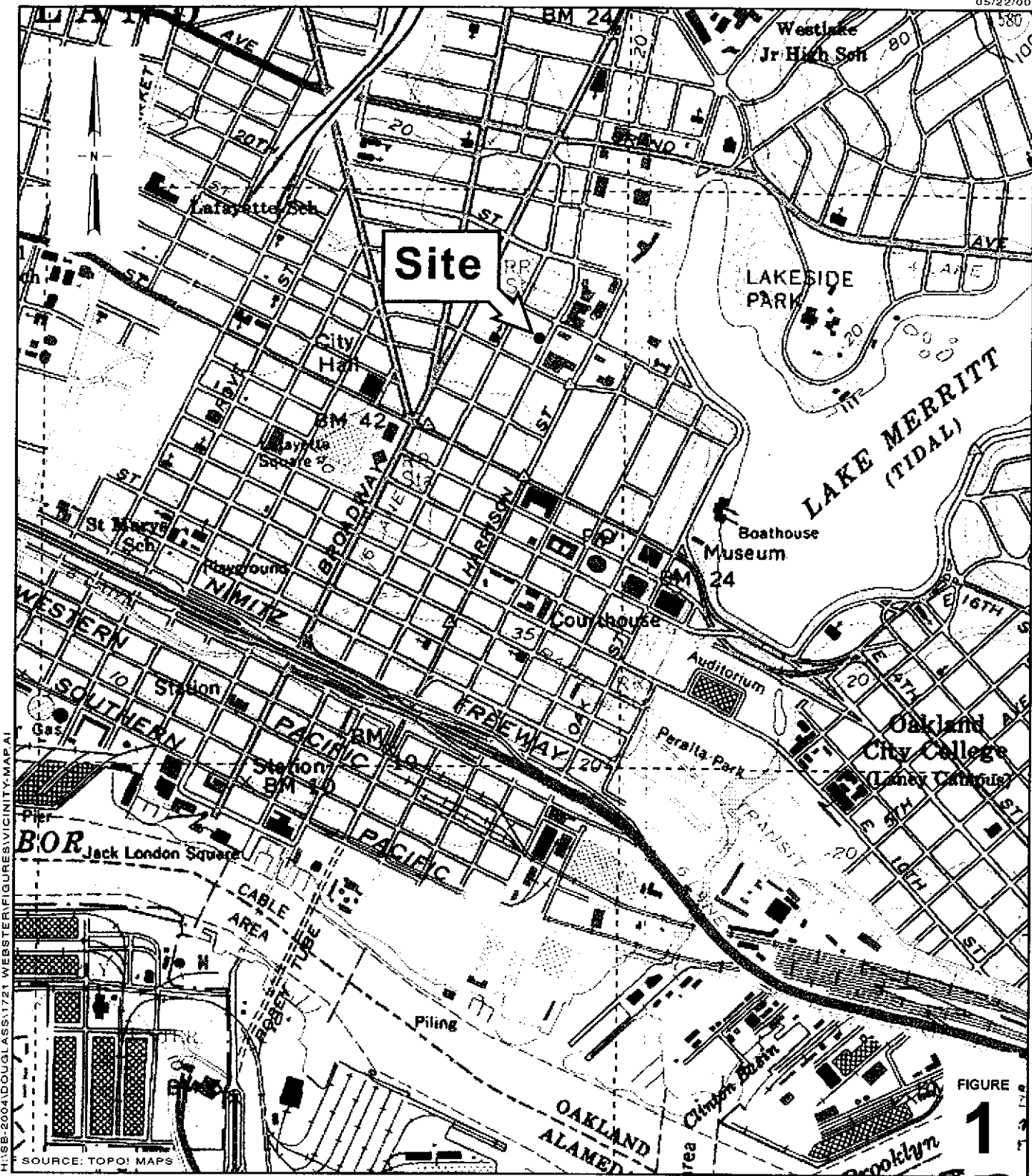
Attachment:       A - EBMUD Water Utility Line Location Map

cc:                       Mr. Leland Douglas, 1721 Webster Street, Oakland, California 94612-3411



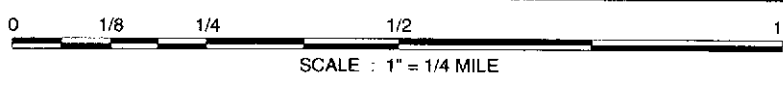
## REFERENCES

- James M. Montgomery Consulting Engineers Inc., *Underground Storage Tank Closure Report* for Prentiss/Copely Investment Group, November 1991.
- Applied Geosciences Inc., *Environmental Assessment for Three Parcels Located in Oakland, California* for Terracorp Properties Inc, January 6, 1993.
- Applied Geosciences Inc., *Results of a Geophysical Survey and Groundwater Investigation at Three Parcels Located on the Block Bounded by 19<sup>th</sup> Street, Harrison Street, 17<sup>th</sup> Street, and Webster Street, Oakland, California* for Prentiss Properties, April 1, 1993.
- Applied Geosciences Inc., *Results of a Geophysical Survey and Subsurface Investigation at a Parcels Located on the East Side of Webster Street, Between 17<sup>th</sup> and 19<sup>th</sup> Streets, Oakland, California* for Prentiss Properties, June 1, 1993.
- ATC Associates Inc., *Soil and Groundwater Investigation for 1750 Webster Street, Oakland, California* for Prentiss Properties, March 19, 1998.
- ATC Associates Inc., *Well Installation and Quarterly Monitoring Second and Third Quarters 1998 Prentiss Properties LTD., Inc. 1750 Webster Street, Oakland, California*, for Prentiss Properties, September 23, 1998.
- ATC Associates Inc., *Quarterly Groundwater Monitoring First Quarters 1999 Prentiss Properties LTD., Inc. 1750 Webster Street, Oakland, California* for Prentiss Properties, March 29, 1999.



U:\SB-2004\DOUGLASS\1721 WEBSTER\FIGURES\VICINITY.MAP.A1

SOURCE: TOPO! MAPS



**Douglas Parking Facility**  
 1721 Webster Street  
 Oakland, California



C A M B R I A

**Vicinity Map**

FIGURE  
**1**

**EXPLANATION**

- Groundwater monitoring well
- SB-A** Soil boring location
- Electrical line
- Gas line
- Storm drain and flow direction
- Sanitary Sewer line and flow direction
- EBMUD water line
- Telecommunications line
- (12.92) Approximate trench elevation above mean sea level (msl)
- |         |
|---------|
| Well ID |
| TOC     |
| GW      |

 Well designation
- |     |
|-----|
| TOC |
| GW  |

 Top of casing elevation above msl
- |    |
|----|
| GW |
|----|

 Groundwater elevation above msl

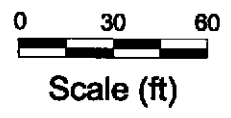
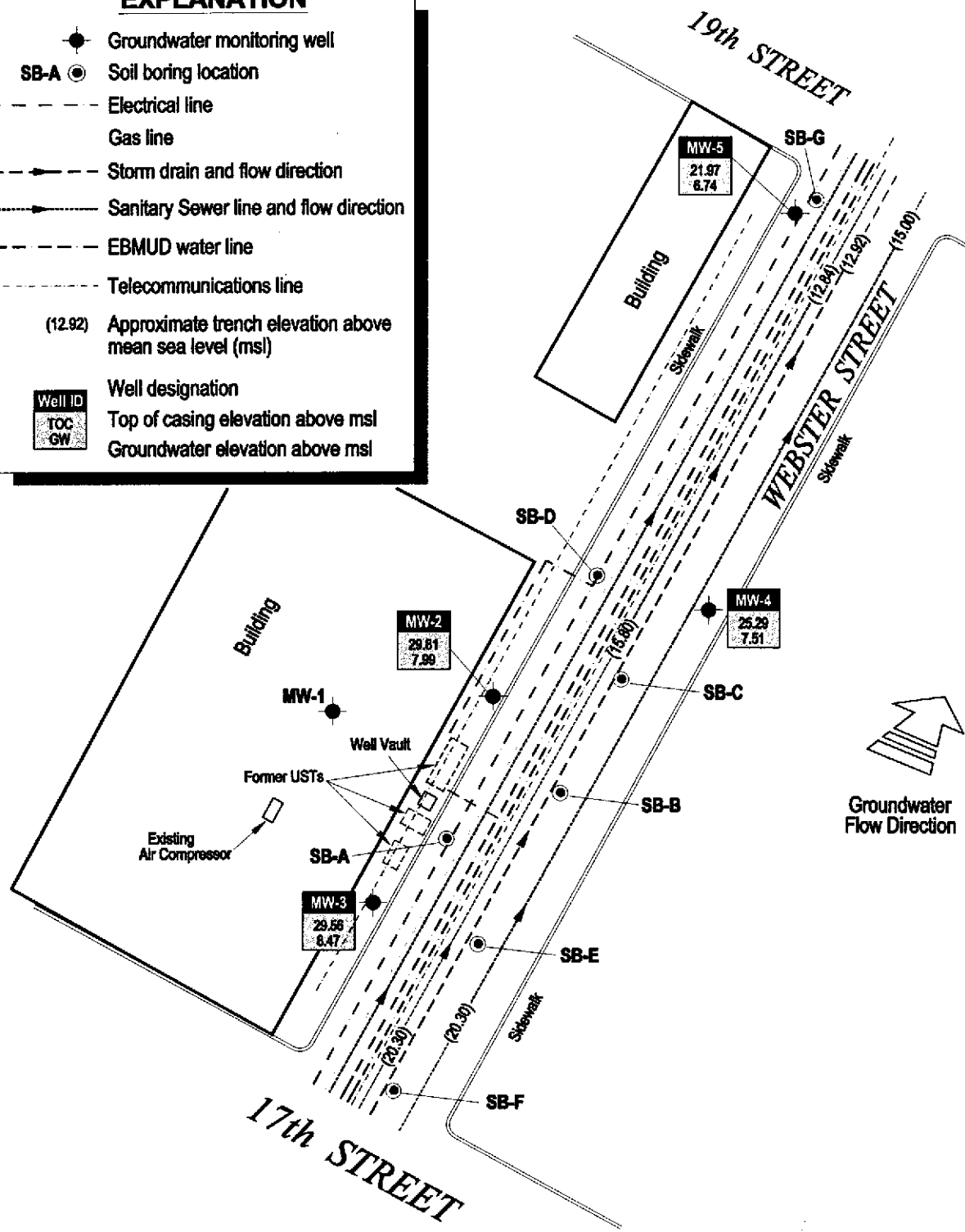


FIGURE  
**2**

K:\95-204\00\GIS\FIGURE\CONDUIT\FIGURE 2

**Douglas Parking Facility**  
1721 Webster Street  
Oakland, California



**Conduit Study Map**



OFFICE/RETAIL BUILDING

WORLD SAVINGS CENTER

19TH STREET

*Deanna Vogel Stahl*

RESTAURANTS/RETAIL/  
OFFICES

PARKING LOT

PARCEL 1

*1833 Harmon*

*Enter 5 KUST*

HARRISON STREET

OFFICE BUILDING

WEBSTER STREET

*Parking Lot*  
OFFICE/RETAIL BUILDINGS

PARCEL 2

PARCEL 3

HP-2

HP-1

PARKING LOT

APARTMENTS

PARKING LOT

PARKING GARAGE

*Deanna Vogel Stahl*

*17th St*

EXPLANATION

HP-1



HYDROPUNCH SAMPLE LOCATION AND DESIGNATION



AREA OF PATCHED ASPHALT



CIRCULAR ASPHALT PATCH



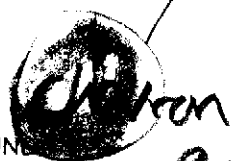
FORMER TRANSFORMER LOCATION



SITE BOUNDARY



PARCEL BOUNDARY



*90020*

*1033 Harmon*

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP MODIFIED FROM MAP PROVIDED BY TERRACORP PROPERTIES, INC.
3. NO SCALE

APPLIED GEOSCIENCES INC.

Environmental Consultants



Figure

SITE PLOT PLAN

3

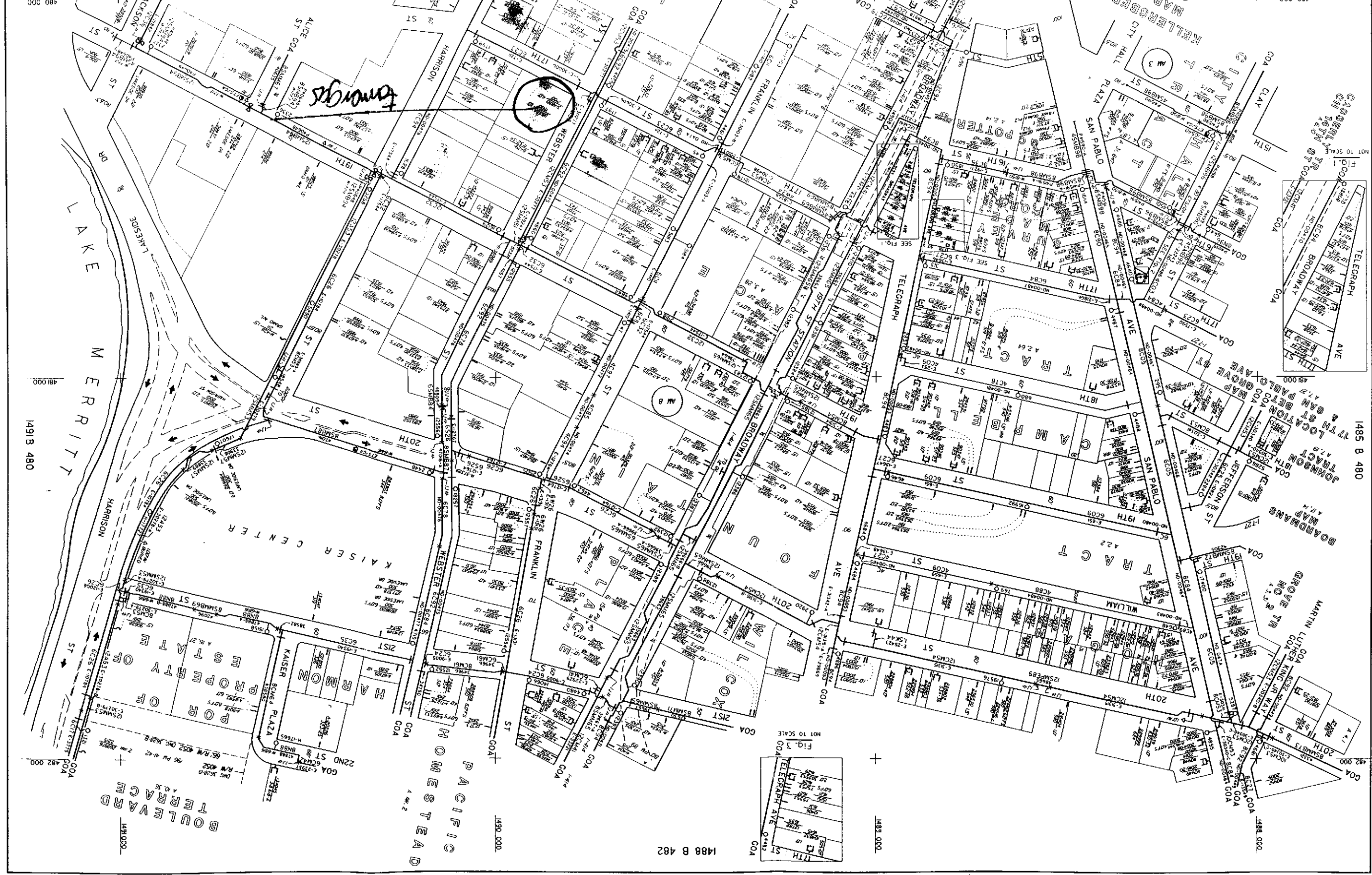
**ATTACHMENT A**

EBMUD Water Utility Line Location Map

1488B480

EAST BAY MUNICIPAL UTILITY DISTRICT  
DATE 15980 JAN 2000  
CITY OAKLAND  
COUNTY ALAMEDA  
SHEET NO. 202

POSTED REVISIONS  
DATE JAN 2000  
TAP LEGEND  
1 1/2" TAP IS ON MAIN 1  
1 1/2" TAP IS ON MAIN 2  
1 1/2" TAP IS ON MAIN 3  
ONLY THOSE MAPS ON WHICH THIS LEGEND APPEARS ENTER THE MAIN TAPPED.



1488 B 480  
NOT TO SCALE  
FIG. 1  
CASSIDY TRACT  
1488 B 480  
TELEGRAPH AVE  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 2  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 3  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 4  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 5  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 6  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 7  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 8  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480

1488 B 480  
NOT TO SCALE  
FIG. 9  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480  
CASSIDY TRACT  
1488 B 480