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Alameda County
Environmental Health

February 9, 2009

Paresh C. Khatri
Alameda County Health Care Services Agency
1131 Harbor Way Parkway, Suite 250
Alameda, California 94502

Subject: Site Investigation Workplan, Fuel Leak Case RO0002735,
EBMUD South Area Service Center
589 East Lewelling Boulevard
San Lorenzo, California

Dear Paresh Khatri,

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Schroeter', written over a large, light-colored oval scribble.

John Schroeter
East Bay Municipal Utility District
Environmental Compliance Manager



ALISTO ENGINEERING GROUP

February 6, 2009

Mr. John Walter
East Bay Municipal Utility District
375 11th Street; M.S. 704
Oakland, California 94607

10-654-42

Subject: Site Investigation Workplan
EBMUD South Area Service Center
589 East Lewelling Boulevard
San Lorenzo, California

Dear Mr. Walter:

Alisto Engineering Group is pleased to submit this workplan to conduct site investigation at the above-referenced site.

Please call if you have questions or comments.

Sincerely,

ALISTO ENGINEERING GROUP

Chris Reinheimer
Senior Project Manager

Enclosure

SITE INVESTIGATION WORKPLAN

**East Bay Municipal Utility District
South Area Service Center
589 East Lewelling Boulevard
San Lorenzo, California
Alameda County Fuel Leak Case No. RO0002735**

Project No. 10-654-42

Prepared for:

**Mr. John Walter
East Bay Municipal Utility District
375 11th Street; M.S. 704
Oakland, California 94607**

Prepared by:

**Alisto Engineering Group
2737 N. Main Street, Suite 100
Walnut Creek, California**

February 6, 2009



**Chris Reinheimer
Senior Project Manager**

**Al Sevilla, P.E.
Principal**

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
1.2 Scope of Work	1
2.0 IMPLEMENTATION SCHEDULE.....	3

TABLE

- 1 Summary of Results of Soil Sampling

FIGURES

- 1 Site Vicinity Map
- 2 Proposed Soil Boring Location Map

SITE INVESTIGATION WORKPLAN

**East Bay Municipal Utility District
South Area Service Center
589 East Lewelling Boulevard
San Lorenzo, California
Alameda County Fuel Leak Case No. RO0002735**

Alisto Project No. 10-654-42

1.0 INTRODUCTION

This work plan presents the proposed scope of work for site investigation at the East Bay Municipal Utility District (EBMUD) South Area Service Center, located at 589 East Lewelling Boulevard, San Lorenzo, California. The site investigation was directed by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated December 5, 2008. A site vicinity map is shown on Figure 1

During the May 2004 upgrades to the secondary containment systems under the two fuel dispensers (one diesel and one gasoline), at the EBMUD South Area Service Center, subsurface soil samples were collected in accordance with ACHCSA guidelines. A County representative was present to observe the work. On May 5, 2004 soil samples were collected at approximately 3 feet below ground surface (bgs) and 2 feet bgs beneath the diesel dispenser and gasoline dispenser, respectively. The soil samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D), total petroleum hydrocarbons as motor oil (TPH-MO), total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes, (BTEX), volatile organic compounds (VOCs), and lead.

As described in the report documenting the work submitted by EBMUD to the ACHCSA, (Gettler-Ryan Inc., 2004) TPH-D concentrations ranged from 11 micrograms per kilogram (mg/kg) in Sample L112151-2 at 2 feet bgs beneath the gasoline dispenser to 1,400 mg/kg in Sample L112151-1 at 3 feet bgs beneath the diesel dispenser. TPH-G, TPH-MO, and BTEX constituents were not detected in these samples. Lead concentrations were below Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for industrial sites. A summary of analytical results is included in Table 1.

The purpose of the proposed investigation is to address the concerns of the ACHCSA and determine if groundwater beneath the site has been impacted by TPH-D. The proposed scope of work includes the following tasks:

- Obtain drilling permits from Alameda County Flood Control District; Zone 7 for the drilling of soil borings.
- Drill two Geoprobe soil borings on EBMUD property and collect soil and grab groundwater samples for analysis
- Prepare a report presenting the results and findings of the site investigation.

The locations of the proposed Geoprobe borings are shown in Figure 2.

1.2 SCOPE OF WORK

The proposed scope of work will be conducted in accordance with the guidelines and requirements of the RWQCB, San Francisco Bay Region and the ACHCSA, and includes the following tasks:

Task 1: Pre-Field Activities

On receipt of approval of the work plan by the regulatory agencies, pre-field activities will be performed to include: acquiring drilling permits; scheduling and coordinating field activities with subcontractors and appropriate parties; and clearing proposed drilling location to avoid damage to onsite underground utilities at the proposed boring locations.

Task 2: Drilling and Sampling of Soil Borings

To assess the potential impact of petroleum hydrocarbons in soil and groundwater in the immediate vicinity of the fuel dispensers, two soil borings are proposed to be drilled using a Geoprobe drilling rig at locations shown on Figure 2. Soil samples will be collected continuously for lithologic logging to the total depth of each boring. The borings are proposed to be drilled to first encountered groundwater, anticipated to be at a depth of approximately 30 feet.

Soil samples will be logged in the field by a qualified geologist or engineer in accordance with the Unified Soils Classification System. Each sample will also be field-screened using a flame ionization detector (FID) and organic vapor meter (OVM) to aid in selection of soil samples for analysis.

Grab groundwater samples are proposed to be collected from the undeveloped borings. Once saturated sediments are encountered, an in-situ grab water sampling tool (hydropunch) will be emplaced into the sediments ahead of the drill string and a grab groundwater sample will be collected using a peristaltic pump or disposable bailer. After collection of sufficient groundwater sample volume for analysis of the constituents of concern, the borings shall be backfilled from the bottom to the surface using tremied neat cement grout.

The grab water samples will be collected in clean laboratory-supplied containers, properly labeled and maintained in an iced cooler prior to transport to a state-certified laboratory for analysis.

Task 3: Analyze Groundwater and Soil Samples

Selected soil and groundwater samples will be transported to EBMUD Special District No. 1; Laboratory Services Division (California ELAP No. 1060) and analyzed for TPH-D using EPA Method 8015M. The samples will be analyzed on a standard 2-week turnaround time.

Task 4: Evaluate Data and Laboratory Results

Soil and groundwater sample analytical results will be compared to California RWQCB ESLs. On completion of sample analysis, a detailed evaluation of results will be conducted to determine if analytical results warrant further investigation, or if regulatory case closure is appropriate for the site. The data evaluation will include interpretation of the subsurface sediments and hydrogeologic conditions encountered, analysis of analytical data and interpretation of findings.

Task 5: Well Search

If TPH-D is detected at concentrations exceeding RWQCB ESLs in the subsurface, public records on file with the California Department of Water Resources will be reviewed in an effort to locate active or inactive wells within a ¼-mile radius of the site. A private data resources firm shall also be retained to compile historical information on the site to include past land use which may affect fate and transport of hydrocarbon in soil or groundwater if present.

Task 6: Prepare Site Investigation Report

A report presenting the results, findings, and conclusions of Task 1 through Task 4 will be submitted to the ACHCSA. The report will include analytical results, boring logs, tabulated summary of analytical results, and sampling protocol and documentation. If Task 5 is deemed warranted by the discovery of diesel above the ESLs in groundwater, the results of the well search shall also be included and discussed in the report. In addition, recommendations for further investigation will be made if warranted.

2.0 IMPLEMENTATION SCHEDULE

The proposed site characterization will be completed and a report submitted within 90 days after receipt of written approval of the proposed work plan from the appropriate regulatory agencies.

TABLE

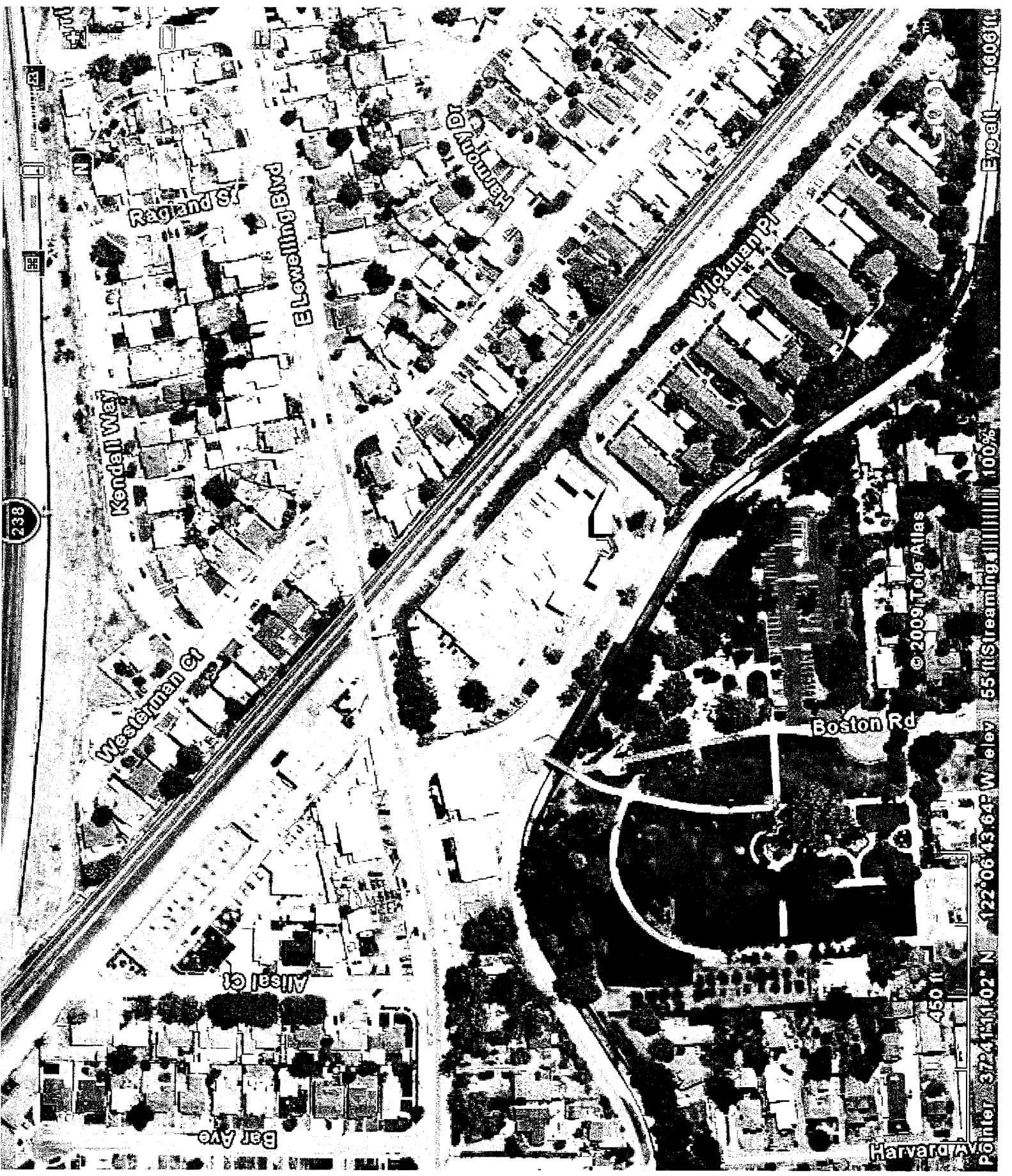
TABLE 1 - SUMMARY OF RESULTS OF SOIL SAMPLING
 EBMUD South Area Service Center
 589 Lewelling Boulevard
 San Lorenzo, California
 ALISTO PROJECT NO. 10-654-42

BORING ID	DATE OF SAMPLING	DEPTH (Feet)	TPH-D (mg/kg)	TPH-MO (mg/kg)	TPH-G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	LEAD (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	EDB (mg/kg)	TAME (mg/kg)
L112151-1	5/5/2004	3.0	1400	ND<2000	ND<1.0	ND<0.0012	ND<0.0018	ND<0.0020	ND<0.0083	ND<0.013	5.71	ND<0.25	ND<0.013	ND<0.013	ND<0.0025	ND<0.013
L112151-2	5/5/2004	2.0	11	ND<100	ND<1.0	ND<0.0012	ND<0.0018	ND<0.0020	ND<0.0083	ND<0.013	8.78	ND<0.25	ND<0.013	ND<0.013	ND<0.0025	ND<0.013
L112310-1	5/11/2004	5.5	3.5	ND<100	ND<1.0	ND<0.0024	ND<0.0036	ND<0.0040	ND<0.0166	ND<0.026	3.69	ND<0.50	ND<0.026	ND<0.026	ND<0.005	ND<0.026
TD-SOUTH	8/23/1990	13.0	---	---	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	---	---	---	---	---	---	---
TD-NORTH	8/23/1990	13.0	---	---	ND<10	ND<0.005	0.05	ND<0.005	ND<0.015	---	---	---	---	---	---	---
TG-SOUTH	8/23/1990	12.0	---	---	ND<1	ND<0.005	0.1	ND<0.005	ND<0.015	---	---	---	---	---	---	---
TG-NORTH	8/23/1990	12.0	---	---	ND<1	ND<0.005	0.015	ND<0.005	0.019	---	---	---	---	---	---	---
90 10 12 195	10/12/1990	12	---	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---
90 10 12 196	10/12/1990	12	---	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---
90 10 12 197	10/12/1990	9	---	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---
90 10 12 198	10/12/1990	10	---	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---
90 10 12 199	10/12/1990	14	53	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---
90 10 12 200	10/12/1990	9	ND	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---
90 10 12 201	10/12/1990	9	---	---	---	ND<0.010	ND<0.010	ND<0.010	ND<0.010	---	---	---	---	---	ND<0.050	---

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons in gasoline range	ETBE	Ethyl tert-Butyl Ether
TPH-D	Total petroleum hydrocarbons in diesel range	TAME	tert-Amyl Methyl Ether
TPH-MO	Total petroleum hydrocarbons in motor oil range	DIPE	Diisopropyl ethyl ether
B	Benzene	MTBE	Methyl tert-butyl ether
T	Toluene	EDB	Ethylene Dibromide
E	Ethylbenzene		
X	Total xylenes		
mg/kg	Milligrams per kilogram		
ND	Not detected above reported detection limit		
---	Not analyzed/applicable/measured		

FIGURES



238

Ragland St
Kendall Way
E Lowelling Blvd

Westernman Ct

Alisal Ct

Bar Ave

Dr

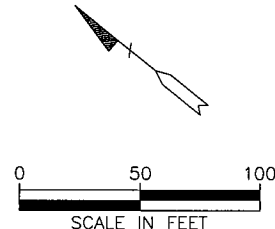
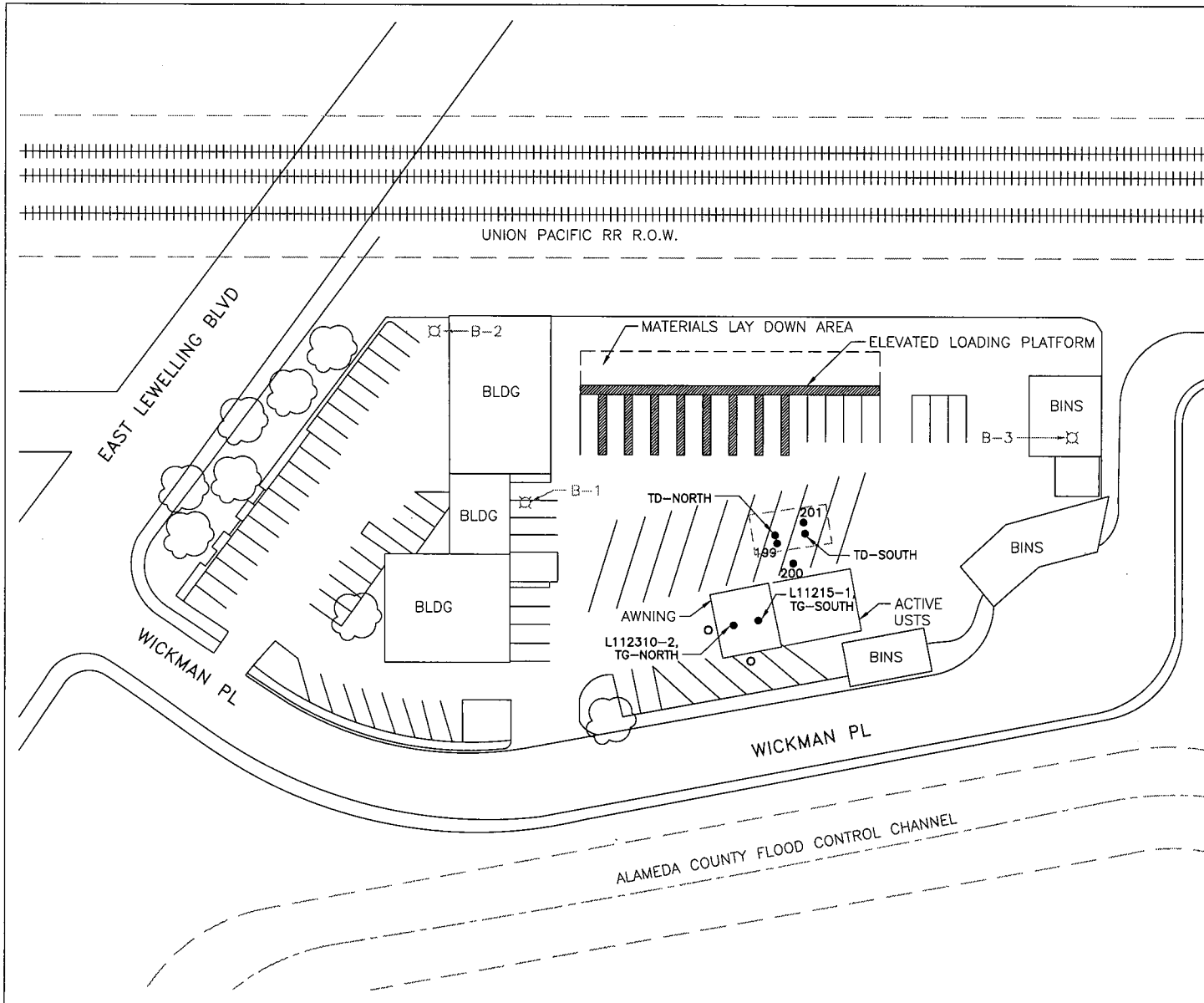
Wickman Pl

Boston Rd

Harvard Ave

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Pointer 37.2411102° N 122.064364° W elev 65 ft (Streaming) 100% EyeAlt 1606 ft



- LEGEND**
- GEOTECHNICAL BORING (1988)
 - 201 SOIL SAMPLE & ID NO.
 - PROPOSED SOIL BORING
 - ☁ TREE
 - - - APPROXIMATE EASEMENT BOUNDARY

FIGURE 2
SITE PLAN
 EAST BAY MUNICIPAL UTILITY DISTRICT
 SOUTH AREA SERVICE CENTER
 589 E. LEWELLING BLVD.
 SAN LORENZO, CA
 PROJECT NO. 10-654-42

