



ALISTO ENGINEERING GROUP

May 4, 2001

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

10-210-15-001

Subject: Work Plan for Additional Investigation
Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California

Dear Ms. Chu:

On behalf of Xtra Oil Company, Alisto Engineering Group is pleased to submit this work plan for additional investigation at Xtra Oil Company service station (dba Shell), 1701 Park Street, Alameda, California.

Please call if you have questions or comments.

Sincerely,

ALISTO ENGINEERING GROUP

Brady Nagle
Project Manager

Enclosure

cc: Mr. Keith Simas, Xtra Oil Company, 2307 Pacific Avenue, Alameda, CA 94501
Mr. Mark Owens, SWRCB-UST Cleanup Fund, P.O. Box 944212,
Sacramento, CA 94244-2120



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Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

10-210-15-001

Subject: Work Plan for Remediation System Installation
Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California

Dear Ms. Chu:

On behalf of Xtra Oil Company, Alisto Engineering Group is pleased to submit this work plan for remediation system installation at Xtra Oil Company service station (dba Shell), 1701 Park Street, Alameda, California.

Please call if you have questions or comments.

Sincerely,

ALISTO ENGINEERING GROUP

Brady Nagle
Project Manager

Enclosure

cc: Mr. Keith Simas, Xtra Oil Company, 2307 Pacific Avenue, Alameda, CA 94501
Mr. Hari Patel, SWRCB-UST Cleanup Fund, P.O. Box 944212,
Sacramento, CA 94244-2120

WORK PLAN FOR ADDITIONAL INVESTIGATION

**Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California**

Project No. 10-210-12-004

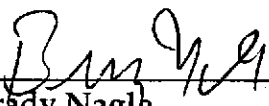
Prepared for:

**Xtra Oil Company
2307 Pacific Avenue
Alameda, California**

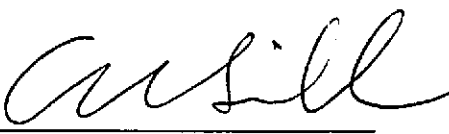
Prepared by:

**Alisto Engineering Group
3732 Mt. Diablo Boulevard, Suite 270
Lafayette, California**

April 17, 2001



Brady Nagle
Project Manager



Al Sevilla, P.E.
Principal



WORK PLAN FOR ADDITIONAL INVESTIGATION

Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California

Project No. 10-210-12-004

April 17, 2001

INTRODUCTION

This work plan presents the scope of work to perform additional investigation at Xtra Oil Company service station (dba Shell), 1701 Park Street, Alameda, California. The site vicinity map is shown on Figure 1.

The purpose of this additional work is to address the concerns of the Alameda County Health Care Services Agency (ACHCSA), as set forth in the June 7, 2000 letter to Xtra Oil Company to further assess the horizontal extent of petroleum hydrocarbons in the subsurface. The scope of work will include the following tasks:

- Obtain encroachment permits to perform work in the public right-of-way.
- Collect soil samples and shallow groundwater samples at ~~three locations~~ using a hand auger and sampler and temporary casing.
- Coordinate future groundwater monitoring and sampling with the Exxon site at 1725 Park Street.
- Analyze soil and groundwater samples for specified hydrocarbon constituents.
- Evaluate the data and prepare a report.

SCOPE OF WORK

The proposed scope of work for additional investigation will include the following tasks:

Task 1: Conduct Pre-Field Activities

Encroachment permits will be obtained from the City of Alameda perform work in the public right-of-way and Underground Service Alert will be contacted to locate underground utilities.



Task 2: Collect Soil and Shallow Groundwater Samples

Soil and shallow groundwater samples will be collected at three locations as shown on the attached site plan to assess the horizontal extent of petroleum hydrocarbons in the subsurface. A hand auger and soil sampler will be used to advance to the desired depths and collect soil samples immediately above encountered groundwater for chemical analysis. Prior to each use and to avoid cross-contamination, all drilling and sampling equipment, including temporary casing, will be decontaminated using a phosphate-free detergent followed by a tap water and deionized water rinses.

Soil samples from the hand augered borings will be collected using a hand sampler equipped with stainless steel tubes. The hand sampler will be advanced approximately 6 inches into the undisturbed soil using a slide hammer. After retrieval from the boring, the sampler will be opened, and the sample tube removed. The sample will be retained within the tube and both ends will be immediately covered with Teflon sheeting and polyurethane caps. The caps will be sealed with adhesive tape and labeled with the following information: Alisto's project number, boring number, sample-depth interval, sampler's initials, and date of collection. The sample will be immediately placed in a waterproof plastic bag and stored in a cooler containing water or blue ice. Possession of the samples will be documented from the field to a state-certified analytical laboratory by using a chain of custody form.

After obtaining the soil samples, the borings will be extended approximately three feet into the groundwater and a temporary casing will be inserted into each boring to collect groundwater samples. The temporary casing will consist of 3/4-inch-diameter, flush-threaded, Schedule 40 PVC casing, with perforated casing extending from the bottom of the boring to above the stabilized groundwater level. It is anticipated that groundwater will be encountered at approximately 7 feet below grade. Prior to collecting groundwater samples from the borings, groundwater will be purged from the temporary casing while periodically collecting field parameter readings. Purging will continue until these readings have stabilized, indicating that the groundwater samples are representative of the aquifer. After sample collection, the borings will be backfilled with neat cement and the surface repaired to match surrounding conditions.

Task 3: Coordinate Groundwater Monitoring Well Sampling

Quarterly groundwater sampling will continue and will be coordinated with the groundwater sampling event at the Exxon site at 1725 Park Street as shown on the site plan. Reports will show the groundwater gradient and chemical concentrations across both sites to assess the extent of petroleum hydrocarbons in groundwater.

Task 4: Analyze Soil and Groundwater Samples

Soil and groundwater samples will be analyzed for the following:

- Total petroleum hydrocarbons as gasoline (TPH-G) using EPA Methods 8015 and California LUFT Manual

• TPH diesel



- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method Modified 8020
- Methyl tert-butyl ether (MTBE) using EPA Method Modified 8020

Additionally, selected groundwater samples will be analyzed for the following fuel oxygenates using EPA Method 8260:

- t- butanol (TBA)
- MTBE
- Di-isopropyl ether (DIPE)
- Ethyl-t-butyl ether (ETBE)
- t-amyl methyl ether (TAME)
- 1,2-dichloroethane (1,2-DCA)

Task 5: Prepare Report

A report presenting the results and findings of the additional investigation will be prepared for submittal to the appropriate agencies and will include the results of soil and groundwater sampling and analysis, boring logs, findings and recommendations, as warranted.

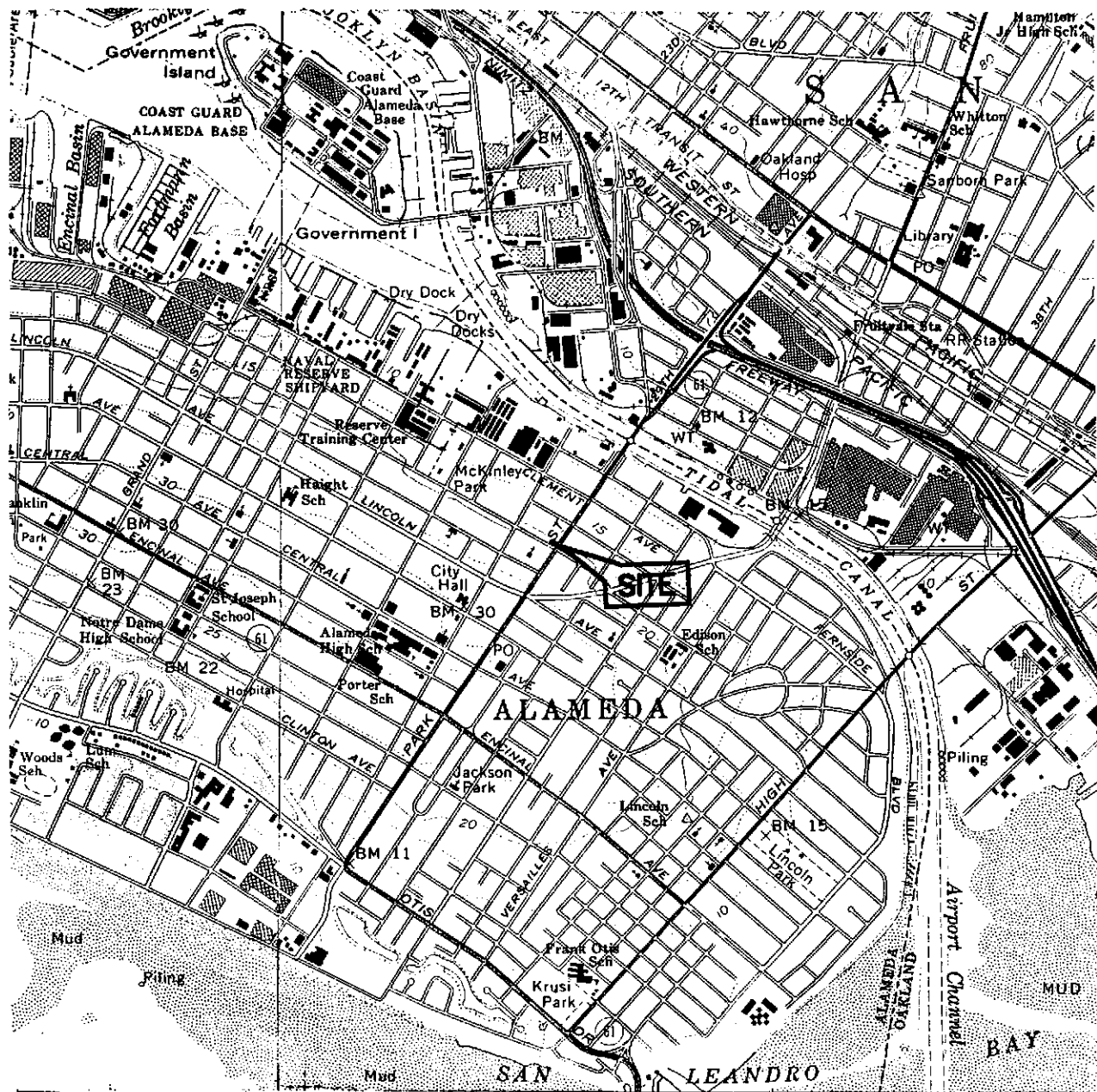
SITE SAFETY PLAN

All field procedures and activities related to the well destruction will be conducted in accordance with a site-specific safety plan. The site safety plan will be developed in accordance with applicable requirements of the California Environmental Protection Agency (Cal-EPA) and the federal and state Occupational Safety and Health Administration (OSHA and Cal-OSHA).

IMPLEMENTATION SCHEDULE

The proposed additional investigation field activities will be completed within 30 days after receiving the encroachment permits. A report will be submitted within 60 days after completion of field activities.





SOURCE:
 USGS MAP, OAKLAND WEST AND EAST QUADRANGLE,
 7.5 MINUTE SERIES, 1959,
 PHOTOREVISED 1980.

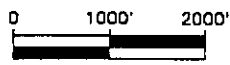
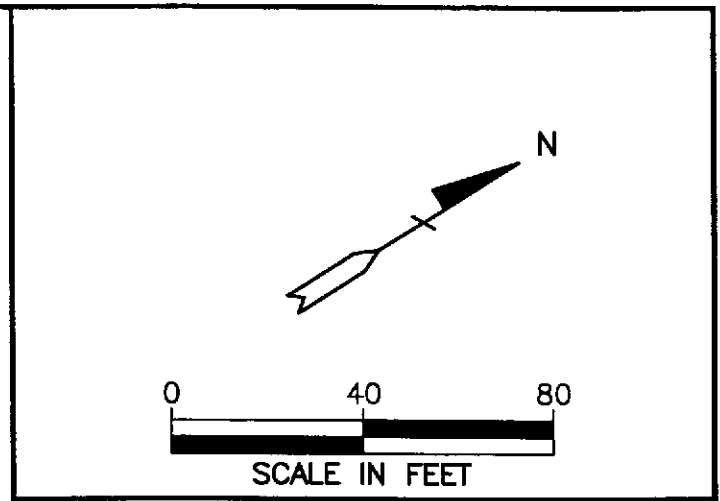
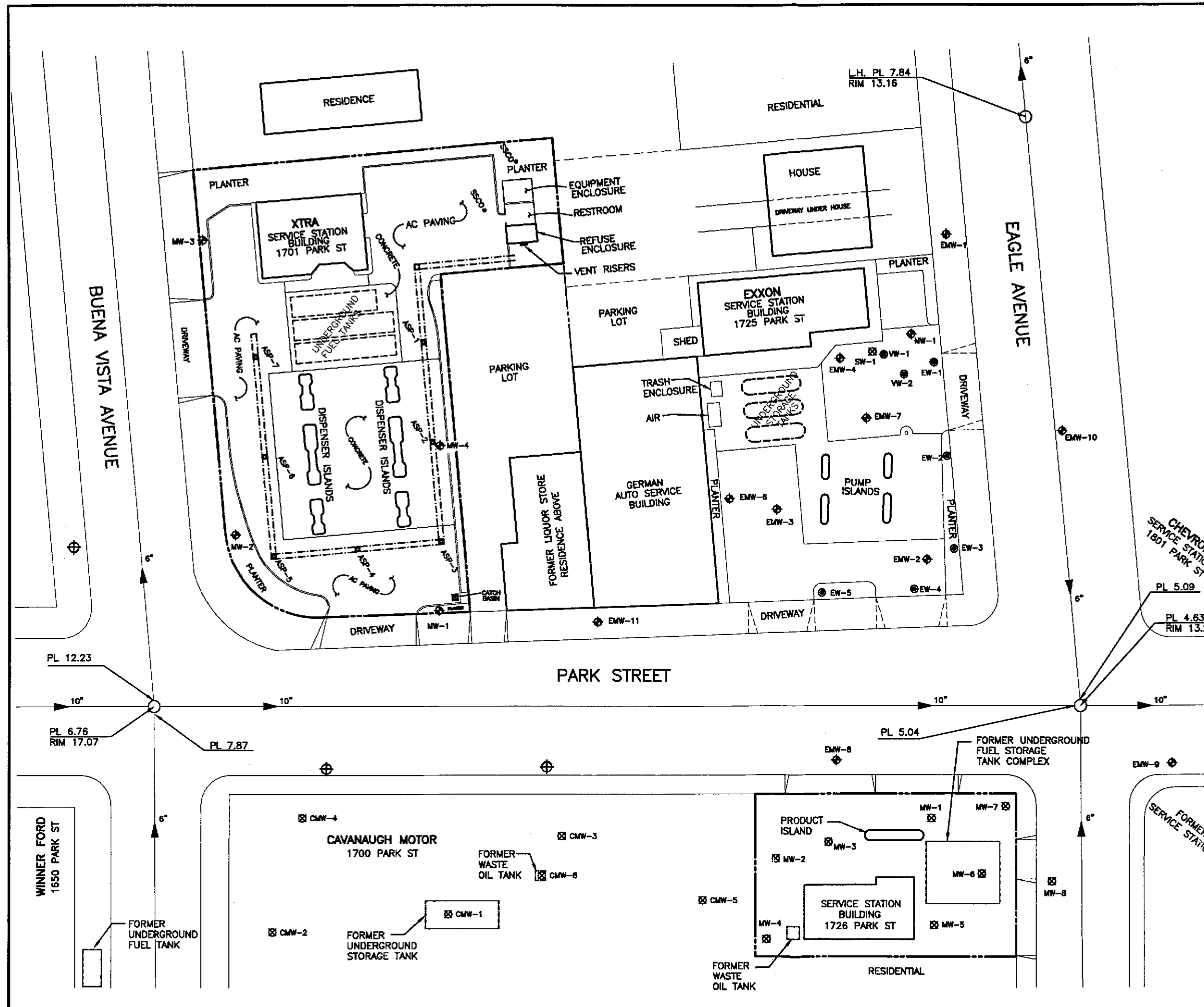


FIGURE 1
SITE VICINITY MAP

XTRA OIL COMPANY SERVICE STATION
1701 PARK STREET
ALAMEDA, CALIFORNIA
PROJECT NO. 10-210





- LEGEND**
- ⊕ PROPOSAL TEMPORARY WELL
 - ◆ EXISTING GROUNDWATER MONITORING WELL
 - ⊠ DESTROYED WELL
 - EXISTING AIR SPARGING POINT WITH WELL VAULT
 - PROPOSED PIPING VAULT
 - SSCOO SEWER SERVICE CLEANOUT
 - PROPERTY LINE
 - - - - EXISTING HORIZONTAL VAPOR EXTRACTION TRENCHING
 - SEWER LINE

FIGURE 2
SITE PLAN
 XTRA OIL COMPANY SERVICE STATION
 1701 PARK STREET
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-210

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