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Advanced
GeoEnvironmental, Inc.



21 February 2007
AGE-NC Project No. 03-1101

Mr. Jerry Wickham
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

**Subject: Soil Excavation and Ozone Well Destruction/Re-Installation Work Plan
RINEHART OIL, INC. - OAKLAND TRUCK STOP
1107 5th Street, Oakland, California**

Dear Mr. Wickham:

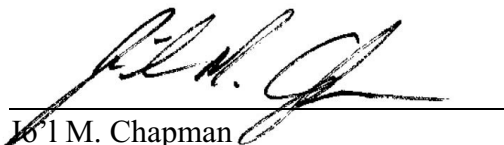
Advanced GeoEnvironmental, Inc. has prepared the enclosed *Soil Excavation and Ozone Well Destruction/Re-Installation Work Plan* for the above-referenced site. The scope of work includes the destruction of five ozone injection wells, excavation of approximately 240 cubic yards of soil surrounding the existing truck scale, and re-installation of five ozone injection wells. The work is to be performed as part of scale upgrade activities conducted by the property's lessee.

Since the scale upgrade excavation activities to be conducted by CAT Scale involve removing a significant volume of petroleum hydrocarbon-impacted soil from the vadose and smear zones, AGE believes that it will have a positive effect on overall remediation at the site.

If you have any questions or require further information, please contact our office at (209) 467-1006.

Sincerely,

***Advanced* GeoEnvironmental, Inc.**

A handwritten signature in black ink, appearing to read "J. M. Chapman", is written over a horizontal line.

J. M. Chapman
Staff Geologist

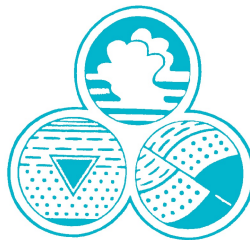
**Soil Excavation and Ozone Well Destruction/Re-Installation Work Plan
RINEHART OIL, INC. - OAKLAND TRUCK STOP
1107 5th Street, Oakland, California**

21 February 2007
AGE-NC Project No. 03-1101

PREPARED FOR:

Mr. Reed Rinehart
RINEHART OIL, INC.

PREPARED BY:

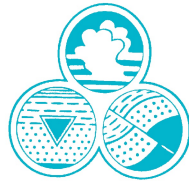


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**Soil Excavation and Ozone Well Destruction/Re-Installation Work Plan
RINEHART OIL, INC. - OAKLAND TRUCK STOP
1107 5th Street, Oakland, California**

21 February 2007
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**Advanced GeoEnvironmental, Inc.
837 Shaw Road, Stockton, California**

PREPARED BY:

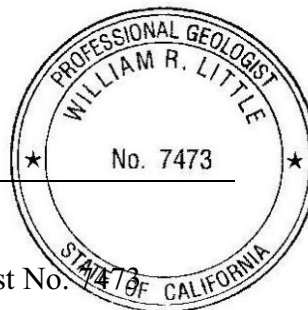
Jo'l M. Chapman
Staff Geologist

PROJECT MANAGER:

Jo'l M. Chapman
Staff Geologist

REVIEWED BY:

William R. Little
Senior Project Geologist
California Professional Geologist No.



Soil Excavation and Ozone Well Destruction/Re-Installation Work Plan
RINEHART OIL, INC. - OAKLAND TRUCK STOP
1107 5th Street, Oakland, California

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FIGURES

Figure 1 - *Location Map*

Figure 2 - *Site Plan*

Figure 3 - *Ozone Well Construction Diagram*

Soil Excavation and Ozone Well Destruction/Re-Installation Work Plan
RINEHART OIL, INC. - OAKLAND TRUCK STOP
1107 5th Street, Oakland, California

1.0. INTRODUCTION

Advanced GeoEnvironmental, Inc. (AGE) has prepared this *Soil Excavation and Ozone Well Destruction /Re-Installation Work Plan* for the site located at 1107 5th Street, Oakland, California. The scope of work includes the destruction of five ozone injection wells, excavation of approximately 240 cubic yards of soil surrounding the existing truck scale, and re-installation of five ozone injection wells. The work is to be performed as part of scale upgrade activities conducted by the property's lessee. The site and surrounding area are illustrated on Figure 1. On-site structures, soil borings, and well locations are illustrated on Figure 2.

2.0. SCOPE OF WORK

The scope of work includes the destruction of five ozone injection wells by over-drilling, soil excavation, and re-installation of five ozone injection wells after the completion of the truck scale upgrade activities conducted by CAT Scale. The scope of work will include the following tasks:

- Permitting and pre-field work activities;
- Destruction of five ozone injection wells;
- Soil excavation;
- Re-Installation of five ozone injection wells; and
- Preparation of a report of findings.

2.1. PERMITTING AND PRE-FIELD WORK ACTIVITIES

Applicable well destruction and installation permits will be obtained from Alameda County Environmental Health Services - Department of Environmental Protection (ACEHS - DEP). An update to the health and safety plan presently on-file will be prepared in accordance with *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (National Institute for Occupational Safety and Health Administration, U.S. Coast Guard and U.S. Environmental Protection Agency, 1985). Prior to mobilization, the area of excavation will be clearly marked and a utility clearance obtained through Underground Service Alert.

2.2. OZONE WELL DESTRUCTION

AGE proposes to destroy five ozone injection wells (OZ10, OZ17, OZ18, OZ6, and OZ7) in preparation for truck scale upgrade activities to be performed by the property's lessee and CAT Scale. The wells will be destroyed by over-drilling to total depth and backfilling each boring with a cement ground mixture to surface grade. Procedures for the well destructions are detailed in Section 3.1..

2.3. SOIL EXCAVATION AND SAMPLING

Hydrocarbon-impacted soil surrounding the existing truck scale (Figure 2) will be excavated as part of truck scale upgrade activities and will facilitate an overall mass reduction of near-surface contaminants. Soil will be removed to a depth of approximately 6 feet below surface grade (bsg) using an excavator, with an estimated 240 yards of impacted soil to be removed and disposed. The approximate extent of soil excavation is depicted on Figure 2. During the excavation activities, soil will be placed directly into trucks to be transported to a disposal facility.

Soil samples will be collected from the floor and sidewalls of the excavation for characterization and removal documentation purposes. Following State of California Regional Water Quality Board, Tri-Regional Board recommendations, soil samples will be collected from the base and each side wall of the excavation at a minimum interval of every 20 linear feet. Soil samples will be collected from the base of the excavation at a minimum of one sample for every 400 square feet of excavation area.

Each soil sample will be analyzed by a State of California Department of Health Services (DHS)-certified laboratory for the following constituents:

- Total petroleum hydrocarbons quantified as gasoline (TPH-g) and diesel (TPH-d) in accordance with EPA Method 8015 Modified;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and fuel additives methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB) in accordance with EPA Method 8260B.

The laboratory report for soil analysis, testing methods, laboratory quality assurance/quality control (QA/QC) reports, and sample chain of custody documentation will be presented in a report of findings.

2.4. OZONE WELL DRILLING AND INSTALLATION

After completion of the truck scale upgrade by CAT Scale, AGE proposes to advance five pilot soil borings at the site for the re-installation of ozone injection wells OZ10, OZ17, OZ18, OZ6, and OZ7. Using a CME-75HT truck-mounted drill rig equipped with 8.25-inch hollow-stem augers; the pilot borings will be advanced to a depth of 15 feet bsg. The total depth of each well boring may vary according to geologic/hydrogeologic conditions encountered during drilling. The pilot borings will be advanced as near as possible to their former locations (Figure 2). No soil samples will be collected.

The ozone well pilot soil borings will be completed as single-level ozone injection wells with manufacturer-assembled, 2-inch by 24-inch microporous sparge points set at approximately 13 feet bsg. Procedures for the well installations are detailed in Section 3.4..

2.5. REPORT PREPARATION

Upon completion of field work and receipt of final laboratory analysis, a report will be prepared presenting a description of the work performed and the results of the sampling and analysis. The report will be in a format acceptable to the ACEHS-DEP and will be reviewed and signed by a California Professional Geologist.

3.0. FIELD PROCEDURES

All field procedures will be overseen by an AGE representative under the supervision of a California Professional Geologist. Procedures for ozone well destructions and installations and soil excavation activities are described below.

3.1. OZONE WELL DESTRUCTION PROCEDURES

In preparation for destruction of ozone injection wells OZ10, OZ17, OZ18, OZ6, and OZ7, all material within the original boreholes, including the well casings, filter pack, annular seal, and well cover boxes, will be excavated (over-drilled) utilizing a CME-75HT drill rig and 10-inch diameter hollow stem augers. Soil cuttings generated during over-drilling activities will be containerized in properly labeled, Department of Transportation (DOT)-approved 55-gallon drums and stored on-site in an area lacking public access.

Following over-drilling activities, each borehole will be backfilled with a cement grout mixture to

surface grade. The grout mixture will consist of a nominal 6 gallon to 94-pound sack portland cement ratio. The grout mixture will be deployed utilizing the hollow stem augers as a tremie pipe. Based on backfilling a 10-inch diameter borehole, the volume of portland cement grout mix per borehole can be calculated utilizing the following equation for a cylinder:

$$V = \pi r^2 h$$

where V is the volume, r is the radius of the borehole, and h is equal to the depth of the borehole. Therefore:

$$V = \pi (0.417^2)(15 \text{ ft}) = 8.2 \text{ ft}^3$$

One cubic foot is equivalent to 7.48 gallons, therefore:

$$(8.2 \text{ ft}^3)(7.48 \text{ gal./ft}^3) = 61.3 \text{ gallons}$$

AGE anticipates an estimated 307 gallons of portland cement grout mix should be utilized to backfill the boreholes.

3.2. SOIL EXCAVATION PROCEDURES

Soil surrounding the existing truck scale will be excavated by representatives of CAT Scale; the excavation will provide for the removal of a significant amount of impacted soil within the present vadose and smear zones. The soil will be excavated using an excavator to a total depth of approximately 6 feet bsg; since there is little room on-site for stockpiling, immediately upon excavation the soil will be loaded on trucks for transportation Keller Canyon Landfill in Pittsburg, California.

The open excavation area will be surrounded by temporary fencing. No AGE or subcontractor personnel will be allowed into any excavation greater than 5 feet bsg until proper excavation shoring and/or sloping techniques have been emplaced.

3.3. SOIL SAMPLING PROCEDURES

Soil samples collected from the base and sidewalls of the excavation will be obtained using the excavator. Soil samples will be collected from the bucket of the excavating equipment with a metric soil sampling hammer and one 6-inch by 2-inch brass sleeve. The exposed ends of the sample sleeve will be covered with Teflon sheets, capped, and sealed with tape. Following sample collection, each

sample sleeve will be labeled with the sample location, depth, time, date, and sampler's initials. Appropriately sealed and labeled samples will be placed in a chilled container and transported under chain of custody procedure to a DHS-certified laboratory for analysis for the constituents listed in Section 2.3..

All tools used for sample collection will be thoroughly washed with a solution of Alconox and rinsed with clean water prior to each sampling location. The excavation will be backfilled with clean fill sand and/or pea gravel mixtures. The excavation will be backfilled and compacted in 5-foot lifts.

3.4. OZONE WELL PILOT SOIL BORING AND COMPLETION

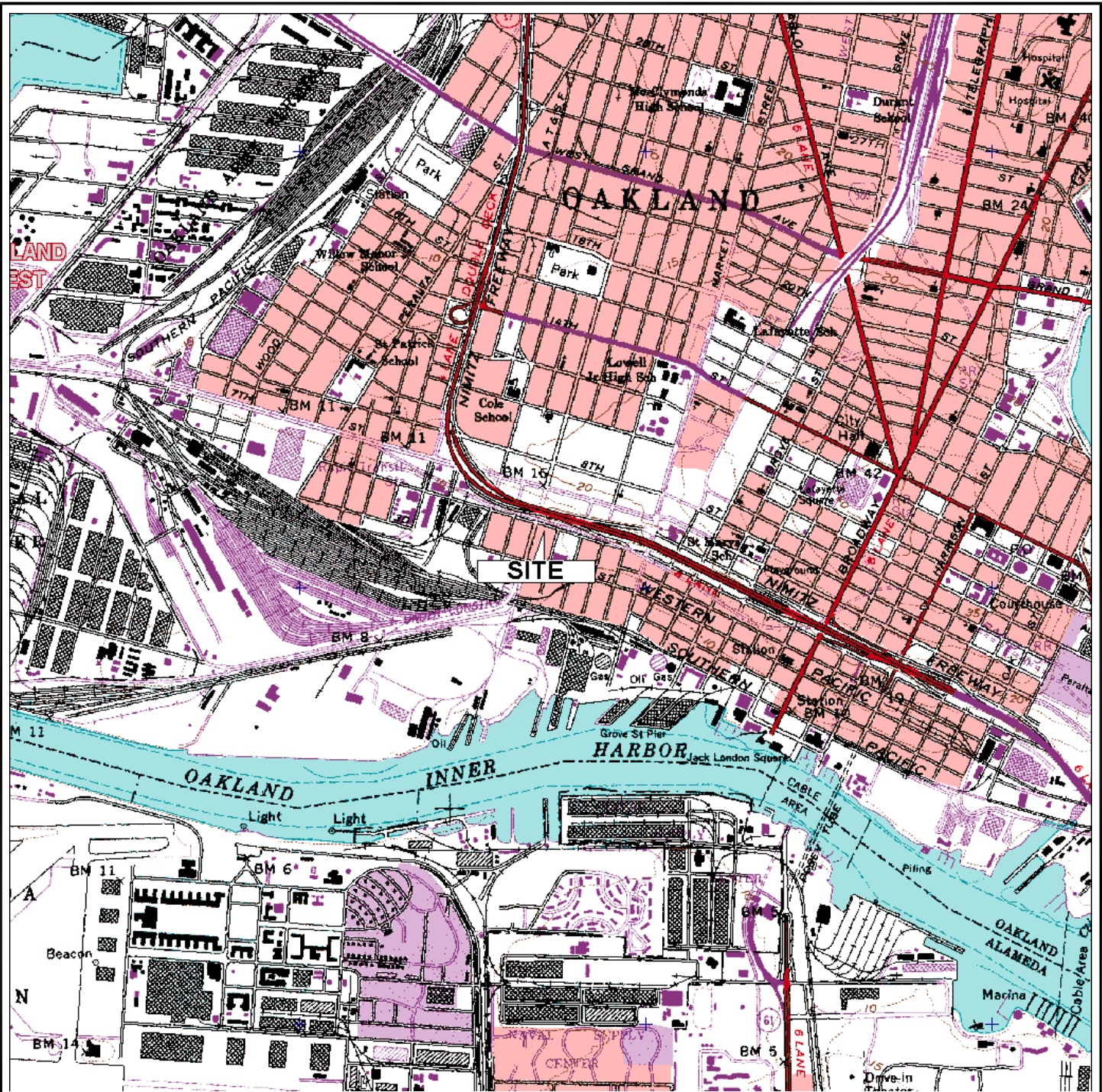
Utilizing a CME-75HT truck-mounted hollow-stem drill rig equipped with 8.25-inch diameter hollow-stem augers, pilot soil borings for ozone injection wells OZ10, OZ17, OZ18, OZ6, and OZ7 will be advanced to a depth of 15 feet bsg. The pilot borings will be completed with manufacturer-assembled, 2-inch by 24-inch microporous sparge points set at approximately 13 feet bsg and blank casing extending to the surface. A well construction diagram is depicted on Figure 3.

After installing the well casing in the pilot boring, a filter pack material consisting of pre-washed #3 Lonestar sand will be added through the augers from total depth to approximately 2 feet above the sparge point. A nominal 2-foot bentonite chip seal will be placed above the filter pack to minimize the potential for grout penetration into the screened section of the wells. The bentonite seal will be formed by pouring bentonite chips into the annulus and allowing them to settle on the filter pack. The bentonite chips will be allowed to hydrate for a minimum of ½-hour prior to grouting.

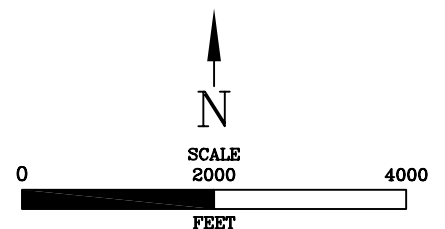
The remaining annular space will be filled to within 1 foot of the ground surface with a cement grout. The grout mixture will consist of Type I/II portland neat cement and not more than 6 gallons of water per 94-pound sack of cement. The grout will be placed utilizing the augers as a tremie pipe. A grouting inspection will be scheduled with ACEHS-DEP personnel.

All down-hole and drilling equipment will be pressure washed prior to starting each boring. Cuttings and rinseate generated during drilling will be containerized in properly labeled, DOT-approved 55-gallon drums and stored on-site in an area lacking public access. Disposal alternatives will be evaluated based on the results of soil analysis.

FIGURES



OAKLAND WEST QUADRANGLE, CALIFORNIA
 7.5 MINUTE SERIES (U.S. GEOLOGICAL SURVEY)



LOCATION MAP
 RINEHART – OAKLAND TRUCK STOP
 1107 5TH STREET
 OAKLAND, CALIFORNIA

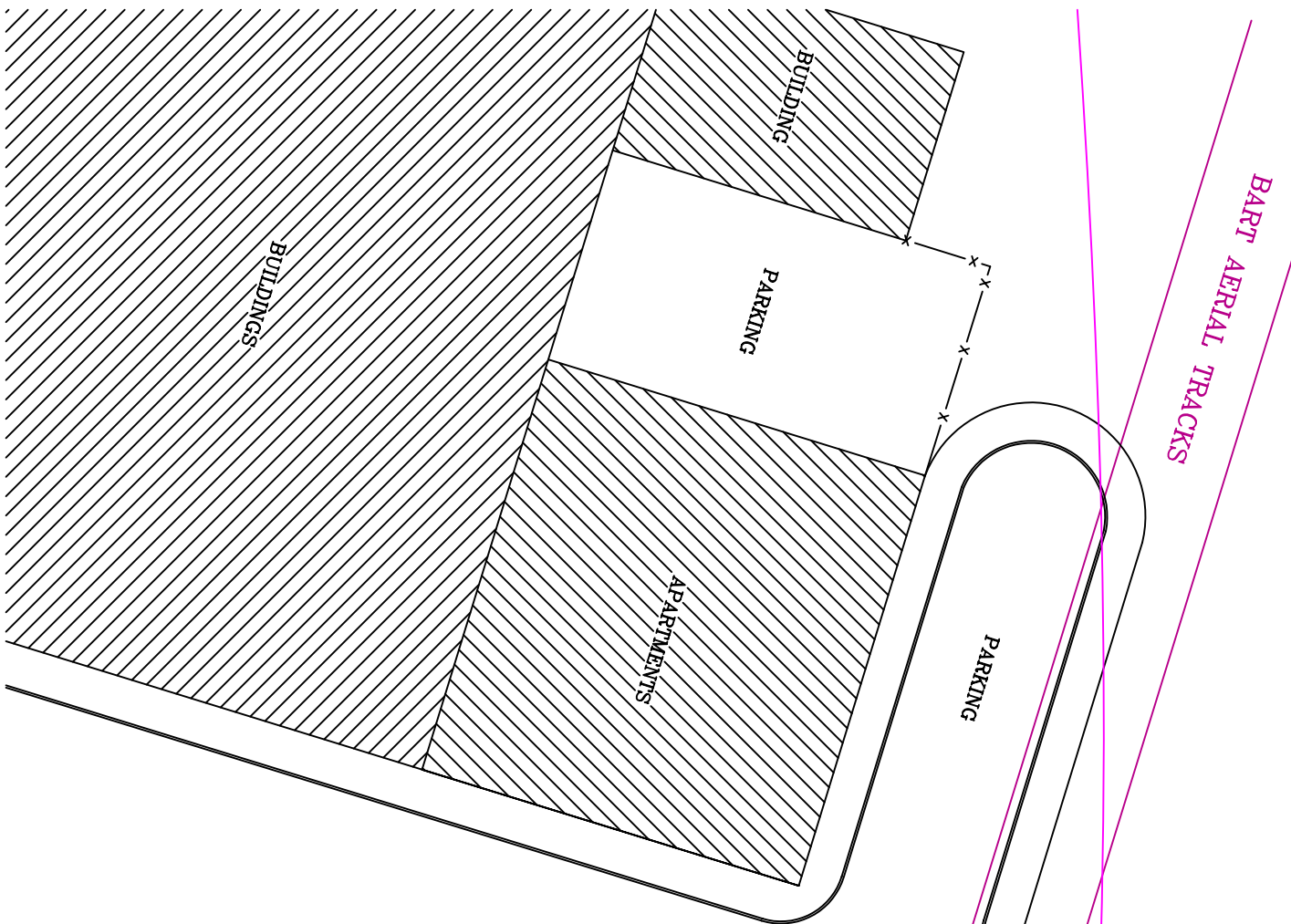


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| | | |
|----------------------------|----------------|---------|
| PROJECT NO. AGE-NC-03-1101 | FILE: LOCATION | FIGURE: |
| DATE: 27 SEPTEMBER 2004 | DRAWN BY: MAC | 1 |

BART AERIAL TRACKS

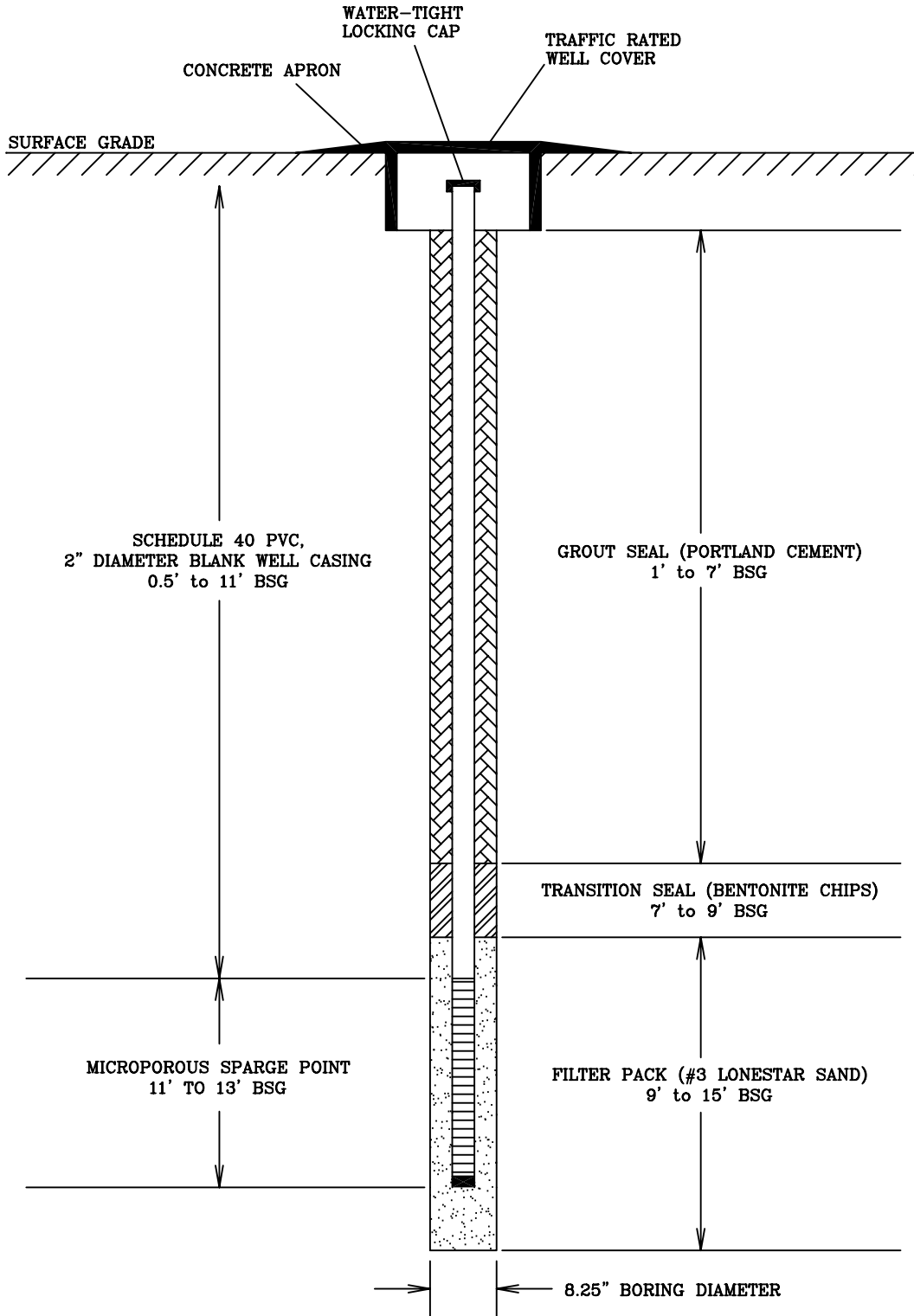
INTERSTATE 880 AERIAL STRUCTURE



SITE PLAN
 RINEHART - OAKLAND TRUCK STOP
 1107 5TH STREET
 OAKLAND, CALIFORNIA

Advanced GeoEnvironmental, Inc.
of Northern California

| | | |
|----------------------------|----------------------|---------|
| PROJECT NO. AGE-NC-03-1101 | FILE: OaklandSITE008 | FIGURE: |
| DATE: 21 FEBRUARY 2007 | DRAWN BY: MAC | 2 |



NOT TO SCALE

OZONE WELL CONSTRUCTION DIAGRAM
RINEHART - OAKLAND TRUCK STOP
1107 5TH STREET
OAKLAND, CALIFORNIA



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PROJECT NO. AGE-NC-03-1101

FILE: OaklandOW

FIGURE:

DATE: 21 FEBRUARY 2007

DRAWN BY: MAC

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