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May 27, 2020

Project 8619202890

Ms. Alyx Karpowicz, PG
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: **Remedial Action Plan**
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

Ms. Karpowicz:

Wood Environment & Infrastructure, Inc. (Wood), is pleased to submit this Remedial Action Plan on behalf of Pennzoil-Quaker State Company dba SOPUS Products (SOPUS) to the California Regional Water Quality Control Board (Water Board), San Francisco Bay Region. This RAP presents the plan for demolition and remedial excavation activities at the Pennzoil-Quaker State Alameda Distribution Center located at 2015 Grand Street in Alameda, California.

If you have any questions regarding this RAP, please contact any of the undersigned at their direct number.

Sincerely,
Wood Environment & Infrastructure Solutions, Inc.

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HY/mr
https://woodplc.sharepoint.com/teams/shellalameda/shared documents/rap/01_text/wood cover letter.docx

Attachment: Remedial Action Plan

cc: Ms. Samantha Elliot (SOPUS Products)

REMEDIAL ACTION PLAN

2015 Grand Street
Alameda, California

Prepared for:

SOPUS Products
Alameda, California

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.
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Oakland, California 94612

May 2020

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ACRONYMS AND ABBREVIATIONS

ACDEH	Alameda County Department of Environmental Health
ACM	asbestos-containing material
Alameda County Public Works	Alameda County Public Works Agency, Water Resources
Alameda Distribution Center	Pennzoil-Quaker State Alameda Distribution Center
AMP	Alameda Municipal Power
ASTs	above-ground storage tanks
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
Cal OSHA	California Occupational Safety and Health Administration
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
COC	chemicals of concern
CRA	Conestoga-Rovers & Associates
EBMUD	East Bay Municipal Utilities District
ESLs	Environmental Screening Levels
HASP	Health and Safety Plan
IS/MND	Initial Study/Mitigated Negative Declaration
LUC	Land Use Covenant
mg/kg	milligrams per kilogram
NGVD29	National Geodetic Vertical Datum of 1929
NPDES	National Pollutant Discharge Elimination System
ORC®	Oxygen Release Compound
Order	Water Board Site Cleanup Requirements Order No 98-121
OSHA	Occupational Safety and Health Administration
ppm	parts per million
QSD	Qualified SWPPP Developer
RAP	Remedial Action Plan
SAP	Sampling and Analysis Plan
SOPUS	Pennzoil-Quaker State Company dba SOPUS Products
SWPPP	Stormwater Pollution and Prevention Plan
SWRCB	State Water Resources Control Board
TPHd	total petroleum hydrocarbons as diesel
TPHg	total petroleum hydrocarbons as gasoline
TPHmo	total petroleum hydrocarbons as motor oil
USA North	Underground Service Alert North
UST	underground storage tank

ACRONYMS AND ABBREVIATIONS
(Cont'd)

VIMS	vapor intrusion mitigation system
VOC	volatile organic compound
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
Wood	Wood Environment & Infrastructure Solutions, Inc.
WMTP	Waste Management and Transportation Plan

REMEDIAL ACTION PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

EXECUTIVE SUMMARY

Wood Environment & Infrastructure Solutions, Inc. ("Wood") has prepared this Remedial Action Plan (RAP) for the Pennzoil-Quaker State Alameda Distribution Center ("Alameda Distribution Center") on behalf of Pennzoil-Quaker State Company dba SOPUS Products (SOPUS) for submittal to the California Regional Water Quality Control Board, San Francisco Bay Region ("Water Board"). The Water Board issued Site Cleanup Requirements Order (Order) No 98-121 for the property located at 2015 Grand Street in Alameda, California (the "Site", Figure 1) on December 16, 1998 (Water Board, 1998) This RAP describes source removal activities not contemplated in the Order.

This RAP describes demolition of structures as well as excavation and off-site disposal of shallow soil impacted with petroleum hydrocarbons and benzene in the northeast (maintenance yard and former underground storage tank [UST] area) and southwest (tank farm) portions of the Site. Planned demolition of above ground structures and hardscape within excavation extents, and soil removal activities will be implemented concurrent with and following closure of the Alameda Distribution Center, currently planned for August 2020.

Shallow soil removal will include excavation of impacted soil in the maintenance yard to a depth of six feet below ground surface (bgs; approximately 6,500 cubic yards of soil) and in the tank farm to a depth of three feet bgs (approximately 4,900 cubic yards). Excavated soil will be transported for disposal at a permitted and SOPUS-approved off-site facility and the excavation areas will be backfilled with clean imported fill to pre-excavation grade.

Following completion of remedial activities, a deed restriction and Land Use Covenant (LUC) will be put in place in a portion of the Northeast Area requiring active vapor intrusion mitigation systems (VIMS) to be installed as part of construction of future residential buildings during redevelopment of the Site. A lot-line adjustment will be recorded with the City of Alameda so that applicable institutional controls are placed on only a single parcel of land.

REMEDIAL ACTION PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. ("Wood") has prepared this Remedial Action Plan (RAP) for the Pennzoil-Quaker State Alameda Distribution Center ("Alameda Distribution Center") on behalf of Pennzoil-Quaker State Company dba SOPUS Products (SOPUS) for submittal to the California Regional Water Quality Control Board, San Francisco Bay Region ("Water Board").

This RAP describes demolition of structures and how shallow soil impacted above proposed cleanup goals in the northeast (maintenance yard and former underground storage tank [UST] area, hereafter referred to as the "Northeast Area") and southwest ("Tank Farm Area") portions of property at 2015 Grand Street in Alameda, California (the "Site", Figure 1) will be removed and properly disposed of off-site.

The Water Board issued Site Cleanup Requirements Order (Order) No 98-121 for the 2015 Grand Street property on December 16, 1998 (Water Board, 1998). This RAP describes source removal activities not contemplated in the Water Board Order. The work described in this RAP will be performed in anticipation of Site closure and redevelopment.

The Water Board is the lead regulatory agency for the Site. The City of Alameda also has specific interest in investigation, remediation, and future development at the Site.

1.1 REPORT ORGANIZATION

The remaining sections of this RAP are organized as follows:

- Site Conditions and Background (Section 2)
- Pre-Construction Activities (Section 3)
- Construction Activities (Section 4)
- Monitoring and Control Measures During Construction (Section 5)
- Post-Remediation Activities (Section 6)

- Project Schedule (Section 7)
- Reporting (Section 8)
- References (Section 9)

2.0 SITE CONDITIONS AND BACKGROUND

This section presents information about the Site description, history, geology and hydrogeology, completed remedial actions at the Site, the nature and extent of contamination, chemicals of concern, proposed cleanup goals, and remedial action objectives.

2.1 SITE DESCRIPTION

The Site is located in Alameda, California and is bordered on the northeast by Fortmann Way, on the southeast by Grand Street, on the southwest by Ellen Crag Avenue, and on the northwest by Hibbard Street (Figures 1 and 2). The Site is relatively flat, and currently consists of a bulk storage tank farm, lubricant warehouses, truck loading/unloading areas, an abandoned rail line, and administrative facilities (Figure 2). The Site is bound by residential housing to the southwest and northeast, commercial properties to the northwest (including an animal shelter and City of Alameda maintenance service center), and light industrial/commercial properties to the southeast (including construction supply and Alameda Municipal Power offices). The Fortmann, Grand, and Alameda Marinas are located approximately 400 to 600 feet north of the Site, beyond the housing and commercial/light industrial properties.

The Northeast Area consists of the main administrative and warehouse building, three additional connected warehouses, storage yard, loading docks, and a maintenance building and covered carport. The ground surface is covered by asphalt, concrete, or buildings. The Tank Farm Area contains 11 above-ground storage tanks (ASTs), the compounding room, inactive railroad tracks, and truck scale. The ASTs range in size from 14,137 gallons to 60,000 gallons. The ASTs are surrounded by a four-foot high concrete retaining wall/dike, except along the wall of the compounding building. The ground surface within the retaining wall is gravel. The ground surface outside the retaining wall is covered by asphalt or concrete.

Electric power to most of the Alameda Distribution Center is provided from an onsite power pole and transformer located within the Tank Farm area on the southeast side of the site. The inactive railroad tracks are adjacent to the compounding room.

2.2 SITE HISTORY AND REDEVELOPMENT PLANS

The Site has been in operation since 1951 as a blending, packaging, and distribution center for petroleum lubricant products. Blending and packaging operations ceased in 1995 and current operations include distribution of bulk and pre-packaged industrial lubricants.

Operations at the Site are anticipated to cease in August 2020. Following closure of the facility, some structures will be demolished and remedial excavations will be performed within the Northeast and Tank Farm Areas as described in this RAP. The property is anticipated to be sold and redeveloped. The future property owner will be responsible for demolition of the warehouse buildings.

2.3 SITE GEOLOGY AND HYDROGEOLOGY

The Site and surrounding area was originally marshlands which were filled with a mixture of man-made refuse, bay mud and sand dredged from San Francisco Bay (USGS, 1959). Numerous subsurface investigations at the Site have confirmed the presence of imported fill that ranges in thickness from 2 to 25 feet, underlain by fat clay (bay mud) that ranges in thicknesses from a few inches to 95 feet. Groundwater levels measured in monitoring wells at the Site generally range from 0.5 to 3.0 feet below ground surface, varying seasonally. Groundwater flow is generally towards the east or northeast. Ground surface elevations range from 3.0 feet (native soil in the northern corner of the Northeast Area) to 7.4 feet (finished grade in the southern corner of the Tank Farm Area), above the National Geodetic Vertical Datum of 1929 (NGVD 29).

2.4 COMPLETED INVESTIGATIONS AND REMEDIAL ACTIONS

Numerous investigations and remedial actions have been conducted at the Site to delineate impacts to shallow soil and groundwater that consist of total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPHg, TPHd, TPHmo); and benzene, toluene, ethylbenzene, and xylenes (collectively, BTEX). These investigations are described in detail in reports and work plans prepared by Conestoga-Rovers & Associates (CRA; CRA 2014 and 2015) and Wood (2019).

Gasoline and diesel USTs and associated product piping were removed from the Northeast Area in 1985. In December 1996, two steel USTs were removed from inside one of the warehouses (the "Taylor Warehouse"). No USTs remain at the Site (CRA, 2014).

In August 2002, approximately 410 cubic yards of soil was excavated from several targeted locations within the Tank Farm Area following spills from some of the ASTs. An additional 22 smaller excavations were then conducted around several ASTs. Excavation depths ranged from 6 inches to 4 feet below ground surface (bgs; ARCADIS, 2003).

In December 2013, 37 ASTs were removed from the Tank Farm Area, leaving the 11 ASTs that currently remain. No hydrocarbon staining was found in the soil beneath the removed tanks, and no soil sampling was conducted (CRA, 2014).

From July through August 2019, Wood performed an investigation of soil, groundwater, and soil vapor in the Northeast Area to better define the current nature and extent of TPH and BTEX impacts in soil, groundwater, and soil vapor (Wood, 2019).

2.5 NATURE AND EXTENT OF CONTAMINATION

Chemicals of concern (COCs) at the Site consist of TPHg, TPHd, TPHmo; and BTEX in shallow soil and groundwater. Figure 3 depicts analytical results and contours of concentrations of COCs corresponding to the most recent soil samples taken in the Northeast Area subsequent to the last remedial activity in the area. Figure 4 depicts analytical results and contours corresponding to historical soil samples taken in the Tank Farm Area.

2.6 PROPOSED CLEANUP GOALS

The Order does not specify cleanup standards for the Site. The Site is zoned as Neighborhood Residential within the Special Planned Development District pursuant to the City of Alameda Zoning Map and Ordinance (City of Alameda, 2019a and 2019b). When the Site is redeveloped, Clement Avenue will connect through the Site, and Hibbard Street will be widened to full street width, as shown on Figure 5.

After remedial activities proposed in this RAP are complete, elevated concentrations of COCs, particularly benzene, may persist in groundwater in portions of the Northeast Area of the Site and would likely be an indoor air concern if unrestricted residential use was permitted. SOPUS therefore proposes to place restrictions on the future use of those portions of the Site that will require mitigation of potential vapor intrusion to residential indoor air.

This RAP presents remedial action intended to remove soil containing concentrations of COCs that exceed soil cleanup goals based on Water Board Environmental Screening Levels (ESLs). In

areas of future residential redevelopment at the Site, residential direct-exposure ESLs in soil are proposed, and construction worker direct-exposure ESLs in soil are proposed in areas where Hibbard Street will be expanded and Clement Avenue will be constructed.

The proposed cleanup goals for soil are indicated below:

Chemical of Concern	**Residential Soil Cleanup Goal** (mg/kg)	**Basis for Residential Cleanup Goal**	**Construction Soil Cleanup Goal** (mg/kg)	**Basis for Construction Cleanup Goal**
Benzene	0.33	Direct Exposure, Cancer Risk	33	Direct Exposure
Toluene	1,100	Direct Exposure, Non-Cancer Risk	4,700	Direct Exposure
Ethylbenzene	5.9	Direct Exposure, Cancer Risk	540	Direct Exposure
Xylenes	580	Direct Exposure, Non-Cancer Risk	2,400	Direct Exposure
TPHg	430	Direct Exposure, Non-Cancer Risk	1,800	Direct Exposure
TPHd	260	Direct Exposure, Non-Cancer Risk	1,100	Direct Exposure
TPHmo	12,000	Direct Exposure, Non-Cancer Risk	54,000	Direct Exposure

mg/kg = milligrams per kilogram

2.7 REMEDIAL ACTION OBJECTIVES

The remedial action objectives of the demolition and soil removal activities planned for the Site prior to redevelopment activities include:

- Demolition of buildings, above-ground features, and hardscape within proposed excavation areas;
- Excavation of soil impacted with COCs in the Northeast Area, Tank Farm, and the former UST and wash area in the Taylor Warehouse; and
- Confirmation that the excavation extents, within the property boundary and to anticipated depths to groundwater, have adequately removed source area COC impacts in soil to proposed cleanup goals.

3.0 PRE-CONSTRUCTION ACTIVITIES

Permitting and other pre-construction activities, as described below, will be completed before demolition and soil removal activities begin.

3.1 PERMITTING AND NOTIFICATION

Permits will be obtained and notifications will be made prior to the start of demolition and soil removal activities.

Permits required for pre-construction and construction activities include:

- City of Alameda - Demolition and grading permits (collectively a building permit);
- Alameda Municipal Power (AMP) - Required to be consulted for the building permit with the City of Alameda. (A separate removal plan permit is required to remove the power pole, power drop, and transformer located within the Tank Farm Area. SOPUS is not planning to remove poles or the transformer at this time);
- East Bay Municipal Utilities District (EBMUD) – Industrial wastewater discharge permit for discharge of treated groundwater to the sanitary sewer during excavation dewatering activities.
- Alameda County Public Works Agency, Water Resources (Alameda County Public Works) – Well destruction permit for destruction of all monitoring wells and vapor pins at the Site.

No other permits are expected to be necessary; if planned notifications to other agencies result in the need for additional permits, these will be obtained prior to conducting work addressed by the permit.

Public and agency notifications include:

- California Occupational Safety and Health Administration (Cal OSHA)– Excavation Activity Notification for excavation work of 5 feet or deeper;

- Bay Area Air Quality Management District (BAAQMD)– Notification of Demolition (known as a J#) and Notification of Excavation;
- Water Board – Notice of Intent for the performance of the construction activities under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities ("Construction General Permit", State Water Board, 2012);
- Alameda County Department of Environmental Health (ACDEH) – Facility Closure Notification to be submitted a minimum of 30 days prior to closure of the Alameda Distribution Center;
- Public Notice – Water Board public notification for demolition and soil removal activities;
- AMP – notice to close account and request service disconnect for power drop to the compounding room and maintenance building; and
- Underground Service Alert North (USA North) – Notification to subsurface utility owners.

Utility notification and coordination will continue throughout the pre-construction and construction phases. USA North will be notified a minimum of three working days before the work begins, and utility owners will mark their utilities at the Site. The USA North notification will be kept current throughout the remediation activities.

3.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) requires that an Initial Study (IS) and Mitigated Negative Declaration (MND) be prepared for demolition and excavation activities planned for the Site. Wood is preparing the IS/MND under separate cover on behalf of the Water Board, who must review and approve the IS/MND as the lead agency prior the start of remedial excavation activities. The Water Board review and required 30-day public comment period is anticipated to occur concurrently with the review and public comment period for this RAP.

The IS/MND will include a Project Description, and the following technical studies: Air Quality Modeling and Analysis Report, Archaeological Resources Management Plan and Native American consultation, Noise Study, and Traffic Impact Assessment.

3.3 PUBLIC OUTREACH AND COMMUNICATION PLAN

Under the direction of SOPUS, Craig Communications will perform community outreach related to the work described in this RAP. Public outreach activities will include public meetings with citizens and regulatory groups prior to significant Site activities to address concerns and provide an opportunity for comment on issues such as permitting, closure, noise, traffic control, dust control, and vapor control. Craig Communications will develop and distribute collateral materials, such as a holding statement, FAQs, a fact sheet, and door hangers that briefly describe the project and state the time and place of any public meetings. For the duration of the project, Craig Communications will update residents on future activities, provide guidance to SOPUS, Wood, and its contractors on public interaction and activity scheduling, and have a visible field presence that the community can contact. Craig Communications will also prepare weekly reports detailing public interactions.

3.4 UTILITY LOCATING AND SURVEY

USA North, a public utility marking service, will be contacted a minimum of 72 hours before demolition, excavation, and/or utility capping or removal work to request registered entities in the area of the Site to mark their utilities. Additionally, a private utility subcontractor will conduct a subsurface utility locate to identify and mark potential structures, pipelines, and/or utilities within the Northeast and Tank Farm Areas of the Site. Subsurface utilities and other identified features will be surveyed by a surveyor licensed in the State of California for inclusion on the site topographic survey.

Subsurface utilities and other identified features will be further located by potholing using manual excavation methods to expose the location and depth of the subject line.

AMP will be contracted to de-energize/shut off power to the compounding room and maintenance building prior to demolition.

3.5 GROUNDWATER MONITORING WELL DESTRUCTION

All groundwater monitoring wells at the Site (Figure 5) will be destroyed prior to building demolition and soil excavation. Well destruction will be conducted in accordance with the *Well Destruction Work Plan* submitted to the Water Board on April 16, 2020 (Wood, 2020a) and approved by the Water Board on April 23, 2020. Well destruction activities are anticipated to

occur in June 2020, following receipt of well destruction permits from the Alameda County Public Works.

Investigation-derived waste, including soil cuttings, decontamination water, groundwater, well casing, and annular materials generated during well destruction activities will be properly contained, transported, and disposed of offsite at a SOPUS-approved facility, as described in the Waste Management and Transportation Plan (WMTP; Appendix A).

3.6 TEST PITS

Soil test pits were excavated across the Site, to the anticipated depth of the remedial excavation to observe first-encountered groundwater depths and infiltration rates. Three test pits were excavated in the Tank Farm Area, and three test pits in the Northeast Area. Groundwater depths and observed infiltration rates will inform the design and sequencing of the remedial excavation, and the design of the onsite dewatering and treatment system, if needed. Test pits were left open for 24 to 48 hours to allow groundwater, if any, to infiltrate.

Test pit locations and sampling protocols for soil waste profiling prior to the demolition and excavation activities are described in the Sampling Analysis Plan (SAP, Appendix B).

3.7 WASTE PROFILING

During potholing of confirmed utility locations, as described in Section 3.4, soil samples will be collected to profile the soil for waste disposal purposes. Soil will be profiled following applicable local, state, and federal laws, as described in Appendix B, for acceptance of the excavated soil at SOPUS-approved landfills.

Soil within the Northeast Area excavation containing total volatile organic compound (VOC) concentrations greater than 50 parts per million (ppm) will be profiled separately and disposed as direct-burial at an appropriate SOPUS-approved landfill. All other soil to be excavated at the Site that contains less than 50 ppm total VOC concentrations will be used as alternative daily cover at an appropriate SOPUS-approved landfill. Appendix A lists the SOPUS-approved landfills where excavated soil will be taken.

4.0 CONSTRUCTION ACTIVITIES

The construction activities associated with this RAP include site preparation, storage tank closure and demolition, non-tank above-ground structure demolition, and soil excavation. Construction drawings for these activities are presented in Appendix C.

4.1 SITE PREPARATION

Site preparation activities will include establishing work areas and survey control, and establishing other site control measures, including fencing, signage, and best management practices in accordance with the Stormwater Pollution and Prevention Plan (SWPPP) to be prepared for the Site, as described in Section 6.5. Planned excavation extents will be surveyed and marked. 21,000-gallon frac tanks and other essential equipment will be brought onsite and stored in accordance with the Traffic Control Plan which is included in the WMTP (Appendix A). The frac tanks will be placed in the Tank Farm Area on drip containment to contain spills, and the frac tanks and drip containment will be cleaned prior to demobilization. The warehouse will be utilized as an office, which contains restroom facilities. The Site will be cleared of vegetation and buildings scheduled for demolition will be cleared of debris, as needed. Temporary security fencing will be brought onsite to be placed as structures that are on the edge of the property are demolished in order to maintain site security. Security personnel will be contracted to patrol the Site during non-working hours in order to secure the site and discourage theft or vandalism of equipment.

Asbestos-containing material (ACM) and paint containing lead have been identified in some structures at the Site during the asbestos and lead paint survey performed in 2014 (ERM, 2014). Of the structures that will be demolished for the remedial excavation activities, the compounding room was the only structure identified as containing ACM and/or paint containing lead according to the 2014 ERM survey. Prior to demolition of the compounding room, a certified, licensed and permitted asbestos abatement subcontractor will be used to provide the removal of ACMs. Asbestos abatement activities will be performed in accordance with Cal OSHA standards. During demolition of the compounding room, properly trained workers will utilize lead-safe work practices in compliance with California regulations and the Occupational Safety and Health Administration's (OSHA's) Lead in Construction Standard (OSHA, 2004).

4.2 DEMOLITION

Site demolition activities will begin in the Northeast Area while the Alameda Distribution Center is still in operation. Once operations have ceased, demolition of structures in the Tank Farm Area and within the Taylor Warehouse will commence. Demolition of above-ground structures will begin once necessary permits have been obtained and notifications have been issued.

Site demolition activities will include the removal of select surface features, as described below.

4.2.1 Above-Ground Structure Demolition and Removal

Site demolition activities will include the removal of surface features, including concrete foundations, slabs, structures, and concrete and asphalt paving, as follows:

- Northeast Area
  - Former maintenance building/warehouse;
  - Covered carport;
  - Concrete and asphalt paving.
- Tank Farm Area
  - Compounding room and piping;
  - Railroad tracks and truck scale;
  - 11 above-ground storage tanks and piping;
  - Concrete retaining wall; and
  - Concrete and asphalt paving.
- Taylor Warehouse former UST area and wash area

The maintenance building is a single-story steel structure with a steel ceiling and roof. The compounding room is a single-story concrete structure with concrete slab floors and a wood-framed and sheeted ceiling with cap sheet roofing supported on interior columns. The containment wall around the Tank Farm Area is reinforced concrete.

The concrete walls, slabs, foundations, and footings of each structure will be demolished by excavators with hydraulic breakers and pulverizers. Horizontal surfaces will be fractured and "peeled" back to reduce subsurface disturbance. Footings and foundations will be exposed by

an excavator that will excavate around each below grade structure to gain access. The concrete will be broken, sized, and relocated to a central location for eventual loadout.

A sequence of mechanical demolition techniques will be employed to exceed the City of Alameda's 65% recycling goal, while providing safe working conditions during the building demolition. Various excavators equipped with specialized attachments (grapples, pulverizers, breakers, processors and shears) will demolish the buildings in a top-down, controlled manner. This will allow building components to be broken into smaller pieces that are safer to move and reduce dust generation. Operations with high noise levels will be performed over mid-day hours to minimize disruption to nearby residences. Dust control measures, including misting with water, will be employed to reduce the generation of fugitive dust and vapors, as described in Section 5.3.

The compounding room manifold and piping, piping from the Taylor Warehouse to the compounding room, piping from the compounding room to the ASTs, and the rail lines will be loaded into semi-end dump trucks for transport to a recycler. Remaining concrete will be removed and relocated to a central location for eventual loadout.

4.2.2 Above-Ground Storage Tank Closure, Demolition, and Removal

After the Alameda Distribution Center ceases operations, demolition activities will begin in the Tank Farm Area.

The ASTs within the tank farm will first be hydraulically isolated from the facility through a pipeline isolation blinding process. Pancake slip blinds will be inserted at the pipeline side of each existing feed and drain valve to stop the flow of any liquids that may be associated with the ASTs. Liquids and pumpable sludges within the ASTs will be pumped to one of the frac tanks, and the interior of the ASTs will be cleaned under confined space entry protocols with soapy (e.g., JPX brand industrial degreaser) water stored in the other frac tanks. Frac tank liquids will be pumped into vacuum trucks that will transport the tank liquids as either RCRA non-hazardous (containing oil) or non-hazardous (no oil) waste to a SOPUS-approved facility per the WMTP (Appendix A). Vacuum truck washouts will occur on an as-needed basis throughout, and at the conclusion of the project.

Multiple tank wall openings may be advanced at grade surface to allow for better access to perform the cleaning activities.

The cleaned ASTs will be inspected by the Alameda Fire Department. Following written approval from the Fire Department Inspector, the ASTs will be demolished.

ASTs will be demolished with an excavator equipped with a hydraulic shear. Shearing of the AST will begin near the top and proceed to the bottom. The sheared pieces will be transported by an excavator equipped with a grapple or front-end loader to the staging area, downsized, and loaded into semi-end dumps for transport to a recycler.

4.3 SOIL EXCAVATION

Excavation areas and depths are depicted on Figure 5. Excavation activities will begin in the Tank Farm Area and progress northward. A total of 11,400 cubic yards of soil is anticipated to be excavated and disposed of as RCRA non-hazardous waste. The excavation dimensions may change based on conditions encountered and confirmation sampling results (see Section 4.4).

Excavation in the Tank Farm Area (including the compounding room and railroad spur) will be performed to 3 feet bgs, with an approximate total of 4,900 cubic yards removed. Confirmation samples will be collected from the bottom of the excavation to determine whether excavation below 3 feet bgs is required to remove impacted soil. Excavation will not extend deeper than 5 feet bgs (anticipated groundwater depth). Lateral excavation extents are bound by the property line on three sides of the Tank Farm Area and by the anticipated future extent of Clement Avenue as illustrated on Figure 5. Excavation in this area will not extend beyond southern boundary of the Main and Taylor Warehouses.

The excavation within the Tank Farm Area will exclude the power pole and drop, tension pole, and transformer that are located within the Clement Avenue easement (see Figure 5 and engineering drawings in Appendix C). Barriers will be put in place a minimum of five feet from each pole and the transformer to protect them in place, and samples will be collected from the sidewalls of adjacent excavations to confirm that soil left in place is below proposed construction cleanup goals. If concentrations of Site COCs in these confirmation samples are above the cleanup goals, provisions will be made to remove the soil during redevelopment of the property when the transformer and poles are removed or relocated.

Excavation of approximately 6,500 cubic yards of soil is planned in the Northeast Area to 6 feet bgs, the approximate depth of first encountered groundwater. Lateral excavation extents are bound by the property line on three sides of the Northeast Area; soil is not anticipated to be

excavated in the area of the loading docks as illustrated on Figure 5. If confirmation samples indicate that soil along the sidewalls near the loading dock contains soil with COCs above the proposed cleanup goals, the excavation will be extended into the loading dock area until samples confirm that COC concentrations left in place are below proposed cleanup goals.

The excavations will be performed with an excavator equipped with a bucket attachment. Hydrocarbon-impacted soil will be direct-loaded into trucks for off-haul and disposal. A rubber-tired loader will assist with excavations by shuttling material and, if needed, loading trucks with impacted-soil.

Impacted soil will be loaded into semi-end dumps for transportation and disposal at a licensed, permitted, and SOPUS-approved disposal facility. Each truck will be tarped, dry decontaminated and inspected prior to leaving the Site. Wood staff will manage manifests and perform the truck inspection verifying the truck is ready to leave the Site with its load.

To encourage in situ aerobic bioremediation of the petroleum hydrocarbons in groundwater and saturated soils in the Northeast Area, Oxygen Release Compound (ORC®) will be applied to the bottom of the excavation prior to backfilling. Application of ORC is intended to accelerate natural degradation rates of TPH compounds for up to 12 months and reduce concentrations in groundwater and soil vapor in the Northeast Area.

4.4 CONFIRMATION SAMPLING

Soil confirmation samples will be collected and submitted for laboratory analysis after completing the excavation to the planned extent. Excavation sidewall confirmation samples will be collected on 50-foot spacing. Bottom confirmation samples will be collected on a 50-foot grid pattern. Soil samples will be analyzed for TPH (gasoline, diesel, and motor oil), VOCs, and metals.

If samples indicate that a Site COC is present in concentrations above the proposed cleanup goal in either the loading dock (Northeast Area) or the area where Clement Avenue will be constructed (Tank Farm Area), additional soil will be excavated and another confirmation sample will be collected until analytical results indicate that COC concentrations are below the proposed cleanup goals for the area. Confirmation samples will be collected approximately five feet from both the power and tension poles located within the Tank Farm Area. These samples

will be used to confirm that the soil left in place is either clean and does not require excavation, or that it is impacted and will require removal at a later date.

Additional details regarding sample spacing and collection are provided in the SAP (Appendix B).

4.5 EXCAVATION DEWATERING

Excavation in the Northeast Area is planned as deep as first encountered groundwater. Based on the soil sample borings and water levels in groundwater monitoring wells, the excavation may extend below the water table, and dewatering and discharge or disposal may be required. Groundwater from excavation dewatering will be containerized onsite in water tanks within secondary containment. The water will be temporarily stored in tanks onsite before discharge to the City of Alameda sanitary sewer system or transport to a license disposal facility off-site.

A specific discharge permit from EBMUD will be required for discharge of dewatered groundwater to the sanitary sewer system or for water disposed of off-site. The required permit will be secured before excavation begins.

The liquid waste will be sampled and analyzed for compounds required per the EBMUD permit and on-site treatment of the dewatered groundwater may be required prior to discharge, as specified in the SAP (Appendix B). Quarterly reporting is required for the discharge permit, which will include the sampling results and discharge volume.

4.6 WASTE HANDLING AND DISPOSAL

Waste handling and disposal of waste materials generated during groundwater monitoring, well destruction, test pit sampling, utility confirmation potholing, demolition, excavation, and dewatering will be performed in accordance with the WMTP (Appendix A), and will take into account procedures for ACM and the City of Alameda goal of recycling at least 65% of construction and demolition materials. The debris generated during demolition will be transported to an appropriate non-hazardous landfill or offsite recycling facility.

The ASTs will be cleaned prior to demolition, and frac tanks will be cleaned at the conclusion of the work. Residual sludge and water within the tanks will be cleaned by a crew under confined space entry protocols and under a confined space entry permit per protocols provided in the WMTP (Appendix A).

4.7 BACKFILLING

Backfill of excavations will be completed to match existing surrounding grade with clean imported fill materials that have been tested for conformance with the DTSC clean imported fill information advisory. Backfill will be performed by industry standard equipment to include a loader or dozer, an excavator with a sheepsfoot, an 84-inch padded single-drum vibratory compactor (as needed), and a water truck. Loading dock and crushed concrete material will be placed into the excavations in loose, 8- to 12-inch lifts. Water will be applied as needed and each lift will be compacted to 90% maximum dry density.

5.0 MONITORING AND CONTROL MEASURES DURING CONSTRUCTION

Monitoring and control measures that will be implemented during pre-construction, site prep, demolition, and excavation activities are specified in a number of plans that are included as part of this RAP.

5.1 HEALTH AND SAFETY PLAN

The existing site-specific Health and Safety Plan (HASP; Wood, 2020b) was amended to include activities related to demolition and remedial excavation activities. The HASP outlines the health and safety procedures for each field task and was prepared in accordance with Occupational Safety and Health Administration (OSHA) Title 29 Code of Federal Regulations (CFR) Part 1910.120.

5.2 DECONTAMINATION PLAN

Decontamination protocols specified in the HASP will be used to establish a consistent approach for checking cleanliness of equipment mobilized to the Site and decontaminating equipment that comes in contact with site soil. Equipment that contacts impacted soil will be decontaminated prior to leaving the Site. Dry decontamination will be the preferred method of decontamination for heavy equipment, using laborers with brooms and brushes who will check each truck before it leaves the Site. A pressure washer, tire washing station, or other approved equipment may be brought onsite to aid in decontaminating equipment and trucks, if necessary. Small, disposable equipment intended for one-time use, including personal protective equipment, shall be disposed of per the WMTP (Appendix A).

5.3 DUST, ODOR, AND VAPOR MONITORING PLAN

The Dust, Odor, and Vapor Control and Monitoring Plan presented in Appendix D specifies the measures that will be taken to reduce the generation of fugitive dust, vapors, and odor and the monitoring that will be performed to document dust and vapor concentrations. The plan describes visual observation protocols and monitoring instruments to be used to ensure that conditions can be appropriately monitored and modified to be protective of on-site workers and to minimize off-site migration of dust, vapors, and odor. Dust and vapor control and monitoring will be performed in accordance with federal, state, and local requirements, specifically with BAAQMD rules, and the SWPPP.

5.4 SAMPLING AND ANALYSIS PLAN

A SAP was prepared and included in Appendix B. The SAP describes: a limited soil investigation to pre-profile soil for disposal; excavation confirmation sampling requirements; soil sampling and analysis to verify that backfill materials meet the criteria for clean soil import as recommended by the California DTSC, and sampling and analysis of groundwater encountered and dewatered from excavations. Groundwater will be sampled prior to onsite treatment, and for select analyses required by EBMUD prior to discharge to the sanitary sewer.

5.5 STORMWATER POLLUTION AND PREVENTION PLAN

A SWPPP will be prepared under separate cover that addresses activities that may potentially generate erosion at the facility, including demolition, excavation, and truck traffic to and from the Site. The SWPPP will be prepared by a Qualified SWPPP Developer (QSD) and prepared to comply with the State Water Resources Control Board's (SWRCB) NPDES General Permit for Stormwater Discharges Associated with Construction General Permit Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006 DWG (State Water Board, 2012).

5.6 CONSTRUCTION QUALITY CONTROL PLAN

A Construction Quality Control Plan (included as Appendix E) was prepared to describe quality assurance activities that will be performed before and during demolition and excavations to ensure that the project fulfills the requirements for quality assurance in accordance with design plans and specifications prepared for this project (Appendix C).

5.7 WASTE MANAGEMENT AND TRANSPORTATION PLAN

A WMTP is provided in Appendix A. The waste management sections of the WMTP detail procedures for identifying and managing waste streams generated during implementation of this project, specifically:

- Methods or options for disposal, treatment, or recycling of anticipated waste streams (including a list of potential treatment and disposal facilities);
- Protocols for on-site waste segregation, containerizing, temporary staging and loading;
- Roles and responsibilities for SOPUS, Wood and contractors; and
- Waste characterization approach.

The WMTP will be provided to the City of Alameda Public Works department for review and approval of the building permit.

The transportation sections of the WMTP illustrates special traffic control measures that may be required by the City of Alameda for truck traffic arriving at or leaving the Site, including the route(s) that trucks transporting waste and recyclable materials from the Site will travel to the nearest freeways or other destinations. In addition, the plan describes how on-site traffic will be managed and will identify routes of entry and egress, stabilized construction entrances, material and equipment laydown areas, active loading and unloading areas, and parking areas.

6.0 POST-REMEDIATION ACTIVITIES

The following post-remediation activities will be performed following the completion of demolition, excavation, and backfilling activities.

6.1 DEED RESTRICTION AND LAND USE COVENANT

To mitigate potential exposure to soil vapor, a deed restriction and Land Use Covenant (LUC) will be put in place in a portion of the Northeast Area requiring active vapor intrusion mitigation systems (VIMS) to be installed as part of construction of future residential buildings during redevelopment of the Site. A lot-line adjustment will be recorded with the City of Alameda so that applicable institutional controls are placed on a single parcel of land. With the placing of both a deed restriction and LUC on the property, no post-excavation soil vapor monitoring is proposed.

6.2 POST-REMEDIATION GROUNDWATER SAMPLING

The need for post-excavation groundwater monitoring is not currently anticipated but will be evaluated based on concentrations of COCs detected in groundwater during and after excavation dewatering. At this time, there are no plans to reinstall the Site monitoring wells or resume groundwater monitoring.

7.0 PROJECT SCHEDULE

The project schedule assumes that the Water Board approves submittals within 30-60 days of the submittal date depending on the submittal, and is contingent upon SOPUS ceasing operations at the Alameda Distribution Center. Changes to the schedule will be communicated to the Water Board in a timely manner. All scheduled activities listed below will be performed by or on behalf of SOPUS, unless indicated otherwise.

- April 2020
  - Submit Well Destruction Work Plan to the Water Board for review.
- May 2020
  - Receive Water Board approval for Well Destruction Work Plan and well destruction permit from Alameda County Public Health Department.
  - Submit RAP and CEQA IS/MND to the Water Board for review and public commenting period.
  - Perform Site utility location and geophysical survey.
  - Implement test pitting, waste pre-profile potholing and sampling, and utility potholing.
- June 2020
  - Implement monitoring well destruction.
  - Begin public outreach efforts, in conjunction with the Water Board.
  - Begin marketing the property to potential buyers.
- August 2020
  - Initiate demolition activities.
  - Receive Water Board approval for RAP and CEQA IS/MND.
  - Alameda Distribution Center ceases operations (August 31).

- October 2020
    - Complete demolition activities and implement remedial excavations in accordance with approved RAP.
- December 2020
    - Complete remedial excavations in accordance with approved RAP.
    - Notify Water Board that field activities related to the excavation implementation have been completed.
- March 2021
    - Submit Demolition and Soil Removal Completion Report to the Water Board.

8.0 REPORTING

Following the conclusion of the remedial activities, a Demolition and Soil Removal Completion Report will be generated and submitted to the Water Board for approval. The report will include a description of field methods, observations, monitoring, and disposal of excavated soil, waste materials, and construction debris. Field and laboratory data will be tabulated as appropriate. As-built drawings will be prepared to illustrate the extent of the final excavation. Copies of appropriate documentation (e.g. manifests, bills of lading, and field or laboratory report data sheets) will also be included.

9.0 REFERENCES

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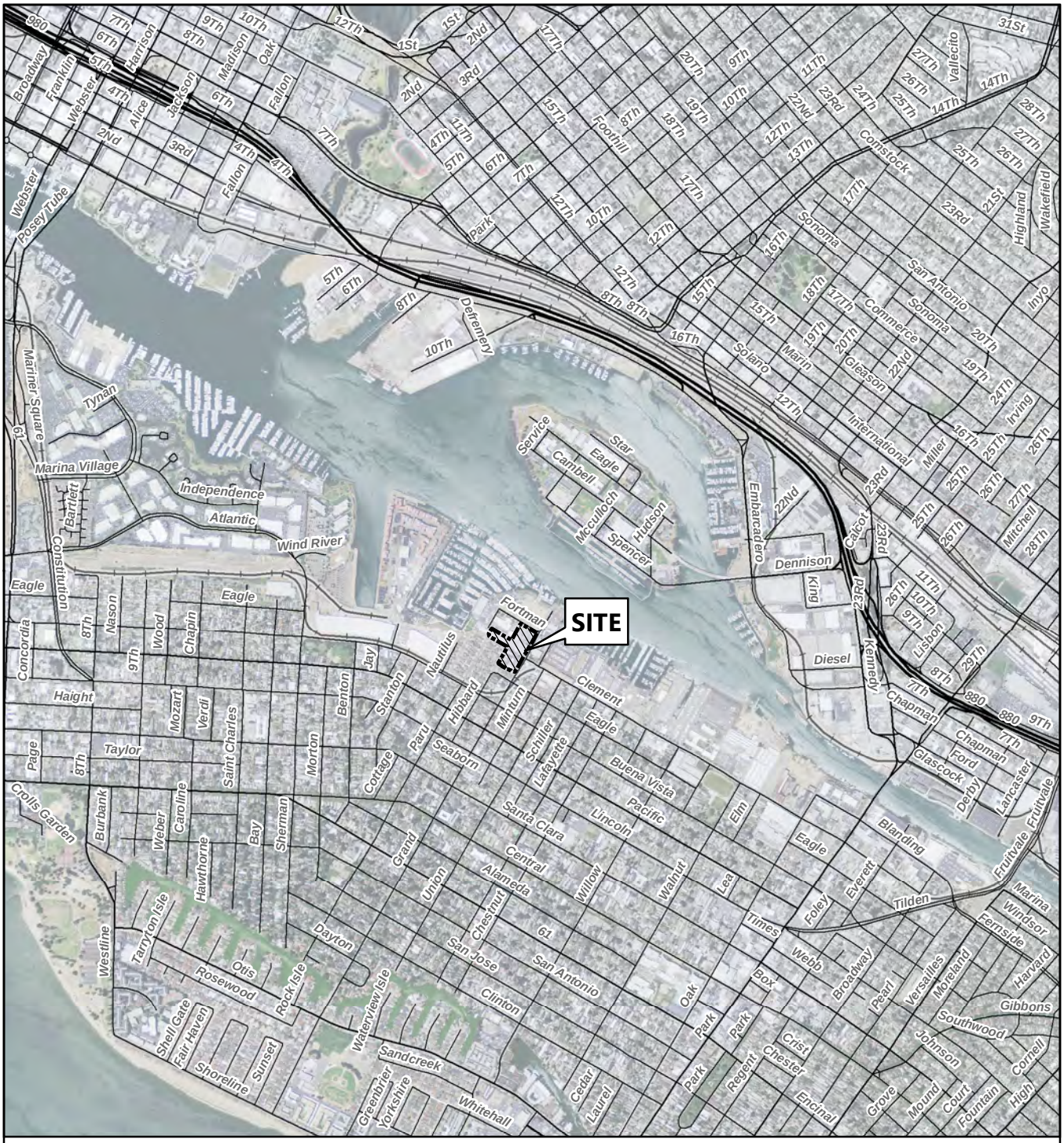
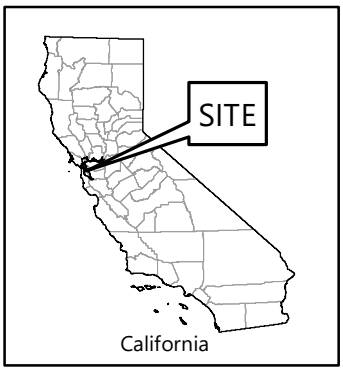
FIGURES



Street map from ESRI, 2007. Aerial image from NAIP, 2009.



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SITE LOCATION MAP
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.	By: KLU	Prj. No. 8620192890.02
	Date: 03/30/2020	Figure 1

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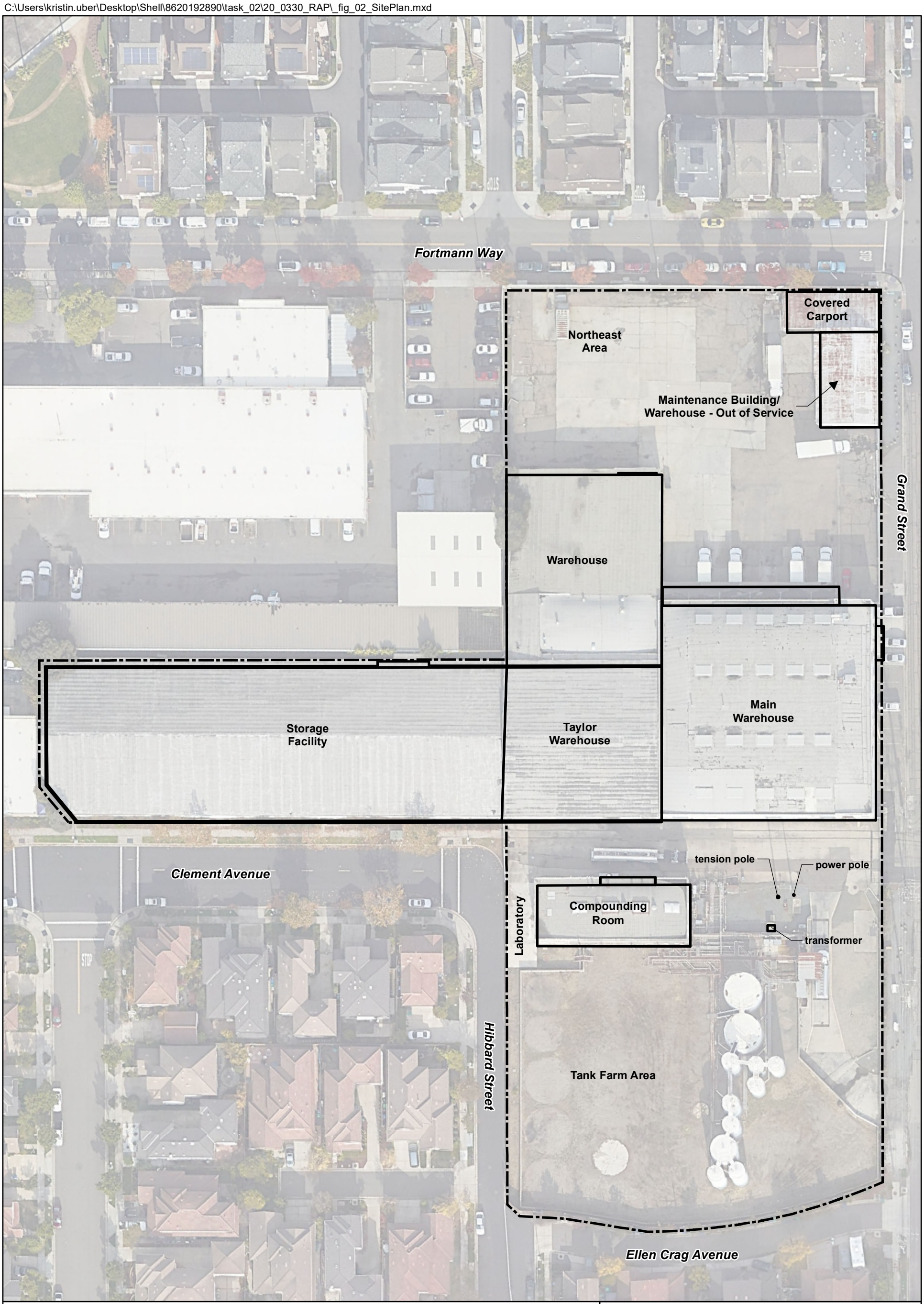

Background image ©Google Earth, dated October 2018.

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SITE VICINITY MAP
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

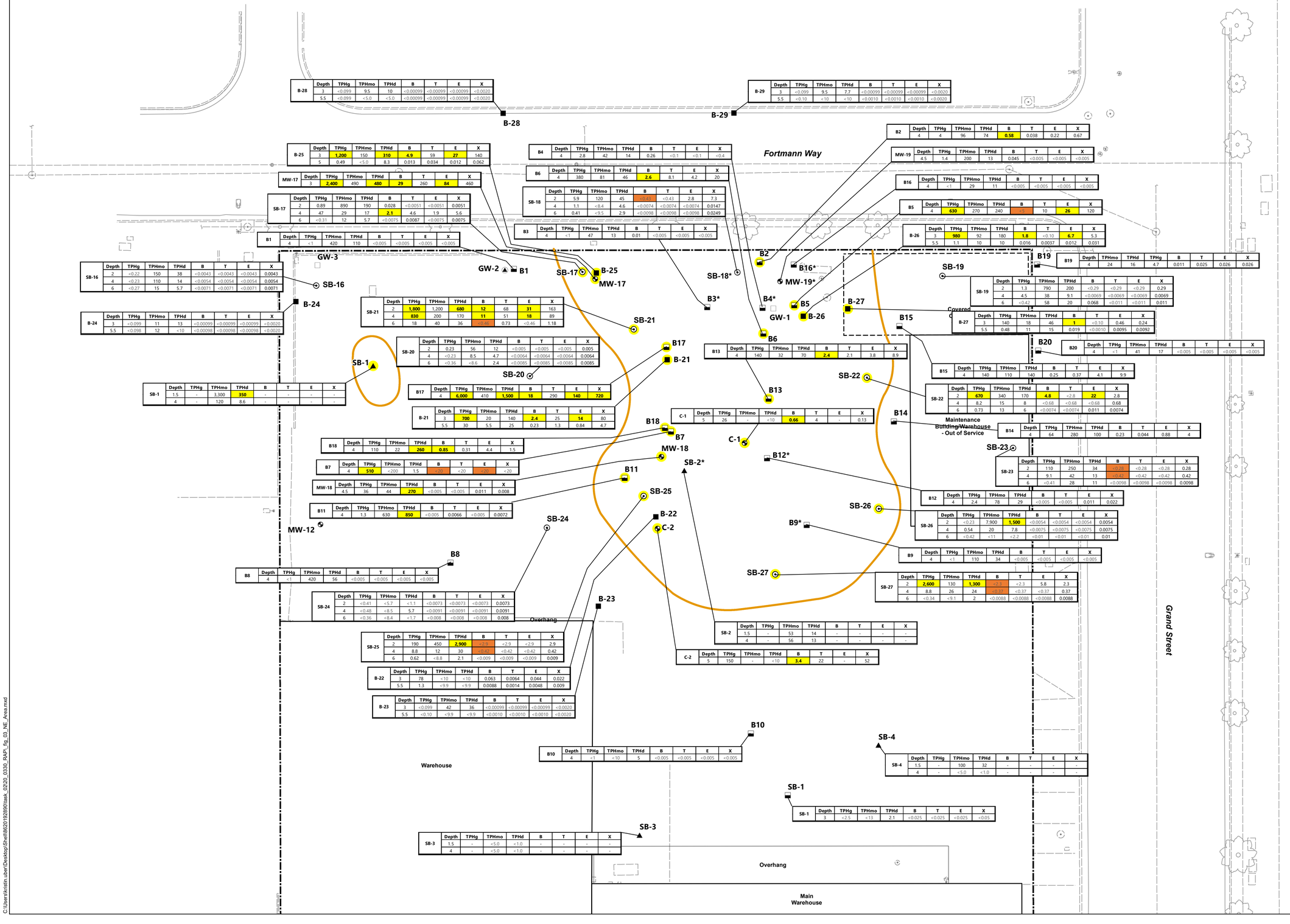
wood.

By: KLU

Date: 04/24/2020

Project No. 8620192890.02

Figure 2



B-28	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	<0.099	9.5	10	<0.00099	<0.00099	<0.00099	<0.0020
	5.5	<0.099	<5.0	<5.0	<0.00099	<0.00099	<0.00099	<0.0020

B-29	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	<0.099	9.5	7.7	<0.00099	<0.00099	<0.00099	<0.0020
	5.5	<0.10	<10	<10	<0.0010	<0.0010	<0.0010	<0.0020

B-25	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	**1,200**	150	**310**	**4.9**	59	**27**	140
	5	0.49	<5.0	8.3	0.013	0.034	0.012	0.062

MW-17	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	**2,400**	450	**480**	**29**	260	**84**	460

SB-17	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	0.89	890	190	0.028	<0.0051	<0.0051	0.0051
	4	47	29	17	**2.1**	4.6	1.9	5.6
	6	<0.31	12	5.7	<0.0075	0.0087	<0.0075	0.0075

B1	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	420	110	<0.005	<0.005	<0.005	<0.005

B4	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	2.8	42	14	0.26	<0.1	<0.1	<0.4

B6	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	380	81	46	**2.6**	8.1	4.2	20

SB-18	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	5.9	120	45	<0.43	<0.43	2.8	7.3
	4	1.1	<8.4	4.6	<0.0074	<0.0074	<0.0074	0.0147
	6	0.41	<9.5	2.9	<0.0098	<0.0098	<0.0098	0.0249

B3	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	47	13	0.01	<0.005	<0.005	<0.005

B2	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	4	96	74	**0.58**	0.038	0.22	0.67

MW-19	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4.5	1.4	200	13	0.045	<0.005	<0.005	<0.005

B16	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	29	11	<0.005	<0.005	<0.005	<0.005

B5	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	**630**	270	240	<5	10	**26**	120

B-26	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	**980**	92	180	**1.8**	<0.10	**6.7**	5.3
	5.5	1.1	10	10	0.016	0.0037	0.012	0.031

B19	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	24	16	4.7	0.011	0.025	0.026	0.026

SB-19	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	1.3	790	200	<0.29	<0.29	<0.29	0.29
	4	4.5	38	9.1	<0.0069	<0.0069	<0.0069	0.0069
	6	<0.42	58	20	0.068	<0.0011	<0.0011	0.011

B-27	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	140	18	46	**1**	<0.10	0.46	0.24
	5.5	0.48	11	15	0.019	<0.0010	0.0095	0.0092

B20	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	41	17	<0.005	<0.005	<0.005	<0.005

B15	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	140	110	140	0.25	0.37	4.1	9.9

SB-22	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	**670**	340	170	**4.8**	<2.8	**22**	2.8
	4	8.2	15	8	<0.68	<0.68	<0.68	0.68
	6	0.73	13	6	<0.0074	<0.0074	0.011	0.0074

B14	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	64	280	100	0.23	0.044	0.88	4

SB-23	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	110	250	34	<0.28	<0.28	<0.28	0.28
	4	9.1	42	13	<0.42	<0.42	<0.42	0.42
	6	<0.41	28	11	<0.0098	<0.0098	<0.0098	0.0098

B12	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	2.4	78	29	<0.005	<0.005	0.011	0.022

SB-26	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	<0.23	7,900	**1,500**	<0.0054	<0.0054	<0.0054	0.0054
	4	0.54	20	7.8	<0.0075	<0.0075	<0.0075	0.0075
	6	<0.42	<11	<2.2	<0.01	<0.01	<0.01	0.01

B9	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	110	34	<0.005	<0.005	<0.005	<0.005

SB-27	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	**2,600**	130	**1,300**	<2.3	<2.3	5.8	2.3
	4	8.8	26	24	<0.37	<0.37	<0.37	0.37
	6	<0.34	<9.1	2	<0.0088	<0.0088	<0.0088	0.0088

SB-2	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	53	14	-	-	-	-
	4	-	56	13	-	-	-	-

C-2	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	5	150	-	<10	**3.4**	22	-	52

SB-21	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	**1,800**	1,200	**680**	**12**	68	**31**	163
	4	**830**	200	170	**11**	51	**18**	89
	6	18	40	36	<0.46	0.73	<0.46	1.18

SB-20	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	0.23	56	12	<0.005	<0.005	<0.005	0.005
	4	<0.23	8.5	4.7	<0.0064	<0.0064	<0.0064	0.0064
	6	<0.36	<8.6	2.4	<0.0085	<0.0085	<0.0085	0.0085

B17	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	**6,000**	410	**1,500**	**18**	290	**140**	**720**

B-21	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	**700**	20	140	**2.4**	25	**14**	80
	5.5	30	5.5	25	0.23	1.3	0.84	4.7

C-1	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	5	26	-	<10	**0.66**	4	-	0.13

SB-1	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	3,300	**350**	-	-	-	-
	4	-	120	8.6	-	-	-	-

B18	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	110	22	**260**	**0.85**	0.31	4.4	1.5

B7	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	**510**	<200	1.5	<20	<20	<20	<20

MW-18	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4.5	36	44	**270**	<0.005	<0.005	0.011	0.008

B11	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	1.3	630	**850**	<0.005	0.0066	<0.005	0.0072

B8	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	420	56	<0.005	<0.005	<0.005	<0.005

SB-24	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	<0.41	<5.7	<1.1	<0.0073	<0.0073	<0.0073	0.0073
	4	<0.48	<8.5	5.7	<0.0091	<0.0091	<0.0091	0.0091
	6	<0.36	<8.4	<1.7	<0.008	<0.008	<0.008	0.008

SB-25	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	190	450	**2,900**	<2.9	<2.9	<2.9	2.9
	4	8.8	12	30	<0.42	<0.42	<0.42	0.42
	6	0.62	<8.8	2.1	<0.009	<0.009	<0.009	0.009

B-22	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	78	<10	<10	0.063	0.0064	0.044	0.022
	5.5	1.3	<9.9	<9.9	0.0088	0.0014	0.0048	0.009

B-23	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	<0.099	42	36	<0.00099	<0.00099	<0.00099	<0.0020
	5.5	<0.10	<9.9	<9.9	<0.0010	<0.0010	<0.0010	<0.0020

B10	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4	<1	<10	5	<0.005	<0.005	<0.005	<0.005

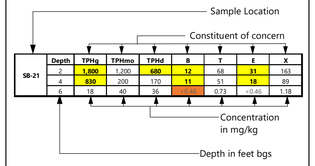
SB-4	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	100	32	-	-	-	-
	4	-	<5.0	<1.0	-	-	-	-

SB-1	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3	<2.5	<13	2.1	<0.025	<0.025	<0.025	<0.05

SB-3	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	<5.0	<1.0	-	-	-	-
	4	-	<5.0	<1.0	-	-	-	-

EXPLANATION

- Groundwater monitoring well
- Inactive groundwater monitoring well
- Destroyed well location
- Soil Boring (surveyed August 2, 2019)
- Soil boring location (1981, 1990, 1995-1998)
- Soil boring location (2000)
- Soil boring location (2003, 2004)
- Grab groundwater location (2003)
- Floor soil sample location (2002)
- Wall soil sample location (2002)
- Approximate extents of proposed soil cleanup goal exceedances
- Approximate Site Boundary

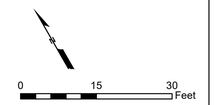


SB-21	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2	**1,800**	1,200	**680**	**12**	68	**31**	163
	4	**830**	200	170	**11**	51	**18**	89
	6	18	40	36	<0.46	0.73	<0.46	1.18

Notes:
1. **1,800** = concentration exceeds its respective proposed soil cleanup goals.
2. <0.46 = a result whose laboratory reporting limit exceeds its respective proposed soil cleanup goals.
3. = indicates that the detection of at least one constituent of concern exceeds its respective proposed soil cleanup goals.
4. All concentrations are in milligrams per kilogram (mg/kg).

	Proposed Soil Clean-up Goals (mg/kg)[3]						
	TPHg	TPHmo	TPHd	B	T	E	X
Residential	430	12,000	260	0.33	1,100	5.9	580
Construction	1,800	54,000	1,100	33	4,700	540	2,700

Abbreviations:
- < Result was non-detect, and is shown as less than the reporting limit
- * sample location not used for contouring
- bgs below ground surface
- F floor sample
- mg/kg milligrams per kilogram
- ESL Environmental Screening Level
- UST Underground Storage Tank
- W wall sample
- TPHg total petroleum hydrocarbon as gasoline
- TPHmo total petroleum hydrocarbon as motor oil
- TPHd total petroleum hydrocarbon as diesel
- B benzene
- T toluene
- E ethylbenzene
- X total xylenes



NORTHEAST EXCAVATION AREA
COC CONCENTRATIONS IN SOIL
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU	Project No. 8620192890.02
Date: 04/28/2020	Figure 3

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Storage Building

Taylor Warehouse

Main Warehouse

Overhang

Compounding Room

Tank Farm Area

Truck scale

Clement Avenue

Hibbard Street

Grand Street

tension pole

powerpole

transformer

SB-8 (1998)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	41	5,600	1,500	<0.025	0.12	<0.025	<0.025
	3.0	<1	280	80	<0.005	<0.005	<0.005	<0.005

SB-8 (1998)

SB-9	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	<1	540	84	<0.005	0.0082	<0.005	0.0077
	3.5	36	1,200	460	<0.025	<0.025	<0.025	<0.025

SB-9

SB-12	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	<1	20	5	<0.005	<0.005	<0.005	<0.005
	3.0	<1	220	29	<0.005	<0.005	<0.005	<0.005

SB-12

SB-11	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	<1	140	20	<0.005	<0.005	<0.005	<0.005
	3.0	1,700	740	330	<5	<5	<5	<5

SB-11

GW-6

MW-4

MW-4	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	-	13,000	-	<0.28	<0.28	<0.28	5.4

SB-6 (2000)

SB-6 (2000)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	36	4	-	-	-	-
	4.0	-	<5.0	<1.0	-	-	-	-

MW-13

SB-10

SB-10	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	8.5	13,000	3,700	<0.025	0.089	<0.025	0.03
	3.0	19	11,000	3,500	<0.05	<0.05	<0.05	<0.05

MW-14

SB-2 (2003)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	<2.5	<13	1	<0.025	<0.025	<0.025	<0.05

SB-2 (2003, 2004)

MW-9

MW-9	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	39	-	-	-	-	-

SB-5

SB-5	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5		13		<0.0054	<0.0054	<0.0054	<0.0054

SB-6 (1995)

SB-6 (1995)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	18	-	<0.0054	<0.0054	<0.0054	<0.0054

ExASample13-W	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.0	-	5,200	310	-	-	-	-

EXASample13

ExASample12-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	12	15	-	-	-	-

EXASample12

ExASample8-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	<10	<5	-	-	-	-

EXASample8

ExASample10-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	<10	<5	-	-	-	-

EXASample10

ExASample11-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	<10	<5	-	-	-	-

EXASample11

ExASample18-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	-	47	9	-	-	-	-

EXASample18

MW-1

MW-1	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	-	58	-	<0.0058	<0.0058	<0.0058	<0.0058

EXASample9

ExASample9-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	21	5	-	-	-	-

EXASample19

ExASample19-W	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	-	29	8	-	-	-	-

EXASample5

ExASample5-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	10	<5	-	-	-	-

ExCSample4-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	35	8	-	-	-	-

EXCSample4

EX16-2-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	19	10	-	-	-	-

EX16-2

MW-7

MW-7	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	290	-	-	-	-	-

SB-7 (2000)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	70	26	-	-	-	-
	4.0	-	<5.0	1	-	-	-	-

SB-7 (2000)

MW-15

ExCSample3-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	87	19	-	-	-	-

EXCSample3

EXCSample5

ExCSample5-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.5	-	14	<5	-	-	-	-

SB-4	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.5	-	550	-	<0.0055	<0.0055	<0.0055	<0.0055

SB-4

MW-6

MW-6	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.0	-	740	-	-	-	-	-

ExASample2-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	28	7	-	-	-	-

EXASample2

ExASample15-W	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	18,000	3,600	-	-	-	-

EXASample15

EX2-3

EX2-3-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	4.0	-	93	20	-	-	-	-

EXGSample2

EXGSample1

ExGSample2-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	100	74	-	-	-	-

ExGSample1-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	1,500	570	-	-	-	-

EXCSample2

ExCSample2-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	23	<5	-	-	-	-

MW-5

MW-5	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.0	-	10	-	-	-	-	-

SB-7 (1995)

SB-7 (1995)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	14	-	<0.0054	<0.0054	<0.0054	<0.0054

ExASample4-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	75	19	-	-	-	-

EXASample4

SB-2 (1995)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.5	-	24	-	<0.0057	<0.0057	<0.0057	<0.0057
	3.5	-	40	-	<0.0056	<0.0056	<0.0056	<0.0056

SB-2 (1995)

EXASample17

ExASample17-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.5	-	20	<5	-	-	-	-

EXASample20

EXASample21

SB-8 (2000)

SB-8 (2000)	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	-	4,600	890	-	-	-	-
	4.0	-	87	11	-	-	-	-

ExASample21-W	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.0	-	1,900	<200	-	-	-	-

MW-8

MW-8	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.0	-	15	-	-	-	-	-

EXDSample2

ExDSample2-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	78	44	-	-	-	-

SB-3	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.5	-	1,700	-	<0.0055	<0.0055	<0.0055	<0.0055

SB-3

EXDSample1

ExDSample1-F	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	2.0	-	26	<5	-	-	-	-

MW-3

MW-3	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	-	<12	-	<0.0057	<0.0057	<0.0057	<0.0057

MW-16

MW-2

MW-2	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	3.0	-	<11	-	<0.0054	<0.0054	<0.0054	<0.0054

GW-5

EXPLANATION

- Groundwater monitoring well
- Inactive groundwater monitoring well
- Destroyed well location
- Soil boring location (1981, 1990, 1995-1998)
- Soil boring location (2000)
- Soil boring location (2003, 2004)
- Grab groundwater location (2003)
- Floor soil sample location (2002)
- Wall soil sample location (2002)
- Approximate extents of proposed soil cleanup goal exceedances
- Railroad Tracks
- Approximate future street boundary
- Approximate Site Boundary

Sample Location

Constituent of concern

SB-10	Depth	TPHg	TPHmo	TPHd	B	T	E	X
	1.5	8.5	13,000	3,700	<0.025	0.089	<0.025	0.03
	3.0	19	11,000	3,500	<0.05	<0.05	<0.05	<0.05

Concentration in mg/kg

Depth in feet bgs

Notes:

1. 3,700 = concentration exceeds its respective proposed soil cleanup goals.
2. = a result whose laboratory reporting limit exceeds its respective proposed soil cleanup goals.
3. = indicates that the detection of at least one constituent of concern exceeds its respective proposed soil cleanup goals.
4. All concentrations are in milligrams per kilogram (mg/kg).

	Proposed Soil Clean-up Goals (mg/kg)[3]						
	TPHg	TPHmo	TPHd	B	T	E	X
Residential	430	12,000	260	0.33	1,100	5.9	580
Construction	1,800	54,000	1,100	33	4,700	540	2,700

Abbreviations:

- < Result was non-detect, and is shown as less than the reporting limit
- bgs below ground surface
- F floor sample
- mg/kg milligrams per kilogram
- ESL Environmental Screening Level
- UST Underground Storage Tank
- W wall sample
- TPHg total petroleum hydrocarbon as gasoline
- TPHmo total petroleum hydrocarbon as motor oil
- TPHd total petroleum hydrocarbon as diesel
- B benzene
- T toluene
- E ethylbenzene
- X total xylenes

0 15 30 Feet

TANK FARM EXCAVATION AREA
COC CONCENTRATIONS IN SOIL
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU

Project No. 8620192890.02

Date: 04/28/2020

Figure 4

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Explanation

- Groundwater monitoring well
- Sub-slab vapor pin
- Railroad Tracks
- Approximate future street boundary
- Truck scale (to be excavated)
- Excavate to 3-foot depth[1]
- Excavate to 6-foot depth[2]
- Former UST area and washrack (~100CY excavation allowance)
- Approximate Site Boundary

Notes:

1. Excavation extents in the Former Tank farm Area exclude areas of anticipated future construction of Hibbard Street and Clement Avenue. Above-ground structures and hardscape (including the railroad tracks) in these areas will be demolished and removed. Above- and below-ground piping associated with the Compounding Room will be removed, cleaned, and recycled.
2. Cleanup goals for site COCs are recommended to be based on residential direct-exposure risk ESLs for soil, and residential risk pathway for soil gas in areas of the site to be redeveloped for residential use. Cleanup goals for site COCs are recommended to be based on construction worker direct-exposure risk ESLs for soil areas where Clement Avenue and Hibbard Street will be constructed.

N

0 40 80 Feet

Background image ©Google Earth, dated October 2018.

PROPOSED DEMOLITION AND EXCAVATION AREA
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.	By: KLU	Prj. No. 8620192890.02
	Date: 04/21/2020	Figure 5

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APPENDIX A

Waste Management and Transportation Plan

APPENDIX A

WASTE MANAGEMENT AND TRANSPORTATION PLAN

Pennzoil-Quaker State Distribution Center
Alameda, California

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FIGURES

ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
AST	above-ground storage tank
C&D	construction and demolition
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CHP	California Highway Patrol
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
EBMUD	East Bay Municipal Utilities District
HASP	Health and Safety Plan
OSHA	Occupational Safety and Health Administration
PPE	personal protective equipment
ppm	parts per million
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SOPUS	Pennzoil-Quaker State Company dba SOPUS Products
SVOCs	semi-volatile organic compounds
TSDF	treatment, storage, and disposal facility
UST	underground storage tank
VOC	volatile organic compound
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
WMTP	Waste Management and Transportation Plan
Wood	Wood Environment & Infrastructure Solutions, Inc.

WASTE MANAGEMENT AND TRANSPORTATION PLAN

Pennzoil-Quaker State Distribution Center
Alameda, California

A1.0 BACKGROUND

Wood Environment & Infrastructure, Inc. ("Wood"), has prepared this Waste Management and Transportation Plan (WMTP) on behalf of Pennzoil-Quaker State Company dba SOPUS Products("SOPUS") to identify and describe the characterization, handling, disposal, transportation procedures and control measures that will be implemented during demolition and remediation activities for the Pennzoil-Quaker State Distribution Center located at 2015 Grand Street, between Fortmann Way and Ellen Crag Avenue in Alameda, California (collectively referred to as "the Site"; Figure A-1). This plan is Appendix A of the Remedial Action Plan (RAP) for the Site. The lead regulatory agency for the Site is the San Francisco Regional Water Quality Control Board ("Water Board").

Previous soil and groundwater investigations conducted at the Site have identified residual petroleum hydrocarbons in the soil. The planned demolition and soil remediation activities will involve demolition of buildings and above-ground features; cleaning and demolition of the above-ground storage tanks (ASTs); and excavating the impacted soil and disposing of it at an approved non-hazardous landfill. In the southern portion of the Site, soil will be excavated to a depth of 3 feet in the footprints of the tank farm, compounding room, and inactive rail tracks (collectively referred to as the "Tank Farm Area"), as shown on Figure A-2. In the northern portion of the Site, soil will be excavated to a depth of 6 feet in the maintenance yard, former underground storage tank (UST) area and the maintenance building and covered carport (collectively referred to as the "Northeast Area"), as shown on Figure A-2. Soil will be excavated from beneath a former UST and wash area located within the Taylor Warehouse, as shown on Figure A-2. Excavation activities will begin in the Tank Farm Area and progress northward. The excavation extent may change based on conditions encountered, and with the approval of SOPUS. A total of 11,400 cubic yards of soil is anticipated to be excavated and disposed as non-hazardous waste.

The Site is located in a mixed-use area that includes residential and commercial/industrial uses. Locations of nearby schools and day-care facilities are identified in Attachment A-1, Figure 1. A list of the schools and day-care facilities, with addresses and contact information, is presented in Attachment A-1, Table 1. The closest hospital, as identified in the site-specific Health and Safety Plan (HASP; Wood, 2020), is also listed in Attachment A-1, Table 1.

In the sections below, "Contractor" refers to the entity or entities, including subcontractors, selected by SOPUS to perform the remediation work, and "Engineer" refers to the entity selected by SOPUS to oversee implementation of the remediation. This WMTP applies to all waste stream management, vehicular traffic in the work areas, adjacent support areas, and city streets in the vicinity of the Site, as well as the designated transportation routes.

A2.0 PURPOSE AND OBJECTIVES

The purpose of this WMTP is to describe the methods to be used to safely manage and transport waste materials generated during the demolition and remedial activities and import fill materials. The goal is to manage and transport materials in such a way as to prevent impacts to human health, safety and the environment, and to minimize impacts to local traffic, businesses, and residents near the Site and along designated haul routes.

This plan describes the characteristics of the materials at the Site, transportation routes and disposal destinations for the excavated soil and other waste streams, proposed staging areas, procedures for loading and managing trucks, estimated quantity of trucks, anticipated work hours on-site, and emergency procedures related to transportation.

A3.0 IDENTIFICATION OF WASTE MATERIALS

It is anticipated the following material will be generated during the implementation of the demolition and remedial action at the Site:

- Excavated soil – Excavated soil will be pre-characterized for waste profiling so that excavated material can be direct loaded for off-Site disposal at an appropriate facility. Excavated soil includes approximately 6,500 and 4,900 cubic yards of soil from the Northeast Area and the Tank Farm Area, respectively.
- Demolition debris – Demolition debris from the demolition and removal of concrete and asphalt paving within the excavation extents; the former maintenance building/warehouse and the covered carport in the Northeast Area; the compounding room and piping, railroad tracks and truck scale, and concrete

retaining wall in the Tank Farm Area; and former wash area inside the Taylor Warehouse.

- ASTs – ASTs will be cleaned, demolished and recyled off-site. Liquid from AST cleaning will be processed through an oil/water separator as needed and disposed off-site.
- Utility decommissioning – Subsurface utilities within the work area will either be removed and capped beyond the limits of the excavation, or protected in place to allow for future use of the utility.
- General construction waste – General construction waste, including miscellaneous packaging, personal protective equipment (PPE), and field office trash, will be generated during construction activities.
- Water from excavation dewatering – groundwater infiltrated in the open excavation will be collected, treated, and then discharged.

A4.0 WASTE MATERIAL HANDLING

This section describes the handling and disposal activities anticipated for waste materials generated during construction.

A4.1 EXCAVATED SOIL

To the extent practicable, excavated soil will be loaded directly into semi-end dump trucks for transportation and disposal at a licensed and permitted disposal facility. Each truck will be tarped, dry decontaminated and inspected prior to leaving the Site. Wood staff will manage manifests and perform the truck inspection verifying the truck is ready to leave the Site with its load. Temporary stockpiles of excavated soil may be placed within the excavation areas and covered with 10 mil plastic sheeting during non-working hours and during periods of high wind or precipitation.

Excavated soil will be sampled, characterized, and profiled prior to excavation, as outlined in the Sampling and Analysis Plan (SAP; Appendix B of the RAP).

A4.2 DEMOLITION DEBRIS

Site demolition and removal activities include the planned removal of the former maintenance building/warehouse and the covered carport in the Northeast Area, and the compounding room and piping, wash area, railroad tracks and truck scale, and concrete retaining wall in the Tank Farm Area. Demolition debris will also include pavement and concrete rubble, miscellaneous metal, and piping that may be generated during demolition activities. Such debris will be

classified as construction and demolition (C&D) debris. As required by City of Alameda, as a city compliant with California Green Building Standards, 65% of all debris hauled from a project must be recycled by a certified C&D processor.

Asbestos-containing material (ACM) and paint containing lead have been identified in some structures at the Site during the asbestos and lead paint survey performed in 2014 (ERM, 2014). Prior to demolition of the compounding room, a certified, licensed and permitted asbestos abatement subcontractor will be used to provide the removal of ACMs. Asbestos abatement activities will be performed in accordance with the State of California regulations and Occupational Safety and Health Administration (OHSA) standards. During demolition of the compounding room, properly trained workers will utilize lead-safe work practices in compliance with California regulations and OSHA's Lead in Construction Standard (OSHA, 2004).

A4.3 ABOVE-GROUND STORAGE TANKS

ASTs will be isolated and drained of liquid and pumpable sludge following the procedures described in the RAP. Once the ASTs are emptied, labor crews will use a combination of hand tools and pressure washing to remove the remaining liquids, sludge, and solids residue within the ASTs. A rinse washing with a hose and application head with less than 100-psi pressure will take place on the tank walls and the tank floor to remove the remaining residue liquids, sludge and solids. Rinsate will be temporarily stored in onsite frac tanks before being processed through an oil/water separator to minimize disposal of liquids containing oil. Liquid waste with oil removed will be pumped into vacuum trucks and disposed of at a local treatment, storage, and disposal facility (TSDF) or equivalent as non-hazardous waste. Each truck load of liquid will be transported using a non-hazardous waste manifest as the chain of custody. Liquid waste from AST cleanouts that contains oil will be pumped into vacuum trucks and disposed of at a TSDF or equivalent as hazardous waste and transported using a hazardous waste manifest as the chain-of-custody. Vacuum truck washouts will occur on an as-needed basis throughout, and at the conclusion of the project.

A confined space entry permit will be issued prior to entry into the tank. Confined space entry program health and safety requirements will be followed during the confined space entry work.

The cleaned ASTs will be inspected by the Alameda Fire Department. Following approval from the Fire Department Inspector, the ASTs will be demolished and transported to a recycler.

A4.4 UTILITY LINE DECOMMISSIONING

In general, most subsurface utilities within the work area will be protected in place during excavation. Since the warehouse will be used for office and restroom facilities during construction activities, water, gas, and power utility lines will be protected. All other utilities (e.g., communication lines) will be removed and capped beyond the limits of the excavation.

Metal utility lines and associated piping will be transported off-Site for recycling. Other utility lines will be disposed as general construction waste.

A4.5 GENERAL CONSTRUCTION WASTE

General construction waste, including miscellaneous packaging, PPE, and office trailer trash will be generated during construction activities. General construction waste may be managed as non-hazardous solid waste, placed in appropriate containers, and transported to a SOPUS approved landfill for disposal.

A4.6 EXCAVATION DEWATERING

Based on the previous site investigation, the excavation in the Northeast Area may be below the water table. To increase sidewall stability and to work in a dry condition in the excavation, construction dewatering is anticipated at the Site.

Groundwater that has infiltrated into the open excavation will be collected, delivered to settlement tanks, and treated onsite if necessary. Dewatered groundwater will be discharge to the City of Alameda sanitary sewer under a special discharge permit obtained from the East Bay Municipal Utilities District (EBMUD).

A5.0 MATERIALS TO BE TRANSPORTED OFF SITE

The following non-hazardous materials are anticipated to be removed from the Site:

- Asphaltic and concrete pavement;
- Base rock, piping, or other metallic scrap to be recycled;
- Soil and fill waste;
- Liquid waste from ASTs processed through an oil/water separator; and
- If needed, dewatered groundwater that cannot be discharged to the sanitary sewer.

Soil, construction debris, and groundwater generated from the excavations may be impacted with petroleum products.

Liquid generated from cleanout of the ASTs within the Tank Farm Area that contains oil is anticipated to be removed from the site as hazardous waste.

A5.1 MATERIAL SORTING

Construction debris and liquids generated during AST cleanout will be segregated by material on site and processed as necessary as described in Sections A4.2 through A4.5 before being transported offsite for proper disposal or recycling. Soil will be directly loaded into trucks as described in Section A4.1. Soil stockpiling will be avoided or minimized in order to limit double handling of soil. Dewatered groundwater from the Northeast Area excavation will be stored in settlement tanks prior to discharge or offsite disposal, as described in Sections A4.6 and A6.3.

A5.2 WASTE CLASSIFICATION

Liquids generated during AST cleanout is anticipated to be characterized for disposal as either hazardous (liquid containing oil) or non-hazardous (liquid with oil removed) once it has been processed through an oil/water separator. Soil to be transported and disposed of off-site will be profiled prior to conducting excavation operations. In accordance with Resource Conservation and Recovery Act (RCRA) regulations, the proposed landfill requirements, and the California Code of Regulations (CCR) for hazardous waste, excavated soil from the Site is anticipated to be characterized for disposal as non-hazardous waste. Non-soil material encountered during excavation (i.e., piping or debris) are expected to be non-hazardous waste. Other waste materials such as asbestos or lead-containing materials that might be encountered during demolition activities will be characterized on site for profiling and appropriate disposal.

A5.3 QUANTITY OF MATERIAL TO BE TRANSPORTED

Based on estimated amounts from proposed excavation extents, approximately 11,400 cubic yards of soil will be excavated from the Site. Construction debris generated (e.g., piping, concrete, and asphalt) will be cleaned and/or sized as necessary, and transported off site to the appropriate disposal or recycling facility. Generated waste will be off-hauled to the disposal facilities indicated in Section A6.0.

An estimated 1,950 cubic yards of gravel to be used for base backfill in the Northeast Area excavation will be transported from the facility indicated in Section A6.0. The remaining 9,450 cubic yards of clean soil backfill will be imported from a facility to be determined closer to the start of excavation activities.

A5.4 TRANSPORTATION REGULATIONS AND REQUIREMENTS

Waste materials designated for off-site disposal will be transported from the Site in accordance with applicable regulations, including 49 Code of Federal Regulations (CFR) Parts 100–199 and 350-399 (42 U.S. Code 6901, et seq.); 40 CFR Parts 260–268; California Vehicle Code; California Hazardous Waste Control laws; and Health and Safety Code, Division 20 (22 CCR, Division 4.5).

Based on analytical results, waste materials classified as both hazardous and non-hazardous waste will be handled and transported in accordance with CCR Title 22, which includes waste generator requirements (i.e., manifests) and hazardous waste transporter requirements (i.e., valid registration, proof of insurance, and up-to-date California Highway Patrol [CHP] vehicle certifications).

A6.0 DESTINATION OF WASTE MATERIALS

Waste materials will be sorted on-site to determine the classification and proper disposal method. The facilities that have been identified as proper destinations for each type of waste that will be generated at the Site are described in this section.

A6.1 EXCAVATED SOIL

Soil generated from the excavation will be directly transported to a Class II facility identified for disposal as non-hazardous waste. The excavated soil will be profiled based on total volatile organic compound (VOC) concentration. Soil with a total VOC concentration of less than 50 parts per million (ppm) will be used as cover material, and soil with a total VOC concentration greater than 50 ppm will be buried. Excavated soil may be disposed of at the following facilities:

- Name: Republic Services Vasco Road Landfill

  Address: 4001 N Vasco Rd.
  Livermore, CA 94551
  Telephone: (925) 447-0491

- Name: Republic Services Forward Inc. Landfill

  Address: 9999 S Austin Rd.
  Manteca, CA 95336
  Telephone: (209) 982-4298

- Name: Recology Hay Road Landfill

  Address: 6426 Hay Rd.
  Vacaville, CA 95687
  Telephone: (707) 678-4718

- Name: Republic Services Keller Canyon Landfill

  Address: 901 Bailey Rd.
  Pittsburg, CA 94565
  Telephone: (925) 232-2999

Maps illustrating the locations of the four potential landfills to be used are shown on Figures A-3 through A-6. If an alternate facility is used, the maps in this WMTP will be revised accordingly. The Water Board will be notified of any change of disposal facility or characterization of the waste.

Excavated soil to be disposed of as non-hazardous waste may contain a small fraction of debris as allowed under the waste disposal profile.

A6.2 DEMOLITION DEBRIS

Demolition debris consisting of abandoned pipes, concrete, and asphalt waste, will be stockpiled separately from excavated soil on Site. The anticipated recycling or disposal facility for these materials are listed by type below and associated transportation routes are shown on Figures A-7 through A-9.

Waste Type:	Demolition debris
Name:	Zanker Road Landfill
Address:	705 Los Esteros San Jose, CA 95134
Telephone:	(408) 263-2384

Waste Type:	Concrete and asphalt recycling
Name:	Argent Materials Inc.
Address:	8300 Baldwin St. Oakland, CA 94621
Telephone:	(510) 638-7188

Waste Type:	Metal recycling
Name:	Schnitzer Steel
Address:	1101 Embarcadero West Oakland, CA 94607
Telephone:	(510) 444-3919

A6.3 LIQUIDS FROM ABOVE-GROUND STORAGE TANK CLEANOUT

Liquid waste generated from cleanout of the ASTs within the tank farm will be processed through an oil/water separator to generate liquid containing oil and liquid containing no oil. Liquid containing oil is anticipated to be transported as hazardous waste, while the liquid containing no oil will be transported as non-hazardous waste. The anticipated facilities for these liquid wastes are listed by type below and associated transportation routes are shown on Figures A-10 and A-11.

Waste Type:	Liquid containing no oil (non-hazardous)
Name:	Instrat
Address:	1105 Airport Rd. C Rio Vista, CA 94571
Telephone:	(707) 374-3834

Waste Type:	Liquid containing oil (hazardous)
Name:	Crosby & Overton
Address:	1850 Garden Track Rd. Richmond, CA 94801
Telephone:	(510) 633-0336

Liquid transported to Crosby & Overton's transfer station in Richmond, California will be transported by Crosby & Overton to their Long Beach, California hazardous waste treatment and disposal facility.

A6.4 GROUNDWATER

Groundwater is anticipated to be encountered during excavation activities. As described in the SAP, groundwater samples will be collected from the trenches during the test pit investigation prior to the excavation. The collected groundwater samples will be analyzed for metals, oil and grease, and semi-volatile organic compounds (SVOCs), and the analytical results will be used to obtain a special discharge permit from EBMUD.

If the sampling results from the test pits are above EBMUD's discharge limits, groundwater from the open excavation will be treated by an on-site treatment system prior to discharge to the sanitary sewer. The on-site treatment system will include a settlement tank, and may include granular activated carbon to treat SVOCs and oil and grease, and organoclay or ion exchange to treat dissolved metals, if necessary. If the sampling results are below the discharge limits, the groundwater will be pumped and temporarily stored into the settlement tank, and then after the suspended solids are settled, water samples will be collected from the clear liquid at the top of the tank and analyzed to confirm that their concentrations are below the discharge limits, prior to discharge to the sanitary sewer.

Should off-site disposal of groundwater be necessary, the Contractor will provide an appropriate disposal facility and associated transportation route for review and approval by the Engineer.

A7.0 MODE OF TRANSPORTATION

The procedures described in this section will be followed in choosing the appropriate transportation methods for each waste stream and import material.

A7.1 TRANSPORT COMPANY

A licensed waste transportation company will be selected by the Contractor to be reviewed and approved by the Engineer prior to construction.

A7.2 TRANSPORTATION VEHICLES/CONTAINERS

Waste materials will be transported in Department of Transportation (DOT)-approved bins, placarded trucks, and/or steel containers. The type of vehicles used to transport material from the work area may include end-dump trucks, tractor trailer rigs that transport roll-off soil bins, and tank trucks for AST cleanout liquid transport and treatment or disposal. Vehicles transporting waste materials that have been classified as both hazardous and non-hazardous

waste will be placarded with the appropriate signage in accordance with DOT requirements. Waste materials will be loaded following the procedures discussed in Section A4.0 of this plan. All loaded disposal trucks will be decontaminated to remove soil from fenders, tires, and other truck surfaces and placarded in compliance with DOT requirements prior to departing the Site. Truck drivers will have all required transportation documentation (e.g. manifest and contingency plan) for each load.

A7.3 IMPORT MATERIAL DELIVERY

The import material source and suggested transportation route to the Site for backfill rock is shown on Figure A-12. Final selection of import material sources used at the Site, including clean soil for backfill, will be based on review and approval of the Contractor's submitted suppliers and product data. If an alternative or additional import material source is used, the map in this WMTP will be revised accordingly or additional maps will be added.

Clean fill will be used as backfill in accordance with Section 4.7 of the RAP. Material sources and associated transportation routes will be proposed by the Contractor for the Engineer's review and approval prior to construction. The Water Board will be notified of any change of import material sources.

A8.0 TRANSPORTATION ROUTE, SCHEDULING, AND EMERGENCY CONTACTS

Transportation routes and schedules will follow the City of Alameda regulations and be cognizant of the surrounding residential areas. Emergency procedures will be followed as described in this section and in the project HASP (Wood, 2020).

A8.1 TRANSPORTATION ROUTES

Figures A-3 through A-12 illustrate the primary route to be used during transport of materials to and from the Site. Drivers may call the California DOT (Caltrans: 800-427-7623) to check road conditions before leaving the Site.

All truck routes specified in this plan comply with the City of Alameda's California Vehicle Code and the Alameda Municipal Code, which prohibits commercial vehicles traveling on certain streets and freeways in Oakland.

A8.2 SCHEDULING OF TRANSPORT

Trucks will be scheduled by the Contractor to enter and exit the Site between the hours of 7:00 a.m. and 5:00 p.m. on weekdays, or as approved by the City of Alameda permit. Loading and transportation activities may be conducted for a period of about four months for removal of waste material designated for off-site disposal. The total estimated number of truckloads of off-haul soil and import backfill material is 950 truckloads each, over an estimated time period of two months. It is estimated that the number of trucks entering/leaving the Site during a day will be between 15 and 30 (off-hauling and backfilling is not anticipated to occur simultaneously). During backfill operations, it is estimated that several to as many as 10 to 15 trucks would be delivering backfill materials through the course of a workday, depending on the Contractor's method and rate of backfill. The quantity of end-dump trucks delivering fill materials will vary with work progress needs and may be several or more trucks per day when backfill is placed and compacted. The number of on-site personal vehicles is expected to be approximately 10-12 per day.

A8.3 EMERGENCY CONTACT

Before loading and transportation activities begin at the Site, the Contractor's transporter company will be provided a copy of this WMTP and the HASP for review. Section A10.0 of this plan provides emergency response procedures and other information that may be required in a transportation emergency. In the event of an emergency on roadways outside the Site work area, the transporter will contact the California Highway Patrol (CHP), in addition to other contacts included in Section A10.0. CHP facility addresses along transportation routes in California are provided in Table 1 of Attachment A-2. The CHP may contact Caltrans to mobilize road crews and/or emergency response contractors to clean up and contain spilled materials. A list of key contacts and emergency telephone numbers is included in Table 2 of Attachment A-2.

A9.0 ON-SITE TRAFFIC CONTROL AND LOADING PROCEDURES

This section details the measures that will be taken on-site to ensure the transportation to and from the Site has minimal affect on the environment and community outside of the Site boundaries.

A9.1 LOCATION OF WORK AREAS

Materials will be handled and loaded within the Site boundaries. Excavation work areas, personnel and truck decontamination areas, stockpile areas, and soil loading areas will be detailed in the traffic control plan prepared by the Contractor and provided in Attachment A-3.

A9.2 SAFE LOADING PROCEDURES

While loading materials into trucks, the area around the trucks will be kept clear of personnel and materials. If needed, the waste material will be wetted with water before and during loading to reduce the potential of dust/particulate emissions. Personnel at the loading area will wear PPE as specified in the HASP (Wood, 2020), and shall stay clear of trucks loading heavy equipment. Truck drivers will be directed to stay in their tractor cabs except when checking load weight pressure gauges. Incidental waste material spilled during loading will be immediately removed from the pavement or ground and the area swept if necessary. Prior to departing the Site, all waste hauling trucks will have a truck bed cover or tarpaulin securely covering the entire bed of the truck. Roll-off soil bins will be covered with steel or heavy-duty plastic covers and secured prior to being picked up by a bin truck.

A9.3 DECONTAMINATION PROCEDURES

Off-haul trucks and equipment will be decontaminated, as necessary, before leaving the Site. Surfaces on trucks and equipment with soil; including fenders, wheels, and tires will be cleaned using dry decontamination methods (e.g., shovels and brooms) or other appropriate means within the staging areas. Soil removed from trucks and equipment during dry decontamination will be placed in end-dumps before covering the bed or will be placed in a stockpile of soil to be loaded.

A10.0 SITE-SPECIFIC TRAFFIC MANAGEMENT AND CONTROL

Prior to commencement of field activities at the Site, the Contractor will create a traffic control plan (Attachment A-3) in accordance with the City of Alameda's permitting requirements and the California Manual on Uniform Traffic Control Devices standards (U.S. Department of Transportation, 2019). It will identify traffic control measures, appropriate signage and traffic control devices that will be implemented prior to and during the work to be conducted at the Site. The purpose of the traffic management and control measures is to regulate, warn, and direct on-site and off-site vehicular traffic.

Traffic control measures will include installing temporary signs and traffic control devices that will include, but not limited to, flaggers, road striping, flashing beacons, and traffic barricades (K-rails). Traffic signs may include:

- Staging Area/Parking Only for Construction Vehicles
- Construction Work Ahead Signs
- Stop Signs

At the end of all work activities, all temporary signage and traffic control devices will be removed, and traffic control measures will be restored to conditions prior to commencement of the work.

A11.0 RECORD KEEPING AND REPORTING

Proper record keeping, as described in this section, is essential to the organization of the project and to compliance with governing regulations.

A11.1 TRANSPORTATION RECORDS

Off-haul logs will be maintained for each load of waste and debris or other material that leaves the Site. Project field personnel will record the following information:

- Date and time each truck departs the Site;
- Vehicle type and license number;
- Transport company;
- Waste manifest number or bill of lading number;
- Material description (i.e., soil, concrete, pipe);
- Approximate volume or weight of material being removed;
- Waste classification; and
- Material destination.

A11.2 REQUIRED TRANSPORTER RECORDS

Documentation carried by the driver will include:

- Bills of lading (or non-hazardous waste manifests) and/or hazardous waste manifests;
- Proof of insurance, valid registration, and current driver's license;
- Material profile information; and
- Material weight records.

A11.3 REPORTING

In accordance with RCRA regulations, the Department of Toxic Substances Control (DTSC) requires that hazardous waste generators report hazardous waste transportation and treatment and/or disposal within 60 days of disposal. Copies of hazardous waste manifests for waste generated and treated, recycled, or disposed during demolition or remedial activities at the Site will be mailed to the appropriate DTSC office in compliance with RCRA and DTSC requirements.

A12.0 CONTINGENCY PLAN

The purpose of this section is to facilitate a quick and effective response in the unlikely event of a transportation emergency. This transportation contingency plan describes response procedures to be implemented if an emergency occurs while waste is being transported to the waste disposal facility.

A12.1 EMERGENCY RESPONSE PROCEDURES

In the event of a non-injury emergency after the transporter has departed the Site, the transporter will first contact the CHP. Afterwards, the driver will notify the appropriate emergency contact for their company. A list of key contacts is included in Attachment A-2. The CHP will respond to the call and contact Caltrans. Caltrans will then contact road crews and/or emergency response contractors who are trained to respond to such emergencies with the appropriate methods of containing and cleaning up spills. As stated in Section A5.2 of this plan, waste material for disposal will be classified as non-RCRA California non-hazardous waste.

The emergency contact within the transporter company will advise the driver concerning other emergency response procedures that may be necessary, and the location of the nearest repair facility, as appropriate. After the CHP and the emergency contact within the transporter company have be notified of an emergency, the driver will notify the Project Manager, who will be responsible for informing the City's representative and the Water Board.

A12.2 PERSONAL PROTECTIVE AND EMERGENCY EQUIPMENT

The following PPE and emergency equipment will be kept on each transporter truck for use in the event of an emergency:

- Gloves
- Safety glasses

- Tyvek™ coveralls
- Hard hat
- Steel-toed boots or shoes
- Fire extinguisher
- Spill response kit containing absorbent pads and socks, nitrile gloves, putty-epoxy, disposal bags, safety glasses, and containment berms

A13.0 REFERENCES

ERM, 2014. Limited Asbestos and Lead Survey Report, Pennzoil-Quaker State Alameda Distribution Center, 2015 Grand Street, Alameda, California. February 19.

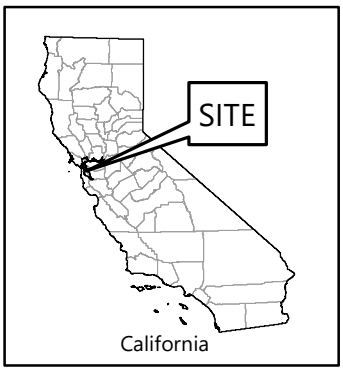
Occupational Safety and Health Administration (OSHA), 2004. Lead in Construction, U.S. Department of Labor, Occupational Safety and Health Administration, OSHA 3142-12R.

U.S. Department of Transportation, 2014. California Manual on Uniform Traffic Control Devices, (Revised March 2019).

Wood Environment & Infrastructure Solutions, Inc., 2020. Health and Safety Plan, Pennzoil-Quaker State Alameda Distribution Center, 2015 Grand Street, Alameda, California. May 8.

FIGURES

Street map from ESRI, 2007. Aerial image from NAIP, 2009.



N

0 2,000 Feet

SITE LOCATION MAP
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.	By: KLU	Prj. No. 8620192890.02
	Date: 04/24/2020	Figure **A-1**

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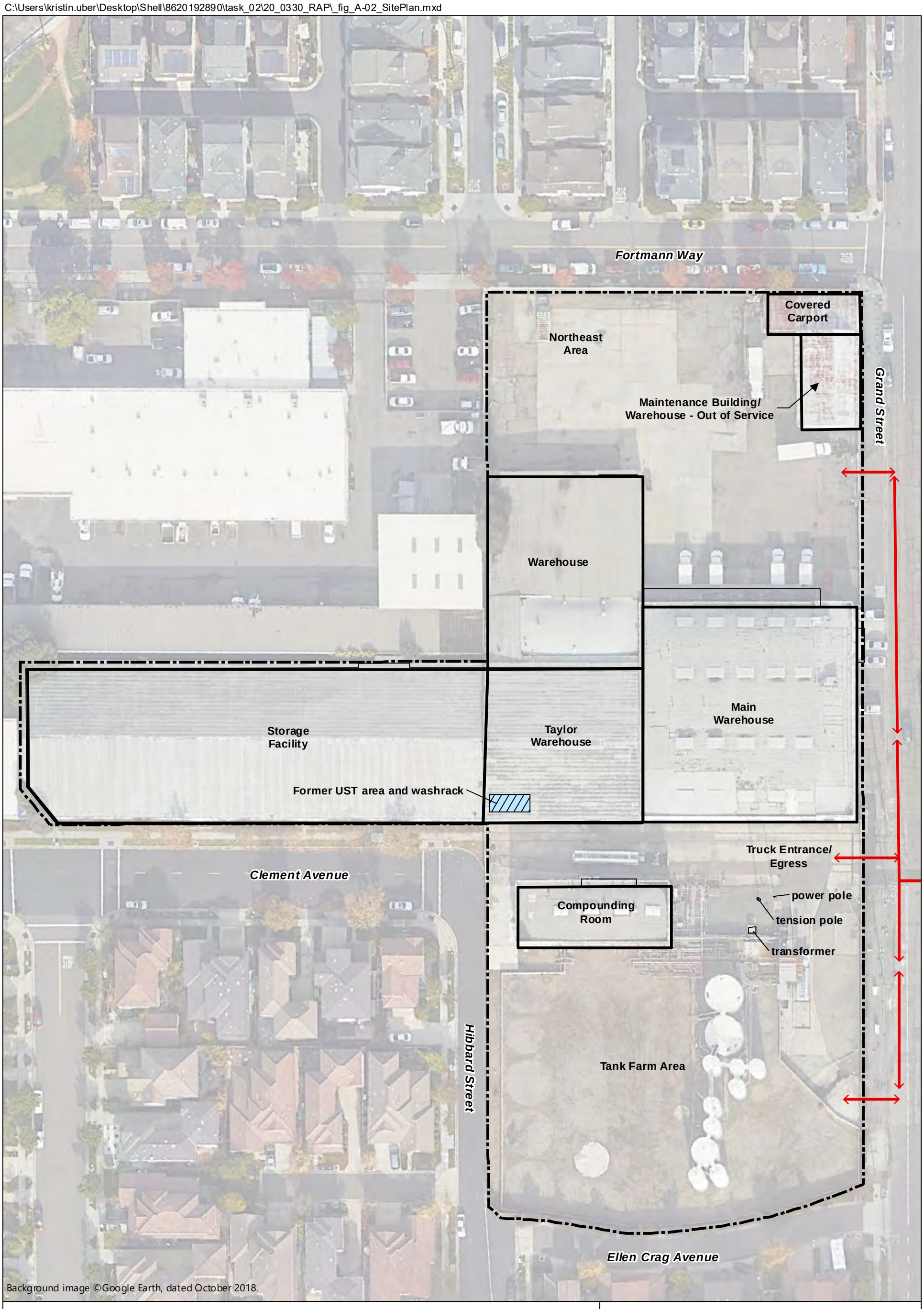


Explanation

- Approximate Site Boundary
- Truck entrance/egress route
- Buildings

Abbreviation:
UST underground storage tank

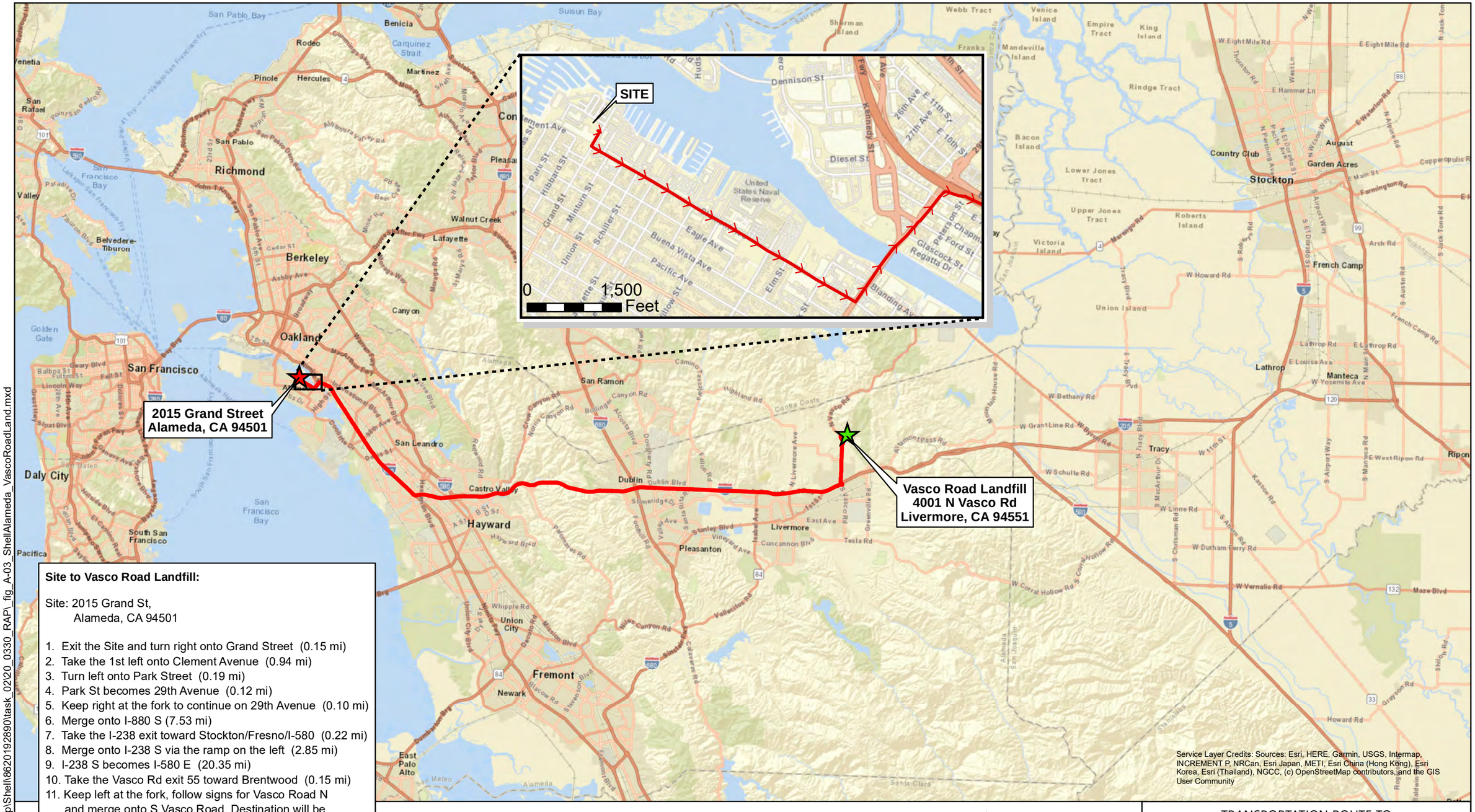
0 30 60 Feet

SITE PLAN
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU
Date: 05/11/2020

Project No. 8620192890.02
Figure **A-2**



Site to Vasco Road Landfill:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park St becomes 29th Avenue (0.12 mi)
5. Keep right at the fork to continue on 29th Avenue (0.10 mi)
6. Merge onto I-880 S (7.53 mi)
7. Take the I-238 exit toward Stockton/Fresno/I-580 (0.22 mi)
8. Merge onto I-238 S via the ramp on the left (2.85 mi)
9. I-238 S becomes I-580 E (20.35 mi)
10. Take the Vasco Rd exit 55 toward Brentwood (0.15 mi)
11. Keep left at the fork, follow signs for Vasco Road N and merge onto S Vasco Road. Destination will be on the right (2.9 mi)

4001 N Vasco Rd
Livermore, CA 94551

Distance: 35.4 miles
Time: 40 min.

Explanation

Site to Vasco Road Landfill

Start from Site (shown on Inset)

N

0 5 Miles

TRANSPORTATION ROUTE TO
VASCO ROAD LANDFILL
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU

Date: 04/24/2020

Prj. No. 8620192890.02

Figure **A-3**

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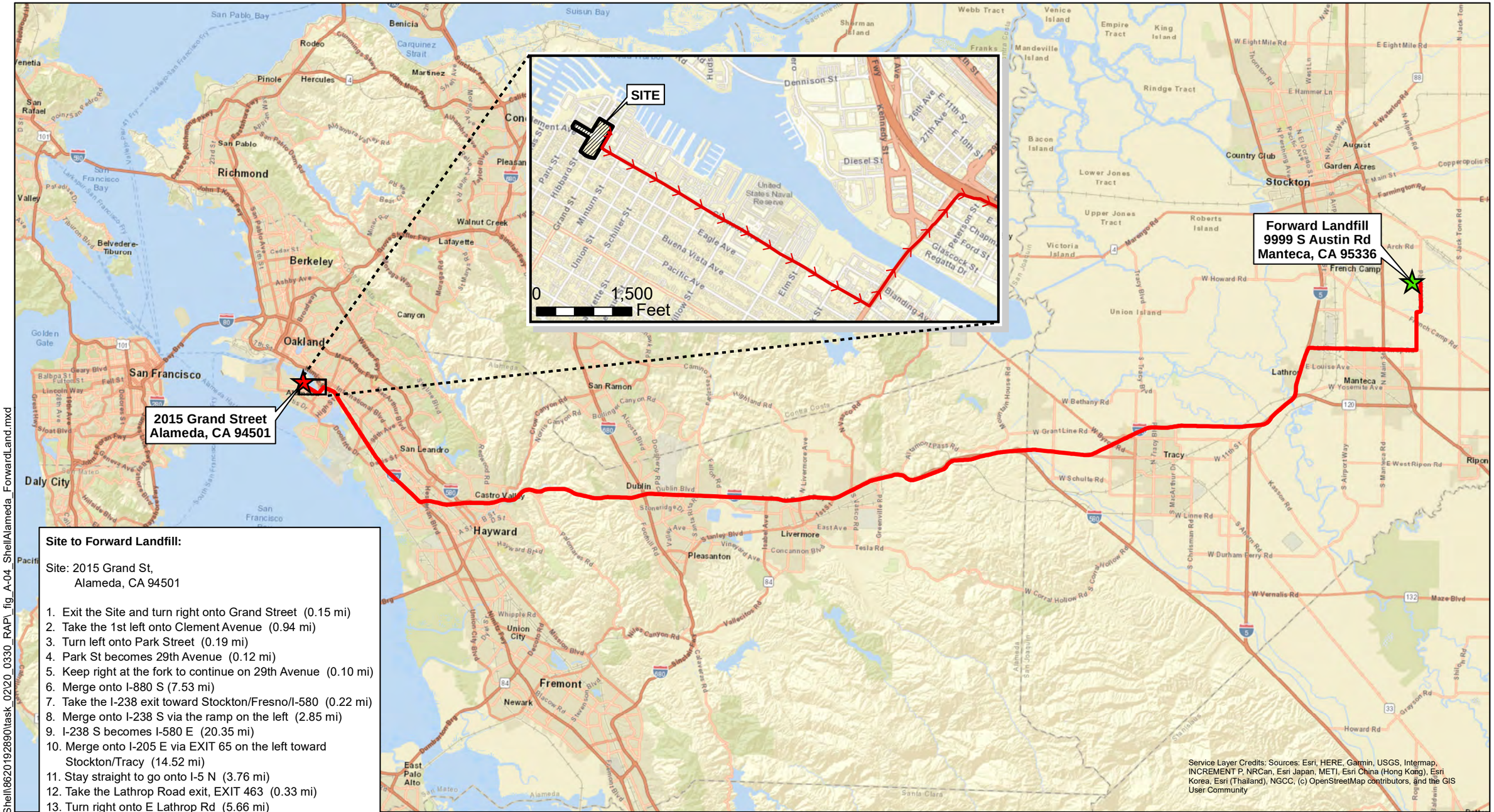

Site to Forward Landfill:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park St becomes 29th Avenue (0.12 mi)
5. Keep right at the fork to continue on 29th Avenue (0.10 mi)
6. Merge onto I-880 S (7.53 mi)
7. Take the I-238 exit toward Stockton/Fresno/I-580 (0.22 mi)
8. Merge onto I-238 S via the ramp on the left (2.85 mi)
9. I-238 S becomes I-580 E (20.35 mi)
10. Merge onto I-205 E via EXIT 65 on the left toward Stockton/Tracy (14.52 mi)
11. Stay straight to go onto I-5 N (3.76 mi)
12. Take the Lathrop Road exit, EXIT 463 (0.33 mi)
13. Turn right onto E Lathrop Rd (5.66 mi)
14. Turn left onto S Austin Road. Destination will be on the left (3.47 mi)

9999 S Austin Rd
Manteca, CA 95336-8924

Distance: 69.4 miles
Time: 1hr 19min

Explanation

Site to Forward Landfill

Start from Site (shown on Inset)

N

0 5 Miles

TRANSPORTATION ROUTE TO
FORWARD LANDFILL
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU

Date: 04/27/2020

Prj. No. 8620192890.02

Figure **A-4**

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Site to Hay Road Landfill:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park St becomes 29th Avenue (0.12 mi)
5. Keep left at the fork to continue on 29th Avenue (0.25 mi)
6. Turn left onto E 10th Street (0.01 mi)
7. Merge onto I-880 N via the ramp on the left (5.44 mi)
8. Merge onto I-80 E/I-580 W via EXIT 46B toward Sacramento/San Rafael (5.17 mi)
9. Keep left to take I-80 E toward Sacramento/Vallejo (Portions toll) (34.02 mi)
10. Take the Air Base Pkwy exit, EXIT 47, toward Travis A F B/Waterman Blvd. (0.21 mi)
11. Merge onto Air Base Pkwy. (4.15 mi)
12. Turn slight left onto Peabody Road (1.21 mi)
13. Turn right onto Vanden Road (1.60 mi)
14. Turn right onto Canon Road (0.85 mi)
15. Turn left onto N Gate Road (0.50 mi)
16. Turn slight right onto McCrory Road (0.99 mi)
17. Take the 1st left onto Meridian Road (0.50 mi)
18. Take the 1st right onto Hay Road, Destination will be on your right (3.85 mi)

6426 Hay Rd
Vacaville, CA 95687

Distance: 60.0 miles
Time: 1hr 7min

Hay Road Landfill
6426 Hay Rd
Vacaville, CA 95687

2015 Grand Street
Alameda, CA 94501

SITE

0 1,500 Feet

Explanation

Site to Hay Road Landfill

Start from Site (shown on Inset)

N

0 5 Miles

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

TRANSPORTATION ROUTE TO
HAY ROAD LANDFILL
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU

Date: 05/27/2020

Prj. No. 8620192890.02

Figure **A-5**

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Keller Canyon Landfill
901 Bailey Rd
Pittsburg, CA 94565

2015 Grand Street
Alameda, CA 94501

SITE

0 1,500 Feet

Site to Keller Canyon Landfill:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park St becomes 29th Avenue (0.12 mi)
5. Keep left at the fork to continue on 29th Avenue (0.25 mi)
6. Turn left onto E 10th Street (0.01 mi)
7. Merge onto I-880 N via the ramp on the left (3.08 mi)
8. Merge onto I-980 E via EXIT 42A toward Walnut Creek/CA-24 (1.87 mi)
9. I-980 E becomes CA-24 E (13.0 mi)
10. Merge onto I-680 N via EXIT 15B on the left toward Concord/Sacramento (4.75 mi)
11. Merge onto CA-242 N via EXIT 50 toward Pittsburg/Concord (3.24 mi)
12. Merge onto CA-4 E via EXIT 3C on the left toward Pittsburg/Stockton (5.48 mi)
13. Merge onto Bailey Rd via EXIT 20A, Destination will be on the left (1.00 mi)

901 Bailey Road
Pittsburg, CA 94565

Distance: 33.9 miles
Time: 36min

Explanation

Site to Keller Canyon Landfill

Start from Site (shown on Inset)

N

0 3 Miles

TRANSPORTATION ROUTE TO
KELLER CANYON LANDFILL
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

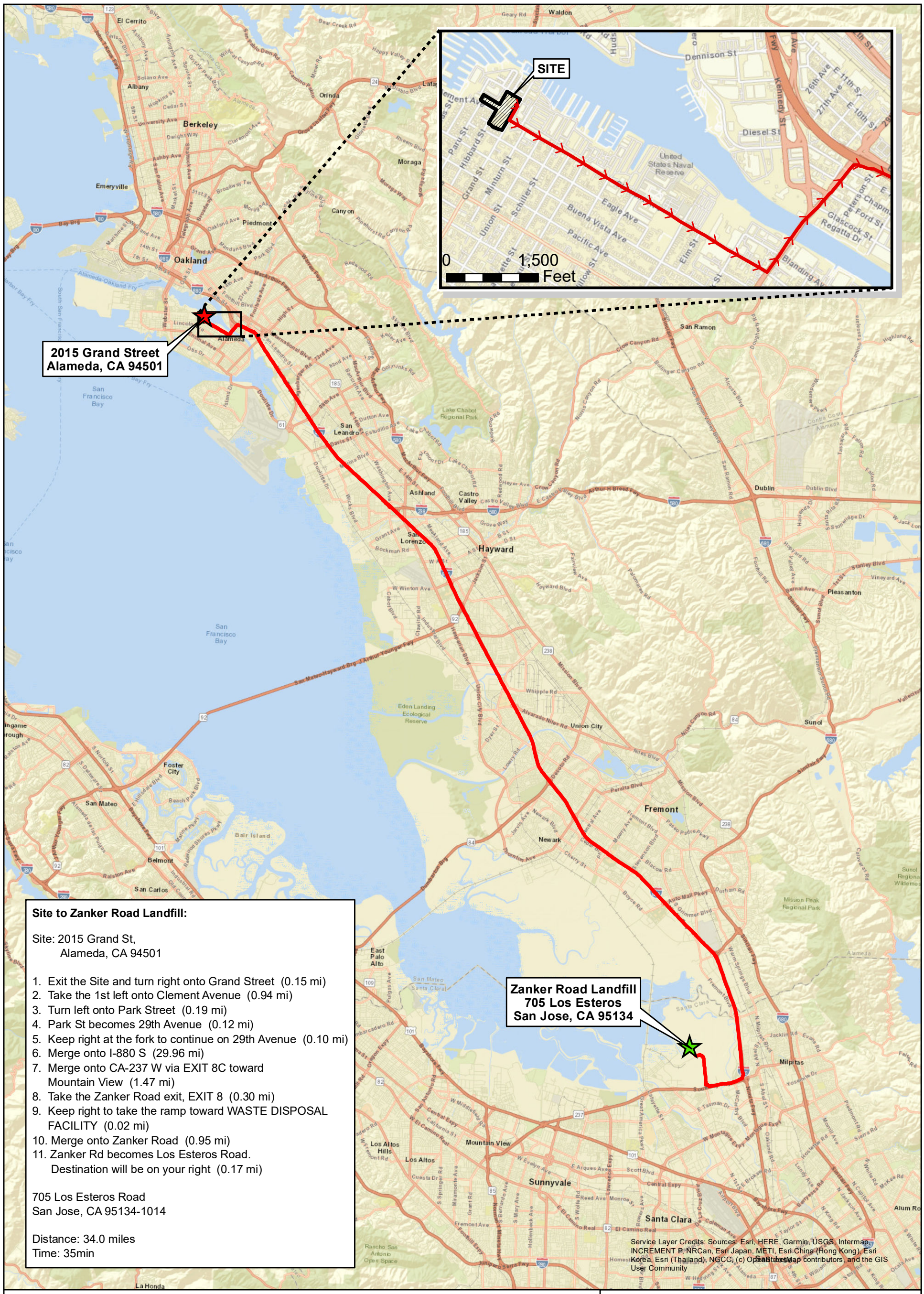
By: KLU

Date: 05/27/2020

Prj. No. 8620192890.02

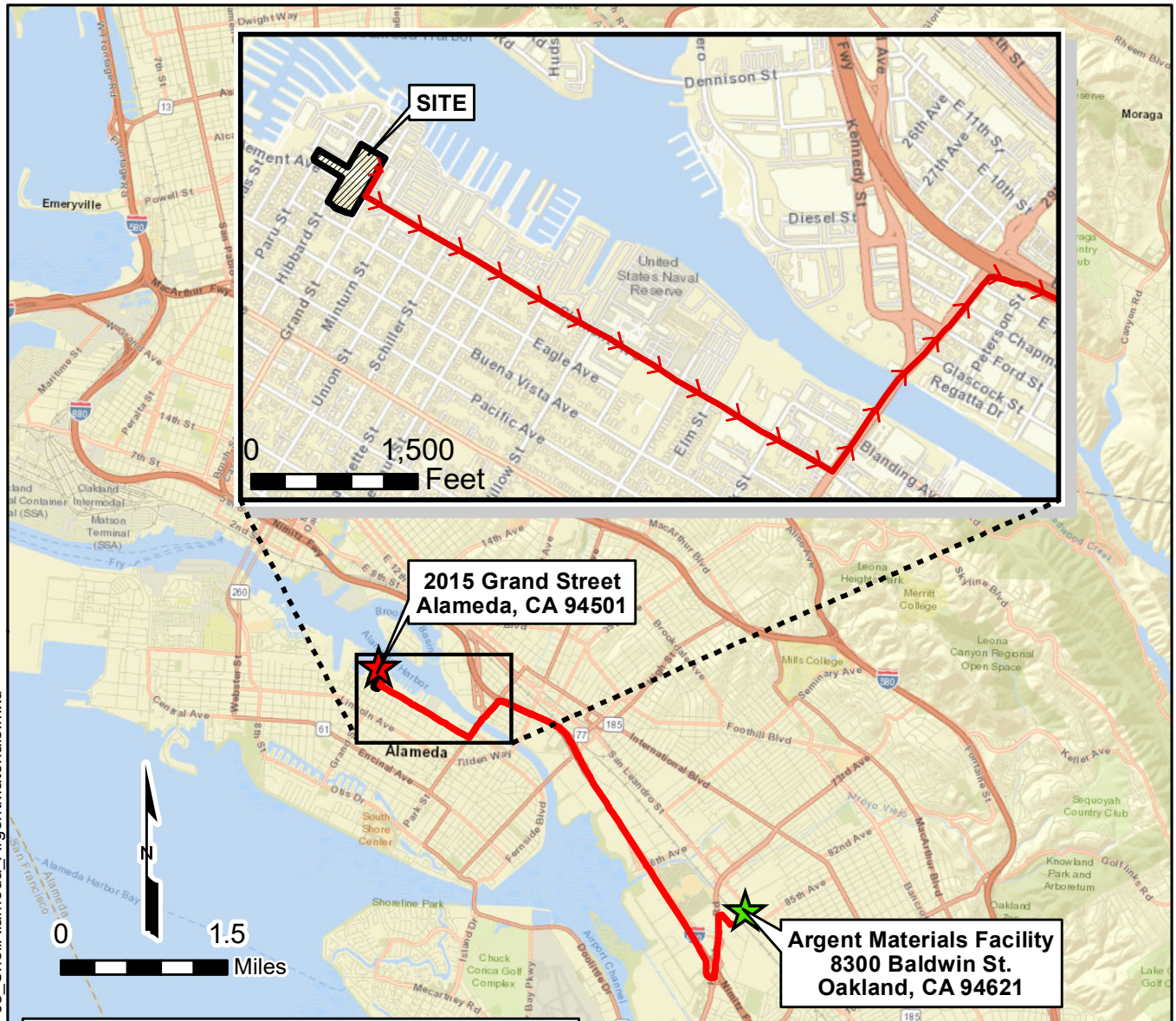
Figure **A-6**

C:\Users\kristin.uber\Desktop\Shell\8620192890\task_02\20_0330_RAP_fig_A-07_ShellAlameda_Zanker.mxd



TRANSPORTATION ROUTE TO
ZANKER ROAD LANDFILL
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.	By: KLU	Prj. No. 8620192890.02
	Date: 05/27/2020	Figure **A-7**



Site to Argent Materials Facility:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park St becomes 29th Avenue (0.12 mi)
5. Keep right at the fork to continue on 29th Avenue (0.10 mi)
6. Merge onto I-880 S (2.93 mi)
7. Take the Hegenberger Rd exit, EXIT 36, toward Oakland Airport/Coliseum (0.37 mi)
8. Turn left onto Hegenberger Road (0.58 mi)
9. Turn right onto Baldwin Street (0.03 mi)
10. Turn right to stay on Baldwin Street. Destination will be on the left (3.59 mi)

8300 Baldwin St.
Oakland, CA 94621-1926

Distance: 5.7 miles
Time: 12min

Explanation

Site to Argent Materials Facility

Start from Site (shown on Inset)

TRANSPORTATION ROUTE TO
ARGENT MATERIALS FACILITY
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.	By: KLU	Prj. No. 8620192890.02
	Date: 05/27/2020	Figure A-8

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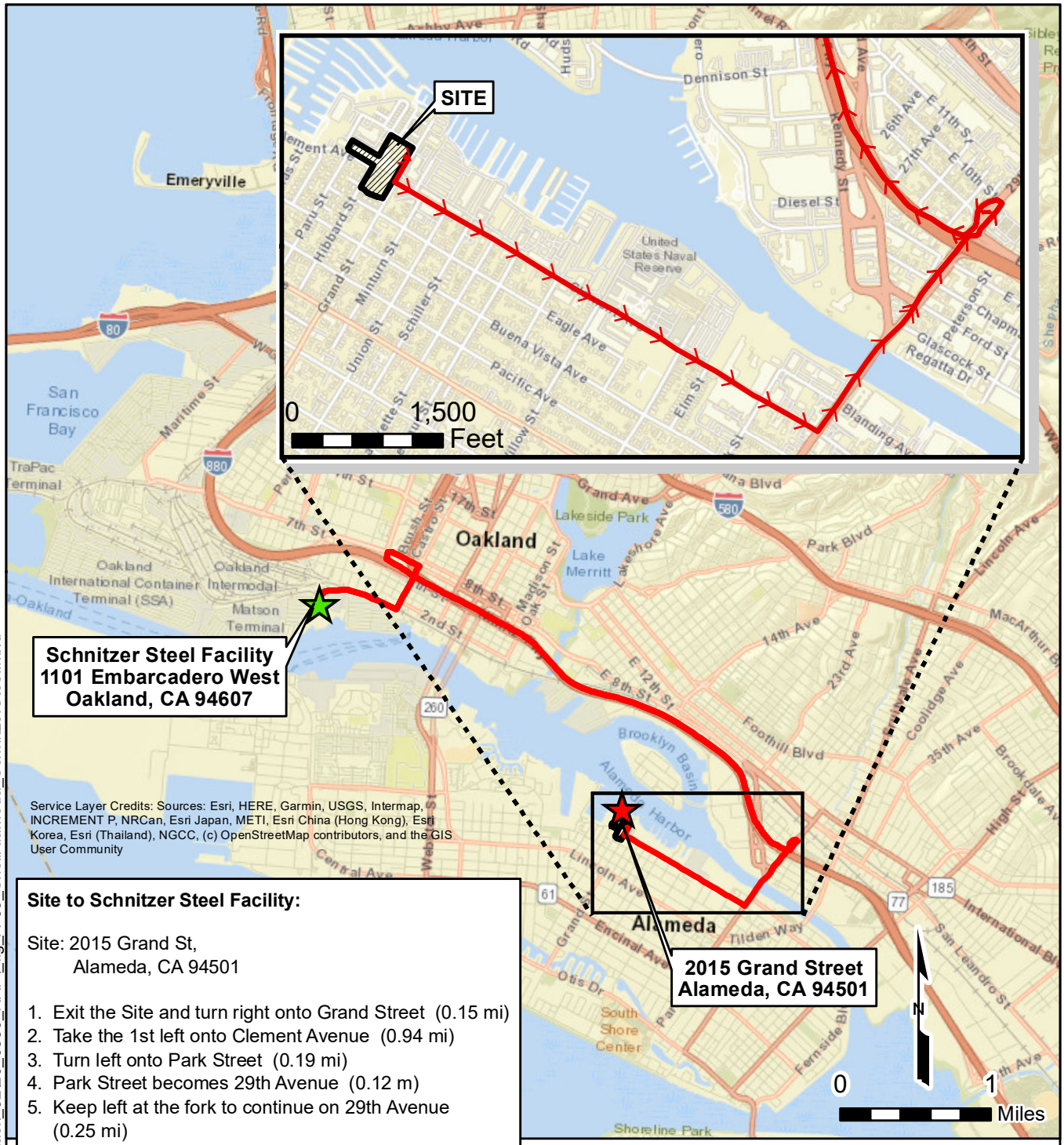

Site to Schnitzer Steel Facility:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park Street becomes 29th Avenue (0.12 m)
5. Keep left at the fork to continue on 29th Avenue (0.25 mi)
6. Turn left onto E 10th Street (0.01 mi)
7. Merge onto I-880 N via the ramp on the left (3.31 mi)
8. Take the Market St exit, EXIT 42B, toward Harbor Terminal (0.20 mi)
9. Turn right onto Market Street (0.05 mi)
10. Take the 1st right onto 7th Street (0.23 mi)
11. Take the 2nd right onto Martin Luther King Jr Way (0.33 mi)
12. Turn right onto Embarcadero. Destination will be on the left (0.41 mi)

1101 Embarcadero West, Oakland, CA 94607

Distance: 6.3 miles
Time: 15min

Explanation

Site to Schnitzer Steel Facility

Start from Site (shown on Inset)

TRANSPORTATION ROUTE TO
SCHNITZER STEEL FACILITY
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU

Date: 05/27/2020

Prj. No. 8620192890.02

Figure **A-9**

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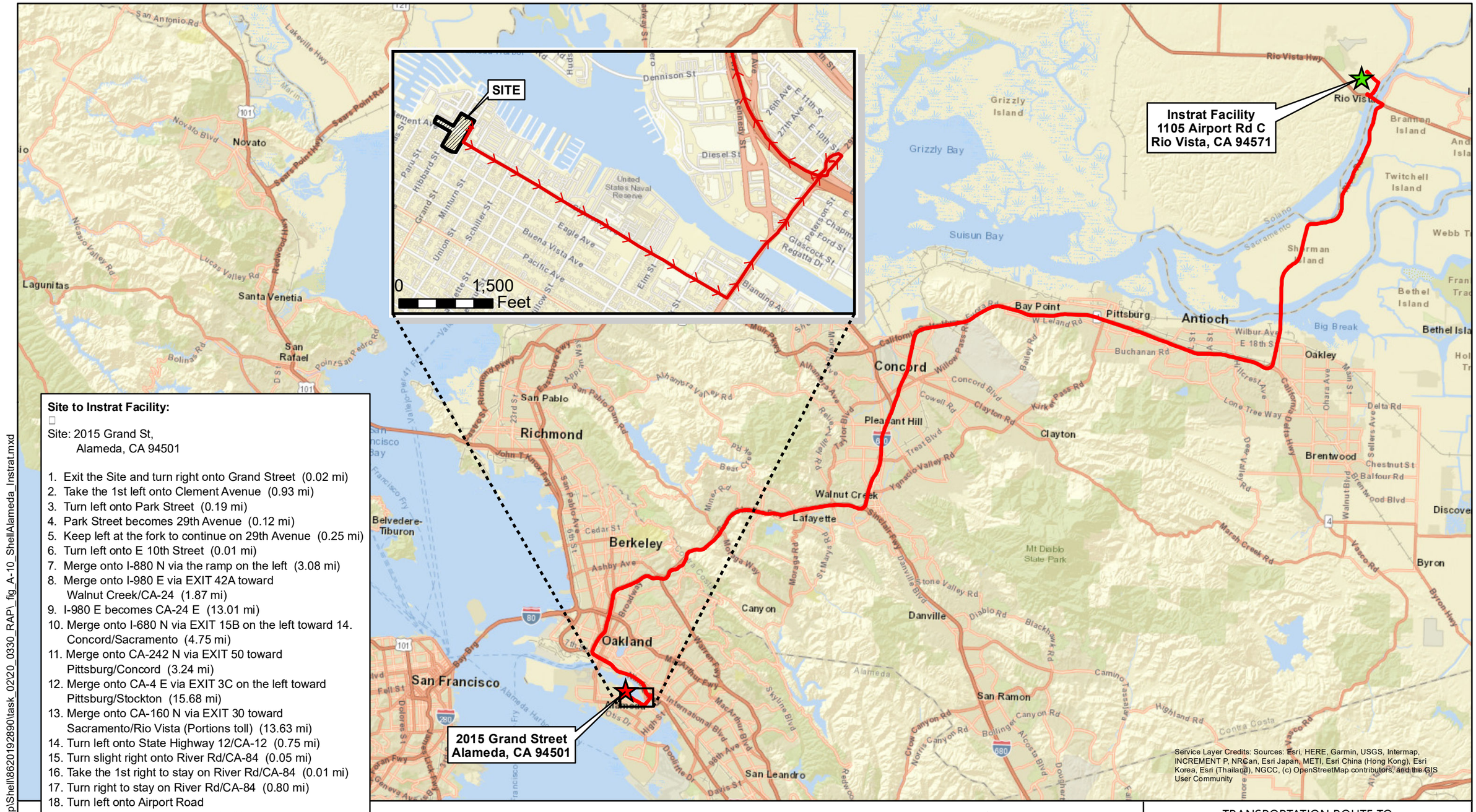

Site to Instrat Facility:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.02 mi)
2. Take the 1st left onto Clement Avenue (0.93 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park Street becomes 29th Avenue (0.12 mi)
5. Keep left at the fork to continue on 29th Avenue (0.25 mi)
6. Turn left onto E 10th Street (0.01 mi)
7. Merge onto I-880 N via the ramp on the left (3.08 mi)
8. Merge onto I-980 E via EXIT 42A toward Walnut Creek/CA-24 (1.87 mi)
9. I-980 E becomes CA-24 E (13.01 mi)
10. Merge onto I-680 N via EXIT 15B on the left toward 14. Concord/Sacramento (4.75 mi)
11. Merge onto CA-242 N via EXIT 50 toward Pittsburg/Concord (3.24 mi)
12. Merge onto CA-4 E via EXIT 3C on the left toward Pittsburg/Stockton (15.68 mi)
13. Merge onto CA-160 N via EXIT 30 toward Sacramento/Rio Vista (Portions toll) (13.63 mi)
14. Turn left onto State Highway 12/CA-12 (0.75 mi)
15. Turn slight right onto River Rd/CA-84 (0.05 mi)
16. Take the 1st right to stay on River Rd/CA-84 (0.01 mi)
17. Turn right to stay on River Rd/CA-84 (0.80 mi)
18. Turn left onto Airport Road
    Destination will be on your left. (0.46 mi)

1105 Airport Rd C
Rio Vista, CA 94571

Distance: 58.8 miles
Time: 1hr 5min

TRANSPORTATION ROUTE TO
INSTRAT FACILITY
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU	Prj. No. 8620192890.02
Date: 05/27/2020	Figure **A-10**

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C:\Users\kristin.uber\Desktop\Shell\8620192890\task_02\20_0330_RAP_fig_A-11_ShellAlameda_Crosby-Overton.mxd

Crosby & Overton Facility
1850 Garden Track Road
Richmond, CA 94801

Site to Crosby and Overton Facility:

Site: 2015 Grand St,
Alameda, CA 94501

1. Exit the Site and turn right onto Grand Street (0.15 mi)
2. Take the 1st left onto Clement Avenue (0.94 mi)
3. Turn left onto Park Street (0.19 mi)
4. Park St becomes 29th Avenue (0.12 mi)
5. Keep left at the fork to continue on 29th Avenue (0.25 mi)
6. Turn left onto E 10th Street (0.01 mi)
7. Merge onto I-880 N via the ramp on the left (5.44 mi)
8. Merge onto I-580 W via EXIT 46B toward Sacramento/San Rafael (10.58 mi)
9. Take EXIT 7B toward Richmond Pkwy/Pt Richmond (0.33 mi)
10. Keep right to take the Castro St ramp toward Pt Richmond/ Richmond Parkway (0.18 mi)
11. Turn right onto Castro Street (1.79 mi)
12. Turn slight right onto Richmond Parkway (0.81 mi)
13. Take the 2nd left onto Pittsburg Avenue (0.15 mi)
14. Turn left onto Garden Tract Rd (Portions unpaved) Destination will be on your left (0.27 mi)

1850 Garden Track Road
Richmond, CA 94801

Distance: 21.3 miles
Time: 31 min

2015 Grand Street
Alameda, CA 94501

SITE

0 1,500 Feet

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Explanation

Site to Crosby & Overton Facility

Start from Site (shown on Inset)

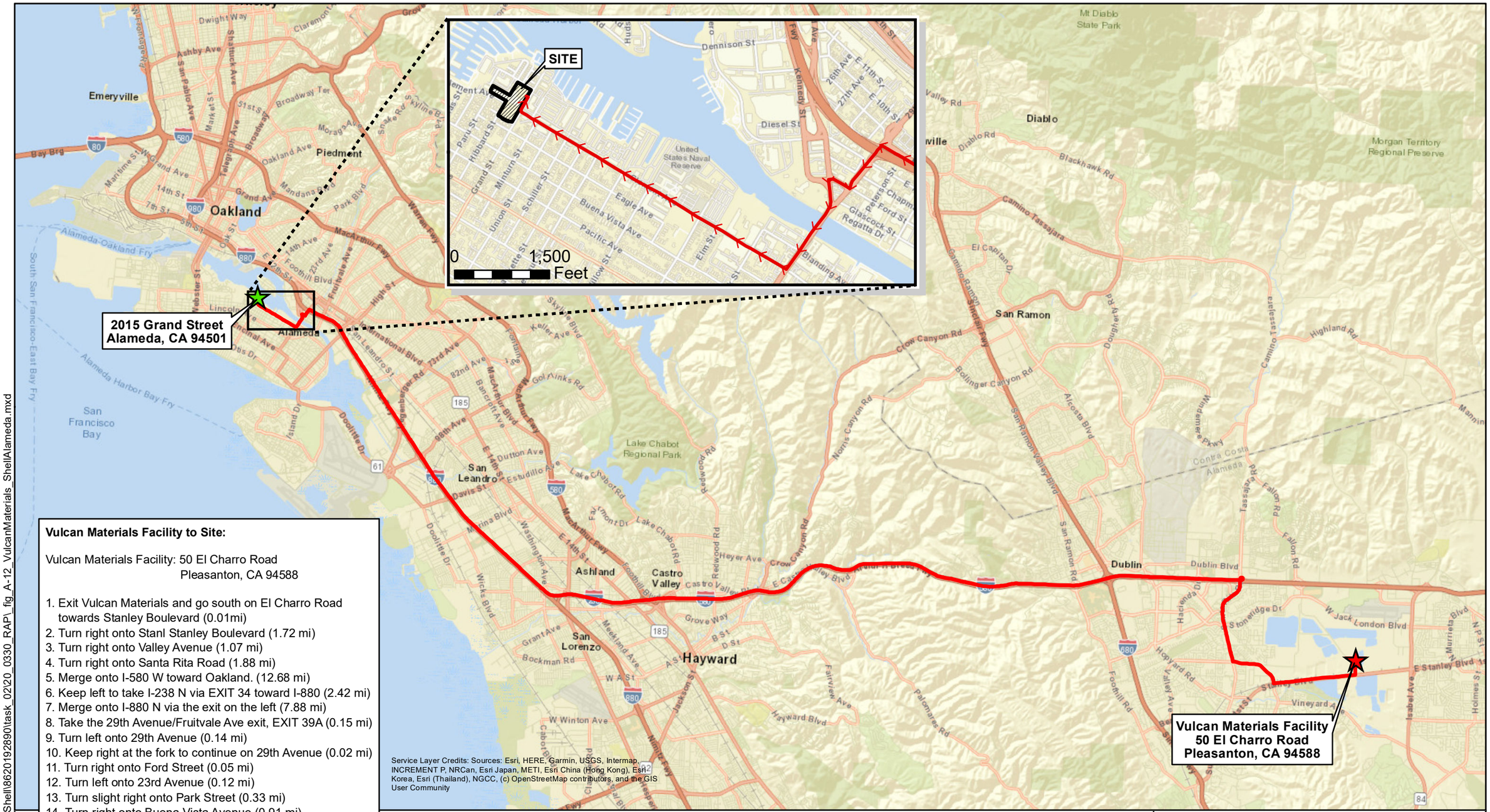
N

0 1.5 Miles

TRANSPORTATION ROUTE
TO CROSBY & OVERTON FACILITY
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU	Prj. No. 8620192890.02
Date: 05/27/2020	Figure **A-11**



Vulcan Materials Facility to Site:

Vulcan Materials Facility: 50 El Charro Road
Pleasanton, CA 94588

1. Exit Vulcan Materials and go south on El Charro Road towards Stanley Boulevard (0.01mi)
2. Turn right onto Stanl Stanley Boulevard (1.72 mi)
3. Turn right onto Valley Avenue (1.07 mi)
4. Turn right onto Santa Rita Road (1.88 mi)
5. Merge onto I-580 W toward Oakland. (12.68 mi)
6. Keep left to take I-238 N via EXIT 34 toward I-880 (2.42 mi)
7. Merge onto I-880 N via the exit on the left (7.88 mi)
8. Take the 29th Avenue/Fruitvale Ave exit, EXIT 39A (0.15 mi)
9. Turn left onto 29th Avenue (0.14 mi)
10. Keep right at the fork to continue on 29th Avenue (0.02 mi)
11. Turn right onto Ford Street (0.05 mi)
12. Turn left onto 23rd Avenue (0.12 mi)
13. Turn slight right onto Park Street (0.33 mi)
14. Turn right onto Buena Vista Avenue (0.91 mi)
15. Turn right onto Grand Street.
    Destination is on the left (0.16 mi)

2015 Grand St,
Alameda, CA 94501

Distance: 29.5 miles
Time: 36min

Explanation

Vulcan Materials Facility to Site

End at Site (shown on Inset)

N

0 2 Miles

TRANSPORTATION ROUTE FROM
VULCAN MATERIALS FACILITY
Pennzoil-Quaker State Distribution Center
2015 Grand Street
Alameda, CA 94501

wood.

By: KLU

Date: 05/27/2020

Prj. No. 8620192890.02

Figure **A-12**

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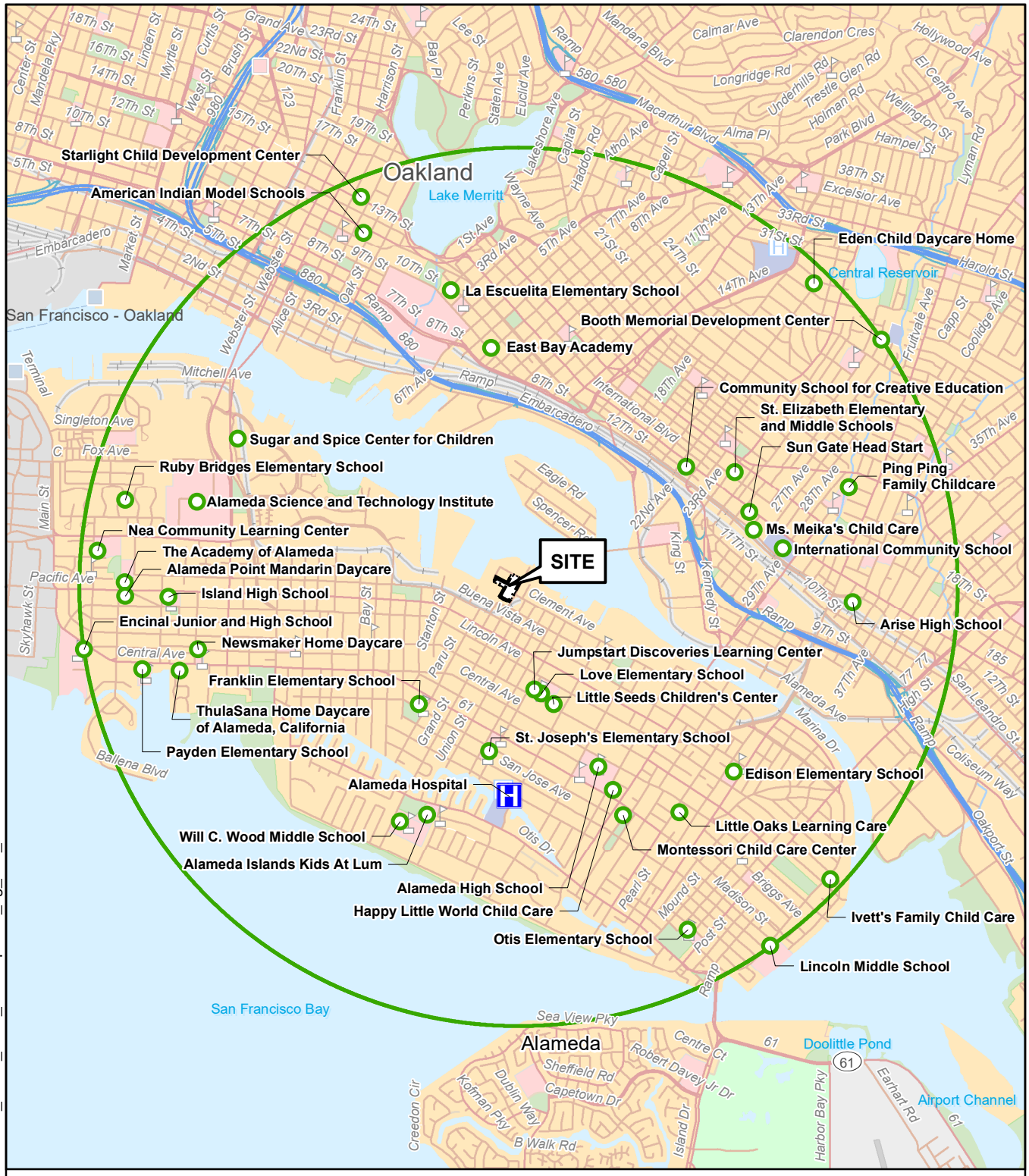
ATTACHMENT A-1

School Facilities and Hospital Near Project Area



S:\CLIENT\Shell\Shell Alameda\8620192890\task_02\20_0330_RAP-ApdxG_fig_G-1_schools.mxd

N

0 3,500 Feet

SCHOOLS AND DAY-CARE FACILITIES WITHIN
A 2-MILE RADIUS OF SITE AND NEAREST HOSPITAL
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU	Prj. No. 8620192890.02
Date: 03/30/2020	Figure **G-1**

ATTACHMENT A-1

LIST OF SCHOOL, DAYCARE, AND HOSPITAL FACILITIES NEAR THE SITE

School and Daycare Facilities			
1)	La Escuelita Elementary School	1050 2nd Avenue, Oakland, CA 94606	(510) 874-7762
2)	American Indian Model Schools	171 12th Street, Oaklnad, CA 94607	(510) 893-8701
3)	Alameda Science and Technology Institute	555 Atlantic Avenue, Alameda, CA 94501	(510) 748-4021
4)	Ruby Bridges Elementary School	351 Jack London Avenue, Alameda, CA 94501	(510) 748-4006
5)	Nea Community Learning Center	1900 3rd Street, Alameda CA, 94501	(510) 748-4008
6)	The Academy of Alameda	401 Pacific Avenue, Alameda, CA 94501	(510) 748-4017
7)	Encinal Junior and High School	210 Central Avenue, Alameda, CA 94501	(510) 748-4023
8)	Island High School	500 Pacific Avenue, Alameda, CA 94501	(510) 748-4024
9)	Payden Elementary School	444 Central Avenue, Alameda, CA 94501	(510) 748-4014
10)	Franklin Elementary School	1433 San Antonio Avenue, Alameda, CA 94501	(510) 748-4004
11)	Will C. Wood Middle School	420 Grand Street, Alameda, CA 94501	(510) 748-4015
12)	St. Joseph's Elementary School	1910 San Antonio Avenue, Alameda, CA 94501	(510) 522-4456
13)	Love Elementary School	2025 Santa Clara Avenue, Alameda, CA 94501	(510) 748-4005
14)	Alameda High School	2200 Central Avenue, Alameda, CA 94501	(510) 337-7022
15)	Edison Elementary School	2700 Buena Vista Avenue, Alameda, CA 94501	(510) 748-4002
16)	Otis Elementary School	3010 Fillmore Street, Alameda, CA 94501	(510) 748-4013
17)	Lincoln Middle School	1250 Fernside Blvd., Alameda, CA 94501	(510) 748-4018
18)	Arise High School	3301 East 12th Street, #205, Oakland, CA 94601	(510) 436-5487
19)	St. Elizabeth Elementary and Middle Schools	1516 23rd Avenue, Oakland, CA 94601	(510) 532-7392
20)	International Community School	2825 International Blvd., Oakland, CA 94601	(510) 532-5400
21)	Community School for Creative Education	2111 International Blvd., Oakland, CA 94601	(510) 686-4131
22)	East Bay Academy	1011 7th Avenue, Oakland, CA 94606	(510) 267-0788

wood.

ATTACHMENT A-1

LIST OF SCHOOL, DAYCARE, AND HOSPITAL FACILITIES NEAR THE SITE

School and Daycare Facilities			
23)	Starlight Child Development Center	246 14th Street, Oakland, CA 94612	(510) 238-8809
24)	Sugar and Spice Center for Children	2238 Mariner Square Drive, Alameda, CA 94501	(510) 865-1055
25)	Alameda Point Mandarin Daycare	416 Marshall Way, Alameda, CA 94501	(510) 282-0234
26)	ThulaSana Home Daycare of Alameda, California	544 Central Avenue, Alameda, CA 94501	(510) 53-2594
27)	Newsmaker Home Daycare	1434 6th Street, Alameda, CA 94501	(510) 769-0748
28)	Alameda Islands Kids At Lum	1801 Sandcreek Way, # A, Alameda, CA 94501	(510) 522-4729
29)	Jumpstart Discoveries Learning Center	2001 Santa Clara Avenue, Alameda, CA 94501	(510) 522-3194
30)	Little Seeds Children's Center	2055 Santa Clara Avenue, Alameda, CA 94501	(510) 865-5900
31)	Happy Little World Child Care	1214 Oak Street, Alameda, CA 94501	(510) 337-1830
32)	Montessori Child Care Center	1247 Park Avenue, Alameda, CA 94501	(510) 521-2354
33)	Little Oaks Learning Care	1362 Broadway, Alameda, CA 94501	(510) 522-6455
34)	Ivett's Family Child Care	1514 Fernside Blvd., Alameda, CA 94501	(510) 865-1750
35)	Ms. Meika's Child Care	1272 26th Avenue, Oakland, CA 94601	(510) 827-6071
36)	Sun Gate Head Start	2563 International Blvd., Oakland, CA 94601	(510) 535-5639
37)	Ping Ping Family Childcare	2915 East 19th Street, Oakland, CA 94601	(510) 479-3189
38)	Booth Memorial Development Center	2794 Garden Street, Oakland, CA 94601	(510) 525-5088
39)	Eden Child Daycare Home	2935 21st Avenue, Oakland, CA 94606	(510) 533-3952
Closest Hospital to the Site			
1)	Alameda Hospital	2070 Clinton Avenue, Alameda, CA 94501	(510) 522-3700

ATTACHMENT A-2

Emergency Contacts

ATTACHMENT A-2
TABLE 1

EMERGENCY CONTACTS

CALIFORNIA HIGHWAY PATROL (CHP) LOCATIONS AND CONTACTS NUMBERS

Station	City	Location	Telephone
Golden Gate Division CHP Station	Oakland	3601 Telegraph Ave Oakland, CA 94609	(510) 450-3821
	Castro Valley	21020 Redwood Road Castro Valley, CA 94546	(510) 581-9028
	Dublin	4999 Gleason Drive Dublin, CA 94568	(925) 828-0466
	Hayward	2434 Whipple Rd Hayward, CA 94544	(510) 489-1500
	San Jose	2020 Junction Avenue San Jose, CA 95131	(408) 467-5400
Valley Division CHP Station	Tracy	385 West Grant Line Road Tracy, CA 95376	(209) 835-8920
Golden Gate Division Inspection Facility	Fremont	4416 I-880 (Southbound) Fremont, CA 94538	(510) 794-3658

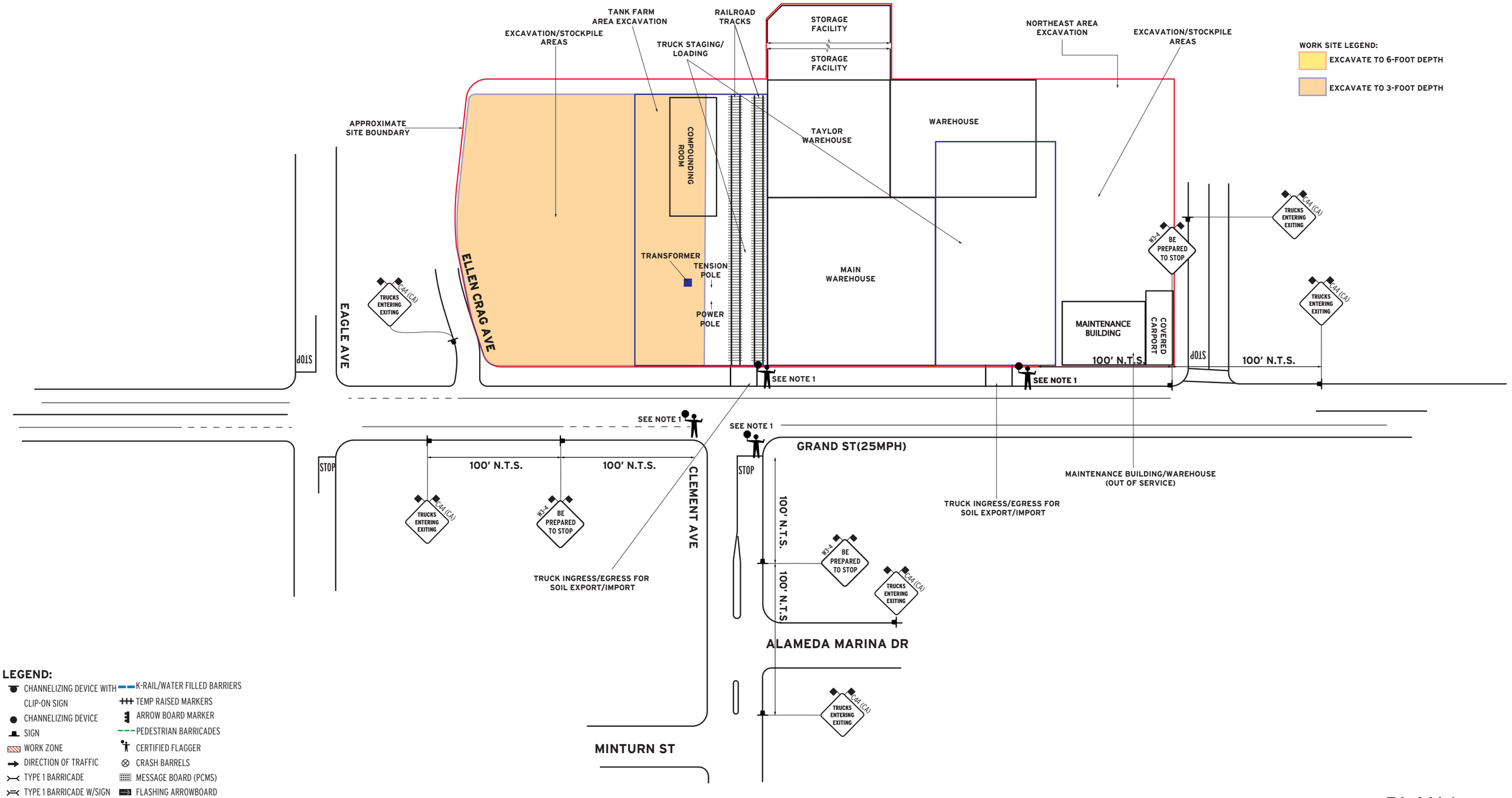
ATTACHMENT A-2
TABLE 2

EMERGENCY CONTACT TELEPHONE NUMBERS

Oakland Fire Department	(510) 238-3856
Alameda Fire Station No. 3	(510) 337-2230
Alameda Police Department	(510) 337-8340
State Offices of Emergency Services Hotline (Emergencies Only)	(800) 852-7550
Wood Environment & Infrastructure, Inc.	
Haely Young, Project Manager	(510) 663-3992 (O) (510) 504-7091 (M)
San Francisco Bay Regional Water Quality Control Board	
Alyx Karpowicz, Project Manager	(510) 622-2427
Water Board - Spill Notification Number - M-F 8am-5pm	(510) 622-2369
OES - Emergency Response Duty Officers - 24/7	(800) 852-7550
EPA - Environmental Emergency Hotline - 24/7	(800) 300-2193
Department of Transportation (Caltrans)	(800) 427-7623

ATTACHMENT A-3

Traffic Control Plan



LEGEND:

- CHANNELIZING DEVICE WITH CLIP-ON SIGN
- CHANNELIZING DEVICE
- SIGN
- WORK ZONE
- DIRECTION OF TRAFFIC
- TYPE 1 BARRICADE
- TYPE 1 BARRICADE W/SIGN
- TYPE 3 BARRICADE
- TYPE 3 BARRICADE W/SIGN
- K-RAIL/WATER FILLED BARRIERS
- TEMP RAISED MARKERS
- ARROW BOARD MARKER
- PEDESTRIAN BARRICADES
- CERTIFIED FLAGGER
- CRASH BARRELS
- MESSAGE BOARD (PCMS)
- FLASHING ARROWBOARD
- CRASH ATTENUATORS
- FLASHING BEACON/BARRICADE LIGHT

ADDITIONAL NOTES:

1. FLAGGERS SHALL HOLD TRAFFIC IF NEEDED TO ALLOW TRUCK/S ACCESS TO AND FROM THE SITE ENTRANCE/EXIT.

PLAN 1

TEMP TRAFFIC CONTROL PLAN

NOTES

- Traffic control shall conform with the most current CAMUTCD part 6 and/or Caltrans Standards
- One lane of traffic in each direction and all high volume turning lanes shall be maintained at all times on all streets at a minimum lane width of 10 feet.
- Contractor shall notify local authorities once signs are posted.
- All advanced warning signs shall be equipped with 2 (18" orange flags)
- Certified Traffic Control Workers shall have Type II vests, work shoes, and hard hats.
- Temporary no parking signs shall be placed a min of 72 hrs prior of work.
- Driveways shall be monitored and maintained at all times during work hours.
- Distance between sign and work area will be determined on speed limit.
- Roadway shall not be opened until safe for public use. All open trenches must be plated or backfilled prior to public usage.
- All Devices shall be removed when no longer required.

MUTCD TABLE 6C-1

MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
Urban (Low Speed) - 25 mph or less	100 ft	100 ft	100 ft
Urban (Low Speed) + 25 to 40 mph	250 ft	250 ft	250 ft
Urban (High Speed) + 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,500 ft	2,640 ft

COMPASS:

SCALE: NOT TO SCALE

DATE REQSTD: 5/15/20

DATE COMPLTD: 5/18/20

PROJECT LOCATION: 2015 GRAND ST., ALAMEDA, CA

PO# NC-18-1298

PAGE# 1/1 (REVISION 2)

REQUEST BY:
LOGAN LINDERMAN
INNOVATIVE CONSTRUCTION SOLUTIONS
209-670-5991
LLINDERMAN@ICSINC.TV

AFTER HOURS EMERGENCY
510-299-5666

Drawn By:
DREW PATEL
CSLB# 917034
Office: 510-657-2543
Fax: 510-657-2544

44800 Industrial Drive Fremont, CA 94538
WWW.BATSTRAFFICSOLUTIONS.COM

B.A.T.S. TRAFFIC SOLUTIONS

APPENDIX B

Sampling and Analysis Plan

APPENDIX B

SAMPLING AND ANALYSIS PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

TABLE OF CONTENTS

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
EBMUD	East Bay Municipal Utility District
EPA	US Environmental Protection Agency
ppm	parts per million
QA/QC	Quality Assurance and Quality Control
RAP	Remedial Action Plan
SAP	Sampling and Analysis Plan
SOPUS	Pennzoil-Quaker State Company dba SOPUS Products
TPH	Total petroleum hydrocarbons
TPHd	Total petroleum hydrocarbons as diesel
TPHg	Total petroleum hydrocarbons as gasoline
TPHmo	Total petroleum hydrocarbons as motor oil
UST	underground storage tank
VOC	volatile organic compound
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
Wood	Wood Environment & Infrastructure Solutions, Inc.

SAMPLING AND ANALYSIS PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

B1.0 INTRODUCTION

Wood Environment & Infrastructure, Inc. (Wood), has prepared this Sampling and Analysis Plan (SAP) on behalf of Pennzoil-Quaker State Company dba SOPUS Products (SOPUS) as an appendix to the Remedial Action Plan (RAP) for the planned demolition of above ground structures and hardscape within excavation extents, and soil removal activities at the Pennzoil-Quaker State Distribution Center located at 2015 Grand Street in Alameda, California (the "Site", Figure B-1). The lead regulatory agency for the Site is the San Francisco Regional Water Quality Control Board ("Water Board"). This SAP describes the plan to develop waste profiles prior to excavation activities in the northeast (maintenance yard and former underground storage tank [UST] area, hereafter referred to as the "Northeast Area") and southwest ("Tank Farm Area") portions of the Site; and describes post-excavation confirmation sampling and analytical procedures that will be implemented during the remedial action. In addition, groundwater from excavation dewatering will be sampled and analyzed prior to discharge as required by the permitting agency. The groundwater sampling and analysis plan is described herein.

B2.0 PRE-EXCAVATION TEST PITS AND WASTE PROFILING

This section describes procedures for the sampling plan and analytical methods that will be followed to pre-profile soil waste prior to excavation.

B2.1 TEST PITS

Soil test pits were excavated to the anticipated maximum depth of the remedial excavations to observe first-encountered groundwater depths and infiltration rates. Three trenches were dug in the Northeast Area, and three trenches in the Tank Farm Area, for a total of six trenches across the Site as depicted on Figure B-2. Groundwater depths and observed infiltration rates will inform the design and sequencing of the remedial excavation, and the design of the onsite

dewatering and treatment system, if needed. Trench dimensions were approximately 10 feet by 5 feet and they were left open for 24 to 48 hours to allow groundwater to infiltrate.

During the same mobilization as test pitting, potholes were dug to confirm utility locations, as needed, and collect samples for pre-profiling of soil waste.

B2.2 PRE-CHARACTERIZATION SOIL SAMPLE LOCATIONS

Based on historical soil analytical results from previous investigations in the Northeast Area (Wood, 2019) and the Tank Farm Area (Conestoga-Rovers & Associates, 2014), the remediation will include removal of soil to 6 feet below ground surface (bgs) in the Northeast Area, and to 3 feet bgs in the Tank Farm Area as shown on Figure B-2.

In accordance with landfill requirements, excavated soil containing total volatile organic compound (VOC) concentrations greater than 50 parts per million (ppm) will be disposed as direct-burial, and soil containing less than 50 ppm total VOC concentrations will be used as alternative daily cover.

As shown on Figure B-2, the Northeast Area will be divided into a five-cell grid, approximately 100- by 60-feet in size. One 15 to 25-point composite sample was collected from each cell. Each composite sample was collected from depths that spanned ground level to the bottom of the future excavation in the Northeast Area (six feet bgs). The Tank Farm Area was divided into a four-cell grid, approximately 40-by 230-feet in size (Figure B-2). One 6 to 8-point composite sample was collected from each cell, and each composite sample was collected from depths that spanned ground level to the bottom of the future excavation in the Tank Farm Area (three feet bgs).

B2.3 PRE-CHARACTERIZATION SOIL SAMPLE COLLECTION AND ANALYSIS

Samples collected for TPHd, TPHmo, and metals were placed directly into laboratory-supplied, 8-ounce, glass jars with threaded Teflon®-lined lids after collection. Samples collected for VOCs and TPHg were placed directly into laboratory-supplied 4-ounce glass jars with threaded Teflon-lined lids after collection. If the density of the soil was too high to easily push into sample jars, a stainless-steel spoon was be used to transfer the material. Sample jars were filled and lightly packed to minimize head space in the samples. Each sample was labeled to identify the sampling point, the time the sample was collected, and the analytical method to be used.

Soil samples were analyzed for the following:

- Total petroleum hydrocarbons (TPH) as diesel (TPHd) and TPH as motor oil (TPHmo) using US Environmental Protection Agency (EPA) method 8015B;
- TPH as gasoline (TPHg) using EPA method 8260B;
- VOCs using EPA method 8360B;
- CAM 17 Metals using EPA method 6010B/6020/7000; and
- Fish bioassay, if TPHd is over 15,000 ppm or TPHmo is over 10,000 ppm.

Analytical methods and additional information for pre-characterization soil samples is provided on Table B-1.

Following sample collection, the labeled soil sample containers were placed in sealed plastic bags and stored in an ice-chilled cooler for transport to a California-certified analytical laboratory. Samples were shipped or hand-delivered to the laboratory under chain-of-custody procedures.

B3.0 SOIL CONFIRMATION SAMPLING

Following completion of the excavation activities, post-remediation samples will be collected to confirm the proposed cleanup goals have been achieved. If any Site chemicals of concern are present in concentrations above the proposed cleanup goals, additional excavation may be performed. The confirmation samples will be collected after the excavation activities are completed, but before backfilling activities are initiated.

B3.1 SOIL CONFIRMATION SAMPLE LOCATIONS

After removing impacted soil, soil samples will be collected from the sidewalls and the bottom of excavation areas. Soil will be collected from the bottom of the excavation in a grid pattern with an approximate spacing of 50 feet. Sidewall samples will be collected at approximately 50-foot intervals along the excavation boundary. Each sidewall sample will be collected at a depth between the existing ground surface and the bottom of the excavation. The proposed bottom and sidewall soil sample locations for both the Northeast and Tank Farm Areas are shown on Figure B-3. The actual sampling frequency and location may be modified or increased in the field based on practical considerations such as observed findings, variations in the soil types, safe access to sampling locations, and presence of groundwater in cavities.

Additionally, one to two confirmation samples will be collected within approximately 5 feet from both the transformer, and the power and tension poles located within the Tank Farm Area, as shown on Figure B-3.

B3.2 SOIL CONFIRMATION SAMPLE COLLECTION AND ANALYSIS

Confirmation samples collected from soil along sidewalls and the bottom of excavations will be analyzed for the following:

- TPHd/mo by EPA method 8015B;
- TPHg by EPA method 8260B;
- VOCs by EPA method 8260B; and
- CAM 17 Metals by EPA method 6010B/6020/7000.

For TPHd/mo and metals analyses, samples will be placed directly into laboratory-supplied, 16-ounce, glass jars with threaded Teflon®-lined lids after collection. For TPHg and VOC analyses, soil samples will be collected using Terra Core samplers or equivalent, in accordance with EPA Method 5035. Using the Terra Core sampler, an aliquot of soil (approximately 5 grams) is collected using the sampling device and transferred directly into laboratory-prepared 40 milliliter volatile organic analysis vials containing sodium bisulfate and methanol preservatives. Analytical methods and additional information for confirmation soil samples is provided on Table B-1.

Each sample will be labeled to identify the sampling point and depth, the time the sample was collected, and the analytical method to be used. Following sample collection, the labeled sample containers will be placed in sealed plastic bags and stored in an ice-chilled cooler for transport to a California-certified analytical laboratory. Samples will be shipped or hand-delivered to the laboratory under chain-of-custody procedures.

B4.0 CONSTRUCTION DEWATERING

Groundwater sampling procedures and analytical methods during the pre-construction and excavation dewatering phases of the project are described below.

B4.1 PRE-CONSTRUCTION GROUNDWATER SAMPLING AND ANALYSIS

Based on previous investigations and groundwater monitoring at the Site, it is assumed that the excavation in the Northeast Area may extend below the water table and dewatering may

be required. Any groundwater that is removed from the excavation will ultimately be discharged to the City of Alameda sanitary sewer system under a specific discharge permit obtained from the East Bay Municipal Utility District (EBMUD).

To understand the water quality from the dewatering activity and decide whether any treatment will be required prior to discharge to the sanitary sewer, groundwater samples will be collected from the trenches during the test pit investigation. Using a bailer or a peristaltic pump and tubing, one sample will be collected from one of the trenches in the Northeast Area, and a second sample will be collected from one of the trenches in the Tank Farm Area.

The required analyses and their sampling containers are indicated below and listed on Table B-2:

- Metals (arsenic, cadmium, chromium, copper, iron, lead, nickel, silver, and zinc) by EPA method 200.8 or 200.7;
- Oil and Grease by EPA method 1664 HEM-SGT; and
- Semi-volatile organics (bases, neutrals, and acids) by EPA method 625.

Each sample will be labeled to identify the sampling point, the time the sample was collected, and the analytical method to be used. Following sample collection, the sample containers will be stored in an ice-chilled cooler for transport to a California-certified analytical laboratory. Samples will be shipped or hand-delivered to the laboratory under chain-of-custody procedures.

B4.2 DEWATERING SYSTEM SAMPLING AND ANALYSIS

Depending on the sampling results from the test pits, on-site treatment of the dewatered groundwater may be required prior to discharge into the sanitary sewer system. At a minimum, a settlement tank will be used to separate the suspended solids from the groundwater prior to discharge into the sanitary sewer system.

Prior to discharge, one set of water samples will be collected from the discharge point of the treatment system – either from the top of the settlement tank after the sediment has settled, if no other treatment is required, or from the effluent sampling port of a dewatering treatment system. This sample is required to confirm compliance with the EBMUD special discharge permit.

The sampling and analyses requirements are the same as discussed in Section 4.1. Analytical methods and additional information for dewatered groundwater samples is provided on Table B-2.

B5.0 DECONTAMINATION AND WASTE DISPOSAL

Reusable field equipment used to collect and handle samples or collect field measurements will be decontaminated before coming into contact with any sample. The equipment decontamination procedures are as follows:

- Clean equipment in bath of tap water (i.e., drinking water) and detergent (i.e., Liquinox or equivalent). Equipment should be free of residual dirt or contamination. Re-wash as necessary.
- Rinse equipment with tap water.
- Air-dry the equipment, and wrap in plastic, if not immediately used.

Excavated soil and associated construction debris will be transported to local landfills and/or recycling facilities. Disposal requirements are discussed in detail in the Waste Management and Transportation Plan (Appendix A).

B6.0 QUALITY ASSURANCE/QUALITY CONTROL

A Quality Assurance and Quality Control (QA/QC) assessment will be conducted for the analytical laboratory data. Each laboratory report will be evaluated using organic data assessment summary checklists that are consistent with the examples in the US EPA National Functional Guidelines for organic and inorganic data review (EPA, 2017a and 2017b). An evaluation of the data QA/QC will be provided in the Remedial Action Completion Report. Where data qualification is required, the appropriate data flag will be marked on the original laboratory reports and included in the data tables.

Laboratory QA/QC procedures used to evaluate method accuracy and precision will include analysis of laboratory method blanks, laboratory control spike samples, surrogates, matrix spike samples, and matrix spike duplicate samples. The laboratory will provide the analytical results in electronic data deliverable format.

B7.0 REFERENCES

Conestoga-Rovers & Associates, 2014. Amended Conceptual Site Model and Work Plan, Pennzoil-Quaker State Alameda Distribution Center, 2015 Grand Street, Alameda, California. November 20.

United States Environmental Protection Agency (EPA), 2017b. National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-540-R-2017-001, January.

EPA, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-2017-002, January.

Wood Environment & Infrastructure Solutions, Inc., 2019. Northeast Area Investigation Report, Pennzoil-Quaker State Alameda Distribution Center, 2015 Grand Street, Alameda, California. December 5.

TABLE B-1

SOIL SAMPLE ANALYTICAL METHOD INFORMATION

Pennzoil-Quaker State Alameda Distribution Center
Alameda, California
Sampling and Analysis Plan

Scope of Work	Target Analytes	Analytical Method	Sample Volume; Container	Preservation	Holding Time
Pre-characterization for waste profiling	Volatile Organic Compounds	EPA 8260B	(1) 4-oz glass jar w/ Teflon lid (no headspace)	Cool to <6° C	14 days
	Total Petroleum Hydrocarbons as Gasoline	EPA 8260B		Cool to <6° C	14 days
	Total Petroleum Hydrocarbons as Diesel/Motor Oil	EPA 8015B	(1) 8-oz glass jar w/ Teflon lid	Cool to <6° C	14 days
	CAM 17 Metals (As, Hg, Sb, Ba, Be, Cd, Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, V, Zn)	EPA 6010B/6020/7000		None	180 days
Confirmation sampling	Volatile Organic Compounds	EPA 8260B	(3) 40-mL VOA vials	Sodium bisulfate w/ stir bar (2 VOAs), and methanol (1 VOA)	14 days
	Total Petroleum Hydrocarbons as Gasoline	EPA 8260B			
	Total Petroleum Hydrocarbons as Diesel/Motor Oil	EPA 8015B	(1) 8-oz glass jar w/ Teflon lid	Cool to <4° C	14 days
	CAM 17 Metals (As, Hg, Sb, Ba, Be, Cd, Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, V, Zn)	EPA 6010B/6020/7000		None	6 months

Abbreviations

° C = degrees Celcius
< = less than
Ag = silver
As = arsenic
Ba = barium
Be = beryllium
Cd = cadmium
Co = cobalt
Cr = chromium
Cu = copper
EPA = Environmental Protection Agency
Hg = mercury
mL = milliliter
Mo = molybdenum
Ni = nickel
oz = ounce
Pb = lead
Sb = antimony
Se = selenium
Ti = thallium
V = vanadium
VOA = volatile organic analysis
Zn = zinc

TABLE B-2

WATER SAMPLE ANALYTICAL METHOD INFORMATION

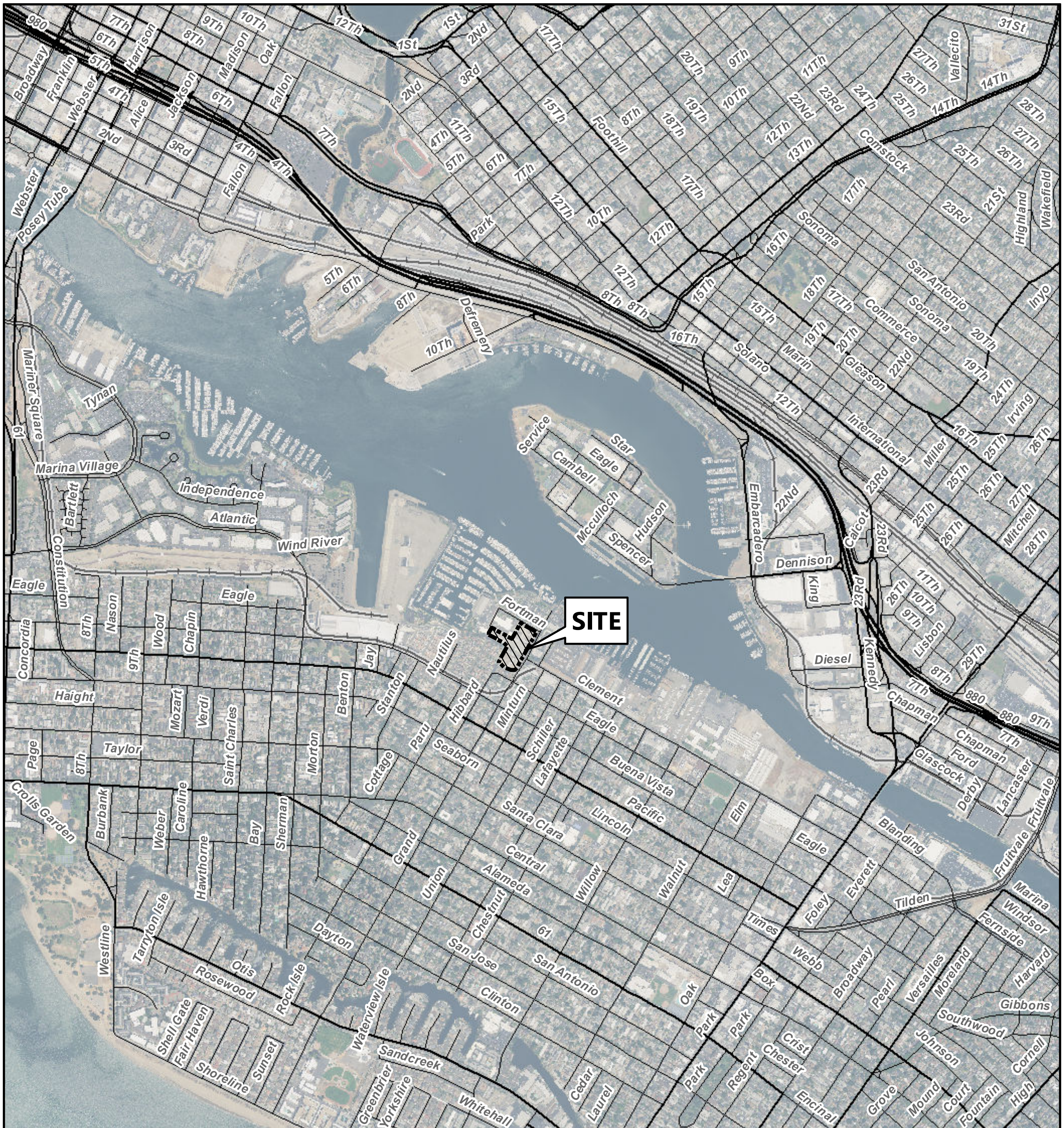
Pennzoil-Quaker State Alameda Distribution Center
Alameda, California
Sampling and Analysis Plan

Scope of Work	Target Analytes	Analytical Method	Sample Volume; Container	Preservation	Holding Time
Pre-construction and dewatering system sampling	Oil and Grease	EPA 1664 HEM-SGT	(1) 1L amber glass	Cool to <6° C pH < 2 HCl	28 days
	Semi-Volatile Organic Compounds (bases, neutrals, & acids)	EPA 625	(1) 1L amber glass	Cool to <6° C	7 days
	Metals As, Cd, Cr, Cu, Fe, Pb, Ni, Ag, Zn	EPA 200.8 or 200.7	(1) 500 mL polyethylene	Cool to <6° C pH < 2 HNO_3	6 months

Abbreviations

° C = degrees Celcius
< = less than
Ag = silver
As = arsenic
Cd = cadmium
EPA = Environmental Protection Agency
Fe = iron
HCl = hydrochloric acid
HNO_3 = nitric acid
L = liter
mL = milliliter
Ni = nickel
Pb = lead
Zn = zinc

FIGURES


SITE
Fortman
Clement
Eagle
Buena Vista
Pacific
Lincoln
Santa Clara
Central
Alameda
San Antonio
San Jose
Grand
Union
Chestnut
Willow
Walnut
Oak
Park
Broadway
Everett
Blanding
Tilden
Diesel
Dennison
Embarcadero
Kennedy
Chapman
Mcculloch
Spencer
Hudson
Service
Campbell
Star
Independence
Atlantic
Wind River
Marina Village
Mariner Square
Constitution
Tynan
Haight
Taylor
Page
Webster
Posey Tube
Nautilus
Hibbard
Minturn
Schiller
Lafayette
Seaborn
Paru
Stanton
Cottage
Benton
Morton
Jay
Sherman
Bay
Caroline
Weber
Burbank
Westline
Hawthorne
Saint Charles
Verdi
Mozart
Chapin
Wood
Nason
Concordia
Crolls Garden
Dayton
Rosewood
Otis
Rock Isle
Waterview Isle
Tarryton Isle
Shell Gate
Fair Haven
Shoreline
Sunset
Sandcreek
Whitehall
Clinton
Cedar
Laurel
Regent
Chester
Crist
Encinal
Grove
Court
Fountain
High
Cornell
Johnson
Southwood
Gibbons
Harvard
Fernside
Windsor
Marina
Fruitvale
Versailles
Moreland
Pearl
Webb
Box
Times
Foley
Lea
Elm
International
Solano
Comstock
Foothill
Defremery
880
980

Street map from ESRI, 2007. Aerial image from NAIP, 2009.

N

0 2,000 Feet

SITE LOCATION MAP
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU	Prj. No.	8620192890.02	
Date: 04/22/2020	Figure	B-1	

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Railroad

Approximate future street boundary

10'x5' test pit

Composite sample grid

Excavate to 3-foot depth

Excavate to 6-foot depth

Former UST area and washrack (~100CY excavation allowance)

Approximate site boundary

Notes:

1. One 15 to 25-point composite sample was collected from each of the five cells (#1 through #5) located within the Northeast Area.
2. One 6 to 8-point composite sample was collected from each of the four cells (#6 through #9) located within the Tank Farm Area.

N

0 40 80 Feet

Background image ©Google Earth, dated October 2018.

PRE-CHARACTERIZATION SAMPLE LOCATIONS
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU

Date: 05/15/2020

Prj. No. 8620192890.03

Figure **B-2**

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Explanation

- Confirmation soil sample (bottom)
- Confirmation soil sample (sidewall)
- 50'x50' sample grid
- Railroad tracks
- Approximate future street boundary
- Approximate site boundary

Notes:

1. Confirmation samples will be collected from the bottom of the excavation at 50-foot centers within each cell of the sample grid, and every 50 lateral feet along sidewalls.
2. Confirmation samples will be collected along the sidewalls of soil left in place around the transformer, power pole, and tension pole in the Tank Farm Area to determine if soil can remain in place or will require excavation during property redevelopment.

N

0 40 80 Feet

Background image ©Google Earth, dated October 2018.

PROPOSED CONFIRMATION SAMPLE LOCATIONS
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU	Prj. No. 8620192890.03
Date: 05/15/2020	Figure B-3

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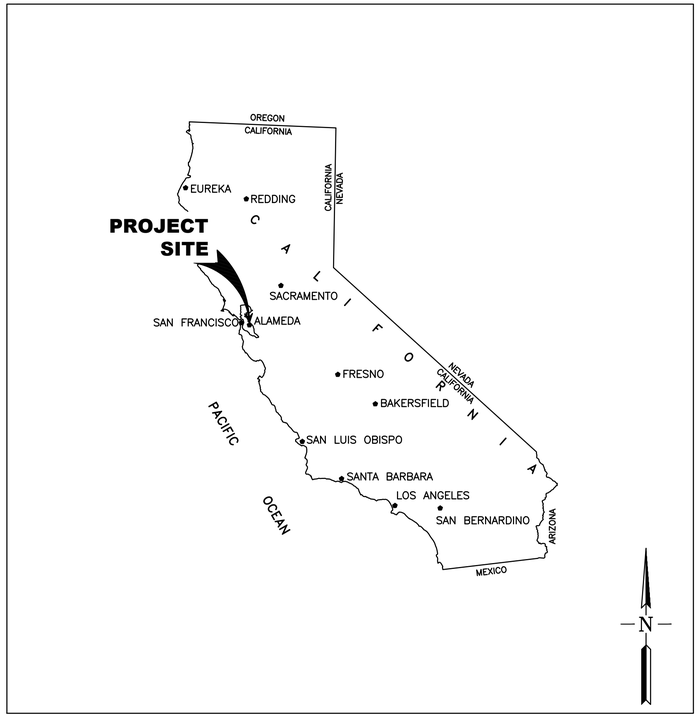
APPENDIX C

Remedial Action Design Drawings

SITE REMEDIAL ACTION
PENNZOIL-QUAKER STATE ALAMEDA DISTRIBUTION CENTER
2015 GRAND ST., ALAMEDA, CA.



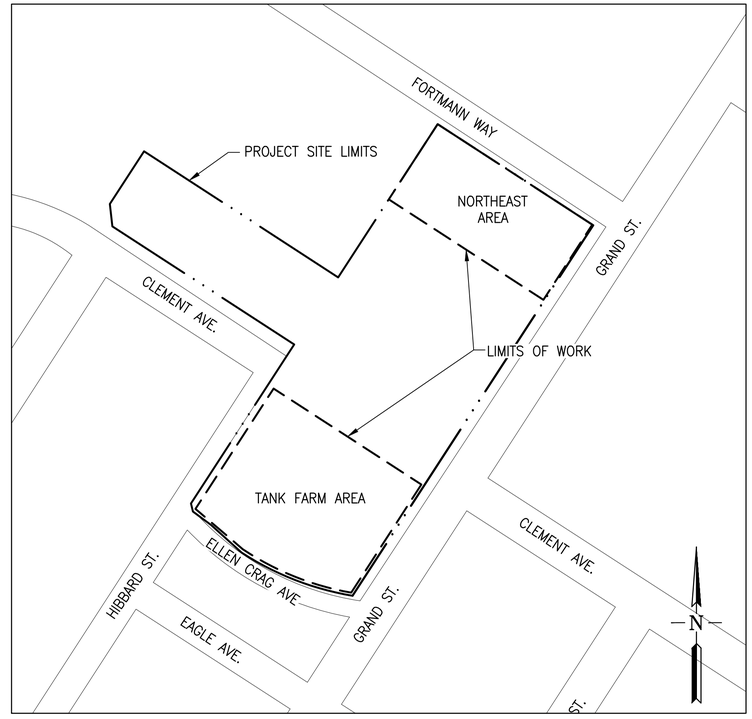
SITE LOCATION MAP

NOT TO SCALE

SITE VICINITY MAP

4000 0 4000 8000

APPROXIMATE SCALE IN FEET



SITE MAP

100 0 100 200

APPROXIMATE SCALE IN FEET

LIST OF DRAWINGS

SHT NO.	DWG NO.	DWG NAME
1	G–1	LIST OF DRAWINGS, SITE VICINITY, AND SITE LOCATION MAPS
2	G–2	GENERAL NOTES AND ABBREVIATIONS
3	G–3	SITE LAYOUT, LIMITS OF WORK, AND STAGING AREAS
4	C–1	EXISTING SITE CONDITIONS (NORTHEAST AREA)
5	C–2	EXISTING SITE CONDITIONS (TANK FARM AREA)
6	C–3	NORTHEAST AREA DEMOLITION PLAN
7	C–4	TANK FARM AREA DEMOLITION PLAN
8	C–5	NORTHEAST AREA EXCAVATION PLAN
9	C–6	TANK FARM AREA EXCAVATION PLAN
10	C–7	FINAL SITE GRADING PLAN

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER
LICENSE NUMBER ----

NO.	DSGN	DATE	DR	REVISION	CHK	APVD	BY	APVD

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

LIST OF DRAWINGS
SITE VICINITY
AND SITE LOCATION MAPS

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612-2936619
TELEPHONE: (510) 663-4100
FAX: (510) 663-4141

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	G-1
SHEET	1 OF 10

GENERAL NOTES

REMEDIATION IMPLEMENTATION WILL BE BY THE FOLLOWING PARTIES:

REMEDIAL ACTION OWNER - SHELL OIL PRODUCTS US

LEAD AGENCY - REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

ENGINEER - WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. (WOOD)

CONSTRUCTION MANAGER - WOOD

CONTRACTOR - PARTIES CONTRACTED BY CONSTRUCTION MANAGER TO PERFORM THE WORK

1. **ALL MATERIAL AND WORK SHALL CONFORM TO THE ALAMEDA MUNICIPAL CODE (AMC) 2019 AMENDMENTS TO THE 2019 CALIFORNIA BUILDING CODE (CBC).**
2. **THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (STANDARD SPECIFICATIONS), AND IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS, ALL TO THE SATISFACTION OF THE ENGINEER. CONTRACTOR SHALL MAKE ENGINEER AWARE OF DISCREPANCIES BETWEEN PLANS AND/OR SPECIFICATIONS UPON DISCOVERY, IN WRITING.**
3. **ALL PERSONNEL INVOLVED SHALL FOLLOW THE REQUIREMENTS FOR EXCAVATION CONTAINED IN THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE DIVISION OF INDUSTRIAL SAFETY.**
4. **THE SPECIFICATIONS FOR THIS PROJECT, WHICH ARE A SEPARATE DOCUMENT, ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. SEE SPECIFICATIONS FOR INFORMATION NOT GIVEN IN THESE GENERAL NOTES OR SHOWN IN THESE PLANS. IF DISCREPANCIES BETWEEN THE PLANS AND SPECIFICATIONS OCCUR, ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WORK.**
5. **HORIZONTAL COORDINATES ARE BASED UPON NORTH AMERICAN DATUM OF 1983 (NAD 83), CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3 (CCS 83).**
6. **ELEVATIONS ARE BASED UPON ALAMEDA CITY BENCHMARK GRAND CLEM-USC&GS-1947, ELEVATION 3.397 FEET (NGVD 29).**
7. **PENNZOIL-QUAKER STATE ALAMEDA DISTRIBUTION CENTER (DISTRIBUTION CENTER) IS AN ACTIVE FACILITY AND WILL BE CLOSED AT A FUTURE DATE. SOME WORK MAY START PRIOR TO THE CLOSURE OF THE FACILITY INCLUDING DEMOLITION, TEST PITTING, AND UTILITY LOCATION. CONTRACTOR SHALL PROVIDE TRAFFIC WARNING SIGNS, BARRICADES, AND DELINEATORS TO DIRECT VEHICULAR TRAFFIC AROUND THE WORK AREAS. COORDINATE USE OF SITE WITH DISTRIBUTION CENTER REPRESENTATIVES, THE ENGINEER AND OTHER CONTRACTORS.**
8. **CONTRACTOR SHALL VISUALLY INSPECT THE SITE TO ASCERTAIN THE CONDITION OF EXISTING FEATURES AND FAMILIARIZE WITH PROPOSED WORK.**
9. **CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS EXCEPT FOR SPECIFIED PERMITS SECURED BY SHELL OIL PRODUCTS US OR THE ENGINEER.**
10. **CONTRACTOR SHALL KEEP PERMITS ON-SITE AND COMPLY WITH ALL PROVISIONS OF THE PERMITS AND PROVIDE A COPY TO THE ENGINEER PRIOR TO BEGINNING WORK.**
11. **ALL DATA, DRAWINGS, AND CORRESPONDENCE FROM LOWER-TIER MANUFACTURERS OR SUPPLIERS SHALL BE ROUTED THROUGH THE CONTRACTOR.**
12. **CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT RELATED INSPECTIONS. THE CONTRACTOR SHALL VERIFY THE ISSUANCE OF AND PICK UP THE BUILDING PERMIT FROM THE CITY OF ALAMEDA, PERMIT CENTER (2263 SANTA CLARA AVENUE, ALAMEDA, CA 94501, 510-747-7400) PRIOR TO THE START OF WORK.**
13. **ALL WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND ORDINANCES.**
14. **LIMITS OF WORK SHOWN ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE LIMITS OF WORK WITH ENGINEER AND THE OWNER.**
15. **CONTRACTOR SHALL CONFIRM THE TEMPORARY STAGING AREA AND SCHEDULE OF WORK WITH ENGINEER. REVISION OF THE TEMPORARY STAGING AREA SHALL BE APPROVED IN ADVANCE BY ENGINEER.**
16. **CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND COMPARE ALL PLANS FOR CONFORMANCE AS TO THE LAYOUT OF DIMENSIONS AND ELEVATIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES FOR CORRECTIVE ACTION PRIOR TO PROCEEDING WITH WORK.**
17. **ENGINEER SHALL BE NOTIFIED OF ANY UNANTICIPATED CONDITIONS THAT ARE ENCOUNTERED AND WILL DETERMINE WHETHER DESIGN CHANGES WILL BE REQUIRED. THIS INCLUDES ANY UNANTICIPATED CONDITIONS THAT HAVE THE POTENTIAL TO IMPACT THE CONSTRUCTION SCHEDULE.**
18. **CONTRACTOR SHALL HAVE COPIES OF THE PLANS, SPECIFICATIONS, AND PERMITS FOR THIS PROJECT ON THE SITE AT ALL TIMES, AND THEY SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS, SPECIFICATIONS AND ANY OTHER CONDITION(S) RELATED TO THE PERMITS.**
19. **CONTRACTOR IS TO MAINTAIN AND PROVIDE ENGINEER WITH AN AS-BUILT MARKUP SET OF DRAWINGS AT THE COMPLETION OF ALL WORK, FOR THE ENGINEER TO GENERATE THE RECORD AS-BUILT DRAWINGS.**
20. **CONTRACTOR SHALL CONFIRM CONSTRUCTION SCHEDULE WITH ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WORK AT THE SITE.**
21. **CONTRACTOR SHALL SEQUENCE, COORDINATE, AND CONDUCT DEMOLITION AND CONSTRUCTION OPERATIONS SUCH AS TO MAINTAIN CONTINUITIES PUBLIC SAFETY, DRAINAGE, AND UTILITY SERVICES TO EXISTING FACILITIES REQUIRING THESE SERVICES. NOTIFY ENGINEER AT LEAST SEVEN (7) DAYS, WHEN FEASIBLE, UNLESS OTHERWISE APPROVED, IN ADVANCED OF INTERRUPTION OF ANY OF THESE SERVICES.**
22. **THE PROPOSED CONSTRUCTION SCHEDULE SHALL BE PRESENTED IN A TIMELINE FORMAT SHOWING ESTIMATED START DATE, DURATION, AND COMPLETION TIMES FOR CRITICAL PATH ITEMS. THE ENGINEER WILL COMPILE AND MAINTAIN AN OVERALL PROJECT SCHEDULE WITH INPUT FROM THE CONTRACTOR. THE CONTRACTOR SHALL COMMUNICATE ANY DEVIATION FROM THE ORIGINALLY PROPOSED SCHEDULE TO THE ENGINEER WITHIN 24 HOURS.**

SAFETY NOTES

1. **CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE WITHIN LIMITS OF WORK AT ALL TIMES INCLUDING SAFETY OF PERSONS AND PROPERTY, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. ENGINEER'S JOB SITE REVIEW DOES NOT INCLUDE REVIEW OF THE ADEQUACY OF CONTRACTOR'S SAFETY MEASURES.**
2. **THERE IS POTENTIAL FOR EXPOSURE TO HAZARDOUS MATERIALS IN SOIL AND GROUNDWATER DURING CONSTRUCTION. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH 29 CFR 1910.120(E).**
3. **ENGINEER WILL PREPARE A HEALTH AND SAFETY PLAN THAT COMPLIES WITH SHELL OIL PRODUCTS US AND DISTRIBUTION CENTER FACILITY HEALTH, SAFETY, AND ENVIRONMENT REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A HEALTH AND SAFETY PLAN TO COVER THEIR ACTIVITIES ONSITE AND SHALL ALSO COMPLY WITH THE DISTRIBUTION CENTER SITE-SPECIFIC HEALTH AND SAFETY PLAN.**
4. **APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT SHALL BE WORN IN ACCORDANCE WITH THE PROJECT APPROVED HEALTH AND SAFETY PLAN.**
5. **ALL PERSONNEL WORKING ON SITE SHALL BE REQUIRED TO ATTEND A SITE-SPECIFIC SAFETY INTRODUCTION BEFORE STARTING ANY WORK AND AT THE BEGINNING OF EACH SUBSEQUENT WORKDAY.**
5. **THE ENGINEER WILL MONITOR WORK ZONE AND EXCAVATIONS USING A PHOTO-IONIZATION DETECTOR WITH DETECTOR TUBES FOR BENZENE IN ACCORDANCE WITH THE SITE-SPECIFIC HEALTH AND SAFETY PLAN.**

UTILITY NOTES

1. **IT IS CONTRACTOR'S RESPONSIBILITY TO LOCATE, PROTECT, AND MAINTAIN EXISTING UTILITIES NOT EXPLICITLY CALLED OUT FOR DEMOLITION IN THE PLANS, WHETHER OR NOT SHOWN ON THE PLANS. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA; 1-800-642-2444) A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY WORK. CONTRACTOR SHALL RETAIN A PRIVATE UTILITY-LOCATING CONTRACTOR TO LOCATE UTILITIES WITHIN THE WORK AREA WITH TRAINING PURSUANT TO CALIFORNIA GOVERNMENT CODE 4216 THROUGH 4216.9, WHICH MEETS THE MINIMUM TRAINING GUIDELINES OF COMMON GROUND ALLOWANCE (CGA) CURRENT BEST PRACTICES.**
2. **EXISTING BASEMAP AND INDICATED PROPERTY LINES ARE AS PROVIDED AND CONFIRMED BY CAL VADA SURVEYING, INC. TO BE BASED ON RECORD OF SURVEY 20218, (SEE PROJECT SPECIFICATIONS). PRIOR TO EXCAVATION, THE CONTRACTOR SHALL HAVE A STATE OF CALIFORNIA LICENSED SURVEYOR LAY OUT AND STAKE THE PROPERTY LINE BASED ON RECORD OF SURVEY 20218. IN ADDITION, THE CONTRACTOR SHALL MAINTAIN THE PROPERTY LINE DELINEATION THROUGHOUT THE DURATION OF THE PROJECT TO COMPLETE EXCAVATIONS UP TO PROPERTY LINE AS SHOWN IN DRAWINGS AND TO RESTORE FENCE WITHIN SHELL OIL PRODUCTS US PROPERTY.**
3. **(TO BE CONFIRMED) LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SITE SURVEY AND SUBSURFACE UTILITY INVESTIGATION PERFORMED IN 2020, AND AVAILABLE RECORDS FROM THE CITY OF ALAMEDA AND UTILITY OWNERS. ALL EXISTING AND ABANDONED UTILITIES MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT UTILITY LINES NOT EXPLICITLY CALLED OUT FOR DEMOLITION WHETHER SHOWN OR NOT SHOWN. (TO BE CONFIRMED)**
4. **CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES NOT EXPLICITLY CALLED OUT FOR DEMOLITION AND TAKE ALL STEPS NECESSARY TO AVOID CONTACT WITH SUCH WHICH MAY RESULT IN INJURY TO PERSONNEL OR DAMAGE TO FACILITIES. THE FINAL DETERMINATION OF EXACT LOCATIONS AND THE COST OF REPAIR TO DAMAGED FACILITIES IS THE RESPONSIBILITY OF CONTRACTOR. THE CONTRACTOR SHALL POTHOLE TO DAYLIGHT EXISTING UTILITIES PRIOR TO CONSTRUCTION AS NEEDED.**
5. **CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES NOT EXPLICITLY CALLED OUT FOR DEMOLITION.**
6. **NO CONNECTION SHALL BE MADE TO ANY WATER MAIN, STORM DRAIN, ELECTRICAL SOURCE OR ANY OTHER UTILITY SYSTEM WITHOUT PRIOR APPROVAL FROM THE UTILITY AGENCY, THE ENGINEER, AND THE SITE FACILITIES ENGINEER/MANAGER OR THEIR DESIGNEE.**
7. **ALL UTILITIES WITHIN THE WORK AREA SHALL BE REMOVED AND CAPPED BEYOND THE LIMITS OF THE EXCAVATION.**
8. **PRIOR TO ANY EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND FACILITIES, INCLUDING ALL WATER, SEWER, STORM DRAIN, GAS, OR OTHER PIPELINES; ALL BURIED ELECTRICAL POWER, COMMUNICATIONS, OR TELEVISION CABLES; ALL TRAFFIC SIGNAL AND STREET LIGHTING FACILITIES; ALL ROADWAY, STATE HIGHWAY, AND RAILROAD RIGHTS-OF-WAY; THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE AUTHORITIES REPRESENTING THE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITIES NOT LESS THAN 3 DAYS OR MORE THAN 7 DAYS PRIOR TO EXCAVATION SO THAT A REPRESENTATIVE OF SAID OWNERS OR AGENCIES CAN BE PRESENT DURING SUCH WORK IF THEY SO DESIRE.**
9. **OVERHEAD ELECTRICAL LINES: CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND MAINTAINING SAFE CLEARANCES FROM OVERHEAD ELECTRICAL LINES BASED ON LINE VOLTAGE AT ALL TIMES AND, WHERE HAZARDOUS CONDITIONS EXIST, FOR TAKING THE NECESSARY PRECAUTIONS AGAINST INJURY AND DAMAGE.**
10. **(TO BE CONFIRMED) MATERIAL FOR UTILITY ABANDONMENT SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:**
    - **12" DIAMETER PIPE OR LARGER:**
      - **A. PORTLAND CEMENT CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 POUNDS PER SQUARE INCH.**
      - **B. CEMENT: AMERICAN SOCIETY FOR TESTING OF MATERIALS C 150, TYPE II MODIFIED.**
    - **10" DIAMETER PIPE OR SMALLER**
      - **A. NON-SHRINK GROUT (QUICKRETE NON-SHRINK GROUT OR APPROVED EQUIVALENT).**
      - **B. NON-SHRINK GROUT: AMERICAN SOCIETY FOR TESTING OF MATERIALS C1107 STANDARD SPECIFICATION FOR PACKAGED DRY, HYDRAULIC-CEMENT GROUT (NONSHRINK). (TO BE CONFIRMED)**

STORMWATER, EROSION AND SEDIMENTATION NOTES

1. **STORMWATER POLLUTION CONTROLS SHALL BE IMPLEMENTED TO MINIMIZE RUNOFF OF SEDIMENT FROM DELINEATED EXCAVATION AREAS IN STORM WATER. CONTRACTOR SHALL COMPLY ANY REQUIREMENTS FROM THE CITY OF ALAMEDA AND THE STORMWATER POLLUTION PREVENT PLAN PREPARED BY ENGINEER, AND ANY ADDITIONAL REQUIREMENTS INCLUDED IN THE STATE WATER RESOURCES BOARD ORDER 2009-009-DWQ (CONSTRUCTION GENERAL PERMIT), IF SUCH PERMIT IS REQUIRED AND OBTAINED BY THE ENGINEER.**
2. **ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN WILL BE CONSTRUCTED IN ACCORDANCE WITH THE "CALTRANS STATEWIDE STORMWATER MANAGEMENT PLAN." THESE MEASURES WILL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.**
3. **ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY ONE OF THE PRACTICES ACCEPTED IN THE STANDARDS, AND PROTECTION SHALL REMAIN UNTIL PERMANENT STABILIZATION HAS BEEN ESTABLISHED.**
4. **ALL EROSION CONTROL DEVICES AND BMPS SHALL BE MAINTAINED AND PERIODICALLY INSPECTED, MAINTAINED AND CORRECTED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.**
5. **PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. STREET SWEEPING CAN BE UTILIZED. DO NOT UTILIZE A FIRE OR GARDEN HOSE TO CLEAN ROADS.**
6. **AVAILABLE "RUMBLE STRIPS" SHALL BE INSTALLED AT ALL SITE EXITS WHERE SOIL HAULING WILL OCCUR AND WHERE EQUIPMENT OR VEHICLES THAT DRIVE OVER EXPOSED SOIL MAY EXIT THE SITE.**
7. **FUEL THAT MAY BE KEPT ONSITE DURING CONSTRUCTION WILL BE STORED IN SUCH A MANNER THAT PREVENTS ACCIDENTAL SPILLS FROM IMPACTING STORM WATER. ANY STORM DRAIN INLETS WHERE FUEL MAY MOBILIZE SHALL BE PROTECTED USING HYDROCARBON SOCKS SECURED USING SANDBAGS.**
8. **STOCKPILE LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO CONSTRUCTION. WHEN EARTHWORK ACTIVITIES OCCUR, DUST CONTROL MEASURES SHALL BE IMPLEMENTED TO MINIMIZE DUST GENERATION. EXCAVATED SOIL SHALL BE HANDLED IN A MANNER CONSISTENT WITH THE REQUIREMENTS OF BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD). AT A MINIMUM CONTRACTOR SHALL STOCKPILE SOIL USING A MINIMUM 20-MILLIMETER (MIL) HIGH DENSITY POLYETHYLENE (HDPE) BOTTOM LINER WITH BERMED SIDES CONSISTING OF 1 FOOT OF SOIL OR K RAILS. STOCKPILED MATERIAL WILL BE COVERED WITH A WEIGHTED 10-MIL (MIN) HDPE COVER AND SECURED DURING PERIODS WHEN MATERIAL IS NOT BEING ADDED OR REMOVED, TO SUPPRESS THE EMISSION OF DUST AND VOCS AND TO PREVENT EXPOSURE TO RAINWATER. ALL STOCKPILES SHALL BE ENCIRCLED WITH STRAW WATTLES SECURED USING SANDBAGS. DURING PERIODS OF ACTIVE USE, THE SOIL STOCKPILE WITH BE KEPT VISIBLY MOIST TO MINIMIZE DUST EMISSIONS. DURING REMOVAL OF IMPACTED SOIL, THE EXCAVATION BOTTOM AND SIDEWALLS WILL BE MOISTENED TO SUPPRESS DUST EMISSIONS. IF NECESSARY, BASED ON PID READINGS, THE EXCAVATION SHALL BE SECURELY COVERED AT THE END OF EACH WORKDAY.**

DEMOLITION NOTES

1. **PAVEMENT AND CURBING SHALL BE REMOVED FROM EXCAVATION AREAS DELINEATED. PAVEMENT SHALL BE SAWCUT AT LIMITS OF REMOVAL PRIOR TO RESTORATION.**
2. **SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING PERFORMANCE OF WORK, CONTRACTOR SHALL CONSULT THE UTILITY OWNER AND ENGINEER IMMEDIATELY FOR DIRECTION. CONTRACTOR SHALL COOPERATE WITH THE SHELL OIL PRODUCTS US DISTRIBUTION CENTER REPRESENTATIVE AND UTILITY COMPANIES IN KEEPING RESPECTIVE FACILITIES IN OPERATION. CONTRACTOR SHALL REPAIR DAMAGED UTILITIES TO SATISFACTION OF THE UTILITY OWNER, SHELL OIL PRODUCTS US, AND THE CITY OF ALAMEDA.**
3. **ASBESTOS-CONTAINING MATERIAL (ACM) HAS BEEN IDENTIFIED IN SOME STRUCTURES AT THE SITE DURING THE ASBESTOS AND LEAD PAINT SURVEY PERFORMED IN 2014. THE CONTRACTOR SHALL MANAGE THE REMOVAL AND DISPOSAL OF ACM. THE CONTRACTOR SHALL SUBCONTRACT A CERTIFIED, LICENSED AND PERMITTED ASBESTOS ABATEMENT SUBCONTRACTOR TO PROVIDE THE REMOVAL OF ACMS. ASBESTOS ABATEMENT ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF CALIFORNIA REGULATIONS AND OHSA STANDARDS.**
4. **CONTRACTOR SHALL CLEAN THE ABOVE GROUND STORAGE TANKS (ASTS) IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND REQUIREMENTS. AFTER INSPECTED BY THE ALAMEDA FIRE DEPARTMENT, THE ASTS SHALL BE DEMOLISHED BY THE CONTRACTOR.**
5. **CONTRACTOR SHALL MANAGE ALL DEMOLITION WASTES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND REQUIREMENTS AND THE WASTE MANAGEMENT AND TRANSPORTATION PLAN PREPARED BY ENGINEER. CONTRACTOR SHALL RECYCLE AT MINIMUM SIXTY FIVE PERCENT OF ALL CONSTRUCTION AND DEMOLITION DEBRIS TO MEET REQUIREMENT OF CITY OF ALAMEDA.**
6. **THE EXTENT OF DEMOLITION REQUIRED BY THE CONTRACTOR WILL BE REVIEWED AND MODIFIED AS NECESSARY PRIOR TO THE "ISSUED FOR CONSTRUCTION" DRAWINGS.**

EXCAVATION NOTES

1. **GROUNDWATER MAY BE ENCOUNTERED DURING EXCAVATIONS, A DEWATERING SYSTEM SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PREPARE A SITE DEWATERING PLAN FOR ENGINEER REVIEW AND APPROVAL PRIOR TO EXCAVATION START. A SPECIAL DISCHARGE PERMIT FROM EAST BAY MUNICIPAL UTILITY DISTRICT WILL BE OBTAINED BY ENGINEER. CONTRACTOR SHALL OPERATE THE DEWATERING SYSTEM IN ACCORDANCE WITH THE PERMIT CONDITIONS.**
2. **EXCAVATION SHALL BE PERFORM ED IN COMPLIANCE WITH THE LINES AND GRADES SHOWN ON THE DRAWINGS. ALL DISTURBED, LOOSE, DESICCATED, SLAKED, OVERLY WET SOIL, DEBRIS, ORGANIC MATERIAL, AND ANY OTHER UNDESIRABLE SOIL SHALL BE REMOVED. ADDITIONAL REMOVAL MAY BE REQUIRED IF LOOSE OR SOFT MATERIAL OR UNDOCUMENTED FILL IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATION.**
3. **TEMPORARY EXCAVATIONS GREATER THAN 5 FEET IN DEPTH SHALL BE SLOPED BACK AT A MAXIMUM INCLINATION OF 1.5 HORIZONTAL: 1 VERTICAL OR BENCHED AT A MAXIMUM OF 0.75 HORIZONTAL: 1 VERTICAL. ALTERNATIVELY, ALL EXCAVATIONS GREATER THAN 5 FEET IN DEPTH SHALL BE SHORED (IF SPACE IS LIMITED) FOR TEMPORARY CUT SLOPES. ALL EXCAVATIONS, TEMPORARY CUT SLOPES, AND TEMPORARY SHORING SHALL ALSO COMPLY WITH CALIFORNIA OSHA STANDARDS FOR TRENCHING AND SHORING.**

BACKFILL NOTES

1. **AREAS TO RECEIVE FILL SHALL BE CLEARED AND STRIPPED OF ALL DEBRIS, DELETERIOUS MATERIAL, ORGANIC MATERIAL AND/OR VEGETATION, AND REMNANTS RESULTING FROM DEMOLITION OF EXISTING PAVEMENTS.**
2. **AT THE BOTTOM OF THE EXCAVATION IN THE NORTHEAST AREA, CONTRACTOR SHALL FIRST PLACE 3-INCH THICK OF 1/2 TO 3/4-INCH GRADATION CRUSHED ROCK THAT HAS BEEN TAMPED INTO PLACE USING A FLAT PLATE COMPACTOR, THEN PLACE DEMARCATION FABRIC (BRIGHT ORANGE GEOTEXTILE, MIRAFI 140N OR EQUIVALENT). AT THE BOTTOM OF THE EXCAVATION AT THE TANK FARM AREA, CONTRACTOR SHALL PLACE DEMARCATION FABRIC (BRIGHT ORANGE GEOTEXTILE, MIRAFI 140N OR EQUIVALENT). IMPORTED FILL SHALL BE PLACED ON THE TOP OF THE DEMARCATION FABRIC TO THE FINISHED GRADE.**
3. **IMPORTED FILL SHALL BE FINE-GRAINED NON-ORGANIC MATERIAL FREE FROM PEAT, TRASH, METAL, PIECES OF WOOD, PARTS OF TREES, ROOTS, SHRUBS, SOD, ORGANIC MATTER, ROCKS LARGER THAN 3-INCHES, AND OTHER DELETERIOUS MATERIAL. IMPORTED FILL SHALL MEET THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL'S CLEAN FILL ADVISORY GUIDELINES.**
4. **THE PERCENT OF WEIGHT PASSING THE NO. 200 SIEVE SHALL NOT EXCEED 50 PERCENT. EXPANSIVE CLAY (ANY CLAY HAVING EXPANSION INDEX EI>70) SHALL NOT BE USED. SOIL THAT CONTAINS MORE THAN 35 PERCENT BY THE WEIGHT OF MATERIAL RETAINED ON A U.S. STANDARD NO. 4 SIEVE SHALL NOT BE USED.**
5. **ALL FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 8 INCHES LOOSE DEPTH AND COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D1557.**
6. **PRIOR TO PLACEMENT OF BACKFILL, A REPRESENTATIVE OF THE ENGINEER WILL INSPECT AND APPROVE THE EXCAVATION BOTTOMS. NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE DATE OF FILL PLACEMENT.**
7. **TRENCHING AND BACKFILL MATERIAL WHICH DOES NOT MEET THE SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.**

COMPACTION NOTES

1. **EACH LAYER OF EARTH FILL SHALL BE COMPACTED BY APPROVED TAMPING METHODS INCLUDING SHEEPS-FOOT ROLLERS, PNEUMATIC-TIRED ROLLERS, OR ANY OTHER MECHANICAL MEANS AS LONG AS THE SPECIFIED RELATIVE COMPACTION IS ACHIEVED. AT LOCATIONS WHERE IT WOULD BE IMPRACTICAL BECAUSE OF INACCESSIBILITY, FILL LAYERS SHALL BE COMPACTED BY HAND-DIRECTED COMPACTION EQUIPMENT.**
2. **ALL FILL SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D1557.**
3. **THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE BROUGHT WITHIN 2 PERCENT OF THE LABORATORY OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.**

GRADE FINISHING NOTES

1. **SURFACE FINISHING: SOIL STABILIZER SHALL BE APPLIED TO COMPACTED SOIL AT THE FINISHED GRADES.**
2. **SURFACE GRADES: SURFACE GRADES SHOWN ARE TO BE FINISHED GRADES.**
3. **ADJUST ALL RIMS TO FINISHED PAVING AND GRADING ELEVATION.**

BACK-FLOW VALVE
CAR STOP
CONTROL POINT
DECORATIVE BRICK
DOOR
ELECTRIC MANHOLE
FIRE DEPARTMENT CONNECTION
FIRE HYDRANT
FOUND MONUMENT AS NOTED
GAS METER
GAS VALVE
GATE
GUARD POST
GUY WIRE
LIGHT STANDARD
LIGHT STANDARD
MONITORING WELL
PINE TREE
POWER POLE
POWER POLE W/LIGHT
SEWER CLEAN OUT
SEWER MANHOLE
SIGN
STAIRS SHOWING DOWNWARD DIRECTION
STORM DRAIN MANHOLE
STREET LIGHT
TREE (TYPICAL)

TRUNCATED DOME
UTILITY POLE
WATER FAUCET
WATER METER
WATER VALVE
ASSESSOR'S PARCEL NUMBER
CENTERLINE
DIAMETER OF EXISTING TREE
CONCRETE
DRAIN INLET
ELECTRIC PANEL
ELECTRIC PULL BOX
FINISH FLOOR
FINISH SURFACE
FLOW LINE
HANDICAP RAMP
INVERT
NATURAL GROUND
SEWER CLEAN OUT
RIGHT OF WAY
TOP OF BERM
TOP OF CURB
TOP OF STRUCTURE
TRANSFORMER
TYPICAL

BLOCK WALL
CANOPY
CENTERLINE
CHAIN LINK FENCE
CONCRETE/RETAINING WALL
EDGE OF PAVEMENT
FLOW LNE
INTERIOR LOT LINE
MONUMENT LINE
OVERHANG
OVERHEAD LINE
PROPERTY LINE
RIGHT-OF-WAY
SANITARY SEWER LINE PAINTED
STORM DRAIN LINE PAINTED
WOOD FENCE
WROUGHT IRON FENCE
LIMITS OF EXCAVATION
TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA

ASPHALT PAVING
CONCRETE PAVING
SOIL
EXCAVATION AREA
EXISTING ABOVE GROUND STRUCTURES TO BE DEMOLISHED
PROPOSED STAGING AREA
EXISTING ABOVE GROUND TRANSFORMER, GUY LINES, POWER DROP AND TENSION POLE TO BE PROTECTED IN PLACE
EXISTING PAVEMENT TO BE DEMOLISHED AND REMOVED. EXISTING RAIL TRACKS UNDER PAVEMENT TO BE DEMOLISHED AND REMOVED

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER
LICENSE NUMBER ----

NO.	DATE	DR	CHK	REVISION	APVD	BY
DSGN						APVD

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

GENERAL NOTES AND ABBREVIATIONS

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 9461208619
TEL: 510.663.4100
FAX: 510.663.4141

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

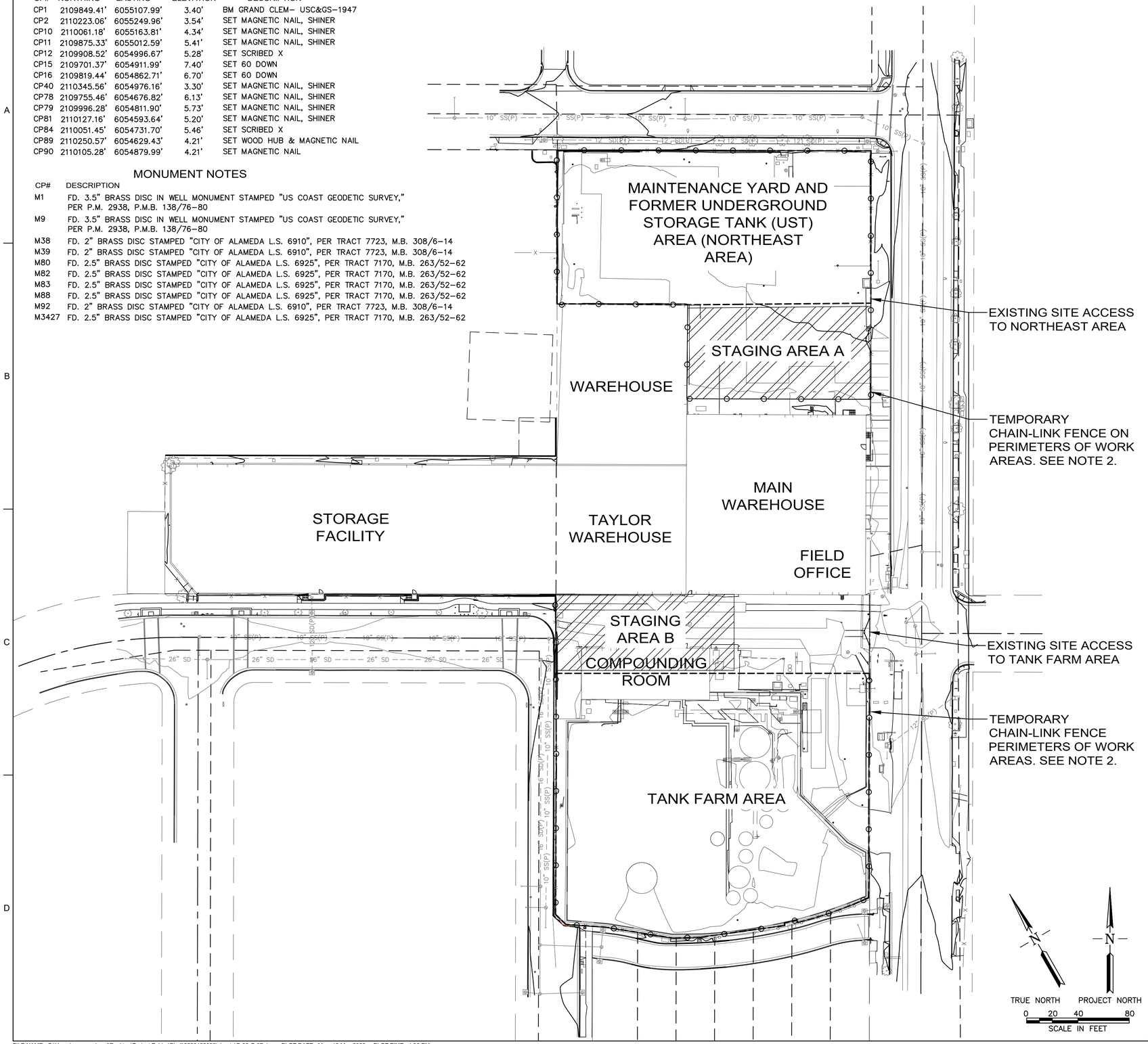
DATE	05/18/2020
PROJECT NO.	8620192890
DWG	G-2
SHEET	2 OF 10

CONTROL POINTS

CP#	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	2109849.41'	6055107.99'	3.40'	BM GRAND CLEM– USC&GS–1947
CP2	2110223.06'	6055249.96'	3.54'	SET MAGNETIC NAIL, SHINER
CP10	2110061.18'	6055163.81'	4.34'	SET MAGNETIC NAIL, SHINER
CP11	2109875.33'	6055012.59'	5.41'	SET MAGNETIC NAIL, SHINER
CP12	2109908.52'	6054996.67'	5.28'	SET SCRIBED X
CP15	2109701.37'	6054911.99'	7.40'	SET 60 DOWN
CP16	2109819.44'	6054862.71'	6.70'	SET 60 DOWN
CP40	2110345.56'	6054976.16'	3.30'	SET MAGNETIC NAIL, SHINER
CP78	2109755.46'	6054676.82'	6.13'	SET MAGNETIC NAIL, SHINER
CP79	2109996.28'	6054811.90'	5.73'	SET MAGNETIC NAIL, SHINER
CP81	2110127.16'	6054593.64'	5.20'	SET MAGNETIC NAIL, SHINER
CP84	2110051.45'	6054731.70'	5.46'	SET SCRIBED X
CP89	2110250.57'	6054629.43'	4.21'	SET WOOD HUB & MAGNETIC NAIL
CP90	2110105.28'	6054879.99'	4.21'	SET MAGNETIC NAIL

MONUMENT NOTES

CP#	DESCRIPTION
M1	FD. 3.5" BRASS DISC IN WELL MONUMENT STAMPED "US COAST GEODETIC SURVEY," PER P.M. 2938, P.M.B. 138/76–80
M9	FD. 3.5" BRASS DISC IN WELL MONUMENT STAMPED "US COAST GEODETIC SURVEY," PER P.M. 2938, P.M.B. 138/76–80
M38	FD. 2" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6910", PER TRACT 7723, M.B. 308/6–14
M39	FD. 2" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6910", PER TRACT 7723, M.B. 308/6–14
M80	FD. 2.5" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6925", PER TRACT 7170, M.B. 263/52–62
M82	FD. 2.5" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6925", PER TRACT 7170, M.B. 263/52–62
M83	FD. 2.5" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6925", PER TRACT 7170, M.B. 263/52–62
M88	FD. 2.5" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6925", PER TRACT 7170, M.B. 263/52–62
M92	FD. 2" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6910", PER TRACT 7723, M.B. 308/6–14
M3427	FD. 2.5" BRASS DISC STAMPED "CITY OF ALAMEDA L.S. 6925", PER TRACT 7170, M.B. 263/52–62



NOTES:
1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR TO USE EXISTING CHAIN-LINK FENCE WHEN AVAILABLE. CONTRACTOR TO ADD TEMPORARY CHAIN-LINK FENCE WHERE EXISTING FENCE IS NOT PRESENT.

PROPOSED STAGING AREA

LIMITS OF EXCAVATION

TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 3, (2017.50) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819; SAID BEARINGS ARE DETERMINED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING CALIFORNIA SPATIAL REFERENCE NETWORK CONTINUOUS OPERATING REFERENCE STATIONS (C.O.R.S.):

C.S.R.C. P224:
NORTHING = 2141582.63' EASTING = 6065448.14'

C.S.R.C. WINT:
NORTHING = 2064266.65' EASTING = 6086754.63'

BENCHMARK

VERTICAL DATUM:
ELEVATIONS SHOWN HEREON ARE BASED UPON ALAMEDA CITY BENCHMARK GRAND CLEM-USC&GS-1947, ELEVATION 3.397 FEET (NGVD 29).

SITE BENCHMARK DESCRIPTION:
STATION IS LOCATED IN THE NORTH-CENTRAL PART OF THE CITY OF ALAMEDA, IN THE GROUND 6 FEET NORTH OF THE NORTH CURB-LINE OF CLEMENT AVENUE AND 4 FEET EAST OF THE EAST CURB-LINE OF GRAND STREET. MARKED BY A STANDARD TRAVERSE STATION DISK, STAMPED GRAND CLEM 1947, SET IN TOP OF CONCRETE POST 6 INCHES SQUARE AT THE TOP, 6 BY 10 INCHES AT THE BOTTOM, AND 30 INCHES LONG. THE MARK IS ABOUT 10 INCHES BELOW WITH A CITY OF OAKLAND IRON LID.

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER
LICENSE NUMBER ----

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

SITE LAYOUT, LIMITS OF WORK, AND STAGING AREAS

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612
PHONE: 510.663.4100
FAX: (510) 663-4141

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	G-3
SHEET	3 OF 10

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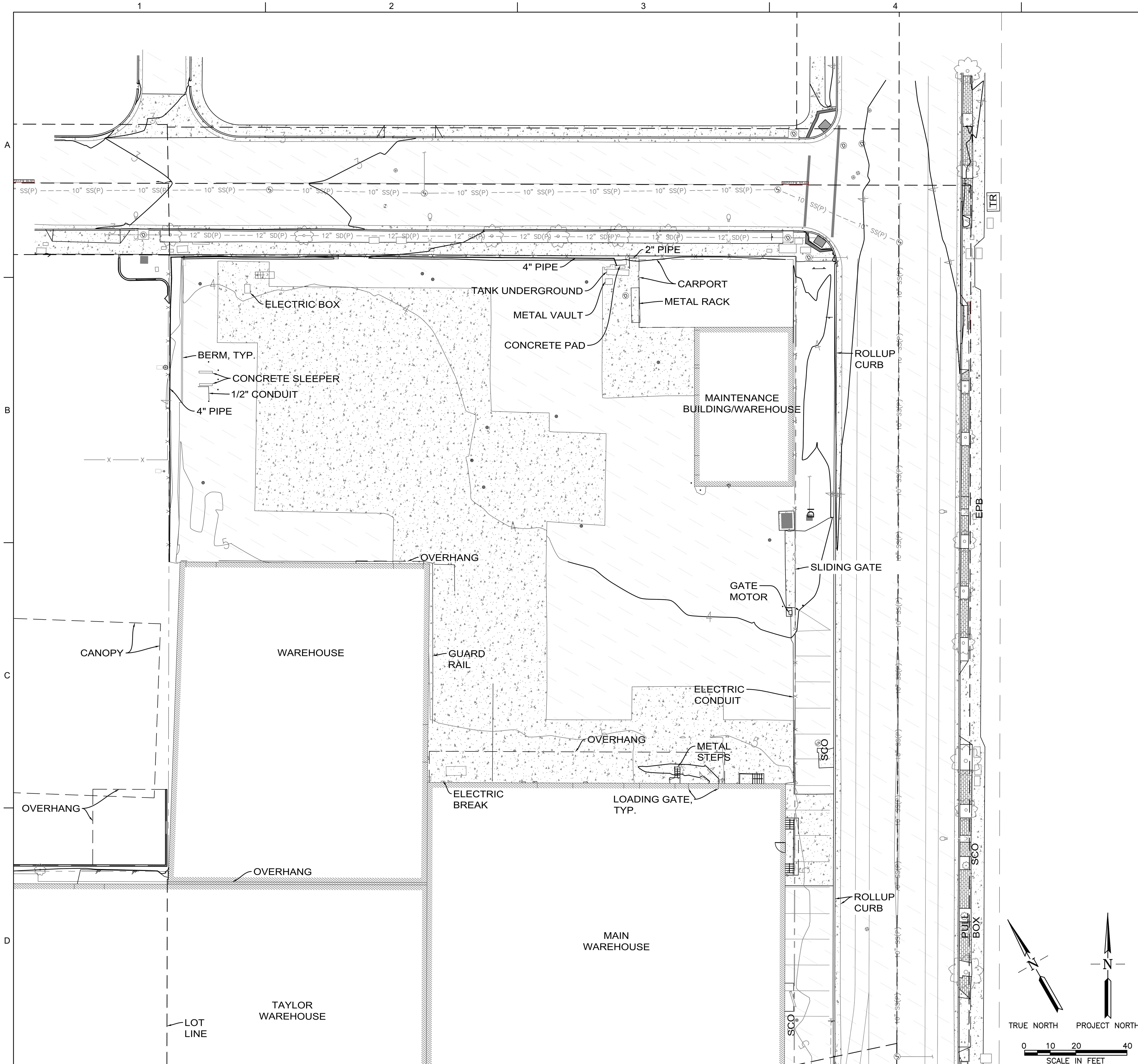

NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.

ASPHALT PAVING

CONCRETE PAVING

SOIL

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER LICENSE NUMBER -----

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DSGN	DR	CHK	APVD

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

EXISTING
SITE CONDITIONS
NORTHEAST AREA

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 946120869

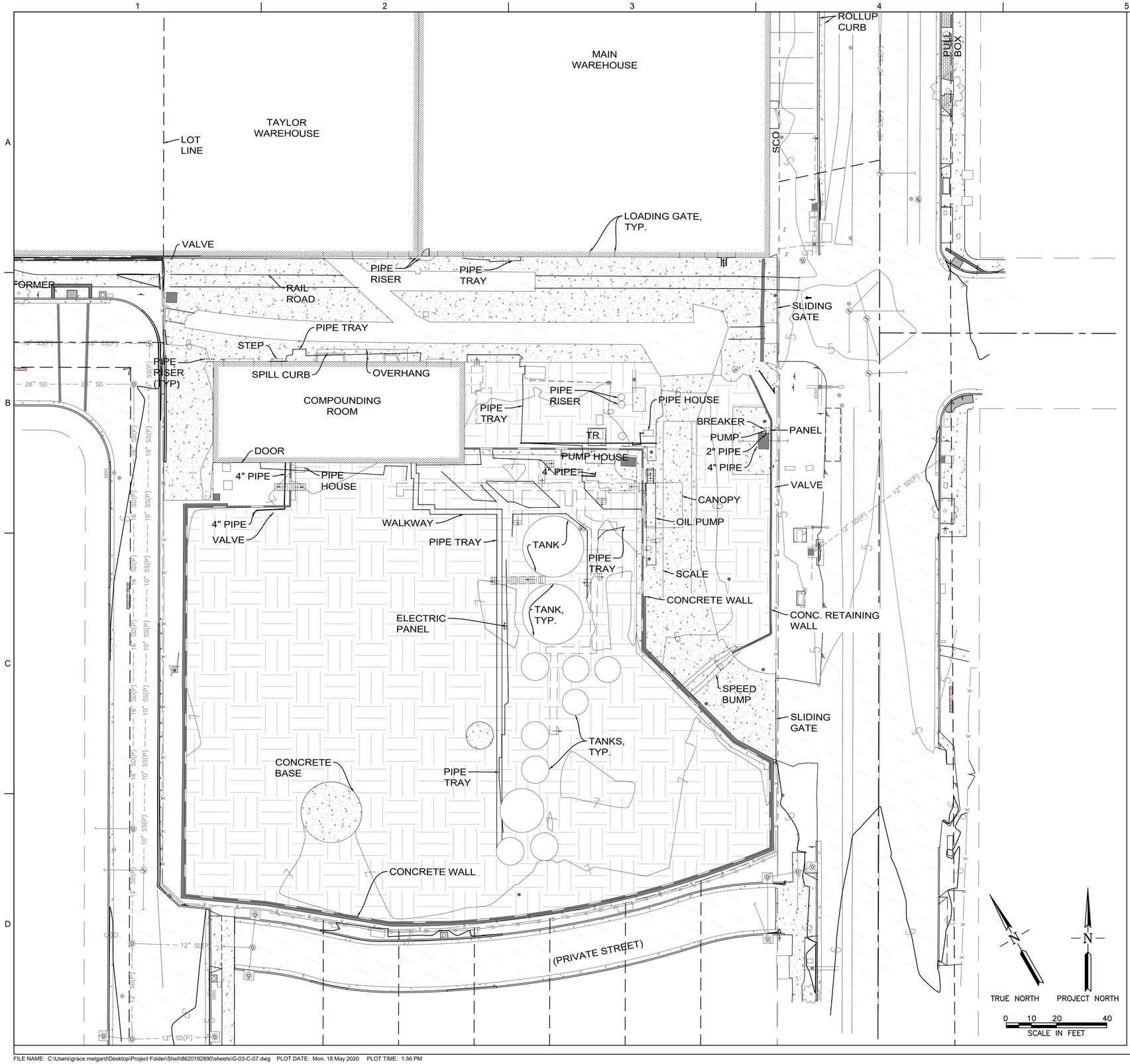
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	C-1
SHEET	4 OF 10

FILE NAME: C:\Users\grace.melgard\Desktop\Project Folder\Shell\8620192890\sheets\G-03-C-07.dwg PLOT DATE: Mon, 18 May 2020 PLOT TIME: 1:36 PM



NOTES:
1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.

ASPHALT PAVING

CONCRETE PAVING

SOIL

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER
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					APVD		

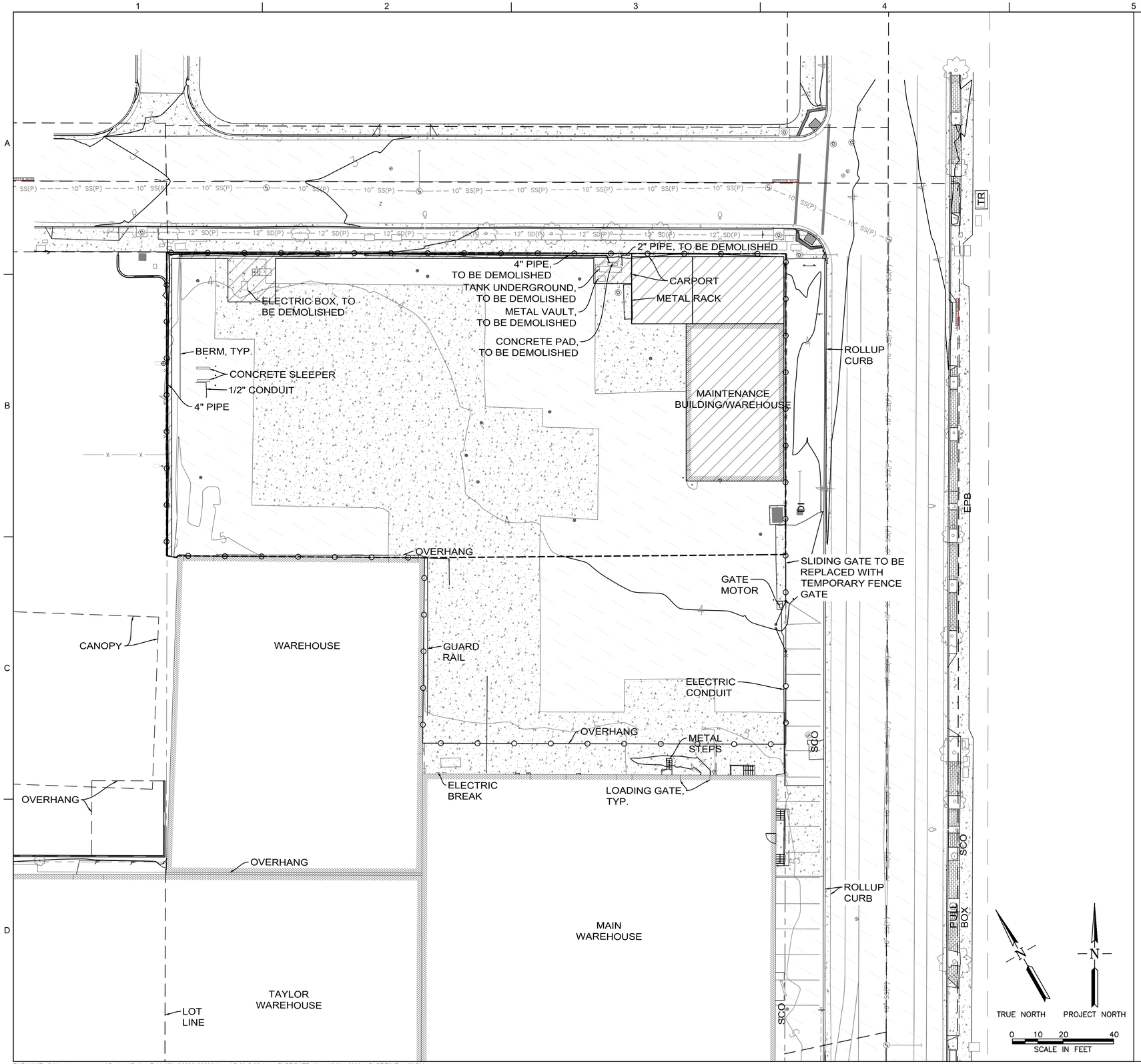
PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

EXISTING SITE CONDITIONS TANK FARM AREA

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612
TELEPHONE: (510) 835-4100
FAX: (510) 663-4141

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	C-2
SHEET	5 OF 10



NOTES:
1. DEMOLISH ALL ABOVE GROUND FEATURES LOCATED WITHIN THE LIMITS OF EXCAVATION.

EXISTING ABOVE GROUND STRUCTURES TO BE DEMOLISHED

LIMITS OF EXCAVATION

TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA

MAY 2020

FILE NAME: C:\Users\grace.melgard\Desktop\Project Folder\Shell\8620192890\sheets\G-03-C-07.dwg PLOT DATE: Mon, 18 May 2020 PLOT TIME: 1:36 PM

SEAL:

CA PROFESSIONAL ENGINEER
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DSGN		DR	CHK	APVD

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

NORTHEAST AREA DEMOLITION PLAN

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612
TELEPHONE: (510) 663-4100
FAX: (510) 663-4141

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DATE	05/18/2020
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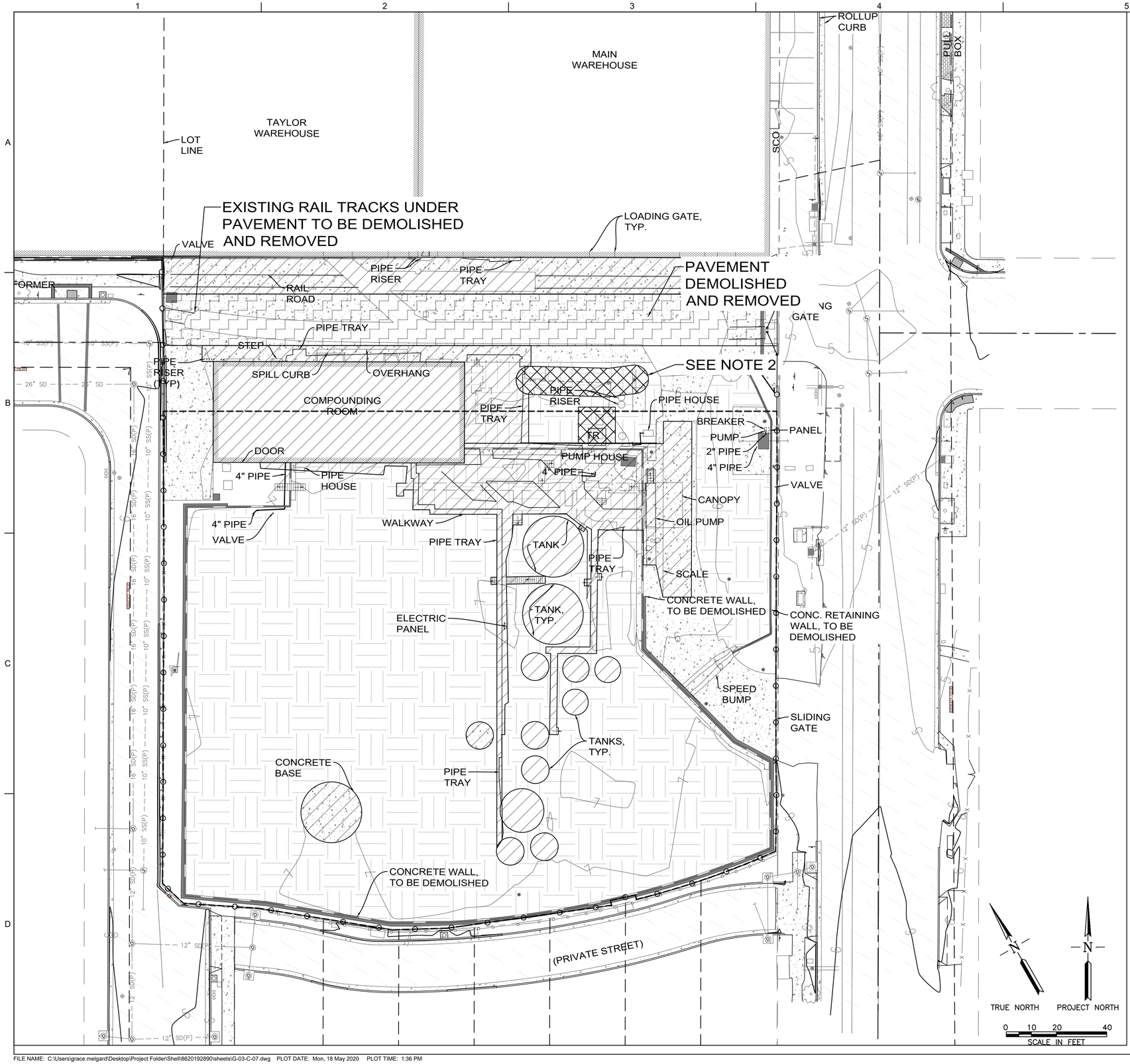
DWG	C-3
SHEET	6 OF 10



NOTES:
1. DEMOLISH ALL ABOVE GROUND FEATURES LOCATED WITHIN THE LIMITS OF EXCAVATION.
2. NO EXCAVATION SHALL BE PERFORMED WITHIN 5 FEET OF POWER POLES AND GUY ANCHORS.
3. DEMOLISH EXISTING ABOVE GROUND FEATURES OUTSIDE OF THE LIMITS OF EXCAVATION INCLUDING BUT NOT LIMITED TO PIPE RISERS, PIPE HOUSES, PIPE TRAYS, AND RAIL ROADS.

EXISTING ABOVE GROUND STRUCTURES TO BE DEMOLISHED

EXISTING ABOVE GROUND TRANSFORMER, GUY LINES, POWER DROP AND TENSION POLE TO BE PROTECTED IN PLACE

EXISTING PAVEMENT TO BE DEMOLISHED AND REMOVED. EXISTING RAIL TRACKS UNDER PAVEMENT TO BE DEMOLISHED AND REMOVED

LIMITS OF EXCAVATION

TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA

MAY 2020

SEAL:

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DSGN			REVISION			

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

TANK FARM AREA DEMOLITION PLAN

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612
TELEPHONE: (510) 663-4100
FAX: (510) 663-4141

VERIFY SCALE
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DATE	05/18/2020
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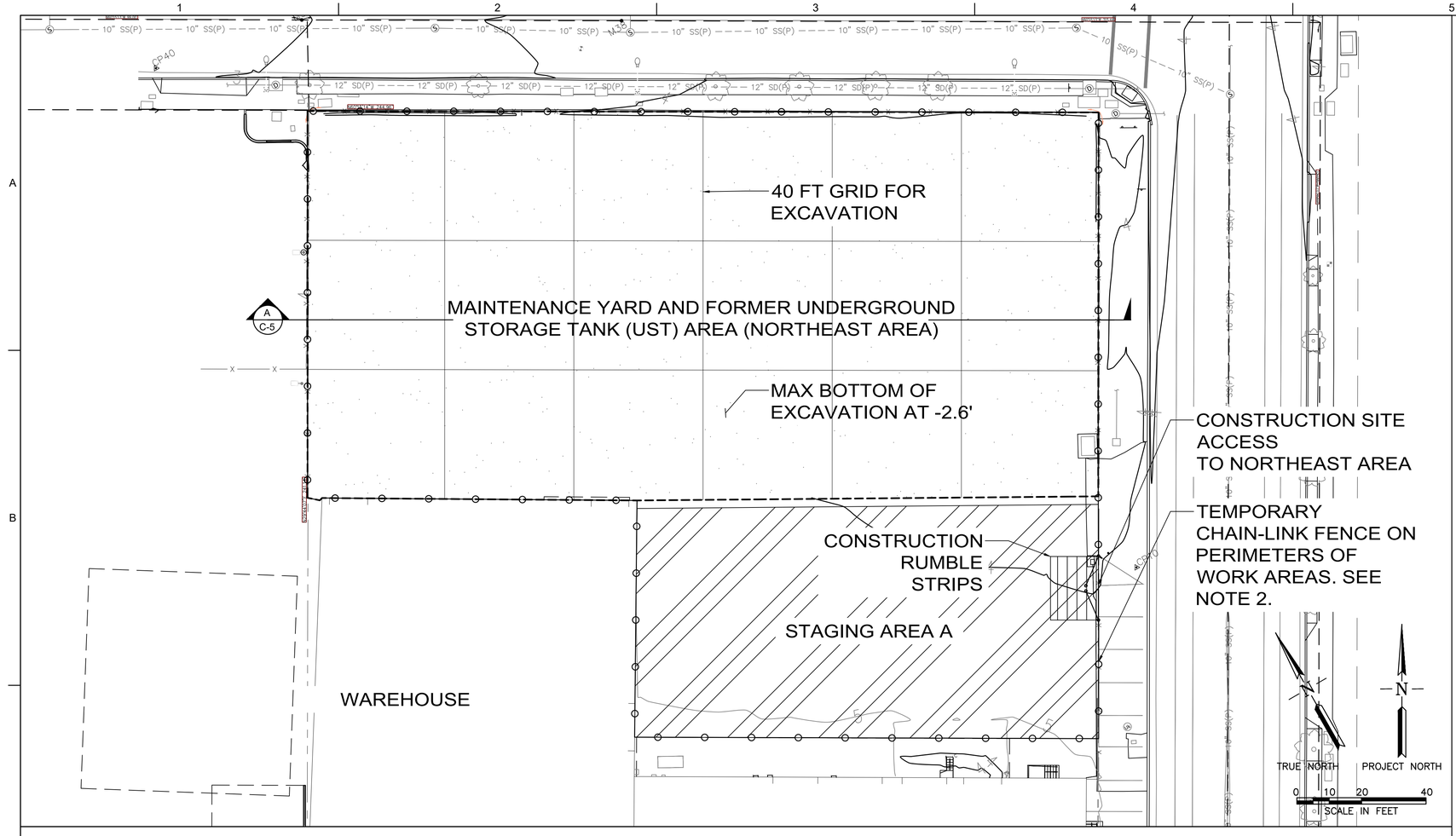
DWG	C-4
SHEET	7 OF 10

FILE NAME: C:\Users\grace.melgard\Desktop\Project Folder\Shell\8620192890\sheets\G-03-C-07.dwg PLOT DATE: Mon, 18 May 2020 PLOT TIME: 1:36 PM



NOTES:

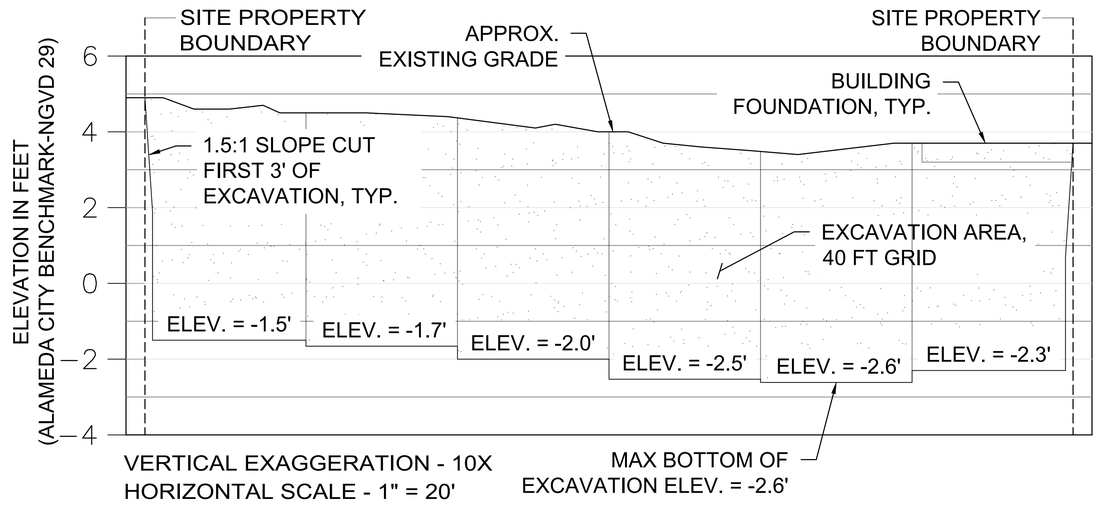
1. AFTER EXCAVATION, CONFIRMATION SAMPLING OF EXCAVATION SIDEWALLS AND BOTTOMS WILL BE CONDUCTED BY THE ENGINEER. CONTRACTOR SHALL FACILITATE ACCESS TO THE SAMPLING AREAS AND ACCOUNT FOR SAMPLING ACTIVITIES IN THEIR CONSTRUCTION SCHEDULE.
2. CONTRACTOR TO USE EXISTING CHAIN-LINK FENCE WHEN AVAILABLE. CONTRACTOR TO ADD TEMPORARY CHAIN-LINK FENCE WHERE EXISTING FENCE IS NOT PRESENT.

EXCAVATION AREA

PROPOSED STAGING AREA

LIMITS OF EXCAVATION

TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA



A / C-5 NORTHEAST AREA CROSS SECTION

SCALE: AS NOTED

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER
LICENSE NUMBER ---

NO.	DSGN	DATE	DR	CHK	APVD	BY	APVD
			REVISION				

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

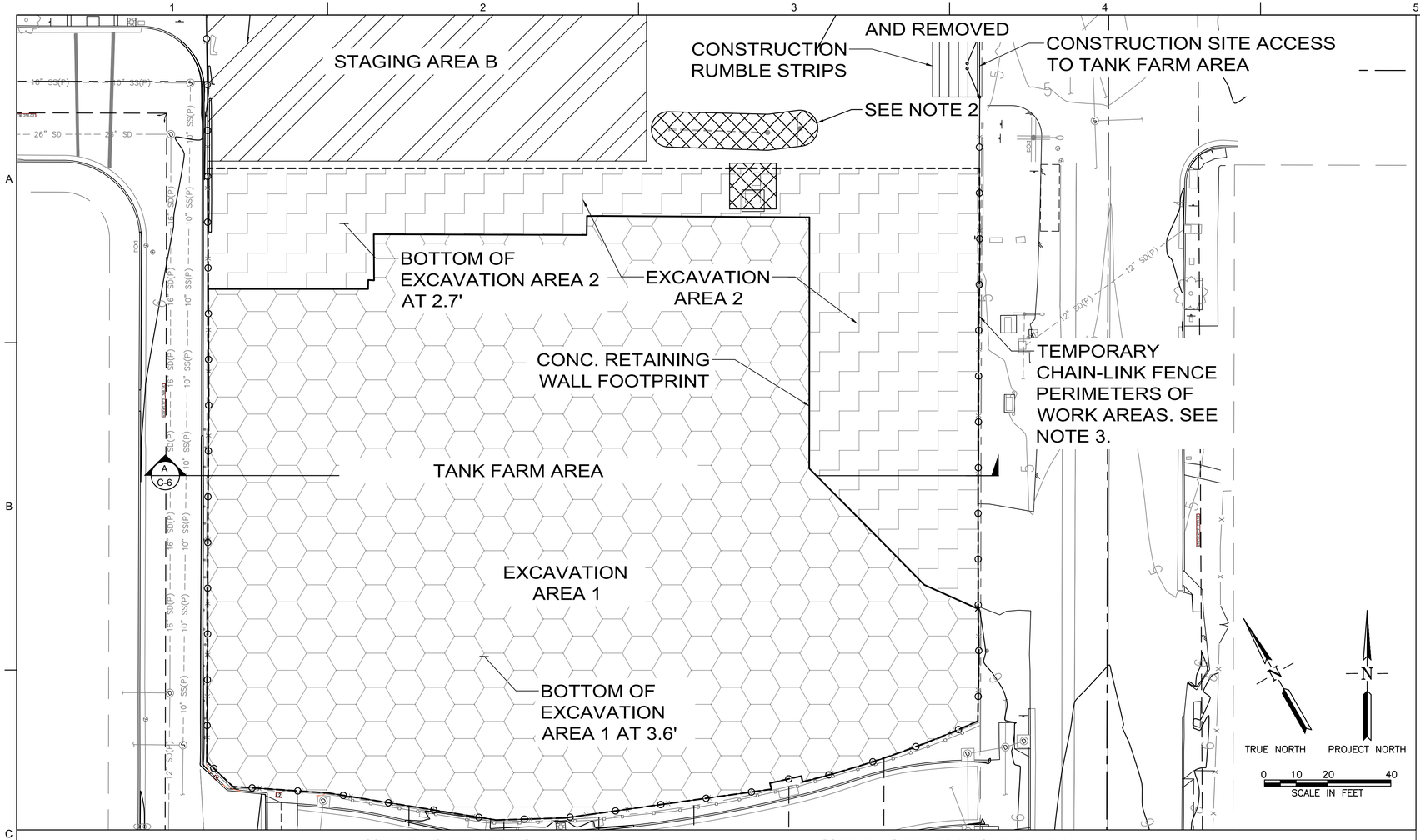
NORTHEAST AREA
EXCAVATION PLAN

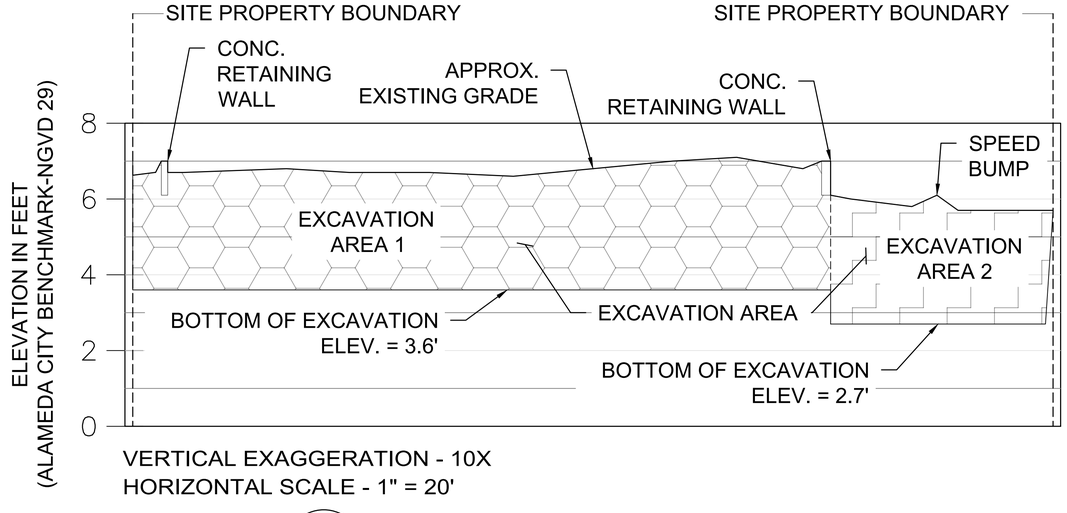
wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612/2936819
TELEPHONE: (510) 663-4100
FAX: (510) 663-4141

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	C-5
SHEET	8 OF 10





VERTICAL EXAGGERATION - 10X
HORIZONTAL SCALE - 1" = 20'

A / C-6 TANK FARM AREA CROSS SECTION

SCALE: AS NOTED

NOTES:
1. AFTER EXCAVATION, CONFIRMATION SAMPLING OF EXCAVATION SIDEWALLS AND BOTTOMS WILL BE CONDUCTED BY THE ENGINEER. CONTRACTOR SHALL FACILITATE ACCESS TO THE SAMPLING AREAS AND ACCOUNT FOR SAMPLING ACTIVITIES IN THEIR CONSTRUCTION SCHEDULE. BASED ON THE RESULTS OF CONFIRMATION SAMPLING, ADDITIONAL EXCAVATION MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
2. NO EXCAVATION SHALL BE PERFORMED WITHIN 5 FEET OF POWER POLES AND GUY ANCHORS.
3. CONTRACTOR TO USE EXISTING CHAIN-LINK FENCE WHEN AVAILABLE. CONTRACTOR TO ADD TEMPORARY CHAIN-LINK FENCE WHERE EXISTING FENCE IS NOT PRESENT.

- EXCAVATION AREA 1
- EXCAVATION AREA 2
- EXISTING ABOVE GROUND TRANSFORMER, GUY LINES, POWER DROP AND TENSION POLE TO BE PROTECTED IN PLACE
- PROPOSED STAGING AREA
- LIMITS OF EXCAVATION
- TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA

MAY 2020

SEAL:

CA PROFESSIONAL ENGINEER
LICENSE NUMBER ---

NO.	DATE	REVISION	BY
DSGN		DR	CHK
			APVD
			APVD

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

TANK FARM AREA EXCAVATION PLAN

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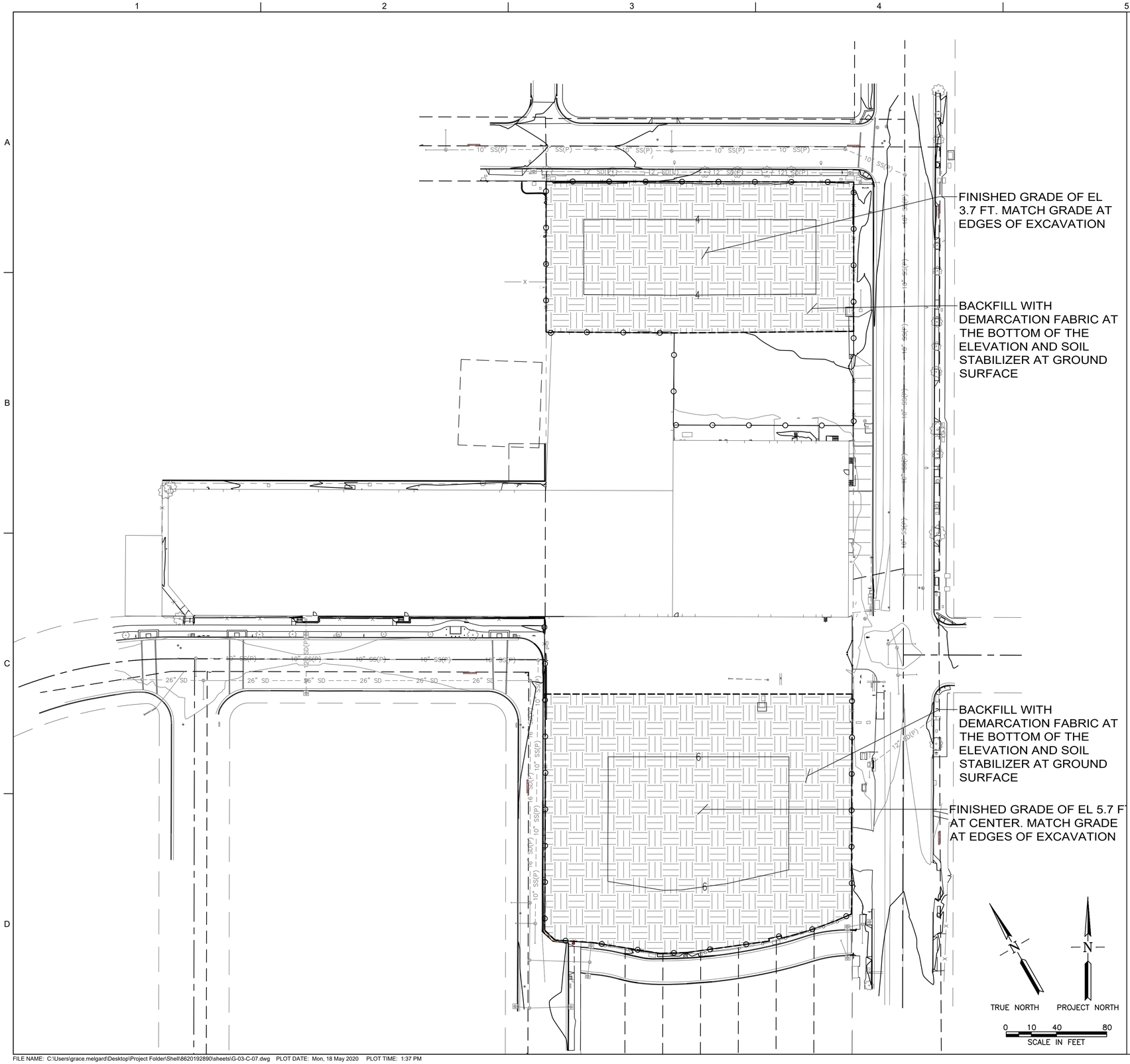
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	C-6
SHEET	9 OF 10

FILE NAME: C:\Users\grace.melgard\Desktop\Project Folder\Shell\8620192890\sheets\G-03-C-07.dwg PLOT DATE: Mon, 18 May 2020 PLOT TIME: 1:37 PM



NOTES:
1. RESTORE EXCAVATION AREA TO MATCH SURFACE GRADE PRE-EXCAVATION.

SOIL

LIMITS OF EXCAVATION

TEMPORARY CHAIN-LINK FENCE ON PERIMETER OF WORK AREA

NO.	DSGN	DATE	DR	REVISION	CHK	BY	APVD
					APVD		

SEAL:

CA PROFESSIONAL ENGINEER
LICENSE NUMBER ----

PENNZOIL-QUAKER STATE
ALAMEDA DISTRIBUTION CENTER
2015 GRAND STREET
ALAMEDA, CALIFORNIA

FINAL SITE GRADING PLAN

MAY 2020

wood.
ENVIRONMENT & INFRASTRUCTURE, Inc.
180 GRAND AVENUE, SUITE 1100
OAKLAND, CALIFORNIA 94612
TELEPHONE: (510) 663-4100
FAX: (510) 663-4141

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	05/18/2020
PROJECT NO.	8620192890
DWG	C-7
SHEET	10 OF 10

FILE NAME: C:\Users\grace.melgard\Desktop\Project Folder\Shell\8620192890\sheets\G-03-C-07.dwg PLOT DATE: Mon, 18 May 2020 PLOT TIME: 1:37 PM

APPENDIX D

Dust, Odor, and Vapor Control Monitoring Plan

APPENDIX D

DUST, ODOR, AND VAPOR CONTROL AND MONITORING PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

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(Cont'd)

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ACRONYMS AND ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
Cal/OSHA	California Occupational Health and Safety Administration
EL	exposure limit
HASP	Health and Safety Plan
OSHA	Occupational Health and Safety Administration
mg/m^3	milligrams per cubic meter
PEL	Permissible Exposure Limit
PID	photoionization detector
PPE	personal protective equipment
ppmv	part per million by volume
RAP	Remedial Action Plan
SHSO	Site Health and Safety Officer
SWPPP	Stormwater Pollution Prevention Plan
TLV	Threshold Limit Value
TPH	total petroleum hydrocarbons
TWA	time-weighted average
VOCs	volatile organic compounds
Wood	Wood Environment & Infrastructure Solutions, Inc.

DUST, ODOR, AND VAPOR CONTROL AND MONITORING PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

D1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. ("Wood") has prepared this Dust, Odor, and Vapor Control and Monitoring Plan ("Dust Control Plan") for the demolition and remedial excavation work associated with the Pennzoil-Quaker State Alameda Distribution Center (the "Site"). This Dust Control Plan was prepared as an appendix to the corresponding Remedial Action Plan (RAP) to detail the measures that will be taken to reduce the generation of fugitive dust, odor, and vapors, and the monitoring that will be performed to document dust and vapor concentrations. Site chemicals of concern include total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs). This Dust Control Plan describes the visual observation protocols and monitoring instruments used, so that conditions can be appropriately monitored and modified to be protective of on-site workers and to minimize off-site migration of dust, odor, and vapors. Dust and vapor control and monitoring will be performed in accordance with federal, state, and local requirements, specifically with Bay Area Air Quality Management District (BAAQMD) rules, the site-specific Health and Safety Plan (HASP; Wood, 2020), and the Stormwater Pollution Prevention Plan (SWPPP).

D1.1 POTENTIAL SOURCES OF FUGITIVE DUST

Planned Site activities have the potential to generate air emissions in the form of fugitive dust. Possible sources of emissions include the following activities:

- Construction Traffic—Moving construction equipment around the construction areas on paved and unpaved roads is capable of creating construction emissions in work areas.
- Site Preparation—Removing asphalt and concrete will increase the potential for fugitive dust emissions through wind erosion.
- Material Stockpiles—Excavated soil and import material may be temporarily stockpiled for profiling or during subgrade preparation, respectively. Fugitive

emissions during stockpiling and truck loading, as well as wind erosion, are possible.

- Transportation of Solid Bulk Material—Import material will be transported to the Site for placement and compaction. If soil is left uncovered, fugitive emissions could occur.
- Excavation and loading activities – Excavation and removal of soils from the Site is capable of creating fugitive emissions.
- Concrete sizing – Concrete will be sized onsite via onsite crushing prior to transport for offsite recycling. Crushing of the concrete debris will create fugitive emissions in the form of dust.
- Fugitive dust emissions generated upgradient of the Site (off-site) may also contribute to on-site dust.

D2.0 GENERAL CONSTRUCTION DUST CONTROL MEASURES

Control methods for fugitive dust are described below for the anticipated emissions generated from the construction activities at the Site.

D2.1 DUST CONTROL METHODS FOR ON-SITE TRAVEL

Fugitive dust resulting from on-site construction traffic will be mitigated through track-out prevention and traffic control, as described below.

D2.1.1 Track-Out Prevention

Track-out of mud or loose materials (e.g., soil) will be controlled by use of tire-cleaning rumble grid plates at the access point between the Site and the paved road. These track-out prevention control points will be established at the primary Site access points (refer to Figure D-2) to ensure that the tires are free of mud or loose soil prior to leaving the Site. Any visible track-out onto a paved road where vehicles exit the work site will be removed by wet sweeping. On-site personnel will verify that tires are free of mud or loose soil prior to any truck leaving the Site.

D2.1.2 Traffic Control

Fugitive dust emissions from construction traffic traveling on unpaved surfaces will be controlled through the following mitigation methods:

- Actively used unpaved roads within the Site will be watered at a frequency sufficient to maintain adequate moisture. The frequency of watering will depend on climate conditions (e.g., precipitation, dry period, windy condition).
- No vehicle will exceed 15 miles per hour within the Site and 5 miles per hour in work areas. The following mitigation measures will be followed for fugitive dust emissions from construction traffic traveling on paved areas:
    - Bulk-loaded trucks used for transportation of soil and other heavy earth-moving equipment will not be allowed to exit the Site, except through the track-out prevention control point.
    - Construction areas adjacent to and above grade from any paved roadway will be treated with Best Management Practices (BMPs), as specified in the SWPPP.
- Roadways within the Site will be swept using a wet sweeper or washed down to remove soil. The accumulated soil shall be routinely removed from non-traffic areas such as gutters and curbs. If any of the preceding mitigation methods fail to properly control fugitive dust emissions, one or more of the following reasonably available control measures will be applied:
    - Unpaved active portions of the Site will be watered or treated with dust-control solutions to minimize windblown dust and dust generated by vehicle traffic.
    - Paved portions of the Site will be cleaned more frequently to control windblown dust and dust generated by vehicle traffic.
    - Vehicle trips will be reduced if necessary.

D2.2 DUST CONTROL MEASURES FOR CONCRETE AND ASPHALT REMOVAL

Fugitive dust emissions from the removal of concrete and asphalt during demolition and excavation activities will be controlled using wetting to sufficiently maintain soil-moisture content and minimize fugitive dust creation. All unpaved, inactive portions of the work area under construction will be watered to minimize fugitive dust creation.

D2.3 MATERIAL STOCKPILES

Fugitive dust emissions from soil storage piles will be controlled by using a temporary cover and/or water.

D2.4 TRANSPORT OF SOLID BULK MATERIAL

Fugitive dust emissions from trucks used to transport import and export material and debris will be controlled using the following methods:

- All trucks that are used to transport solid bulk material will be covered (tarped) prior to entering and leaving the Site.
- Vehicles will be checked to ensure that they are tarped and to remove any excess material on the shelf or exterior surfaces of the cargo compartment.
- Bulk-loaded trucks will exit the Site via an established track-out control point.

D2.5 EXCAVATION AND SOIL REMOVING/EMPLACING ACTIVITIES

Dust generated from excavation and soil removing and emplacement will be controlled using the following methods:

- Soil will be wetted prior to soil-moving activities to reduce dust migration. Additional water will be added during active cutting (excavation), material handling, and loading on an as-needed basis. Active work areas will be wetted approximately every two hours or more frequently if needed, during periods of dry weather and/or windy conditions. A water truck or water buffalo shall be dedicated to earthmoving operations.
- The height from which soil is dropped either onto the ground, trucks, or stockpiles will be minimized.
- Trucks shall be equipped with tarping systems to cover loads during soil transport.
- Truck traffic shall be minimized to the shortest allowable haul routes from the work areas and stockpile areas.
- Soil stabilizer or straw mulch will be applied in sufficient quantities to disturbed areas so as to create a stabilized surface.
- Import fill materials will be wetted on an as-needed basis to maintain moisture. Loader buckets will be emptied slowly, and drop heights from loader buckets will be minimized. A water truck or water buffalo will be dedicated to backfilling operations.
- Water and/or temporary cover will be applied to control fugitive dust emissions from stockpiled material when not actively handled.

D2.6 POST-REMEDIAL ACTION STABILIZATION OF DISTURBED AREAS

Unpaved areas disturbed during grading and/or construction activities will be stabilized using one, or a combination, of the following measures to reduce dust generation on the Site:

- Soil stabilizer (e.g. hydroseed, tackifier)
- Surface swales to control storm water

D2.7 RECYCLING

Non-impacted asphalt and concrete are typically sized on site for eventual recycling offsite and may produce fugitive dust emissions. Fugitive dust emissions from sizing activities will be controlled using the following methods:

- Asphalt and concrete will be wetted prior to handling to reduce dust migration. A water truck or water buffalo shall be dedicated to this activity.
- Additional water will be added during active grinding, sorting, material handling, and loading, as needed, to control fugitive dust.
- The height from which crushed material is dropped either to trucks, stockpiles, or pads will be minimized.
- Trucks shall be equipped with tarping systems to cover loads during transport.
- Truck traffic shall be minimized to the shortest haul routes from the work areas and stockpile areas.
- Water will be applied in sufficient quantities to stockpiles so as to create a stabilized surface.

D3.0 METEOROLOGICAL MONITORING

Meteorological data, including temperature, wind speed, and wind direction, will be obtained from the weather station located on Eagle Avenue in Alameda, approximately one mile west of the Site (Figure D-1). Real-time readings will be recorded on field forms at least three times each day. Wind speeds and wind direction will be monitored during remedial activities to assess whether a change of work activities or implementation/modification of engineering controls is necessary. In addition, a windsock will be placed at the Site to monitor local wind direction and relative speed.

D4.0 REAL-TIME WORK-ZONE AIR MONITORING

The objective of real-time monitoring in the work zone is to monitor the airborne concentrations of dust and VOCs to which on-site personnel could be exposed, and to evaluate if dust and vapor control measures are effective in maintaining emission concentrations below action levels. Personnel who could be exposed to dust or VOC emissions include equipment operators and workers who are in the immediate vicinity of the excavation area.

D4.1 WORK-ZONE AIR MONITORING PROGRAM

Real-time air monitoring data will be collected using direct-reading instruments; readings will be recorded on field forms at least once per hour for the first five days of soil excavation work. If no action levels are triggered during the first five days of hourly logging, logging frequency may be reduced. A hand-held, portable aerosol/dust meter (such as a personal DataRAM™ or equivalent) will be used to monitor dust levels and a photoionization detector (PID) will be used to measure VOC concentrations in the work zone.

Table D-1 presents a summary of the work-zone air monitoring program, including action levels for work-zone monitoring and responses to exceedances. Additionally, details regarding action levels, required PPE levels, and responses to exceedances are included in the site-specific HASP (Wood, 2020).

D4.2 WORK-ZONE ACTION LEVELS AND RESPONSE ACTIONS

The action levels for work-zone air monitoring are intended to be protective of on-site workers. Work-zone action levels are triggered when sustained concentrations of VOCs exceed ambient or background concentrations (e.g. due to unrelated interference to monitoring equipment) measurements for five minutes. Work-zone action levels were determined to be one half of the most stringent exposure limit (EL) listed in the following regulatory standards:

- Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL);
- California OSHA (Cal/OSHA) PEL; and
- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV).

PELs are regulatory limits established to be protective of workers who may potentially be exposed to specific chemicals in air and TLVs are recommended values to assist in the control of potential workplace health and hazards. PELs and TVLs are based on an 8-hour time-weighted average (TWA) exposure to specific chemicals or respirable dust particles in air. The work-zone action levels are summarized in Table D-2 and are as follows:

- The action level for dust is 2.5 milligrams per cubic meter (mg/m^3) (one half the EL of 5 mg/m^3 for respirable fraction of dust). If the work-zone dust levels exceed 2.5 mg/m^3 over background, the contractor will implement dust control measures to reduce dust levels to below the action level. If work continues before dust levels

have been reduced below action levels, personal protective equipment (PPE) must be upgraded to modified Level D, including half-face respirators with P100 dust cartridges until additional monitoring shows that action levels are no longer exceeded.

    - If the work-zone dust levels exceed 15 mg/m^3, the contractor must stop work, evacuate the area, notify the Site Health and Safety Officer (SHSO), and implement additional dust control measures until dust concentrations are below 15 mg/m^3.

- If sustained work-zone vapor levels measured using a PID exceed 3.0 parts per million by volume (ppmv) for total VOCs or 0.5 ppmv benzene (EL of benzene) using a detector tube, work will be stopped, the SHSO will be notified, and consideration will be given to proceeding with work following a PPE upgrade to Level C.

Refer to the site-specific HASP (Wood 2020) for additional details regarding work zone air monitoring action levels, required PPE levels, and responses to exceedances.

D5.0 SITE-PERIMETER AIR MONITORING

Residential properties are adjacent to the north, south, and west sides of the Site. A six-foot high fence separates the Site from the residential properties.

Concentrations of VOCs will be monitored at the Site perimeter. If concentrations of VOCs exceed action levels, work will be stopped, work practices will be evaluated, and future work operations may be modified, as appropriate, to reduce off-site migration of VOCs.

D5.1 SELECTION OF MONITORING LOCATIONS

Perimeter air sampling will be conducted at four locations during post-demolition soil removal, including one upwind and three downwind locations next to the eastern property line as shown on Figure D-2. Monitoring locations may be adjusted based on Site conditions, including wind direction, property access, excavation activities, and ability to secure the sampling instrument. To the extent practicable, sampling stations will be located away from objects that could interfere with air movement near the sampler inlet.

Based on data from the local meteorological station, the predominant wind direction in the area of the Site is from the west-southwest. The locations of upwind and downwind samples will be verified daily based on the actual wind direction observed onsite using a windsock.

D5.2 SITE-PERIMETER AIR MONITORING PROGRAM

Site-perimeter air monitoring will be conducted during post-demolition soil removal activities. Site-perimeter monitoring includes real-time monitoring and the monitoring program is summarized in Table D-3.

D5.2.1 Real-time Monitoring of Dust and VOCs

A portable aerosol monitor (such as a personal DataRAM or equivalent) will be used to monitor dust levels. Portable aerosol monitors will be installed at perimeter sampling locations (Figure D-2) where they will be programmed to continuously record dust readings. Dust readings will also be manually recorded at least once per hour during the first week of earth-moving work. If dust concentrations do not exceed action levels for the first week of work, logging frequency may be reduced.

A PID will be used to monitor concentrations of total VOCs, and readings will be manually recorded at least once per hour. If VOC concentrations do not exceed action levels for the first week of work, logging frequency may be reduced.

D5.3 SITE-PERIMETER ACTION LEVELS AND RESPONSE ACTIONS

The PID detects total VOCs, and therefore will be used as field screening. The action level for PID readings is a higher concentration at downwind locations than upwind locations. As mentioned above, a portable aerosol monitor (DataRAM, miniRAM, or equivalent) will be used to collect dust readings at the site perimeter.

Action levels for dust and VOC monitoring at the site-perimeter are summarized below:

- The action level for dust at the site perimeter (as measured real-time using a dust meter) is 2.5 mg/m^3. In addition, BAAQMD requires that no visible dust cross property boundaries (discussed in Section D6.0).
- The action level for VOCs at the site perimeter (as measured using a PID and/or benzene detector tube) is 3.0 ppmv for total VOCs and 0.5 ppmv for benzene.
- BAAQMD also prohibits the discharge of odorous substances which cause the ambient air to be odorous at or beyond the property line (discussed in Section D6.0).

Short-term (e.g., days) exceedances of the site-perimeter action levels do not imply unacceptable health risks for off-site populations. The site-perimeter action levels are

intentionally conservative so that additional mitigation measures can be implemented if data indicate exceedance of these levels.

Response actions will be developed as described in Section D7.0, and are presented in Table D-3.

D6.0 REGULATORY REQUIREMENTS RELATED TO EMISSIONS CONTROL AND AIR MONITORING

BAAQMD regulations that may be relevant to site remediation include:

- Regulation 1 - General Provisions and Definitions: No person shall discharge any air contaminant which causes nuisance or annoyance to the public.
- Regulation 6 - Particulate Matter: Rule 1 sets general requirements and limitations on emission rates, concentration, visible emissions, and opacity of particulate matter in the atmosphere. No person shall cause emission of visible particles that fall on neighboring properties.
- Regulation 7 - Odorous Substances: This regulation applies if BAAQMD receives odor complaints from 10 or more individuals within a 90-day period. No person shall discharge odorous substances which causes the ambient air to be odorous at or beyond the property line.
- Regulation 8 - Organic Compounds, Rule 40 Aeration of Contaminated Soil and Removal of Underground Storage Tanks: This rule addresses emissions from excavation and removal of contaminated soil. The measures for emission control outlined in this Dust Control Plan are consistent with the procedures under Rule 40. Also, remediation at the Site may be subject to the notification and reporting requirements under this rule. This will be addressed separately from this Dust Control Plan.

Other BAAQMD regulations not directly related to air monitoring may be applicable to remediation activities and will be evaluated as appropriate.

D7.0 MANAGEMENT AND COMMUNICATION OF AIR QUALITY MONITORING RESULTS

The project team members responsible for monitoring air quality and developing appropriate response actions are:

- Air Monitoring Professional – The person who conducts work zone and perimeter air monitoring and sampling;

- Engineer – The entity (Wood) selected to oversee the work of the contractor in the field; and
- Project Engineer – The Engineer's representative onsite.

If a work-zone air monitoring action level is exceeded, the Air Monitoring Professional will immediately notify the Project Engineer. The Project Engineer will convey the results of the air monitoring to the contractor and direct the contractor to implement mitigation measures. The Project Engineer will notify the Engineer and Shell representative of the exceedance and mitigation measures as soon as reasonably possible. If mitigation measures are not effective, the Project Engineer will direct the contractor to stop active work until effective measures are identified and implemented. The Project Engineer will notify the Engineer of the stop-work directive as soon as possible.

Primary mitigation measures that the Project Engineer may direct the contractor to implement include:

- Efforts to minimize the amount of time that ambient air is exposed to odorous material at the site, such as covering excavated soil and stockpiles with polyethylene sheeting/tarps to minimize fugitive vapor; and
- Spraying water, or water containing a non-toxic biodegradable detergent (e.g., Simple Green) over odorous soil materials (e.g., exposed soil within excavations, stockpiles).

If primary mitigation measures are not sufficient and work zone vapor action level exceedances persist, secondary mitigation measures will be employed by applying vapor and odor suppression products (e.g., BioSolve Pinkwater or RusFoam® OC) on all exposed soil within the excavation, soil directly loaded into trucks, and/or temporary stockpiles of soil. These products have the capability to provide immediate, localized control of both odor and vapor emissions by diluting with water and spraying on exposed soil.

D8.0 REFERENCES

Occupational Health & Safety Administration (OSHA), 2019 Permissible Exposure Limits, OSHA Annotated Tables Z-1 and Z-2, https://www.osha.gov/dsg/annotated-pels/tablez-1.html

Wood Environment & Infrastructure Solutions, Inc., 2020. Health and Safety Plan, Pennzoil-Quaker State Alameda Distribution Center, 2015 Grand Street, Alameda, California. May 8.

TABLE D-1

WORK-ZONE AIR MONITORING
Pennzoil-Quaker State Distribution Center
Alameda, California

Contaminant	Monitoring Equipment	Frequency and Location	Action Level [1]	Response to Exceedance
Dust	Personal DataRAM or equivalent portable aerosol monitor, direct reading instrument with a minimum calibration of 0.5 mg/m^3.	Periodically in the work zone during work [2] and whenever dust is visible. Readings will be recorded in the field form at least once per hour for the first week of work. If no action levels are triggered during the first week of hourly logging, logging frequency may be reduced.	2.5 mg/m^3 above upwind background.	Implement controls to reduce concentration of dust to below 2.5 mg/m^3 above upwind background concentrations. If dust levels persist above 2.5 mg/m^3 above upwind background concentration, continue work in modified level D PPE with half-face respirators and P100 cartridges.
			15 mg/m^3 above upwind concentrations.	Stop work and evacuate area. Notify SHSO.
Total VOCs	miniRAE 3000 PID or equivalent direct reading instrument with a minimum calibration of 0.1 ppmv for total VOCs. A colorimetric detector tube will be used to detect benzene.	Periodically in the work zone during work and whenever odors or visibly affected soils are encountered. Readings will be recorded in the field form at least once per hour for the first week of work. If no action levels are triggered during the first week of hourly logging, logging frequency may be reduced.	3 ppmv total VOCs above upwind background. and 0.5 ppmv benzene above upwind background.	Back off and reassess. Implement vapor control measures. If work continues, upgrade to level C PPE, continue monitoring with PID.

Notes
1. Action Level = sustained concentration measured in the work zone exceeding ambient/background concentrations where additional measures to control dust and/or vapor emisisons are required or additional personal protective equipment is required. See Table D-2 for details on action levels.
2. Work refers to remediation activities that have the potential to generate dust; for example, excavation, soil transfer, grading, and stockpile management.

Abbreviations
mg/m^3 = milligrams per cubic meter
PID = photoionization detector
PPE = personal protective equipment
ppmv = parts per million by volume
SHSO = site health and safety officer
VOCs = volatile organic compounds

TABLE D-2

ACTION LEVELS FOR COCS IN THE WORK ZONE
Pennzoil-Quaker State Distribution Center
Alameda, California

Chemical	Maximum Soil Concentration (mg/kg)	Exposure Limit (EL) [1] (ppmv)	Work Zone	
			Action Level [2] for VOCs (ppmv)	Dust Action Level (mg/m^3)
Total Dust	--	10	--	5
Respirable Particulates	--	5	--	**2.5**
Chemicals of Concern				
TPHg	2,600	300	150	--
Benzene	12	0.5	**0.5** [3]	--
Toluene	68	10	5	--
Ethylbenzene	31	5.0	**3**	--
Total Xylenes	163	100	50	--

Notes

1. Values for ELs are selected from the most stringent level provided by the following agencies: 1) Cal OSHA, 2) OSHA, 3) ACGIH TLV. Values reported are time-weighted averages.
2. Action Levels = sustained concentrations measured in the work zone exceeding ambient/background concentrations where additional measures to control dust and/or vapor emisisons are required or additional personal protective equipment is required.
3. A PID will be used to screen for total VOCs. If the concentrations using the PID exceed 0.5 ppmv, a detector tube wil be used to screen for benzene. If benzene does not exceed 0.5 ppmv, the total VOC action level of 3.0 ppmv will apply at the site perimeter.

Abbreviations

-- = not applicable or not calculated
ACGIH = American Conference of Governmental Industrial Hygenists
bold = action level
Cal OSHA = California Occupational Safety and Health Administration
COC = chemicals of concern
EL = Exposure Limit, time-weighted average over 8 hours (see note 1)
mg/kg = milligram per kilogram
ppmv = parts per million by volume
TLV = Threshold Limit Value
TPHg = total petroleum hydrocarbons as gasoline
VOCs= volatile organic compounds

TABLE D-3

SITE-PERIMETER AIR MONITORING
Pennzoil-Quaker State Distribution Center
Alameda, California

Contaminant	Monitoring and Sampling Equipment	Frequency and Location	Action Level [1]	Response to Exceedance
Dust	**Field Monitoring:** DataRAM, MiniRAM, or equivalent portable aerosol monitor, direct reading instrument with a minimum calibration of 0.5 mg/m^3.	**Monitoring During Work [2]:** Continuously (using data logger) at the perimeter locations during work. Also record readings at the perimeter locations on the field form at least once per hour for the first week of work. May reduce logging frequency if no action levels are triggered.	The lowest dust action level is 2.5 mg/m^3 (one half the EL for respirable dust particulates). The BAAQMD requirement is no visible dust across property boundary.	As soon as practicable, adjust work practices to reduce dust emissions to below 2.5 mg/m^3. If visible dust is observed, stop work until engineering controls are sufficient to eliminate visible dust.
VOCs	**Field Screening:** miniRAE 3000 PID or equivalent direct reading instrument with a minimum calibration of 0.1 ppmv or lower for total VOCs. A colorimetric detector tube will be used to detect benzene.	**Screening During Work:** At the start of each workday and at least once per hour at the perimeter locations during the first week of work and whenever odors or visibly affected soils are encountered. May reduce logging frequency if no action levels are triggered.	The PID detects total VOCs, and therefore will be used as field screening. The action level for PID readings is higher concentrations at downwind locations than upwind locations.	Adjust work practices to reduce VOC emissions.

Notes
1. Action Level = sustained concentrations measured at the downwind site perimeter exceeding ambient background where additional measures to control dust and/or vapor emisisons are required. See Tables D-1 and D-2 for details on action levels.
2. Work refers to remediation activities that have the potential to generate dust, for example, excavation, soil transfer, grading, and stockpile management.
3. Values for ELs are selected from the most stringent level provided by the following agencies: 1) Cal OSHA, 2) OSHA, 3) ACGIH TLV. Values reported are time-weighted averages.

Abbreviations
ACGIH = American Conference of Governmental Industrial Hygenists
Cal OSHA = California Occupational Safety and Health Administration
EL = exposure limit, time-weighted average over 8 hours (see note 3)
EPA = Environmental Protection Agency
mg/m^3 = milligrams per cubic meter
PID = photoionization detector
ppmv = parts per million by volume
TLV = Threshold Limit Value
VOCs = volatile organic compounds

FIGURES

N

0 1,000 Feet

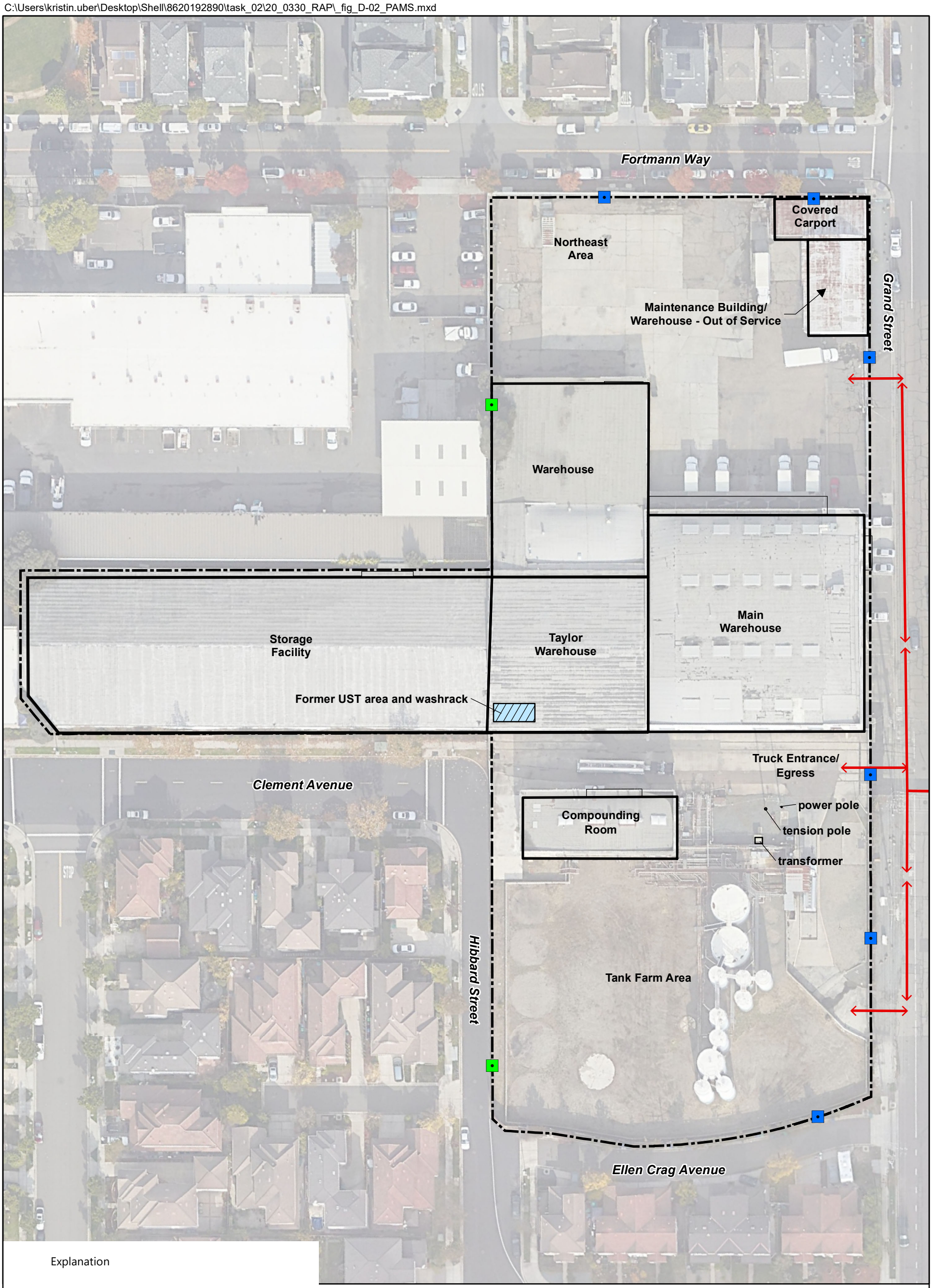
WEATHER STATION
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU	Prj. No. 8620192890.02
Date: 04/22/2020	Figure **D-1**

Wednesday, April 22, 2020 12:05:58 PM
C:\Users\kristin.uber\Desktop\Shell\8620192890\task_02\20_0330_RAP_fig_D-01.mxd

C:\Users\kristin.uber\Desktop\Shell\8620192890\task_02\20_0330_RAP_fig_D-02_PAMS.mxd



Explanation

- Proposed air monitoring station - downwind
- Proposed air monitoring station - upwind
- Approximate Site Boundary
- Truck entrance/egress route
- Buildings

Abbreviation:
UST underground storage tank

0 30 60 Feet

Background image ©Google Earth, dated October 2018.

PERIMETER AIR MONITORING STATIONS
Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.

By: KLU
Date: 04/27/2020

Project No. 8620192890.02
Figure **D-2**

APPENDIX E

Construction Quality Control Plan

APPENDIX E

CONSTRUCTION QUALITY CONTROL PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
CQA	Construction Quality Assurance
CQCP	Construction Quality Control Plan
DFR	daily field record
HASP	Health and Safety Plan
ICS	Innovative Construction Solutions
NCR	Non-Conformance Report
PPE	personal protective equipment
QC	Quality Control
RAP	Remedial Action Plan
SOPUS	Pennzoil-Quaker State Company dba SOPUS Products
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
Wood	Wood Environment & Infrastructure Solutions, Inc.

CONSTRUCTION QUALITY CONTROL PLAN

Pennzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

E1.0 INTRODUCTION

This Construction Quality Control Plan (CQCP) was prepared as an appendix to the Remedial Action Plan (RAP) for the planned demolition of above-ground structures and hardscape within excavation extents, and soil removal activities at the Pennzoil-Quaker State Distribution Center located at 2015 Grand Street in Alameda, California (the "Site"). Construction activities are being conducted under direction of the California Regional Water Quality Control Board, San Francisco Bay Region ("Water Board") as the lead regulatory agency for the Site. This CQCP describes quality assurance activities that will be performed before and during construction to ensure that the project fulfills the requirements for quality and establishes procedures to ensure that the work is executed in accordance with the approved design plans and specifications prepared for the project.

E1.1 PURPOSE

This CQCP was developed to serve as guidance throughout the demolition, excavation, and backfilling phases of the project. The CQCP presents the approach to confirm that the project is performed consistent with the design intent and the requirements identified in the RAP. The objectives of this CQCP are to:

- Describe the roles and responsibilities for staff implementing the Construction Quality Assurance (CQA) and Quality Control (QC) protocols;
- Describe guidelines and documentation for appropriate QC testing;
- Provide reasonable assurance that the completed work will meet or exceed the requirements of the approved design plans; and
- Describe how any unexpected changes or conditions that could affect the construction quality will be detected, documented, and addressed during construction.

E1.2 WORK DESCRIPTION

The work described in the RAP includes the demolition of structures and the excavation and disposal of shallow soil impacted above proposed cleanup goals in the northeast area including the maintenance yard and former underground storage tank area (hereafter referred to as the "Northeast Area"), the southwest area ("Tank Farm Area"), and demolition within the Taylor Warehouse of the former UST area and wash area. Planned demolition of above-ground structures and hardscape within excavation extents and soil removal activities will be implemented concurrent with and following closure of the Pennzoil-QuakerState Alameda Distribution Center, currently planned for August 2020.

Shallow soil removal will include excavation of impacted soil in the Northeast Area and Tank Farm; approximately 6,500 cubic yards to a depth of six feet below ground surface (bgs) and 4,900 cubic yards to a depth of three feet bgs, respectively. Excavated soil will be transported for disposal at a permitted off-site facility that has been approved by Pennzoil-Quaker State Company dba SOPUS Products (SOPUS) and the excavation areas will be backfilled with clean imported fill to pre-excavation grade.

E1.3 CQCP REVISIONS

Wood Environment & Infrastructure Solutions, Inc. (Wood) or SOPUS may initiate revisions to this CQCP. The CQCP may be revised when the CQA/QC procedures or controls are either inadequate or deemed to be more excessive than required to support work being produced in conformance with the specified quality requirements. The Wood Project Manager will obtain approval from SOPUS and the Engineer of Record prior to proceeding with work that reflects a change in the design. Out-of-scope work that results from a client request, third party request, regulator request, unanticipated conditions, or change in requirements will be documented by the Project Manager. Any changes to the CQCP are subject to Engineer of Record and SOPUS review and approval.

E1.4 COMPLIANCE PLANS

This CQCP is one of several construction compliance plans that provide guidance on how to complete the work while complying with applicable standards, procedures, and Wood and SOPUS policies. The other project compliance plans include:

- Dust, Odor, and Vapor Control Monitoring Plan

- Sampling and Analysis Plan
- Stormwater Pollution and Prevention Plan
- Health and Safety Plan
- Waste Management and Transportation Plan

E2.0 MANAGEMENT AND RESPONSIBILITIES

The overall project implementation will be the responsibility of the Project Manager; however, all team members have the responsibility and authority to contribute to the achievement of a successful project. It is the responsibility of all personnel who manage, perform, and ensure the quality of the work to:

- Initiate action to prevent the occurrence of non-conforming work;
- Identify, evaluate, and document quality issues;
- Recommend or initiate quality improvement solutions; and
- Stop the work when non-conforming work is identified until the deficiency is corrected.

E2.1 PROJECT TEAM ENTITIES

The following entities constitute the primary project team organization:

- Owner: SOPUS
- Construction Manager: Wood
- First-Tier Construction Contractor: Innovative Construction Solutions (ICS)
- Public Outreach and Communications: Craig Communications
- Contractor: Unless otherwise indicated, refers to the First-Tier Subcontractor engaged by the Construction Manager to complete portions of the Work.
- Subcontractor: Unless otherwise indicated, refers to the second, third, or other tiers of contractor(s) engaged via the Contractor (First-Tier Contractor) contract line to complete portions of the work.

E2.2 CHAIN OF COMMAND AND COMMUNICATIONS

A project organization and communication chart for the CQCP for the construction phase of the project is provided as Figure E-1. Those outside of the project team such as agencies, the media, and other interested parties that come to the project site shall only communicate with the Project Manager and/or Public Outreach and Communications Liaison. In general, with the exception of regulatory agencies, other interested parties will not be permitted to enter the

Site. The Contractor and Subcontractors may not have direct communication with any third parties without the approval of the Project Manager.

The Construction Manager ultimately controls the field work in terms of the Contractor and Subcontractors, the project schedule, sequencing, and general approach as long as the work is conducted in general conformance with the approved design. However, any proposed design changes or other deviation from the final approved design must initiate a design change procedure, which requires approval by the Project Manager, the Engineer of Record, as well as SOPUS. Change Management is further discussed in Section E2.4.

All project personnel have the authority to immediately stop the work if a condition is observed that threatens the safety of an on-site worker or the public.

E2.3 KEY POSITIONS AND DUTIES FOR CQA/QC

Descriptions of key positions within the project team, and their respective duties related to CQA and QC, are provided below.

E2.3.1 Project Manager

The Project Manager's duties during construction include, but are not limited to:

- Provide centralized leadership for project activities, and maintain primary responsibility for administration of Prime Contract with Owner (scope, schedule, invoicing, submittals, request for information, change management, closeout);
- Interface with SOPUS and the Water Board;
- Communicate directly with the Construction Manager, Engineer of Record, and Project Engineer for project needs;
- Ensure that CQA/QC activities are being properly conducted and documented;
- Conduct routine meetings;
- Review and approve the procurement of Contractors, Subcontractors, and materials;
- Be responsible for on-site leadership on critical production, schedule, and cost-related project activities;
- Coordinate with design team members to ensure progress is keeping pace with needs of construction;
- Manage submittal process, maintain the submittal register, and coordinate with the Project Engineer, Engineer of Record, Construction Safety Officer, and Construction Manager for submittal reviews based on areas of expertise/responsibility. The

Project Manager's submittal review will be for general conformance to the contract only and will solicit detailed technical review and approval from the appropriate subject matter expert on the team (i.e., Project Engineer, Construction Safety Officer, or Construction Manager);

- Direct the preparation of project documentation and all project turnover documents as required by the contract; and
- Apply CQA/QC guidelines and ensure final check before release to client.

The Project Manager is accountable to ensure that project assignments are implemented in accordance with all contract documents and to make available resources as needed for the successful completion of the project. The Project Manager will designate, by name, the qualified individuals who will be responsible for overseeing the quality program. The Project Manager will also ensure that the project team is familiar with and follows all SOPUS policies, procedures, and work processes.

E2.3.2 Construction Manager

The Construction Manager's duties during construction include, but are not limited to:

- Maintain oversight of day-to-day construction activities;
- Interface with the design team to resolve technical problems and CQA/QC issues;
- With the assistance of the safety department, investigate accidents and safety incidents;
- Communicate directly with Project Manager for project needs;
- Receive and review Subcontractor Quality Plans;
- Review submittals as requested by the Project Manager;
- Monitor Subcontractors' conformance with CQA/QC requirements and communication of results of CQA/QC testing and related work performed by Project Engineer;
- Maintain construction quality standards;
- Prioritize work to ensure critical work is completed in a timely manner, as required;
- Be responsible for developing the daily and weekly scheduling for all project work;
- Obtain schedule information from Contractor and Subcontractor(s); ensure that it is included in the project master schedule;
- Monitor performance against the master schedule, including periodic updates; resolve any coordination issues; and

- Ensure that site personnel possess necessary training and medical surveillance.

The Construction Manager is responsible for implementing the CQCP procedures on an ongoing, routine basis. Additionally, the Construction Manager is responsible for ensuring that the project complies with established quality control measures. The Construction Manager will stop work, as necessary, to correct any deficiencies.

E2.3.3 Engineer of Record

The Engineer of Record's duties during construction include, but are not limited to:

- Review submittals as requested by the Project Manager;
- Review and issue approval of any significant proposed changes to the design, in consultation with the design team members;
- Review and issue approval of any significant proposed changes to the CQCP, in
- consultation with the design team members; and
- Monitor construction progress and quality control documentation as the work progresses.

The Engineer of Record is responsible for ensuring that the work is performed in accordance with the design plans and technical specifications. The Engineer of Record will provide resolution of any design issues that may arise during the construction phase. The Engineer of Record will sign off on the review of shop drawings and submittals on the materials and equipment to be used during construction for conformance to the plans and specifications.

E2.3.4 Project Engineer

The Project Engineer's responsibilities during construction include, but are not limited to:

- Lead the submittal review process by reviewing all submittals received and coordinating with subject matter experts, the Project Manager, and the Engineer of Record as necessary;
- Issue final approval of all technical submittals not otherwise approved by Subcontractors;
- Be responsible for ensuring that the construction is performed in accordance with the design documents;
- Inspect and monitor construction activities and materials for conformance with the design documents;

- Communicate the results of the CQA/QC testing to the Construction Manager and Project Manager (as needed) for follow-up actions by the appropriate parties;
- Complete CQA activities including monitoring construction, documenting work completed daily (daily summary report, field logs, photo documentation, and, if necessary, documentation of non-compliant work), monitoring compliance of materials, and confirming that workmanship is in accordance with the requirements of the final design package; and
- Review Subcontractors' individual quality plan(s) and monitor compliance.

E2.3.5 Construction Safety Officer

The Construction Safety Officer is responsible for ensuring the implementation of the project Health and Safety Plan (HASP; Wood, 2020), and reporting to the Project Manager for action if any deviations from the anticipated conditions exist. This includes ensuring:

- Performance of pre-entry briefing, daily tailgate safety meetings, and weekly inspections of job site in accordance with the HASP;
- Presence of the Project Engineer or other qualified person at all times during onsite work to ensure unsafe conditions will be identified and corrected or stopped promptly;
- Verification that all monitoring equipment and PPE is calibrated and operating correctly according to manufacturer's instructions and such equipment is used by on-site personnel; and
- Confirmation that prior to a site visit, site personnel meet the proper medical requirements and have the health and safety training to qualify them to perform their assigned tasks, and all site personnel with special medical conditions have been identified;
- Implementation of site emergency and follow-up procedures.

E2.3.6 Contractor and Subcontractors

The Contractor and Subcontractors' responsibilities during construction include, but are not limited to:

- Perform the work outlined in the final design package under the direction of the Construction Manager and Project Manager;
- Prepare a Quality Plan and submit to the Construction Manager and Project Manager for review and approval;

- Self-perform quality control tasks outlined in approved Quality Plan, design plans, and technical specifications and provide documentation to the Field/Resident Engineer; and
- Request approval/acceptance from Project Engineer for any completed work after the Contractor or Subcontractor's superintendent or CQA person has deemed the work complete.

The Project Manager will decide how many Subcontractors are required to execute the work described in the design documents. The Subcontractors will be executing the work under the supervision of the Project Engineer, Project Manager, and the Construction Manager. The Subcontractors shall direct all communication through the field personnel (Construction Manager and Project Engineer).

E2.4 CHANGE MANAGEMENT

Procedures for managing change throughout the life of the project are described below.

E2.4.1 Changes in Personnel

When personnel changes occur, an updated list will be provided to the Project Manager for review and approval. The written approval of SOPUS may be required prior to the performance of any activity that requires changes in key project personnel.

E2.4.2 Changes to the Design or CQA/QC Procedures

If a Contractor or Subcontractor wants to use means, methods, or materials that vary from the design documents or approved work plans, the request will be made in writing and provided to the Project Manager. The Project Manager will review the proposal and forward it to the Project Engineer and/or the Construction Manager as appropriate for consideration, review, and approval or rejection. If the Project Engineer is in agreement with the proposed change, it will be forwarded to the Engineer of Record for approval. Changes to the design itself or the procedures described in any of the contract documents may not occur without written approval from the Engineer of Record and SOPUS. Reviews of proposed changes will also consider cost implications, durability, and the design life of specific remedy components.

The Project Manager may also initiate a change request if, in consultation with the design team, site conditions encountered reveal that changes may be warranted that address unforeseen issues encountered, improve upon the final product, improve ease of construction, save time, or save money. These written requests will follow the procedure described above

and cannot proceed without written approval from the Engineer of Record. The Project Manager may not allow the Contractor or Subcontractors to undertake less stringent CQA or QC procedures than those outlined in the project documents without written approval from the Engineer of Record and SOPUS.

E2.5 CONSTRUCTION QUALITY CONTROL AND QUALITY ASSURANCE

Construction QC is the systematic implementation of inspections and testing to monitor and control the characteristics of materials, construction or services to meet the required standards of quality and to preclude problems resulting from non-compliance. CQA is the planned and systematic means and actions, including field construction management and oversight, documentation review, routine audits, replicate sample testing, daily field meetings and routine periodic construction team meetings that provide permitting agencies, SOPUS, and the project team adequate confidence that materials and/or services meet the contractual and regulatory requirements and perform satisfactorily as intended.

This CQCP will be implemented to ensure compliance with the specifications for the partial demolition and excavation activities as detailed in the RAP, technical specifications, compliance plans, permits and other contract documents. The procedures outlined in this CQCP reflect the experience gained by Wood, ICS, and their Subcontractors in completing construction projects similar in nature.

QC measures will extend to construction means, methods, and procedures; staffing; types of materials and equipment to be used; and methods of performing, documenting, and enforcing quality control operations of Wood, ICS, and selected Subcontractors (including inspection and testing).

E2.6 CONSTRUCTION OVERSIGHT, INSPECTIONS, AND VERIFICATION ACTIVITIES

Inspections will be performed to confirm that the project is completed consistent with the design intent and in compliance with design drawings, procedures, and specifications as required by the contract. A detailed table of project-specific CQA and QC activities is provided in Table E-1. A breakdown of the four phases of oversight, inspection, and verification activities for a typical construction project is provided in the following subsections and can be used as a guide in conjunction with the aforementioned project-specific set of CQA and QC requirements provided in Table E-1.

E2.6.1 Preparatory Phase

The purpose of the Preparatory Phase is to review applicable specifications and to verify that the necessary resources, conditions, and controls are in place and compliant before the start of work activities. During the Preparatory Phase, the following activities will be performed:

- Review design drawings and specifications;
- Review shop drawings and submittals (an example Submittal Review Form is provided in Attachment E-1);
- Select qualified Contractor and Subcontractors with an experienced and trained workforce;
- Review procedures for instituting and documenting design and field changes;
- Establish hold points for critical project elements;
- Establish roles and responsibilities for material testing and installation/workmanship inspections; and
- Establish a CQA schedule for material testing and installation/workmanship inspections.

The Project Manager will verify that staff and subcontractor responsibilities have been assigned and communicated; that staff has the necessary knowledge, expertise, and information to perform their jobs; and that arrangements with Subcontractor(s) have been made. The Preparatory Phase will include a pre-construction meeting that will be conducted 1 or 2 weeks prior to the start of any field activities.

Any discrepancies with the approved plans identified during the Preparatory Phase must be corrected prior to the start of construction work. Preparatory Phase activities will be documented in the Preparatory Phase Checklist. An example of the Preparatory Phase Inspection Checklist is provided in Attachment E-1.

If changes to the procedures, design, or field activities are identified during the Preparatory Phase, they will be documented on the Preparatory Phase Inspection Checklist and approved by the signature of the Engineer of Record. Any changes will be subject to review and approval by the Engineer of Record, Project Manager, and SOPUS as necessary.

Submittals provided by the Contractor and Subcontractors will be reviewed by the Project Manager and Construction Manager (as appropriate) during this phase.

E2.6.2 Initial Phase Inspection

The Initial Phase Inspection will be conducted the first time a definable feature of work is performed and will be verified at the completion of the task during the inspection. The purpose of this inspection is to check preliminary work for compliance with procedures and specifications, establish the acceptable level of workmanship, check for non-conformance, and resolve any disagreements that may arise.

Activities conducted during the Initial Phase Inspection include the following:

- Establish field engineering controls;
- Implement and verify field layouts;
- Verify and document final lines and grades, elevations, and excavation limits;
- Confirm delivered materials and purchased equipment matches specifications and approved shop drawings and submittals;
- Inspect equipment and materials for damage during shipment or other wear;
- Inspect and verify quality of workmanship;
- Perform CQA testing (as needed);
- Perform CQA inspections;
- Coordinate and make provisions for third-party CQA testing and inspections (if required); and
- Coordinate and make provisions for local building and fire department inspections (if required).

The Construction Manager, with help from the Project Engineer, is responsible for ensuring that discrepancies between site practices and approved specifications are identified and resolved. Initial inspection results are to be documented in the Initial Phase Inspection Checklist.

Discrepancies between site practices and approved plans/specifications are to be resolved and corrective actions for noncompliant conditions or practices are to be verified prior to granting approval to proceed. An example of the Initial Phase Inspection Checklist is provided in Attachment E-1.

E2.6.3 Follow-Up Phase Inspection

The Construction Manager or the Project Engineer will perform Follow-Up Phase Inspections during the performance of a definable feature of work. The purpose is to provide continuous compliance and affirm that an acceptable level of workmanship is performed. The Follow-Up Phase occurs throughout the construction activities. Follow-Up Phase Inspections will include the following tasks:

- Report non-conformance conditions;
- Prepare corrective action plans; and
- Implement corrective actions.

The Project Engineer is responsible for on-site monitoring of the practices and operations and for verifying continued compliance with the specifications and requirements of the contract, approved design plans, and procedures. Discrepancies between site practices and approved plans/procedures are to be resolved, and corrective actions for unsatisfactory and non-conforming conditions are to be verified by the Construction Manager prior to granting approval to continue work. An example of the Follow-Up Phase Inspection Checklist is provided in Attachment E-1.

E2.6.4 Final Phase Inspections

After the definable feature of work is completed, a Final Phase Inspection will be conducted to verify and document concurrence with the approved design and specifications. During the Final Phase Inspection, the following activities will be performed:

- Perform functional testing (compaction testing of backfilled materials);
- Prepare "punch list" at substantial completion; and
- Complete punch list items.

During the Final Phase Inspection, the Construction Manager (in conjunction with the Project Engineer) will develop a punch list of unfinished items or items that do not conform to the approved plans and specifications and include the estimated date by which the items will be completed and/or the deficiencies will be corrected.

The Final Inspection will be performed after the punch list items are believed to be addressed, and before submitting notification of final inspection to the Project Manager. When all items

on the punch list are complete, the Project Manager will submit written documentation to SOPUS that:

- Work has been completed in accordance with Contract Documents, and deficiencies have been corrected;
- Punch list is completed and signed; and
- Work is complete.

An example of the Final Phase Inspection Checklist is provided in Attachment E-1.

E2.7 CONSTRUCTION TESTING

Construction testing is performed to characterize materials, work-in-progress, and completed work to confirm that specifications and requirements are met. Testing in support of the demolition, excavation, sampling, and backfill operations will be conducted in accordance with the approved technical specifications. This section provides a general description of the construction test plan methods. Additionally, a detailed list of project-specific testing, inspections, and other CQA/QC requirements is provided in Table E-1.

E2.7.1 Construction Testing Application

Construction testing will be conducted and reported in accordance with project specifications, drawings, codes, standards, and procedures. Construction testing that may be implemented for the project may include, but is not limited to, compaction testing and laboratory analyses for waste disposal and definition of final excavation limits. Further details of project-specific testing requirements can be found in Table E-1, the technical specifications, and the various project compliance plans. The Construction Manager is responsible for ensuring that the tests are performed and that the results are documented. Any test failure will be noted on the deficiency log so it can be tracked to verify that sufficient rework and retesting has been performed. Documentation of tests performed in the field will be recorded on the Initial Phase Inspection Checklist form (Attachment E-1).

E2.7.2 Testing Procedures

The Construction Manager will verify that the particular test equipment and criteria for successful completion of the required tests are correct and confirm that test personnel have a working knowledge of the tests and instruments. Testing will not proceed until satisfactory verification of the testing requirements is attained. The tests to be conducted, the procedures

to be used, and the submittals required for each system are as reported and specified in the applicable specifications, submittal registers, and drawings for definable features of work.

E2.7.3 Laboratory Analyses

The qualifications of the analytical laboratory will be verified by the Project Manager during the Preparatory Phase. The Project Manager is also responsible for monitoring the performance of each laboratory and verifying compliance with project requirements. Data reports are to include sufficient information to verify the effectiveness and implementation of laboratory QC systems. Requisite information may include raw data, instrument printouts, preparation logs, calibration records, test results for associated QC samples, dilution factors, instrument settings, and observed deviations or problems. To assure the accuracy of the data, laboratory reports should be checked and verified by the laboratory manager or senior laboratory personnel.

E2.7.4 Measurement and Test Equipment Calibration and Maintenance

Portable field equipment used for testing will be calibrated to the appropriate traceable standards and maintained per manufacturer's specifications. Records of these activities are to be generated by the individual performing the activity with copies provided to the Project Manager and retained in the project files.

E2.7.5 Review of Test Results

Prior to their use in decision-making, test data are to be reviewed by the Project Engineer, the Construction Manager, and the Engineer of Record (if necessary). During the review process, the Construction Manager will verify that all required documentation was submitted, that specified test procedures and conditions were followed, and that results are within the limits of acceptability.

E2.8 NON-CONFORMANCE MANAGEMENT

This section provides procedures for tracking construction non-conformances and deviations. It defines the controls and related responsibilities and authorities for dealing with non-compliant products or services, or deviations from the approved design plans and specifications.

E2.8.1 Non-Conformance Identification and Control

Non-conformances noted during inspection are verbally reported to the Construction Manager and noted on the Project Engineer's Daily Field Record (DFR). Non-conformances will be documented in a Non-Conformance Report (NCR) and tracked on the NCR Tracking Log. Examples of the NCR and NCR Tracking Log forms are provided in Attachment E-1.

E2.8.2 Corrective Action

When completed work is found to be deficient and/or does not meet the project specifications, the Construction Manager will assure deficiency corrective actions are implemented and take the necessary steps to prevent unintended use or delivery. The Contractor and/or Subcontractor(s) will implement corrective actions to remedy work that is not in accordance with the approved design drawings and specifications.

The corrective actions will include removal and replacement of deficient work using methods approved by the Engineer of Record and SOPUS (if necessary).

Replacement must be done in accordance with the corresponding technical specifications and will be subjected to the same scope of inspections and testing as the original work. Corrective Actions will be documented on a Corrective Action Request form and tracked on a Corrective Action Request Tracking Log form. Examples of these forms are provided in Attachment E-1.

E2.8.3 Preventative Measures

Certain elements of this CQCP are designed to be proactive and to minimize the potential for non-conformity. The Construction Manager will take preventive actions as necessary to eliminate the causes of potential deficiencies so as to prevent them.

E3.0 SUBMITTALS

Prior to each submittal, the Subcontractor will review and coordinate all aspects of each item being submitted and verify that each item and submittal conforms to specified requirements. Submittals that are not approved or determined to be insufficient for review shall be revised and resubmitted prior to use of the material on site. Submittals will be logged on the Submittal Register. An example of the Submittal Register form is provided as Table E-2.

E3.1 VENDOR DATA AND SHOP DRAWINGS

Shop drawings of materials and equipment to be used during construction will be reviewed first by the Project Manager for general contract conformance. If the Project Manager has no objections to the information in the submittal it is progressed to the Project Engineer to review conformance with approved design plans and specifications. If the Project Engineer, in consultation with the Engineer of Record, deems that the submittal meets the requirements in the contract documents and the design intent, it is approved and returned to the Project Manager. If the submittal is determined not to be in compliance with the contract documents at any stage of the review process, it may be sent back to the Subcontractor with an appropriate review form. The Project Manager or their designee will be responsible for tracking submittals and maintaining the submittal register.

Copies of purchase orders or subcontracts related to materials requiring inspection are to be provided to the Project Manager or their designee for scheduling and record-keeping purposes. If a purchase order requires vendor certification of materials, equipment, or supplies, the certification is to be verified for accuracy and conformance and may be used in lieu of a test for those properties covered by the certification.

Where literature from manufacturers includes data not pertinent to the submittal, the submittal will clearly show which portions of the contents are being submitted for review. If specified in individual specification sections, the manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing will be submitted. The submittals will be reviewed to identify conflicts between the manufacturers' instructions and contract documents. If the manufacturers' instructions conflict with contract documents, the Project Manager or their designee will address the issue with the Contractor, Subcontractor, the manufacturer, or SOPUS if needed.

E3.2 SUBMITTAL SCHEDULE

Submittals and work plans will provide sufficient detail to describe the proposed means and methods for controlling the work. Electronic copies of each work plan will be provided to the Project Manager after being approved by the Project Engineer and Construction Safety Officer, as appropriate to the submittal and as determined by the Project Manager. The Contractor and

Subcontractors cannot proceed with any piece of work until all submittals related to that work component have been submitted, reviewed, and approved by the Project Manager's designee.

E3.3 REVISIONS AND SUBSTITUTIONS

Only those revisions or substitutions directed or approved by the Engineer of Record (and SOPUS, if required) will be allowed. No substitution of materials, equipment, or methods will occur unless such substitutions have been specifically approved in writing by the Engineer of Record.

E4.0 DOCUMENTATION

This section establishes requirements for the control of the documentation of the quality of items and activities performed in accordance with the approved final design package. The Project Manager or their designee is responsible for the control, review, verifications, and maintenance of the documentation listed in the specifications.

E4.1 DAILY RECORDKEEPING

During field work, the Project Engineer will document field activities in DFRs. At the end of each day, the Project Engineer will generate an email transmitting the DFR and a daily summary to the Construction Manager. The Construction Manager will review the daily report summary and DFR and submit it to the Project Manager and Engineer of Record no later than the following morning to address issues and concerns that may have arisen the previous day. A sample DFR is included in Attachment E-1.

E4.2 RECORD DRAWINGS

The Contractor will maintain and provide Wood with an as-built markup set of drawings at the completion of all work, for Wood to generate the record as-built drawings.

E4.3 DOCUMENT CONTROL AND RETENTION

Sufficient documentation and records will be accumulated to provide objective evidence that the design development and review process has been performed in accordance with good engineering practice and in conformance with contractual requirements. The quality records will be stored with the project documents and retained in accordance with contract requirements. Wood will provide electronic copies of the most current requests for information

to parties whose work will be impacted by any changes. Electronic copies will be distributed by email and correspondence retained in the project file.

Design review comment forms, indicating disposition of each comment, shall be retained in the project files. Where applicable, check prints will be kept on file as long as required to ensure that all review comments have been incorporated into the drawings and plans. Quality review checklists for any milestone submissions shall be preserved in the contract file.

E4.4 CONSTRUCTION COMPLETION REPORT

A Demolition and Soil Removal Completion Report ("Completion Report") will be prepared and certified by the Engineer of Record following completion of remedial construction activities. The Completion Report will include a description of the completed remedial construction, approved design changes, record drawings, a project photo log, CQA/QC testing results, waste disposal documentation, and other pertinent information documenting compliance with the design plans, specifications, permits and compliance plans.

E5.0 REFERENCES

Wood Environment & Infrastructure Solutions, Inc. (Wood), 2020. Health and Safety Plan, Pennzoil-Quaker State Alameda Distribution Center, 2015 Grand Street, Alameda, California. May 8.

TABLE E-1

SUMMARY OF CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL TESTING AND INSPECTION REQUIREMENTS

Construction Quality Control Plan
Pennzoil-Quaker State Distribution Center
Alameda, California

No.	QA/QC Requirement	Activity Type	Conducted / Documented by
1	Personal Air Monitoring	Monitor/Test	Subcontractor
2	Periodic Health & Safety Audits	Audit	Subcontractor
3	Daily Inspection of Waste Load Out Pad(s)	Inspection	Subcontractor
4	Weekly Inspection of Decontamination Pad(s)	Inspection	Subcontractor
5	Weekly Inspection of Stockpile Containment Area(s)	Inspection	Subcontractor
6	Inspection of Secondary Containment	Inspection	Subcontractor
7	Pre-Construction Inspection	Inspection	Subcontractor/ Construction Manager
8	As-built Survey	Survey	Surveyor/ Subcontractor
9	Weekly SWPPP Inspections	Inspection	Construction Manager
10	Water Quality Monitoring	Test	Subcontractor
11	Daily Vehicle Inspection	Inspection	Subcontractor
12	Periodic SWPPP Inspections	Inspection	Subcontractor
13	Perimeter Air Monitoring	Test	Project Engineer
14	Noise Control	Test	Subcontractor
15	Asbestos-containing Material Testing and Characterization	Test	Subcontractor/Lab
16	Pre-Demolition Inspection	Inspection	Subcontractor
17	Excavation Depth Verification	Test	Subcontractor
18	Waste Characterization Testing	Test	Project Engineer/ Subcontractor
19	Construction Water Treatment System Start-up Testing	Test	Project Engineer/ Subcontractor
20	Construction Water Treatment System Monthly Testing	Test	Project Engineer/Subcontractor
21	Borrow Source Soil Sample Analyses	Review	Construction Manager
22	Compaction Testing of Backfill	Test	Subcontractor

TABLE E-2

EXAMPLE SUBMITTAL REGISTER

PENNZOIL-QUAKER STATE ALAMEDA DISTRIBUTION CENTER

2015 Grand Street

Alameda, California

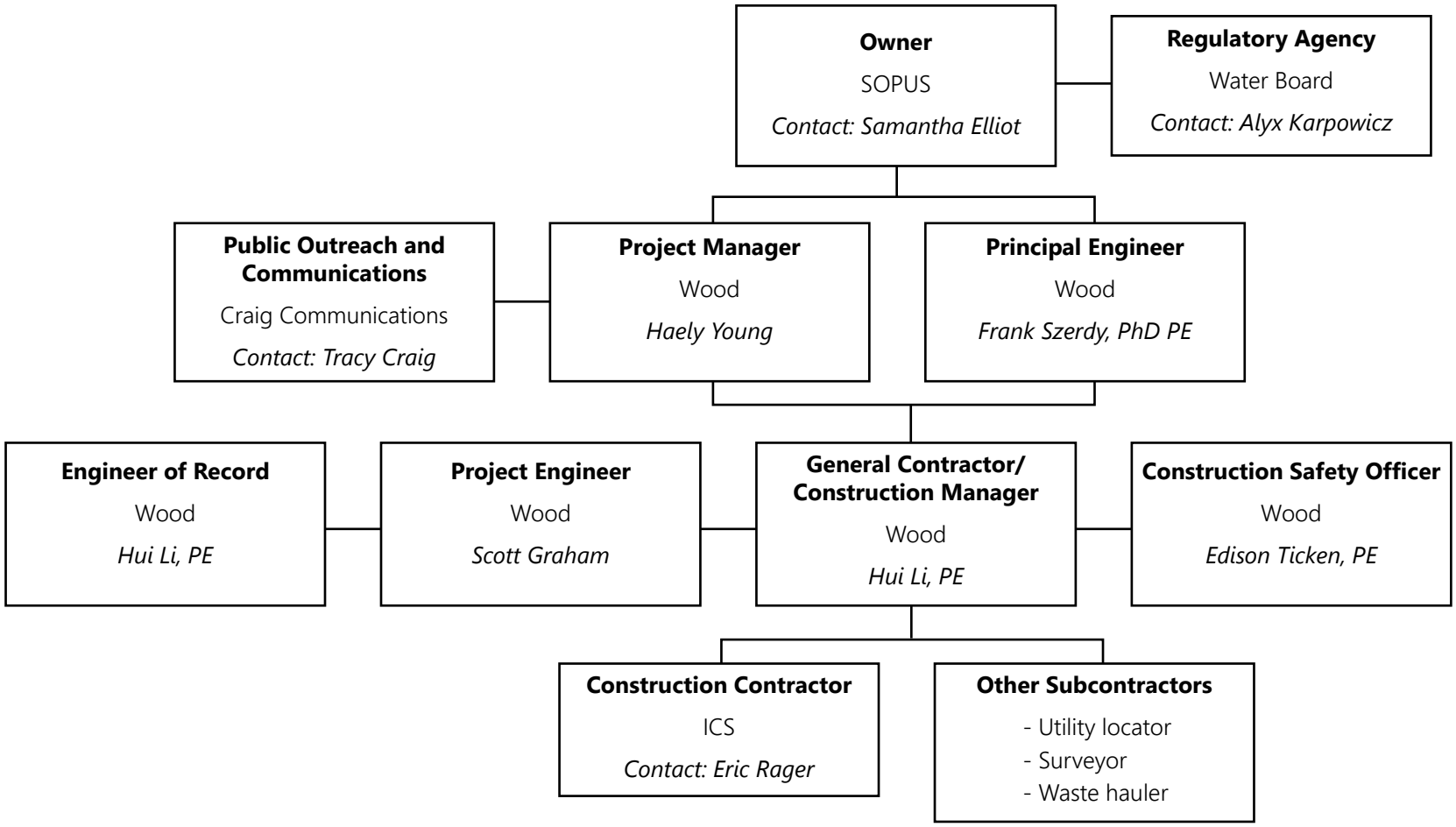
Item Number	Specification Paragaph Number	Submitted Item Description	Submittal Schedule	Type of Submittal[1]	Submittal Formate[2]	Date Received	Review Needed By	Return Date	Reviewed By	Action Code[3]	Remarks

Notes

1. Type of submittal:
   - Drawings
   - Schedule
   - Reports
   - Cutsheet
   - Samples
   - Others (specify)
2. Submittal Format Key:
   - E: Eletronic
   - H: Hard copy
   - S: Samples
3. Action Code Key
   - 1: Reviewed - No Comments
   - 2: Comments as noted
   - 3: Revise and resubmit
   - 4: Not submit to review

FIGURES

C:\Users\kristin.uber\Desktop\Shell\8620192890\task_02\20_0330_RAP_fig_E-1_OrgChart.ai



Abbreviations

ICS	Innovative Construction Solutions
SOPUS	Pennzoil-Quaker State Company dba SOPUS Products
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region

PROJECT ORGANIZATION CHART
Penzoil-Quaker State Alameda Distribution Center
2015 Grand Street
Alameda, California

wood.	By: KLU	Prj. No. 8620192890.02
	Date: 05/27/2020	Figure **E-1**

ATTACHMENT E-1

Example CQA/QC Forms

SUBMITTAL REVIEW FORM

Project Name: Site:

ICS Project No.:

Wood Project No.:

To Contractor:

Submittal Dated: _____

Date Received by Engineer: _____

Date Resubmitted to Engineer: _____

Description of Submittal:			Type of Submittal				
Submittal No.:		Specification Section	Administrative	Material Data	Mfg. Literature	Samples	Certification
Manufacturer, Supplier, Product and Model No., Etc			☐	☐	☐	☐	☐

Your submittal, as referenced, has been reviewed and the following action taken:

Review Summary:

- ☐ Not Reviewed – Informational submittal only.
- ☐ Reviewed – No exceptions taken.
- ☐ Incorporate changes as noted (no resubmission required).
- ☐ Revise and submit for review.

Comments:

None

Reviewed by: _____ Date: _____

Preparatory Phase Inspection Checklist

DATE:_____

MAJOR DEFINABLE FEATURE OF WORK:_____

A. PERSONNEL PRESENT:

	NAME	POSITION	COMPANY
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

B. Design Drawing and Specification Review:

	ITEM
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____
7.	_____
8.	_____
9.	_____
10.	_____

B-I. Have all items involved been approved? Yes_____ No_____

B-II. What items have not been approved?

Preparatory Phase Inspection Checklist (Page 2 of 3)

C. ARE ALL MATERIALS ON HAND? Yes_____ No_____

C-I. Are all materials on hand in accordance with approvals? Yes_____ No_____

C-II. Items not on hand or not in accordance with transmittals:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

D. TESTS REQUIRED IN ACCORDANCE WITH CONTRACT REQUIREMENTS:

	TEST	**INSTALLATION / WORKMANSHIP RESPONSIBLE PARTY**
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

D-I. HOLD POINTS:

	COMPONENT	**INSPECTION REQUIREMENT**	**NOTES**
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

Preparatory Phase Inspection Checklist (Page 3 of 3)

ACCIDENT PREVENTION PREPLANNING – HAZARD CONTROL

E. MEASURES: Applicable Outlines (attach complete copies):

E-I.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

E-II. Operational Equipment Checklists:

ATTACHED FOR:

1. _____
2. _____
3. _____

F. OWNER NOTIFIED? Yes_____ No_____

_____

Quality Manager

Initial Phase Inspection Checklist (Page 1 of 2)

PROJECT NAME:_____ DATE:_____

TITLE:_____

DESCRIPTION AND LOCATION WORK INSPECTED:_____
_____
_____

REFERENCE CONTRACT DRAWINGS:_____ SPEC SECTION:_____

A. MATERIALS, SPECIFICATIONS, ELEVATIONS, FIELD LAYOUTS, FINAL LINES/GRADES, FIELD LAYOUTS, AND ENGINEERING CONTROLS BEING USED ARE IN STRICT COMPLIANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS: Yes ____ No ____
IF NOT,
EXPLAIN:_____
_____
_____

B. PROCEDURES AND/OR WORK METHODS WITNESSED ARE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS: Yes ____ No ____
IF NOT,
EXPLAIN:_____
_____
_____

C. TESTING:

TEST TYPE	**ACCEPTABLE**	**UNACCEPTABLE**

Initial Inspection Checklist (Page 2 of 2)

D. WORKMANSHIP IS ACCEPTABLE? Yes ____ No ____
STATE AREAS WHERE IMPROVEMENT IS NEEDED:_____
_____
_____
_____

E. SAFETY VIOLATIONS AND CORRECTIVE ACTION TAKEN:_____
_____
_____

F. OWNER NOTIFIED: Yes ____ No ____

_____
Quality Manager

Follow-Up Phase Inspection Checklist (Page 1 of 1)

PROJECT NAME:_____ DATE:_____

TITLE:_____

DESCRIPTION AND LOCATION WORK INSPECTED:_____
_____
_____
REFERENCE CONTRACT DRAWINGS:_____ SPEC SECTION:_____

A. MATERIALS, SPECIFICATIONS, ELEVATIONS, FIELD LAYOUTS, FINAL LINES/GRADES, FIELD LAYOUTS, AND ENGINEERING CONTROLS BEING ARE IN STRICT COMPLIANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS: Yes ____ No ____
IF NOT,
EXPLAIN:_____
_____
_
_____
_

B. PROCEDURES AND/OR WORK METHODS WITNESSED ARE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS: Yes ____ No ____
IF NOT, EXPLAIN:_____
_____
_____

C. NON-CONFORMANCE

ARE ANY WORK COMPONENTS IN NON-CONFORMANCE WITH REQUIRED TESTING, DESIGN DRAWINGS AND SPECIFICATIONS: Yes ____ No ____
IF YES, EXPLAIN:_____
_____
_____
_____

ANY NON-CONFORMANCE REQUIRES COMPLETION OF A NON-CONFORMANCE REPORT AND TRACKING ON THE NON-CONFORMANCE REPORT TRACKING LOG

Final Inspection Checklist (Page 1 of 1)

DATE:_____

PROJECT:_____

MAJOR DEFINABLE FEATURE OF WORK:_____

LOCATION:_____ SPEC SECTION:_____

A. OPEN PUNCHLIST ITEMS FROM FINAL FOLLOW-UP INSPECTION:

	ITEM	**DATE OF COMPLETION**
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

B. NEW PUNCHLIST ITEMS NOTED:

	ITEM	**ESTIMATED DATE OF COMPLETION**
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

C. OWNER NOTIFIED? Yes ____ No ____

I certify this activity is completely in accordance with the Contract Documents, based upon the information available to me.

_____

Quality Manager

Non-Conformance Report				NCR NO.:
J.O. NO.:	P.O. NO.:			REQUISITION NO.:
CLIENT:		PROJECT:		
DESCRIPTION OF NON-CONFORMANCE:				PRODUCT OR MATERIAL LOCATION:
ID NO./SYSTEM:	SPECIFICATION VIOLATED:	DRAWING VIOLATED:		CODE VIOLATED:
ORIGINATOR:	DATE:	RECEIPT ACKNOWLEDGEMENT:		DATE:
CONDITION DETAILS: QUALITY MANAGER DATE				
DISPOSITION				
ACTION: ☐ ACCEPT-AS-IS ☐ SCRAP ☐ REWORK ☐ RECTIFY ☐ RETURN TO SELLER				
DISPOSITION DETAILS:				
REQUISITIONING ENGINEER:	DATE:	ENGINEER OF RECORD:		DATE:
OTHER:	DATE:	OTHER:		DATE:
REWORK COMPLETE:	DATE:	NCR CLOSED:		DATE:

Non-Conformance Report (NCR) Tracking Log

NCR #	Date Condition Identified	Identifying Individual	Location of Discrepancy	Description of Condition	Specification Reference or Drawing No.	Corrective Action Verification Date	NCR Close-out Date	Comments

	Corrective Action Request	CAR No.:
		INITIATING DOCUMENT:

CONDITION DESCRIPTION:

ASSIGNED TO:

NAME/TITLE	DATE	LOCN

CAUSE, CORRECTIVE & PREVENTIVE ACTION:

DISTRIBUTION (UPON SPECIFICATION OF CAUSE, CORRECTIVE & PREVENTIVE ACTION)

CORRECTIVE ACTION VERIFIED:

NAME/TITLE	DATE	LOCN

PREVENTIVE ACTION VERIFIED:

NAME/TITLE	DATE	LOCN

RESOLUTION/CLOSE OUT:

QUALITY MANAGER	DATE	LOCN

DISTRIBUTION (UPON CLOSE OUT):

Corrective Action Request (CAR) Tracking Log

CAR #	Specification Reference/Drawing Number	Subject	Location	Date Initiated	Initiator	Document File Object Name	Closure Date