Corrective Action Plan/Soil Management Plan

Ortega Park
604 East Ortega Street, Santa Barbara, California

prepared on behalf of

The City of Santa Barbara
620 Laguna Street
Santa Barbara, California 93101

submitted to

Santa Barbara County Public Health Department
Environmental Health Services Division
2125 South Centerpointe Parkway, Suite 333
Santa Maria, California 93455

prepared by

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June 10, 2020

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June 10, 2020
Project No. 18-06506

E. Steven Nailor, REHS, EIT
Senior Hazardous Materials Specialist
Santa Barbara County, Public Health Department
Environmental Health Services Division
2125 S. Centerpointe Parkway, Room #333
Santa Maria, California 93455
Via Email: Steve.Nailor@sbcphd.org

Subject: Corrective Action Plan and Soil Management Plan – Ortega Park, 604 East Ortega Street, Santa Barbara, California

Dear Mr. Nailor:

On behalf of the City of Santa Barbara, Rincon Consultants, Inc. has prepared this Corrective Action Plan and Soil Management Plan for the Ortega Park site located at 604 East Ortega Street, Santa Barbara, California.

Please do not hesitate to contact us with any questions or comments regarding this report or this project.

Sincerely,
Rincon Consultants, Inc.

Shawn Decker, MESM, LEED AP
Senior Program Manager

Walt Hamann, PG, CEG, CHG
Vice President, Environmental Services

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Introduction

On behalf of the City of Santa Barbara, Rincon Consultants, Inc. (Rincon) has prepared this Corrective Action Plan (CAP) and Soil Management Plan (SMP) for the Ortega Park site located at 604 East Ortega Street, Santa Barbara, California (Figure 1). It is our understanding that the site was used as a municipal waste dump from at least 1902 until at least 1927. Between 1927 and 1930, the site was developed to its current use as a City park (Figure 2). According to the preliminary plans, the park renovation will include the construction of an aquatics facility, a splash pad, a skate park, stormwater management systems, and artificial turf playing fields. Structures at the new park will include the existing welcome house, a new restrooms structure, and a new aquatic mechanical and chemical building.

The subject property is an open site in the Santa Barbara County Public Health Department, Environmental Health Services Division (EHS) Site Mitigation Unit (SMU) Program and identified as SMU Site Number 760 and Global Identification Number T10000014371. This CAP/SMP was prepared in response to a May 26, 2020 directive letter from EHS.

This CAP/SMP presents methodology and protocols to properly handle, store, transport, and dispose impacted soil that is encountered during subsurface work performed for the Ortega Park renovations. These methodologies and protocols are intended to ensure construction work is executed in a manner that is protective of worker, public, and environmental health. The impacted soil should be handled, stored, transported, and disposed in accordance with federal, state, and local regulations. Areas that may require over-excavation to remove contaminated soil at infiltration features are described in the Ortega Park Renovations section. Excavation beyond what is required to perform the park renovations is not proposed at features that do not create a conduit for surface water through contaminated soil and trash to groundwater. Excavation depths will likely be revised following the completion of geotechnical testing.

The following sections provide an overview of the project history and the physical setting, discuss the Ortega Park renovations, and present the scope of work. This CAP/SMP is prepared as a document that can be used for the current project and for future projects involving subsurface work at this site.

Project and Regulatory History

Site History

According to documents provided to Rincon by the City of Santa Barbara, the City purchased the site in 1902. The site served as a municipal waste dump possibly from the early 1900s to approximately 1927. It appears that the waste from the public in addition to debris resulting from the 1925 earthquake were disposed at the site. Debris has been encountered in trenches excavated at the site and EHS investigation records from 1992 to 1993 reference a dump at the site. Between 1927 and 1930, the site was developed as a City park.

April 2019 – Phase II Environmental Site Assessment

On April 16, 2019, twenty borings were advanced at the subject property. Five borings were advanced to 10 feet below grade (HP1 to HP5), 14 borings were advanced to 4 feet below grade (RB1 to RB11, RB12 to RB15), and 1 boring met refusal at 1 foot below grade (RB12) (Figure 2). Two soil matrix samples were collected from each of the 10-foot and 4-foot borings and 1 soil sample was collected from the 1-foot boring. Groundwater samples were collected from borings HP2 through HP5. Groundwater was not encountered in boring HP1.

Organic odor similar to decomposing vegetation was noted in the soil matrix sample collected at 10 feet below grade from boring HP3. Grey and black staining was encountered in borings RB4, RB5, RB6, RB9, and RB10. Debris, including glass, metal, and building materials such as brick, was noted in borings HP2, RB4, RB6, RB7, RB9, RB10, RB11, and RB12. Soil encountered in the borings generally consisted of silt with varying amounts of sand and clay. Field screening with the photoionization detector (PID) did not detect measurable concentrations of volatile organic compounds (VOCs) in the borings with the exception of RB3. Soil screened in boring RB3 at 2 and 4 feet below grade detected VOCs at concentrations of 4 parts per million by volume (ppmv) and 10 ppmv, respectively. The groundwater sample collected from HP3 exhibited a sheen and slight hydrocarbon odor.

Distribution of Contaminants in Soil

TPH

TPHd and TPHo were detected at concentrations exceeding the EHS Investigation Level (IL) of 100 milligrams per kilogram (mg/kg) in soil samples collected from 8 of the 20 borings advanced at the subject property (Figure 3, Table 1). The highest concentration of TPH was detected in soil sample RB6-4 (soil sample collected at 4 feet below grade from boring RB6) at a concentration of 12,700 mg/kg. TPH concentrations exceeding EHS ILs were generally detected in the northeastern, eastern, and southern portions of the subject property.

Metals

Metals were detected at concentrations exceeding EHS ILs in soil samples collected from 12 of the 20 borings advanced at the subject property (Table 2). Metals exceeding EHS ILs include arsenic, barium, chromium, lead, mercury, thallium and zinc. Lead was detected at concentrations exceeding California hazardous waste thresholds in soil samples collected from 7 borings advanced in the

eastern and southern portions of the subject property (Figure 4). Zinc was detected at a concentration exceeding California hazardous waste thresholds in the soil sample collected from boring RB6. Toxicity Characteristic Leaching Procedure (TCLP) lead was detected in soil sample HP4-10 at a concentration of 4.7 milligrams per liter (mg/L) which is below the Federal hazardous waste threshold of 5 mg/L.

PAHs

The benzo (a) pyrene (BaP) Toxicity Equivalent (TE) exceeds the EHS IL for BaP of 0.11 mg/kg in soil samples collected from 5 of 20 borings advanced at the subject property (Figure 5, Table 3). Similar to the TPH, the highest concentrations of PAHs were detected in soil sample RB6-4. BaP TE was calculated as 75 mg/kg in soil sample RB6-4. PAH concentrations exceeding EHS ILs were generally detected in soil samples collected from borings located in the north central and northeastern portions of the subject property.

Hazardous Waste Characterization

Lead concentrations exceeding California (non-RCRA) Hazardous Waste Thresholds were detected in borings RB5, RB6, RB7, RB9, RB10, RB12, and HP4, advanced in the eastern half of the subject property (Figure 4). Boring RB6 also detected zinc at a concentration exceeding the California Hazardous Waste Threshold for zinc in soil.

Distribution of Contaminants in Groundwater

The highest contaminant concentrations detected in the groundwater consisted of TPH in the diesel and motor oil ranges and tert-Butyl alcohol (TBA) in the groundwater sample collected from groundwater sample HP3. Boring HP3 was advanced between the existing locations of the pool and softball diamond in the southern portion of the site. Low concentrations of TPH were detected in the soil samples collected from HP3. Benzene was also detected at concentrations exceeding EHS ILs in groundwater sample HP5.

Groundwater was not encountered, and groundwater samples were not collected from borings advanced in the northeastern portion of the site in which the highest contaminant concentrations were detected in the soil. Groundwater samples were collected in the southern portion of the park in the vicinity of planned features requiring deeper excavation depths.

Physical Setting

Topography

The current United States Geological Survey (USGS) topographic map (Santa Barbara Quadrangle, 1952, photo revised 1988) indicates that the subject property is situated at an elevation of approximately 40 feet above mean sea level with generally flat topography. Regional topography slopes gently to the south towards the Pacific Ocean. Geology and Hydrogeology

Site Geology

The site is located on the gently sloping Santa Barbara Coastal Plain, which is comprised of recent-aged alluvium, deposited across raised marine terraces. These alluvial deposits were derived from older sedimentary deposits within the Santa Ynez Mountains north of the site, and overlie the Quaternary aged Santa Barbara Formation. Soil encountered during the April 2019 assessment generally consisted of silt with varying amounts of sand and clay.

No active faults have been mapped by Dibblee (1986) beneath the subject property. An active fault is defined by the State of California as one which has had surface displacement within the last 11,000 years (Holocene time on the geologic time scale). Active faults are also classified by historic (within the last 200 years) seismicity, where surface rupture may or may not be evident. The concealed trace of the potentially active Mesa Fault is located approximately 1 mile south-southwest of the subject property.

Regional Groundwater Occurrence and Quality

The project site is located within the Santa Barbara Hydrologic sub-area of the South Coast Hydrologic Unit, commonly known as the Santa Barbara Groundwater Basin. The basin is bounded on the southeast by the Pacific Ocean, on the southwest by the Lavigia Fault, on the west by an unnamed fault, and on the north by the Mission Ridge Fault. The Santa Barbara Formation and overlying unconsolidated Holocene alluvium comprise the water bearing zones within this unit. Aquifers within the Santa Barbara Groundwater Basin are used for municipal and domestic water supply. In the site vicinity, the unconsolidated Holocene alluvium aquifer is approximately 200 to 400 feet below grade and the Santa Barbara Formation is located at up to approximately 1,000 feet below grade. It is our understanding that there is a water well located at the subject property. Rincon has not reviewed records for the well.

Records were reviewed on the State Water Resources Control Board's GeoTracker website. GeoTracker records for the R.J. Carroll and Sons Plumbing site located adjacent to the subject property to the southwest indicate that as recently as 2014, groundwater has been encountered at depths ranging from less than 1 foot below grade to approximately 6 feet below grade. Based on information from this and other nearby sites, the local groundwater flow direction in the shallow zone is toward the east, and the regional groundwater flow direction in the shallow zone is toward the ocean (south to southeast). During the April 2019 assessment, groundwater was encountered in the southwest portion of the site at approximately 5 feet below grade.

Ortega Park Renovations

Rincon's understanding of the Ortega Park renovations is based upon our review of preliminary plans prepared by RRM Design Group (RRM). With permission of RRM, the preliminary plans detailing excavation depths are included as Figures 6 through 11 of this CAP/SMP. Preliminary plans do not include disposal of contaminated soil and trash/debris beneath the site. The final plans will include proper offsite disposal of excavated contaminated soil and trash/debris in accordance with this CAP/SMP, permits, rules and regulations. Excavation depths are preliminary and subject to change following the completion of geotechnical testing (Figure 6).

Groundwater was encountered during the April 2019 assessment at approximately 5 feet below grade in borings advanced in the southern portion of the site. Groundwater was not encountered to 10 feet below grade in boring HP1 advanced in the southwestern portion of the site.

Playing Fields

The existing grass field will be replaced with an approximately 90,000 square foot artificial turf field (Figure 7) with soil excavations from 1 to 3 feet below grade. Nineteen drainage pipes constructed of 12 inch diameter ADS AdvanEDGE® pipe planned to be installed beneath the field will drain infiltrated surface water to the northeast to an existing catch basin. According to detail A on Figure 7, the subgrade at 1 foot below grade will be compacted to 90%. Since the playing fields are artificial turf, irrigation will not be required; however, on very hot days the field is watered prior to games to bring down the temperature of the field material. Additional excavation is not planned in the turf field area for contaminated soil removal purposes, as surface water infiltration will be removed by the drainage pipes to an existing catch basin. Geotechnically testing may require additional soil and trash/debris removal for compaction purposes.

Aquatic Area

The existing pool will be replaced by a new wading pool, lap pool, and splash pad area with soil excavations from 1 to 11.5 feet below grade (Figures 6 and 8). The existing bathroom/pool facilities building will also be replaced and a new aquatic mechanical and chemical building will be built.

Preliminary plans indicate the following quantities of soil excavation:

- Swimming pool- 637 cubic yards
- Swimming pool surge tank- 33 cubic yards
- Wading pool- 72 cubic yards
- Slide balance tank- 57 cubic yards

Maximum excavation depth at the swimming pool of 11.5 feet below grade is associated with the main drain and the drain's hydrostatic relief valve and collector tube. Excavation beneath the remainder of the swimming pool is planned at approximately 8.5 feet below grade. According to documents provided to Rincon by RRM, the swimming pool must be constructed in a single soil condition for stability purposes and weight requirements. It is likely that groundwater will be

encountered at approximately 5 feet below grade at the excavations in the aquatic area. Dewatering will likely be necessary. Contaminated groundwater should be properly managed.

Skate Park, Stormwater Chambers, And Multi-Generation Activity Zone

A new skate park, subsurface stormwater chambers, and a multi-generation activity zone will be built to the east of the aquatic area with soil excavations from 1 to 6 feet below grade (Figures 6 and 9). CulTec stormwater chambers details are included on Figure 10. The stormwater chambers will direct water to the southeast to a proposed stormwater catch basin along Cota Street and via a storm drain to a proposed 15-inch diameter storm drain connection to existing curb inlet at the corner of Cota Street and Salsipuedes Street. Additional excavation due to potentially contaminated soil is not expected to be necessary in the stormwater chamber area, as surface infiltration will be removed by the drainage pipes.

Permeable Features

Along with stormwater chambers mentioned above, additional permeable features are proposed, such as bioretention areas and permeable pavement areas with trench drains (Figure 10). If these areas are designed to drain to groundwater, additional excavation would be recommended to groundwater depth with a lateral 3-foot buffer.

Utility Connections and Street Improvements

Improvements to the street surfaces and subsurface utility connections will occur in the streets surrounding Ortega Park (East Ortega Street, North Salsipuedes Street, East Cota Street, and North Quarantina Street). In locations requiring soil excavation, the area may be pre-assessed by drilling or potholing to collect soil samples or assessed during excavation activities, as detailed in the Excavation of Contaminated Material section below.

Tree Planting

Various trees and shrubs will be installed during the park renovations requiring soil excavations at various depths (Figure 12). Small trees and shrubs are proposed to be installed with minimal soil excavation and drainage; therefore, additional excavation is not recommended.

As depicted on Detail 2 on Figure 11, the proposed palm tree locations will be excavated 4 feet below grade for the rootball and backfill and an additional 4 feet below grade for drainage. If palm trees are to be installed in areas of contamination, additional excavation is recommended to reduce the risk of drainage water percolating into contaminated soil and mixing with the groundwater.

Park Irrigation

An irrigation plan is recommended to be developed if contamination is left in place in areas requiring irrigation. Irrigation should be limited to what is required to maintain the landscaping. Overirrigation should be avoided in areas of contamination to decrease the potential for contaminant migration. The playing fields (Figure 7) will be developed with artificial turf and will not

require irrigation, so irrigated areas will be limited to landscaping. On very hot days, the field will be watered prior to games to bring down the temperature of the field material.

Structures

As depicted on Figures 6 and 8, the planned structures at the renovated park will be in the southwest corner and consist of the existing Welcome House, a new restroom building, and a new aquatics mechanical and chemical building. Soil vapor and methane testing may be warranted at the locations of the structures.

Scope of Work

Pre-field Work Tasks

Permits

Prior to the start of subsurface activities, a permit for the excavation of over 1,000 cubic yards of contaminated soil will be obtained from the Santa Barbara County Air Pollution Control District (APCD). The APCD permit typically requires that contaminated soil management activities are performed outside of school hours.

The City of Santa Barbara and the City's contractors will obtain permits required to perform the planned park renovations from the City of Santa Barbara and any other permitting agencies.

Permits from the Central Coast Regional Water Quality Control Board (RWQCB) and/or the City of Santa Barbara will be required if there is the discharge of groundwater. Contaminated groundwater should be properly managed.

Stormwater Pollution Prevention Plan

As required by the Construction General Permit (CGP), a site-specific Stormwater Pollution Prevention Plan (SWPPP) is required to be prepared in compliance with the CGP 2009-0009-DWQ (as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ). The preparation of the SWPPP will address the site-specific Risk Level assessment and develop a plan for inspection and compliance requirements.

Agency Correspondence

Pursuant to the requirements of EHS, within thirty days of receiving project approval from the City of Santa Barbara Community Development Department, an implementation schedule will be submitted to EHS with field work beginning within 120 days.

EHS will be notified at least one week in advance of subsurface construction activities in the vicinity of contaminated soil. The APCD will be notified in accordance with permit requirements. Agency correspondence will follow the Administrative Flow Chart included in this CAP/SMP.

Utility Notification

Prior to the commencement of subsurface work, the contractor will notify the Underground Service Alert utility marking service. California law requires this notification. The utility marking service identifies known utility locations in the public right of way. Also, prior to the start of field work, the City of Santa Barbara will be asked if they know of any subsurface utilities in the proposed excavation areas. If the existence of utilities in the proposed excavation areas is known, then the contractor will consult with the City of Santa Barbara to avoid damaging these known structures.

Health and Safety Plan

A site-specific Health and Safety Plan (HASP) will be prepared that outlines the measures to be followed to minimize exposure to onsite workers and the public. The site safety plan is prepared in accordance with Occupational Safety and Health Administration (OSHA) requirements (California

Code of Regulations [CCR] Title 8 Section 5192) and contains safety provisions for routine response activities and unexpected emergencies. The plan contains information on chemical and physical hazards, personal protective equipment, decontamination procedures, personnel responsibilities, and emergency response protocols. The plan additionally includes the information required by the CUPA. This document is required by Federal law.

Waste Profiling

Contaminated non-hazardous waste soil and non-RCRA hazardous waste soil will be disposed at appropriately licensed facilities. Trash and debris may require sorting from the soil prior to disposal. There might be special handling and disposal requirements associated with the types of trash and debris encountered. Soil, trash and debris will be properly disposed in accordance with applicable laws and regulations.

The APCD requires that landfill acceptance letters be submitted with the permit application. Based on the age of the existing analytical data (April 2019), additional sampling and analysis will likely be required for landfill acceptance. The number of soil samples and analytical program will be in conformance with the requirements of the disposal facility.

Excavation of Contaminated Material

Excavation/Grading Contractor

Excavation work in areas with known contamination will be performed by a contractor with an active General A contractor's license with a hazardous waste endorsement from the State of California. Per OSHA regulations (Federal Standards – 29 CFR, Par 1926 and CCR Title 8 Section 5192) since soil is classified as a hazardous waste, the contractor's employees working on the site are required to be 40-hour trained in Hazardous Materials and Waste Operations (HAZWOPER) prior to conducting excavation activities at the site. Proof of the required training for each of the onsite excavation contractor's employees will be maintained at the site. In addition, EHS requires that site workers are HAZWOPER certified in areas with the potential for hazardous waste.

Installation Contractors

Once contaminated soil is excavated, the floor and sidewalls of excavations may be lined with plastic sheeting to effectively isolate contaminated soil so that workers who may not be HAZWOPER trained can proceed with park renovations activities. Alternative methods of isolation such as partially backfilling the excavation may be considered if the approach can effectively isolate contaminated soil so that direct exposure cannot occur, and that breathing-zone air quality can be maintained.

Identification of Impacted Soil

The constituents of concern are heavy-range TPH, metals, and PAHs. Field evidence of TPH contamination includes and is not limited to discoloration and odors. Elevated metals concentrations and PAHs may not exhibit field evidence of contamination. Trash and debris are field indicators of contamination. Field instruments such as a photoionization detector (PID) will be used for air quality monitoring and soil segregation. An x-ray fluorescence (XRF) field meter will be utilized to field screen the soil for lead during the excavation activities. XRF measurements will be collected at a rate based upon field indications of contamination and homogeneity of the soil being

excavated. At a minimum XRF measurements will be collected at a rate of four measurements per truck load. A Landtech GEM 2000 Plus or 5000 handheld meter will be utilized to monitor for methane. The site specific safety plan will include safety protocols associated with methane.

If field evidence of unidentified soil contamination is encountered during subsurface work, work should cease in that area of the excavation and the City of Santa Barbara representative should be contacted. Any excavated soil exhibiting evidence of contamination should be segregated and managed as described in the following subsection. Work should not resume in potentially contaminated areas of the site without the permission of the City of Santa Barbara project manager. Unless otherwise specified by the City of Santa Barbara project manager, the City of Santa Barbara project manager will notify the EHS Hazardous Materials Specialist, Steven Nailor, via telephone at (805) 346-8344 if potentially contaminated soil is encountered during excavation work.

Excavation, Segregation, and Assessment of Impacted Soil

An Environmental Scientist, working under the direction of a CA-licensed Professional Geologist or Professional Civil Engineer, will be onsite during excavation work conducted in contaminated areas. The Environmental Scientist will direct the excavation contractor on the segregation of the contaminated soil and controlling dust. As warranted, dust will be controlled by periodically spraying the work areas with water or other approved dust control materials. Contaminated soil will either stored onsite (with permission of the APCD) or will be loaded directly onto trucks, covered, and transported to an approved offsite disposal/recycling facility. Field meters, other field evidence of contamination, and analytical testing results from the previously performed borings will be used to direct soil segregation. Waste profile verification sampling will be performed as warranted.

If contamination is identified in areas of the project area that were not previously sampled then additional soil samples will be collected from the contaminated soil for characterization, profiling, and disposal purposes. Soil sampling is described below.

Sorting of Trash/Debris and Soil

Depending on the quantity and type of trash and debris encountered during excavation activities it might be required to sort the trash and debris from the soil prior to offsite disposal. Additional testing may be required.

Monitoring

The Environmental Scientist will monitor the air quality of the work area in conformance with the site-specific health and safety plan and permit requirements. Fugitive vapor emissions shall be monitored with the use of a PID or equivalent. The PID will be calibrated in accordance with manufacturer specifications at the commencement of earthwork activities each day. A particulate air monitor will be utilized to monitor dust. The dust meter will have an active pump and be in accordance with permit conditions.

During excavation or soil loading, air monitoring of dust and VOC concentrations shall be conducted continuously using a hand-held monitor. Monitoring shall be conducted in the downwind direction of the excavation site. The excavation site includes any stockpiles, any areas of disturbed soil, and any active work areas. Monitoring data shall be recorded on a regular time interval. Through the duration of the excavation project, a log of PID and dust readings (if required) shall be kept in accordance with APCD requirements. If fugitive airborne emissions are measured at levels exceeding permit conditions, the City of Santa Barbara will be notified in accordance with the

CAP/SMP Administrative Flow Chart. The City of Santa Barbara will direct the notification of the APCD.

Soil Storage

The APCD permit for the excavation of greater than 1,000 cubic yards of contaminated soil typically does not allow the stockpiling of soil for more than 24 hours. A variance that allows the stockpiling of contaminated soil for more than 24 hours may be applied for under certain circumstances.

If contaminated soil is stored onsite, it shall be placed in United States Department of Transportation (DOT) approved containers or stockpiled. Stockpiled material shall be stored on and covered by undamaged high-density polyethylene or equivalent impermeable barrier in a burrito wrap fashion. The stockpile shall not be located in sensitive site areas or in areas containing inlets to storm drains and other water ways. Stockpile areas will not contain standing water at any time. Residual water resulting from excavated soil that is too wet to transport will be properly containerized, tested, and disposed.

Trash and debris will be sorted and stored in accordance with applicable laws and regulations.

The SWPPP and the City of Santa Barbara Storm Water Management Program, Storm Water Best Management Practices (BMP) Guidance Manual will be followed. Spill containment equipment and devices will be on site at all times during the excavation work.

Soil Sampling

Soil sampling may be required for waste profile verification purposes and for the delineation and left in place documentation of contaminated soil. Soil sampling will be performed as directed by the EHS Hazardous Materials Specialist. Soil sampling rates are anticipated to be affected by the quantity of trash and soil encountered. Soil sampling in areas that are predominantly trash may not be possible.

If soil sampling is performed it will be in accordance with the following methodology. In sloped excavation areas less than 5 feet in depth that are safe to access, the soil samples will be collected by driving the soil sampler directly into the excavation sidewall and excavation bottom. In excavation areas greater than 5 feet in depth, soil samples will be collected directly from the bucket on the excavator. The excavator bucket will be securely placed on the ground prior to collecting the soil sample from the excavator bucket. The excavator bucket will contain enough soil that the Environmental Scientist can collect a representative soil sample from below the top 2 inches of the soil in the excavator bucket. The soil samples will be collected in appropriate sampling containers provided by the analytical laboratory. The container will be labeled, sealed with Teflon, and stored in a cooler chilled to 4 degrees Celsius. The contractor will coordinate with the analytical laboratory to have samples couriered to a State of California certified analytical laboratory using chain-of-custody protocol. For rush turnaround, the samples can be analyzed by a mobile onsite laboratory. Soil sample collection will be in conformance with the current revision of the United States Environmental Protection Agency (USEPA), SW-846 guidance document- *Test Methods for Evaluating Solid Waste*.

Following collection of samples, all sampling equipment will be washed in a non-phosphate detergent soap solution and triple rinsed. Soil sampling will be performed under the oversight of a California Professional Geologist.

Soil Sample Analysis

Soil samples will be transported to the State certified analytical laboratory following chain-of-custody protocol. The laboratory analyses shall be performed by a laboratory certified by the California Department of Health Services Lab Accreditation Program for each of the analyses to be performed. The analytical laboratory Environmental Laboratory Accreditation Program (ELAP) number will be included in the analytical report. The analytical program used for the profiling of the soil and for waste profile verification shall be in accordance with the requirements of the disposal facility that will accept the excavated soil and is anticipated to include the following:

- Title 22 Metals by EPA Method 6010B/7471A
- Full Range TPH by EPA Method 8015M
- Full list VOCs including oxygenates by EPA Method 8260B
- PAHs by EPA Method 8270C

Soil samples analyzed for delineation and left-in-place documentation will be analyzed for the following:

- Title 22 Metals by EPA Method 6010B/7471A
    - Areas with previous metals analytical data may be only analyzed for specific metals such as lead.
- TPHd and TPHo by EPA Method 8015M
- PAHs by EPA Method 8270C

Total lead concentrations exceeding 10 times the soluble threshold limit concentration (STLC) will be analyzed for STLC lead. Total lead concentrations exceeding 20 times the STLC will be analyzed for TCLP lead.

Sample analysis turnaround time will be such that it meets contract requirements and hold times.

MDL

The analytical laboratory is required to report both the method detection limit (MDL) and the practical quantitation limit (PQL) for every sample result. Per 40 CFR, part 136, Appendix B, the MDL is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The PQL is typically 2 to 10 times the MDL. A detection between the MDL and the PQL is flagged by the laboratory to indicate that the laboratory cannot reliably quantify the detection. Laboratories are required to report all detections and all data qualifiers. All non-detections will be reported as not detected less than the value of the MDL.

Transportation Requirements and Procedures

Requirements of Haulers

Qualified haulers to transport soil from the site will be retained. The selected haulers will be fully licensed and insured to transport the soils. Haulers will follow all applicable requirements of the Department of Transportation (DOT) regulations contained in Code of Federal Regulations (CFR), Title 49 Parts 174 through 177 with regard to loading, unloading, and general handling based on

transport mode. If the soil is classified as a hazardous waste then the soil shall be transported by a hazardous waste hauler registered with the California EPA Department of Toxic Substances Control and excavation contractor employees assisting with loading of the trucks will be 40-hour trained in HAZWOPER. Proof of the required training for each of the onsite contractor's employees will be maintained at the site.

Truck Loading Operations

Trucks will be loaded at designated soil staging areas for transportation to the designated disposal facility. Stray waste material on vehicles, tires, or on the lips of the container, etc., will be removed manually with a brush; shaker plates may also be used to reduce tracking of the materials offsite. The container of the truck will be covered to prevent soil or dust from being released from the truck during transport to the disposal facility. Prior to leaving the soil staging areas, each truck will be inspected by environmental field personnel or the site supervisor to ensure that the containers are adequately covered or secured, the trucks are cleaned of overburdened soil, and the shipment is properly manifested. Each truck will receive the proper placarding and paperwork. Water spray or mist suppressant will be applied during soil loading operations, as appropriate.

Transportation Requirements

Transportation of non-hazardous waste or hazardous waste offsite will be in accordance with DOT regulations contained in CFR, Title 49 and the California Hazardous Waste Control Law (Health and Safety Code Section 25100 et seq.; California Code of Regulations (CCR), Title 22, Section 66428 et Seq.). Vehicle idling time within the staging areas will be kept to a minimum to limit air emissions.

All waste haulers will satisfy the following requirements:

- Vehicles will have passed an annual inspection.
- Vehicle operators will be trained in the safe handling of the waste/material.
- Haulers will maintain the ability to pay damages caused by their operations through proper insurance coverage.
- Haulers will have licenses issued by the California Highway Patrol (CHP) for transportation of hazardous materials.
- Haulers will take certain actions in response to waste discharges during transport (e.g., covering the load to prevent the discharge of dust/particulates into the atmosphere during hauling).

Hazardous waste haulers will satisfy the following additional requirements:

- Haulers will have a valid DTSC registration.
- Haulers will have an EPA identification number.
- Haulers will comply with the Uniform Hazardous Waste Manifest System.

Transportation Routes

Transportation of waste will follow routes on arterial streets and freeways approved for truck traffic to minimize potential impacts on the local neighborhood. Transportation should be conducted in accordance with the National Hazardous Material Route Registry - US Department of Transportation DOT-Federal Motor Carrier Safety Administration (FMCSA) Hazardous Materials (HM) designated, preferred, or prescribed routes for transportation of hazardous materials in California. Truck routes will be determined once a disposal facility is selected, as necessary.

Traffic Control Procedures

Soil for offsite disposal will be transported in trucks from the designated soil staging areas. Prior to loading, all trucks will be staged to avoid impacts on the local streets. Traffic will be coordinated in such a manner that, at any given time, a limited number of trucks will be at the site to reduce truck traffic on surrounding surface streets and to reduce dust generation during onsite transportation. While at the site, all trucks will be required to maintain slow speeds (e.g., less than 15-miles per hour) for safety purposes, and to minimize dust generation.

Disposal of Impacted Soil

Upon acceptance of the soil by the disposal facility, impacted soil will be loaded onto trucks, covered, and transported to the approved offsite disposal/recycling facility. The following are potential non-hazardous waste disposal facilities:

- Chiquita Canyon Landfill in Castaic, California- (661) 257-3655
- TRS in Azusa, California- (626) 969-1384
- Santa Maria Sanitary Landfill in Santa Maria, California- (805) 925-0951

The following are potential non-RCRA hazardous waste disposal facilities:

- Kettleman Hills Facility in Kettleman City, California - (559) 309-7688
- Clean Harbors in Buttonwillow, California - (661) 762-6200

It will be arranged that a representative of the City of Santa Barbara will sign the waste manifests at their convenience and prior to the date of waste removal. A copy of the waste manifest will be included as an appendix to the report documenting the findings of the contaminated soil excavation, removal, and disposal. Additionally, the generator's copy of the manifest shall either be mailed to the City of Santa Barbara representative or provided to them after shipment of the waste, but before the final report is released.

Shipment Documentation and Record Keeping

Shipment Documentation

The appropriate non-hazardous waste manifest or Uniform Hazardous Waste Manifest will be used to track the movement of waste soils from the point of generation to the disposal facility. Prior to transporting the excavated soil offsite, an authorized City of Santa Barbara representative will sign each waste manifest. The City of Santa Barbara will maintain a copy of the waste manifest for each truckload onsite until completion of the project. At a minimum, the shipping documents will include the following information:

- Name and address of waste generator
- Name and address of waste hauler
- Name and address of disposal facility
- Description of the waste
- Quantity of waste shipped
- Department of Toxic Substances Control temporary 90 day EPA identification number for Uniform Hazardous Waste Manifests.

Record Keeping

Waste transportation will comply with the California Vehicle Code (CVC), CHP Regulations (13 CCR), California State Fire Marshal Regulations (19 CCR), DOT Regulations, Title 49, Code of Federal Regulations (49 CFR), and the California Health and Safety Code (HSC) and 22 CCR. These requirements include the keeping of appropriate records during transportation activities. The contractor will be responsible for maintaining a record book during onsite activities. The record book will serve to document observations, personnel onsite, as well as truck arrival and departure times.

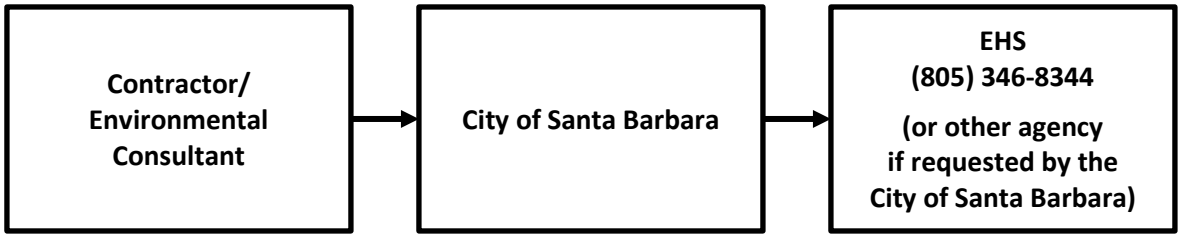
Reporting

The APCD requires that a project completion report is prepared and submitted within 60 days of completion of the project.

If a report is required by EHS it will include a summary of the excavation methodology, volumes and locations of impacted soil removed from the site, a map depicting excavation and sample locations, tabulated analytical results and copies of waste manifests. The report will be signed and stamped by a California Professional Geologist.

CAP/SMP Administrative Flow Chart

The following flow chart describes the contacts and flow of knowledge during the soil management portion of the project:



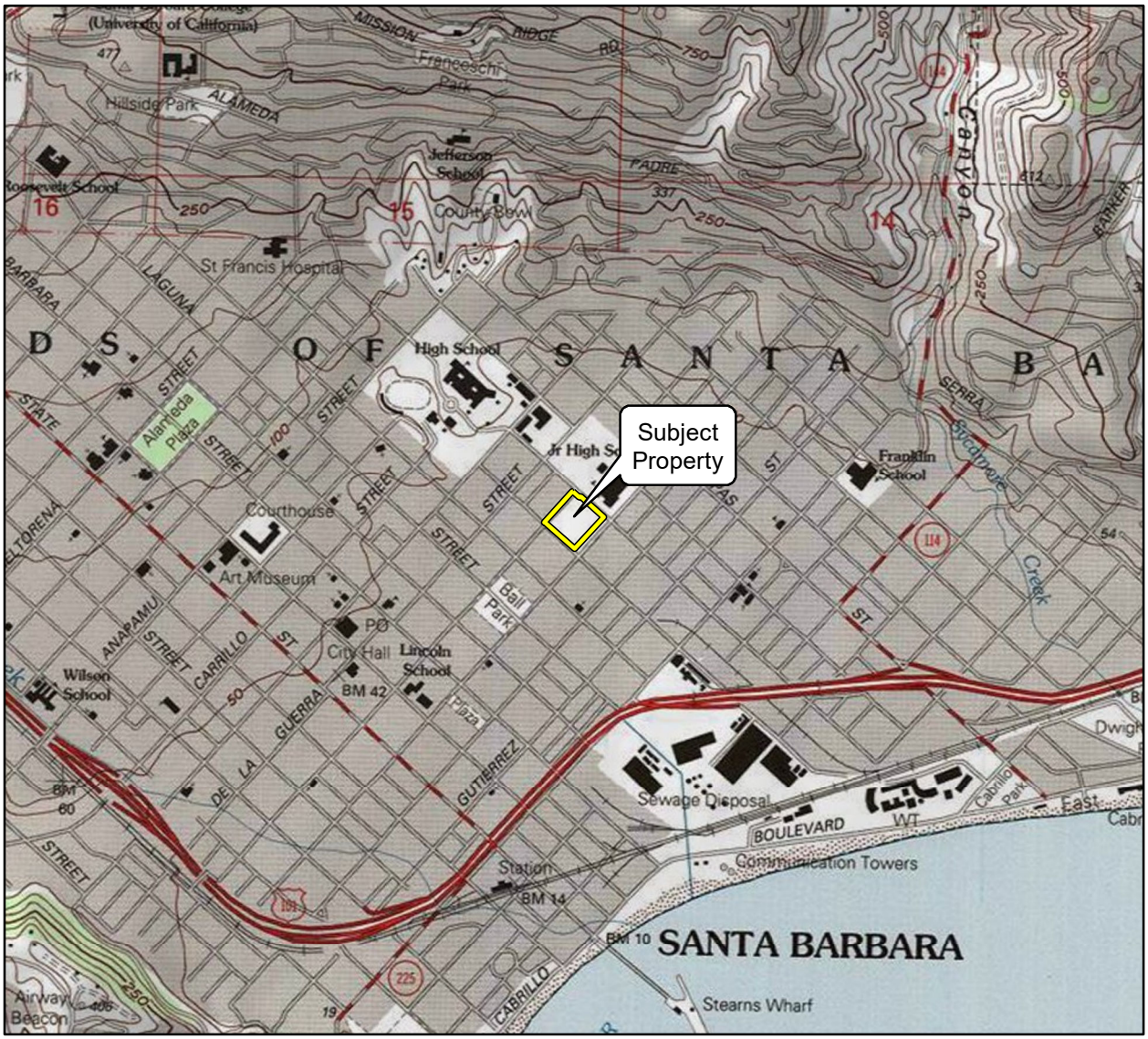
The contractor will contact the environmental consultant prior to initiation of excavation and grading in areas of the site with known contamination. If contamination is encountered in areas of the site where contamination had not previously been identified, the contractor will cease work in that area and contact the on-call Environmental Scientist. Work will not resume in the potentially contaminated area until the soil has been adequately characterized by the Environmental Scientist.

Limitations

This report has been prepared for and is intended for the exclusive use of the City of Santa Barbara and its contractor(s). The contents of this report should not be relied upon by any other party without the written consent of Rincon Consultants, Inc.

Our conclusions regarding the subject property are based on the results of limited subsurface sampling programs. The results of these evaluations are qualified by the fact that only limited sampling and analytical testing was conducted during these assessments. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations. Further, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions and other events. Conclusions regarding the condition of the subject property do not represent a warranty that all areas within the subject property are similar to those sampled.

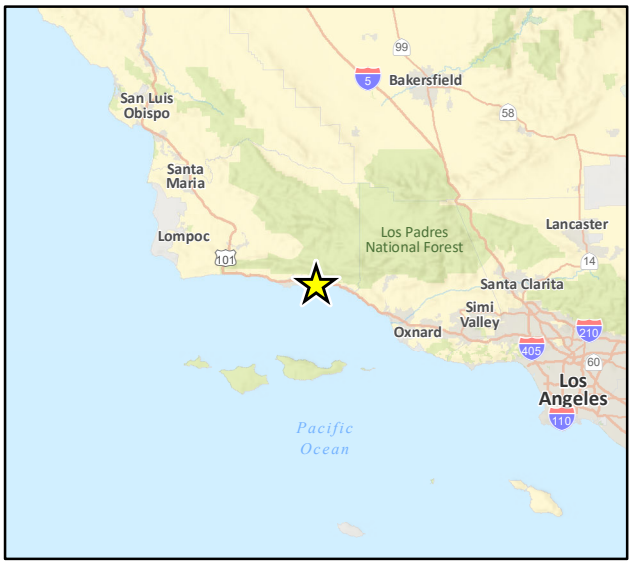
Figures



Imagery provided by National Geographic Society, Esri and its licensors © 2018. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

0 1,000 2,000
Scale in Feet

N



Vicinity Map

Figure 1

Sample Location	Latitude	Longitude
HP1	34.425142	-119.690793
HP2	34.424946	-119.690714
HP3	34.424794	-119.690307
HP4	34.424541	-119.690432
HP5	34.424487	-119.690045
RB1	34.425792	-119.690202
RB2	34.425738	-119.690000
RB3	34.425601	-119.689655
RB4	34.425323	-119.689568
RB5	34.425291	-119.689246
RB6	34.425169	-119.68964
RB7	34.425385	-119.689888
RB8	34.425388	-119.690285
RB9	34.424848	-119.689661
RB10	34.42469	-119.689779
RB11	34.424873	-119.690128
RB12	34.424344	-119.689939
RB13	34.425371	-119.690729
RB14	34.424895	-119.690896
RB15	34.424696	-119.690661

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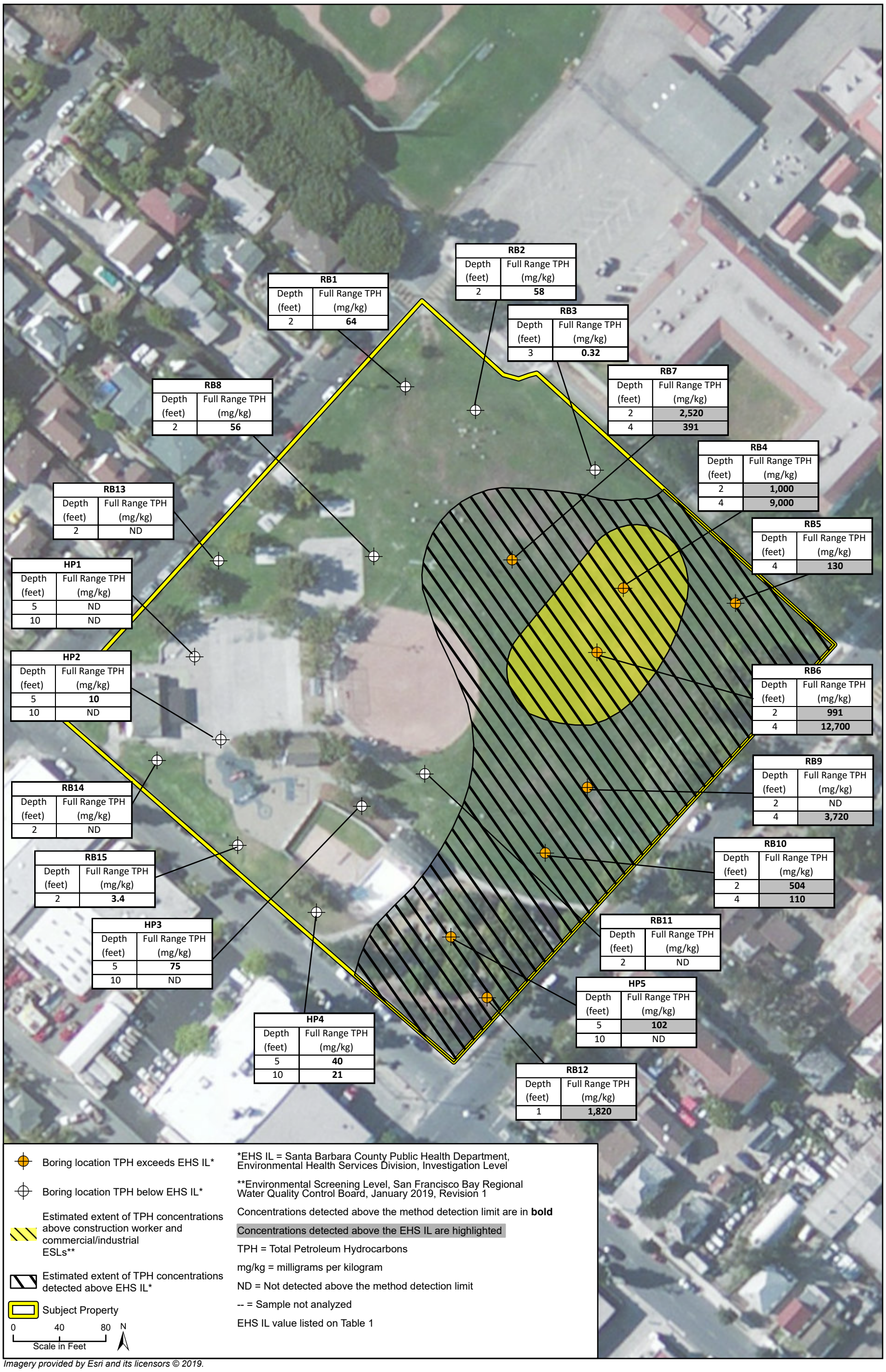
April 16, 2019

Site Map

Figure 2

Rincon Consultants, Inc.



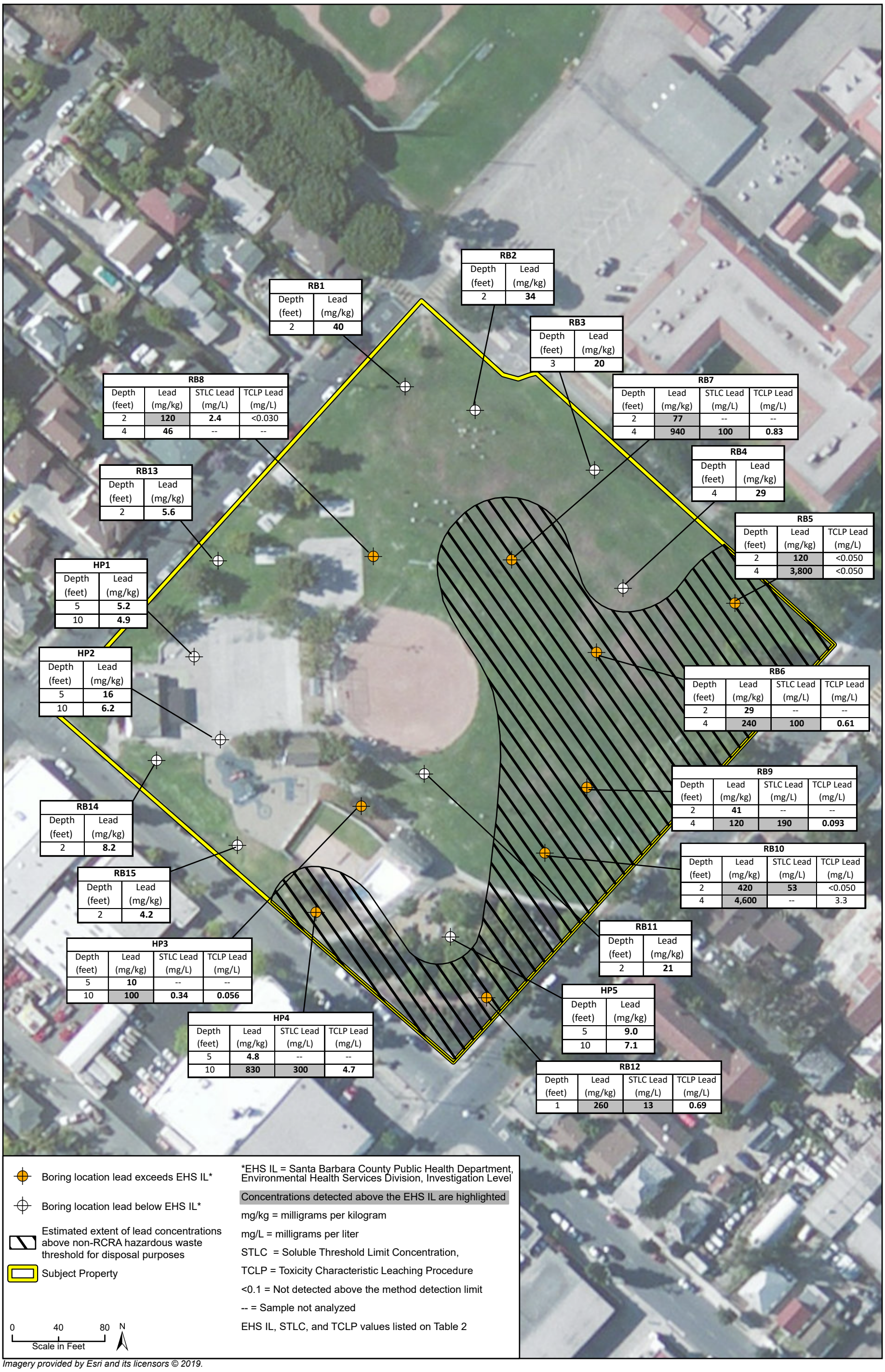
Imagery provided by Esri and its licensors © 2019.

Samples Collected on April 16, 2019

TPH Concentrations in Soil Map

Figure 3

Rincon Consultants, Inc.



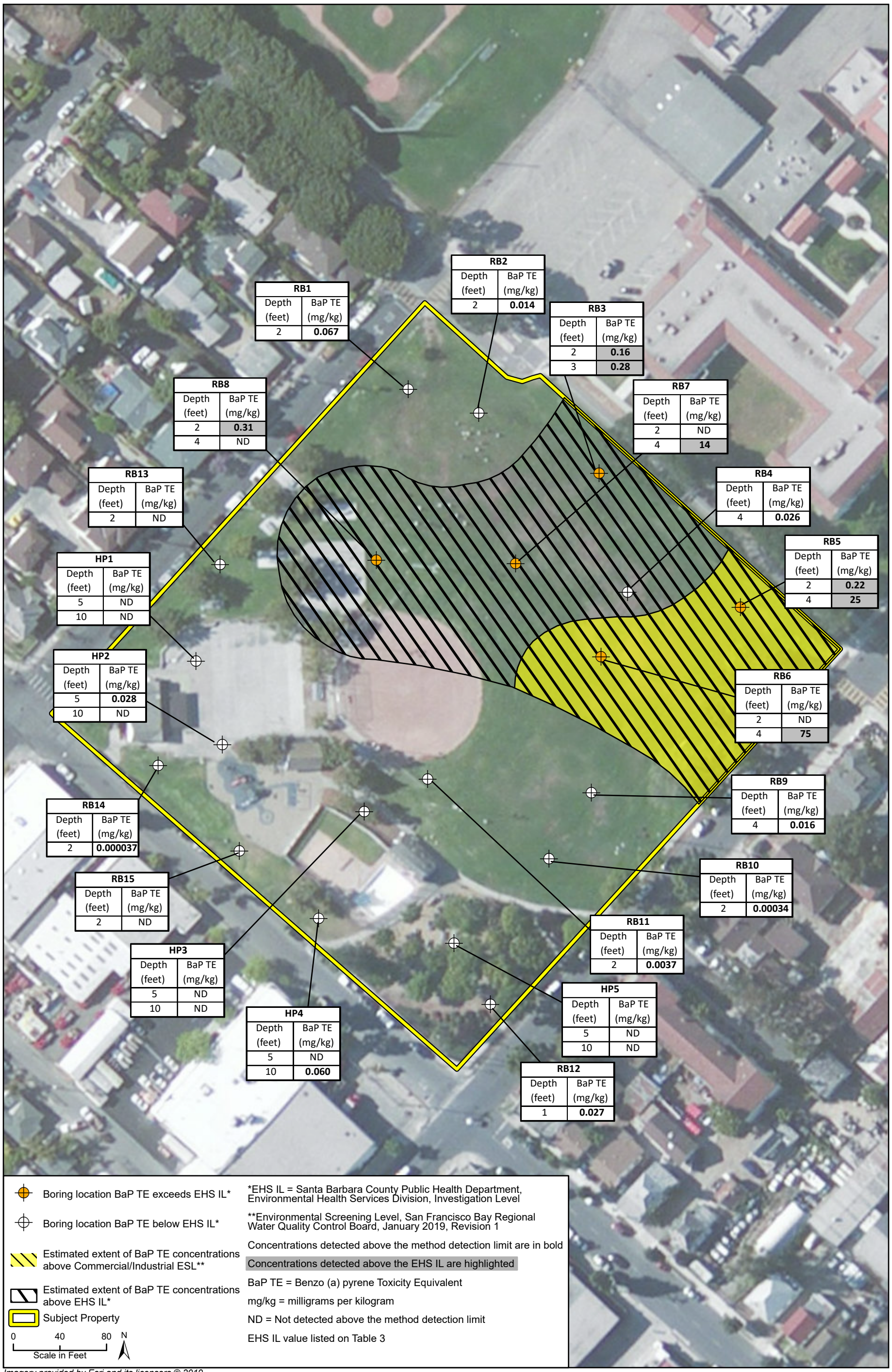
Imagery provided by Esri and its licensors © 2019.

Samples Collected on April 16, 2019

Lead Concentrations in Soil Map

Figure 4

Rincon Consultants, Inc.



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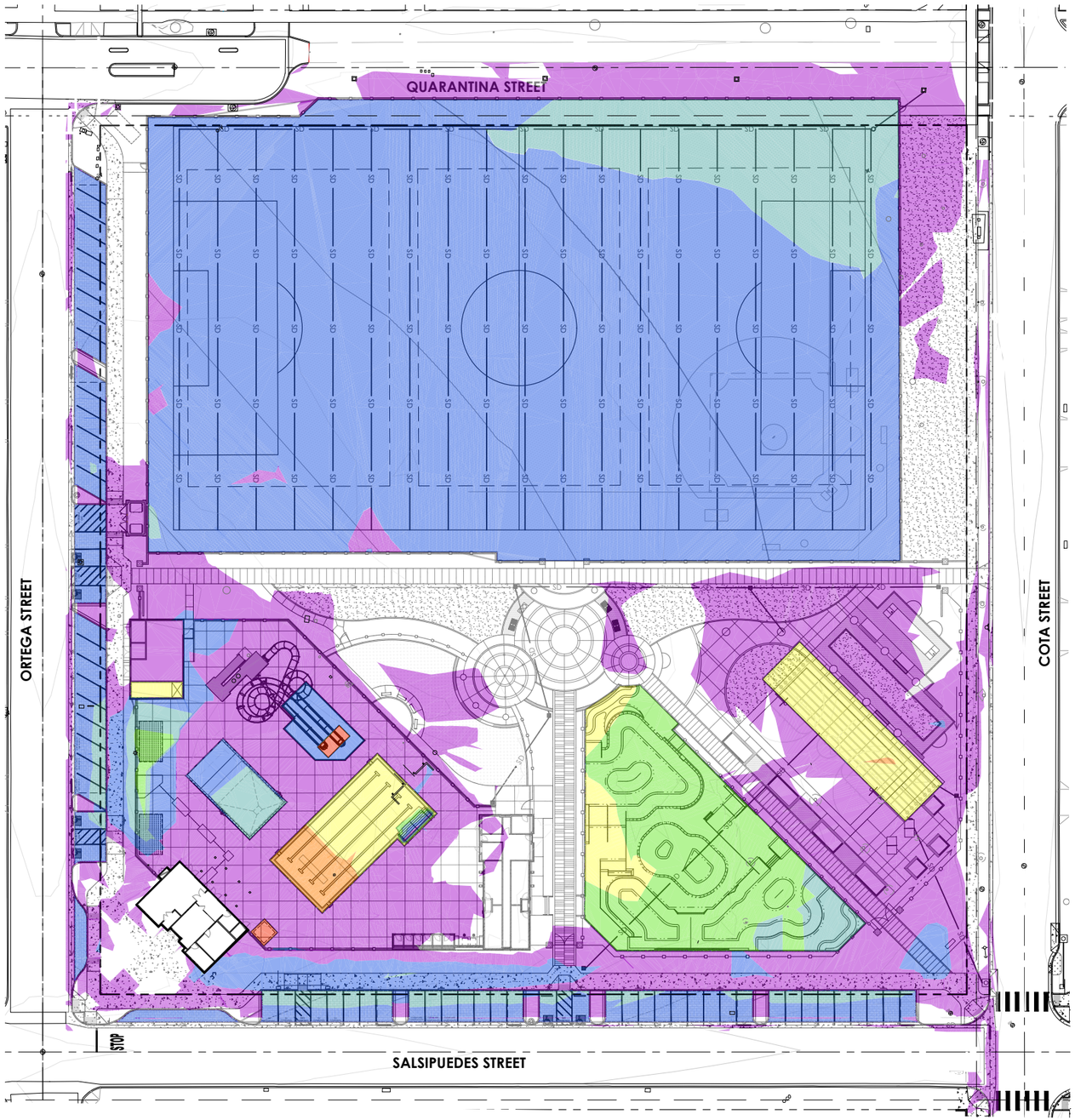
Samples Collected on April 16, 2019

PAH Concentrations in Soil Map

Figure 5

Rincon Consultants, Inc.



GRADING NOTE:

SITE GRADING SHALL CONFORM TO THE RECOMMENDATIONS MADE BY THE GEOTECHNICAL ENGINEER IN THE APPROVED SOILS REPORT.

EARTH QUANTITIES:

AREA OF DISTURBANCE 5.5 AC±

RAW CUT: 10,600 CY
RAW FILL: 480 CY
NET: 10,120 CY CUT

QUANTITY ESTIMATES ON THESE PLANS ARE TO BE USED FOR PERMIT PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR THE PURPOSE OF CONSTRUCTION.

THE RAW EARTHWORK QUANTITIES SHOWN HEREON REPRESENT THE ESTIMATED VOLUMETRIC DIFFERENCE BETWEEN THE PROPOSED ROUGH GRADE AND THE LIMITED TOPOGRAPHIC EXISTING GRADES. THESE ESTIMATES DO NOT MAKE CONSIDERATIONS FOR LOSSES OR BULKING DUE TO: SHRINKAGE, SOIL AMENDMENTS, STABILIZATION, CONSTRUCTION TECHNIQUE, FOOTING & TRENCHING SPOILS, ETC. THESE, IN ADDITION TO ACTUAL FIELD CONDITIONS, CONSTRUCTION TECHNIQUE AND THE FINAL RECOMMENDATIONS OF THE SOILS ENGINEER MAY SIGNIFICANTLY EFFECT THE FINAL IMPORT/EXPORT QUANTITIES.

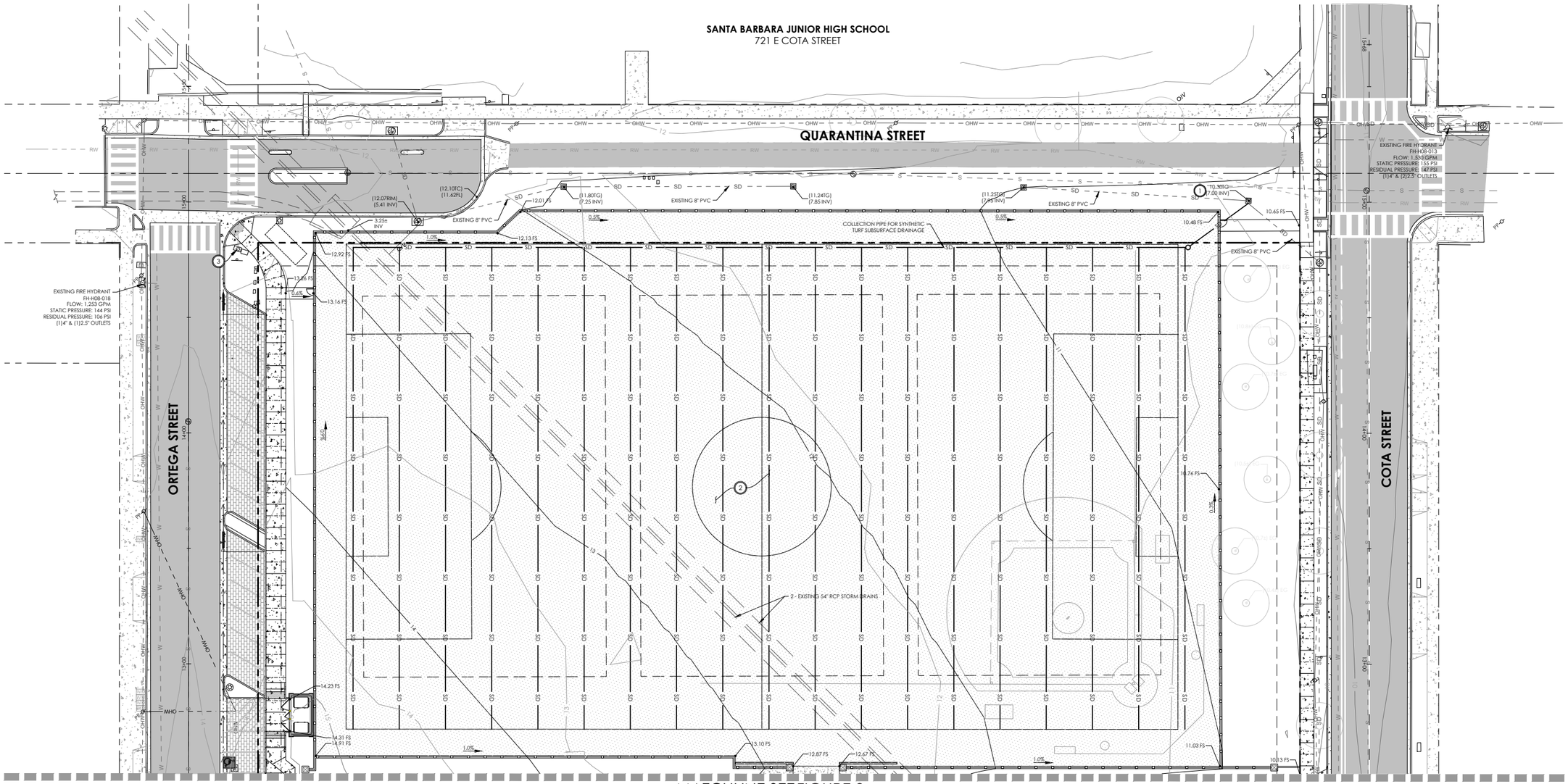
CUT FILL ANALYSIS				
NUMBER	MIN	MAX	AREA	COLOR
1	-11.00	-9.00	221 SQFT	
2	-9.00	-6.00	1,090 SQFT	
3	-6.00	-4.00	6,768 SQFT	
4	-4.00	-3.00	9,901 SQFT	
5	-3.00	-2.00	15,173 SQFT	
6	-2.00	-1.00	97,002 SQFT	
7	-1.00	0.00	61,225 SQFT	
8	0.00	2.00	47,345 SQFT	

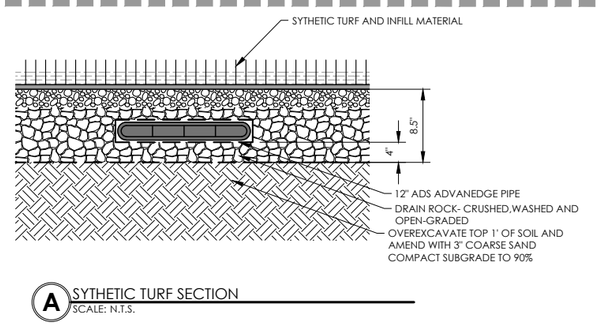
0 50 100 Feet

N

Preliminary Earthwork Map

Source: RRM Design Group, 2020





A SYTHETIC TURF SECTION
SCALE: N.T.S.

IMPROVEMENT NOTES

1. CONNECT TO EXISTING CATCH BASIN.
2. PROPOSED SYNTHETIC TURF AND SUBSURFACE DRAINAGE. SEE DETAIL 'A' THIS SHEET.
3. EXISTING 2" RECYCLED WATER METER TO BE USED FOR IRRIGATION.

LEGEND

- PROPOSED SYNTHETIC TURF
- PROPOSED BIO-RETENTION AREA
- PROPOSED CONCRETE
- PROPERTY LINE
- 821 EXISTING CONTOUR
- 821 PROPOSED CONTOUR
- PROPOSED FLOWLINE
- SD PROPOSED STORM DRAIN
- W EXISTING WATER MAIN
- S EXISTING SANITARY SEWER MAIN
- SD EXISTING STORM DRAIN
- PROPOSED GRADE BREAK

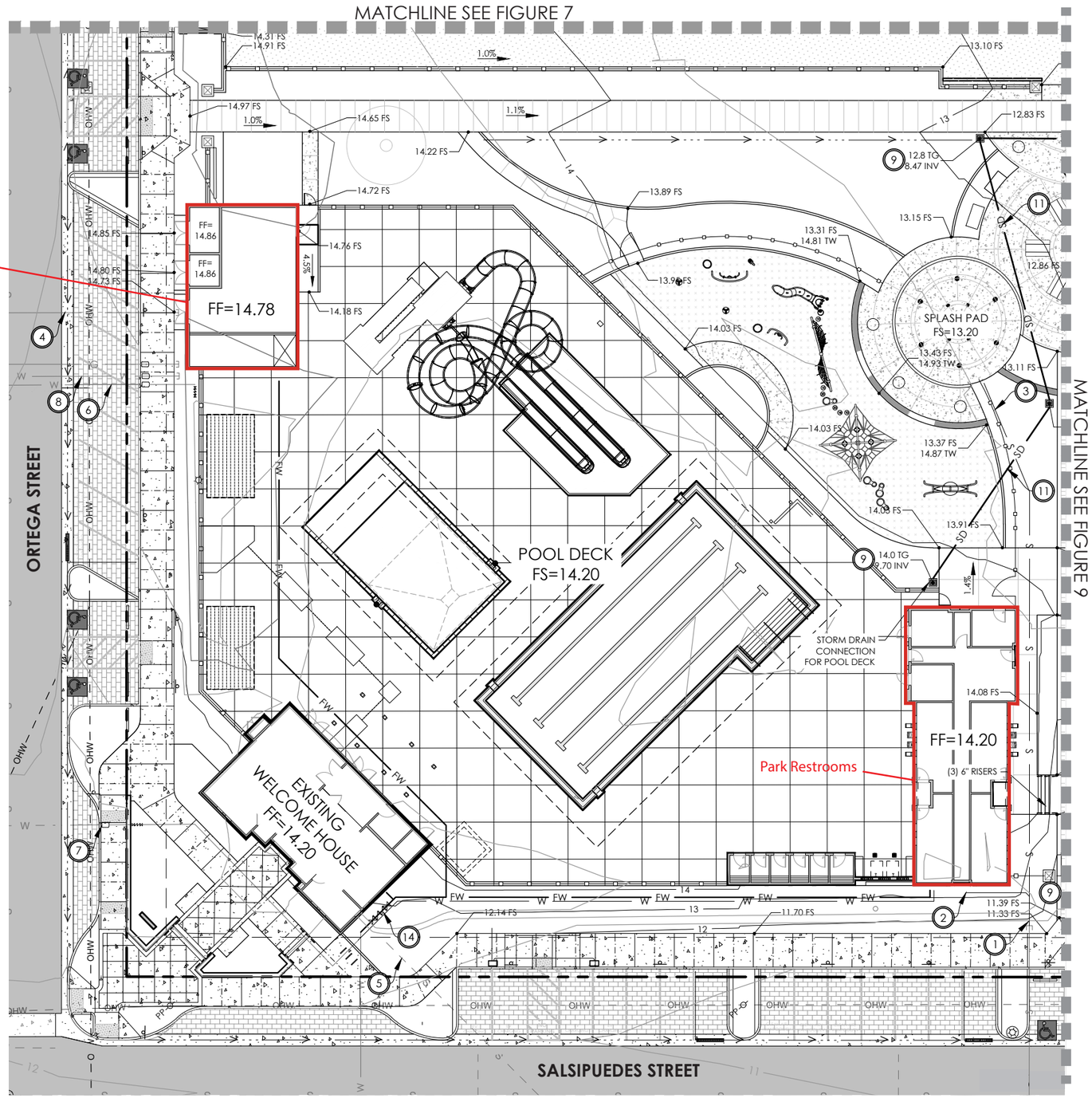
0 25 50 Feet

N

Source: RRM Design Group, 2020

Preliminary Grading and Utility Plan – Playing Fields

Figure 7



IMPROVEMENT NOTES

1. PROPOSED 4" SEWER LATERAL.
2. PROPOSED RESTROOM BUILDING SEWER CONNECTION.
3. PROPOSED SPLASH PAD SEWER CONNECTION.
4. PROPOSED DEDICATED 6" SEWER LATERAL FOR POOL FACILITIES.
5. EXISTING SEWER LATERAL SERVING WELCOME HOUSE TO REMAIN.
6. EXISTING IRRIGATION METER AND BACKFLOW DEVICE TO BE UPSIZED TO 3" METER AND LINE FOR IRRIGATION USE (SYNTHETIC TURF MAINTENANCE).
7. EXISTING WATER METER AND BACKFLOW TO REMAIN FOR DOMESTIC USE (WELCOME HOUSE AND RESTROOM BUILDING).
8. PROPOSED 3" WATER METER AND SERVICE FOR POOL EQUIPMENT.
9. PROPOSED STORM DRAIN CATCH BASIN.
10. PROPOSED UNDERGROUND STORMWATER CHAMBERS. SEE DETAIL 'A' THIS SHEET.
11. PROPOSED 8" STORM DRAIN AT 1.0% MINIMUM SLOPE.
12. PROPOSED 15" STORM DRAIN AT 1.0% MINIMUM SLOPE.
13. PROPOSED 15" STORM DRAIN CONNECTION TO EXISTING CURB INLET.
14. PROPOSED FIRE WATER LINE AND BACKFLOW PREVENTER.

LEGEND

- PROPOSED SYNTHETIC TURF
- PROPOSED BIO-RETENTION AREA
- PROPOSED CONCRETE
- PROPERTY LINE
- 821 EXISTING CONTOUR
- 821 PROPOSED CONTOUR
- PROPOSED FLOWLINE
- SD PROPOSED STORM DRAIN
- W EXISTING WATER MAIN
- S EXISTING SANITARY SEWER MAIN
- SD EXISTING STORM DRAIN
- PROPOSED GRADE BREAK

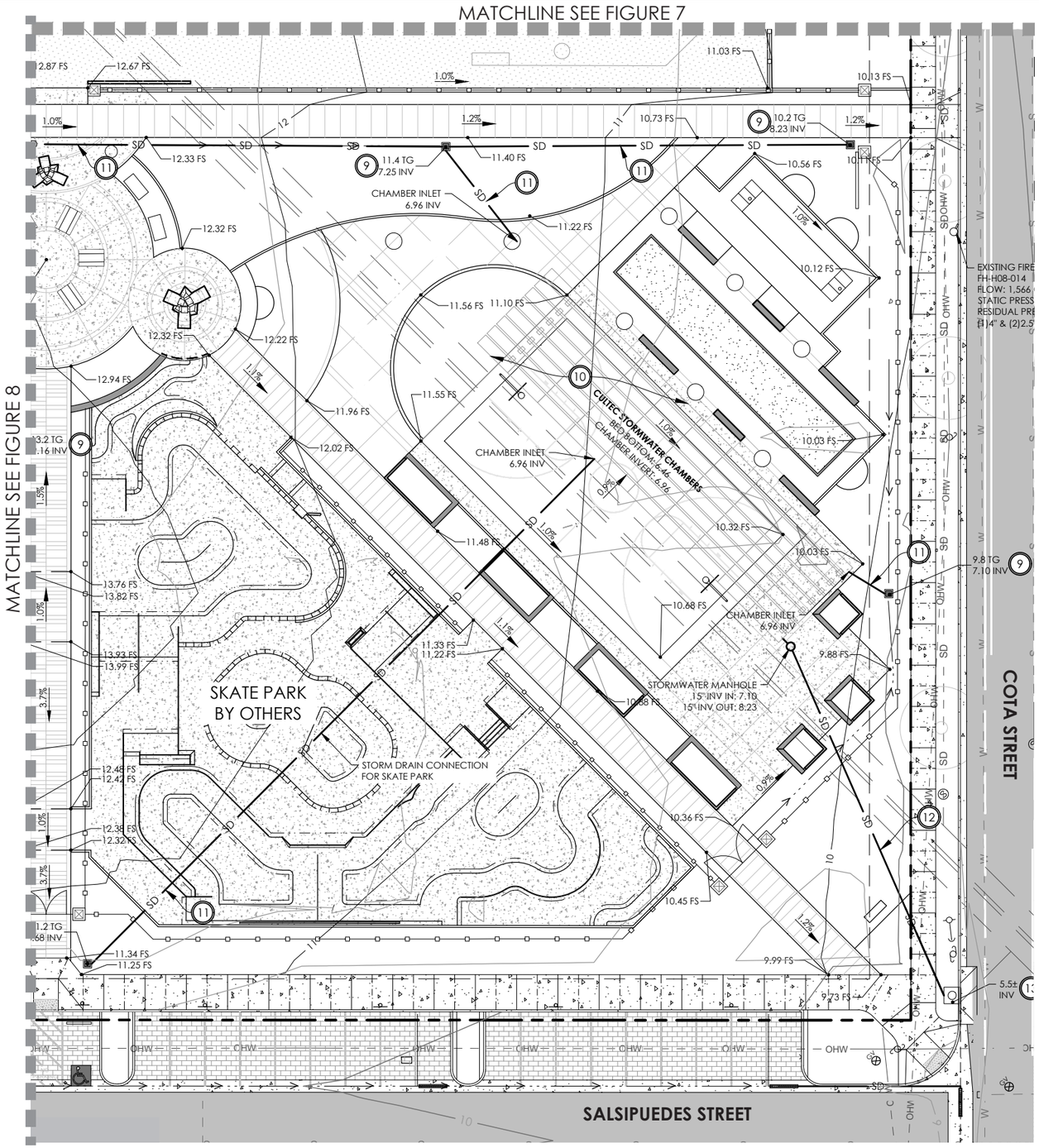
0 15 30 Feet

N

Preliminary Grading and Utility Plan – Aquatics

Source: RRM Design Group, 2020

Figure 8



IMPROVEMENT NOTES

1. PROPOSED 4" SEWER LATERAL.
2. PROPOSED RESTROOM BUILDING SEWER CONNECTION.
3. PROPOSED SPLASH PAD SEWER CONNECTION.
4. PROPOSED DEDICATED 6" SEWER LATERAL FOR POOL FACILITIES.
5. EXISTING SEWER LATERAL SERVING WELCOME HOUSE TO REMAIN.
6. EXISTING IRRIGATION METER AND BACKFLOW DEVICE TO BE UPSIZED TO 3" METER AND LINE FOR IRRIGATION USE (SYNTHETIC TURF MAINTENANCE).
7. EXISTING WATER METER AND BACKFLOW TO REMAIN FOR DOMESTIC USE (WELCOME HOUSE AND RESTROOM BUILDING).
8. PROPOSED 3" WATER METER AND SERVICE FOR POOL EQUIPMENT.
9. PROPOSED STORM DRAIN CATCH BASIN.
10. PROPOSED UNDERGROUND STORMWATER CHAMBERS. SEE DETAIL 'A' THIS SHEET.
11. PROPOSED 8" STORM DRAIN AT 1.0% MINIMUM SLOPE.
12. PROPOSED 15" STORM DRAIN AT 1.0% MINIMUM SLOPE.
13. PROPOSED 15" STORM DRAIN CONNECTION TO EXISTING CURB INLET.
14. PROPOSED FIRE WATER LINE AND BACKFLOW PREVENTER.

LEGEND

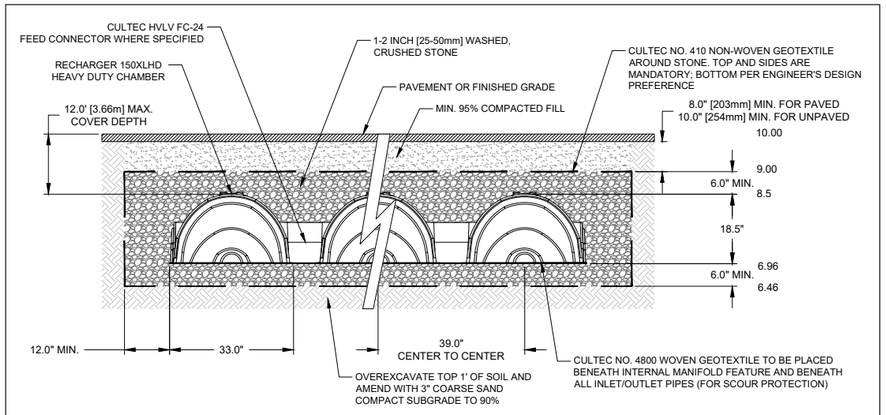
- PROPOSED SYNTHETIC TURF
- PROPOSED BIO-RETENTION AREA
- PROPOSED CONCRETE
- PROPERTY LINE
- 821 EXISTING CONTOUR
- 821 PROPOSED CONTOUR
- PROPOSED FLOWLINE
- SD PROPOSED STORM DRAIN
- W EXISTING WATER MAIN
- S EXISTING SANITARY SEWER MAIN
- SD EXISTING STORM DRAIN
- PROPOSED GRADE BREAK

0 15 30 Feet

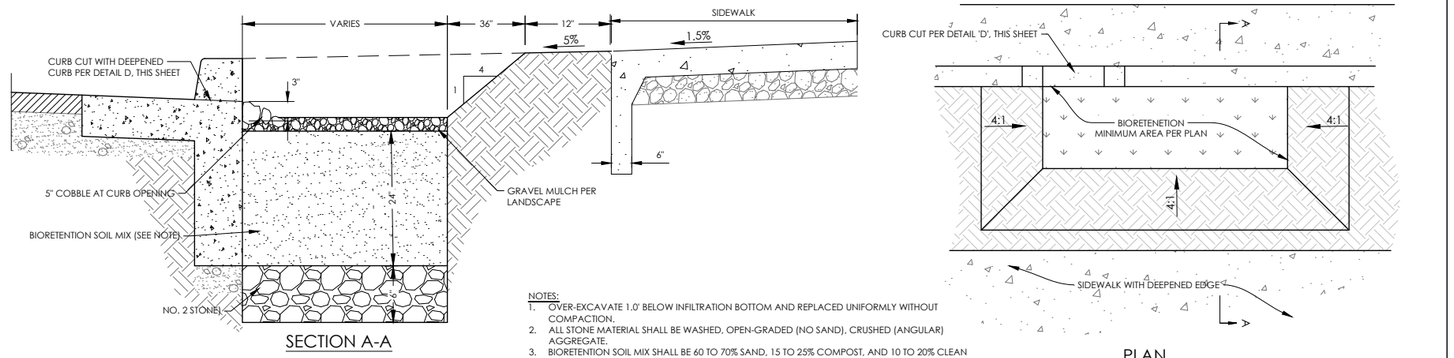
Source: RRM Design Group, 2020

Preliminary Grading and Utility Plan – Skate Park and Stormwater Chambers

Figure 9

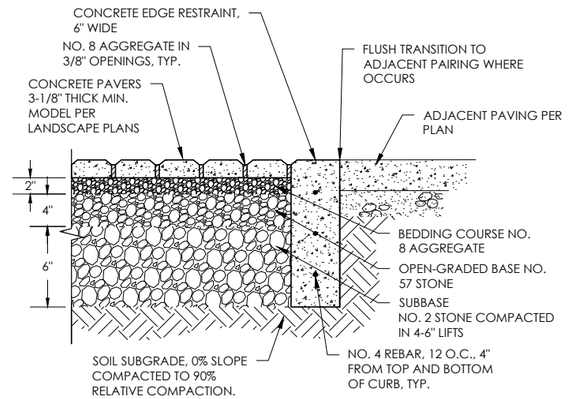


A CULTEC STORMWATER CHAMBERS
SCALE: N.T.S.



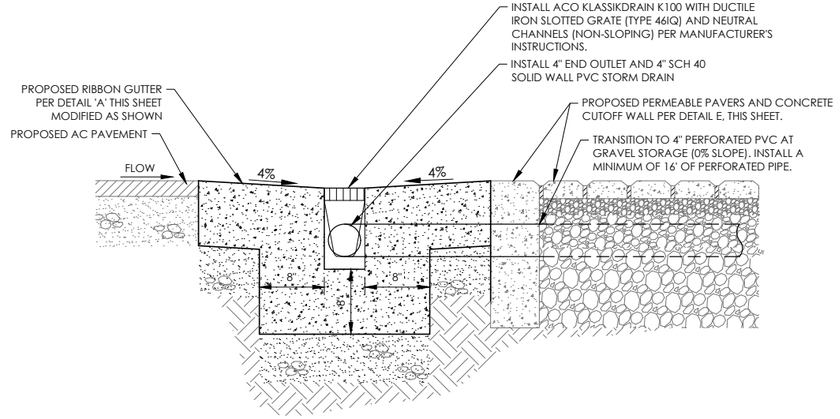
NOTES:
1. OVER-EXCAVATE 1.0' BELOW INFILTRATION BOTTOM AND REPLACED UNIFORMLY WITHOUT COMPACTION.
2. ALL STONE MATERIAL SHALL BE WASHED, OPEN-GRADED (NO SAND), CRUSHED (ANGULAR) AGGREGATE.
3. BIORETENTION SOIL MIX SHALL BE 60 TO 70% SAND, 15 TO 25% COMPOST, AND 10 TO 20% CLEAN TOPSOIL. THE ORGANIC CONTENT SHALL BE 8 TO12% AND PH RANGE SHALL BE 5.5 TO 7.5.
4. EXTEND DEEPENED CURB AND SIDEWALK EDGE 5' BEYOND BOTH SIDES OF BIORETENTION AREA.

B BIORETENTION CROSS-SECTION
SCALE: N.T.S.



NOTES:
1. ALL AGGREGATE BASE MATERIAL SHALL BE WASHED, OPEN-GRADED (NO SAND), CRUSHED (ANGULAR) AGGREGATE.

C PERMEABLE PAVEMENT
SCALE: N.T.S.



NOTES:
1. INSTALL TWO ONE-METER (39.37") CHANNELS AT EACH TRENCH DRAIN LOCATION.

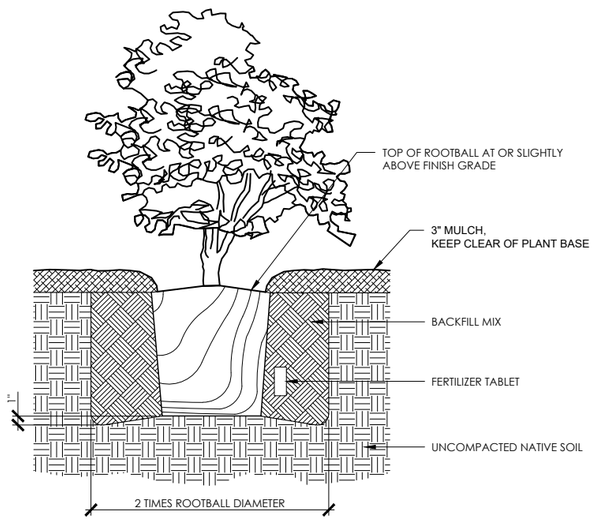
D TRENCH DRAIN TO PERMEABLE PAVEMENT
SCALE: N.T.S.

Preliminary Permeable Features Construction Details

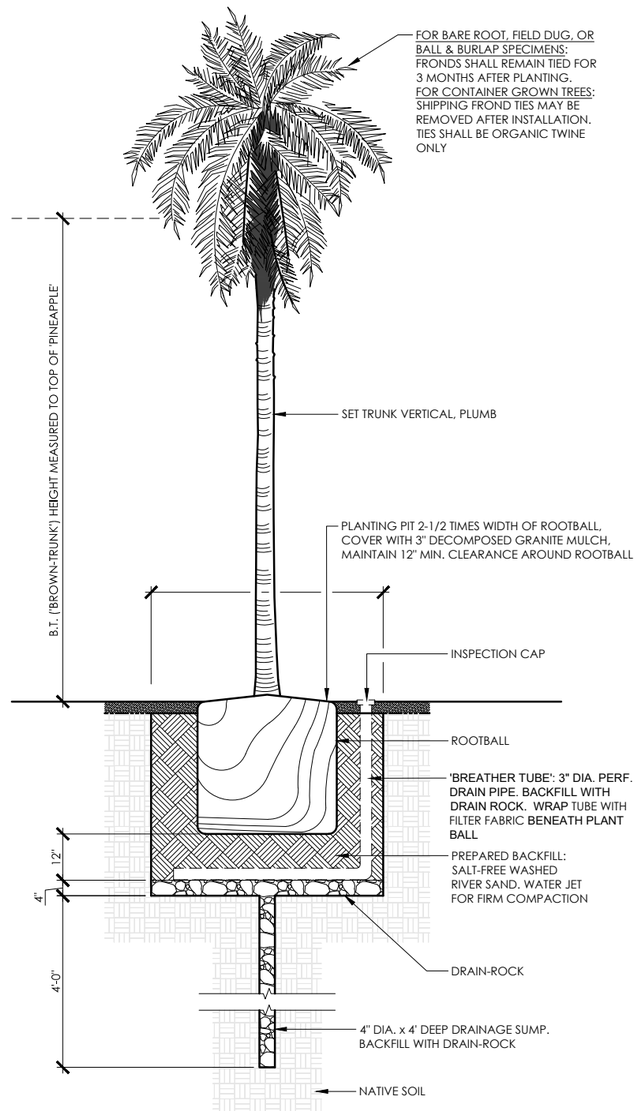
Source: RRM Design Group, 2020

Figure 10

Rincon Consultants, Inc.

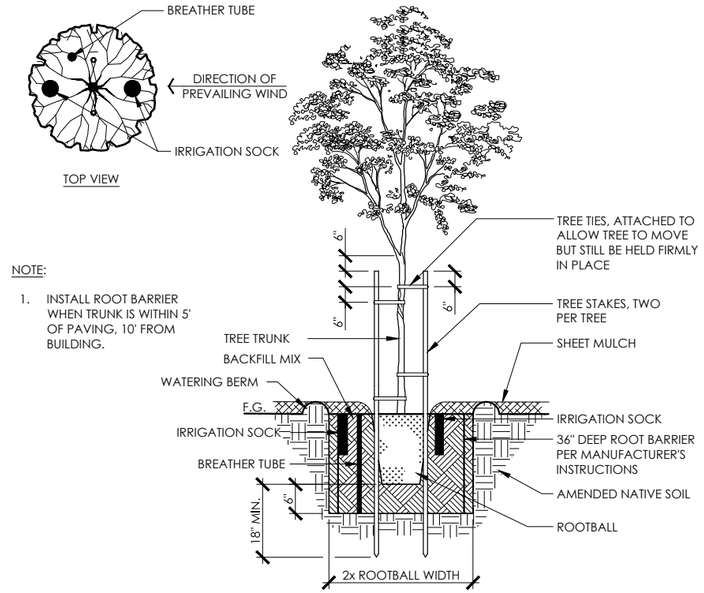


1 SHRUB PLANTING
1 1/2" = 1'-0" 329333-48



NOTE:
1. CONTRACTOR SHALL STAKE SPECIMEN PALM TREES IN THE EVENT PLANT CANNOT SUPPORT ITSELF.

2 PALM TREE PLANTING
1/2" = 1'-0" RRM-1144.01-09



3 TREE PLANTING WITH WOOD STAKING
1/2" = 1'-0" RRM-1144.01-11

Preliminary Plantings Details

Source: RRM Design Group, 2020

Figure 11

Tables

TABLE 1

Summary of TPH, VOCs, and PCBs in Soil Matrix Samples

Ortega Park Phase II Environmental Site Assessment

604 East Ortega Street, Santa Barbara, California

Sample Location	Sample Depth (feet)	TPH				VOCs		PCBs
		TPHg (C_4-C_{12})	TPHd (C_{13}-C_{22})	TPHo (C_{23}-C_{40})	Full Range TPH	4-Isopropyl Toluene	Other VOCs	
		Results in milligrams per kilogram (mg/kg)						
RB1	**2**	<0.00099	<7.6	**64**	**64**	--	--	--
	4	--	--	--	--	--	--	--
RB2	**2**	<0.098	<7.6	**58**	**58**	--	--	--
	4	--	--	--	--	--	--	--
RB3	**2**	--	--	--	--	--	--	--
	3	**0.32**	<7.6	<40	**0.32**	**0.12**	ND	<0.010
RB4	**2**	<0.097	**110**	**890**	**1,000**	--	--	--
	4	<0.099	**1,000**	**8,000**	**9,000**	<0.0020	ND	<0.010
RB5	**2**	--	--	--	--	--	--	--
	4	<0.10	<7.5	**130**	**130**	<0.0020	ND	--
RB6	**2**	<0.099	**31**	**960**	**991**	<0.0020	ND	--
	4	<0.10	**5,800**	**6,900**	**12,700**	<0.0020	ND	--
RB7	**2**	<0.097	**120**	**2,400**	**2,520**	--	--	--
	4	<0.10	**31**	**360**	**391**	<0.0020	ND	<0.030
RB8	**2**	<0.098	<7.6	**56**	**56**	--	--	--
	4	--	--	--	--	--	--	--
RB9	**2**	<0.098	<7.6	<40	ND	--	--	--
	4	<0.10	**420**	**3,300**	**3,720**	<0.0020	ND	<0.010
RB10	**2**	<0.099	**54**	**450**	**504**	<0.0020	ND	--
	4	<0.099	<7.6	**110**	**110**	--	--	--
RB11	**2**	<0.099	<7.6	<40	ND	--	--	--
	4	--	--	--	--	--	--	--
RB12	**1**	<0.10	**120**	**1,700**	**1,820**	<0.0020	ND	<0.010
RB13	**2**	<0.098	<7.5	<40	ND	--	--	--
	4	--	--	--	--	--	--	--
RB14	**2**	<0.099	<7.6	<40	ND	--	--	--
	4	--	--	--	--	--	--	--
RB15	**2**	**3.4**	<7.6	<40	**3.4**	--	--	--
	4	--	--	--	--	--	--	--
HP1	**5**	<0.097	<7.6	<40	ND	<0.0020	ND	--
	10	--	<7.6	<40	ND	<0.0020	ND	--
HP2	**5**	<0.10	**9.6**	<40	**10**	--	--	--
	10	<0.096	<7.6	<40	ND	--	--	--
HP3	**5**	<0.097	<7.6	**75**	**75**	--	--	--
	10	<0.098	<7.5	<40	ND	--	--	--
HP4	**5**	<0.097	<7.6	**40**	**40**	--	--	--
	10	<0.20	**21**	<40	**21**	<0.0020	ND	--
HP5	**5**	<0.099	**10**	**92**	**102**	--	--	--
	10	<0.098	<7.6	<40	ND	--	--	--
EHS IL		*100*	*100*	*100*	*100*	--	*varies*	*0.23*
Tier 1 ESL		*100*	*260*	*1,600*	--	--	*varies*	*0.23*
ESL (C/I)		*2,000*	*1,200*	*180,000*	--	--	*varies*	*0.94*
ESL (CW)		*1,800*	*1,100*	*54,000*	--	--	*varies*	*5.5*

Soil samples collected by Rincon Consultants on April 16, 2019

Concentrations detected above the method detection limit are in **bold**

Concentrations detected above the EHS IL are highlighted grey

TPH = Total Petroleum Hydrocarbons

TPHg = TPH as gasoline

TPHd = TPH as diesel fuel

TPHo = TPH as motor oil

VOCs = Volatile Organic Compounds

PCBs = Polychlorinated Biphenyls

EHS IL = Santa Barbara County Public Health Department, Environmental Health Services Division, Investigation Level

ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, January 2019, Rev. 1

Tier 1 ESL = Based on a generic conceptual site model designed for use at most sites

ESL (C/I) = Commercial/Industrial: Shallow Soil Exposure - Direct Exposure Human Health Risk Levels (Table S-1)

ESL (CW) = Any Land Use/Any Depth Soil Exposure: Construction Worker - Direct Exposure Human Health Risk Levels (Table S-1)

mg/kg = milligrams per kilogram

<0.1 = Not detected above the method detection limit

ND = Not detected above the method detection limit

-- = Value not established

Soil samples analyzed by Oilfield Environmental and Compliance, Inc.

Analyses:

Full Range TPH by EPA Method 8015M

VOCs by EPA Method 8260B

PCBs by EPA Method 8082

TABLE 2
Summary of Metals in Soil Matrix Samples
Ortega Park Phase II Environmental Site Assessment
604 East Ortega Street, Santa Barbara, California

Sample Location	Sample Depth (Feet)	Antimony	Arsenic	Barium	STLC Barium (mg/L)	Beryllium	Cadmium	Chromium	STLC Chromium (mg/L)	TCLP Chromium (mg/L)	Cobalt	Copper	Lead	STLC Lead (mg/L)	TCLP Lead (mg/L)	Mercury	STLC Mercury (mg/L)	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	STLC Zinc (mg/L)
		Results in milligrams per kilogram (mg/kg) unless otherwise noted																							
RB1	2	<0.95	**4.4**	**74**	--	**0.38**	<0.14	**22**	--	--	**4.3**	**18**	**40**	--	--	**0.078**	--	**0.40**	**19**	<0.95	<0.19	**1.9**	**27**	**65**	--
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB2	2	<1.0	**4.9**	**67**		**0.37**	<0.15	**22**			**4.4**	**22**	**34**	--	--	**0.079**		**0.59**	**18**	<1.0	<0.20	**1.7**	**25**	**63**	--
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB3	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3	<0.99	**10**	**57**	--	**0.31**	<0.15	**15**	--	--	**4.1**	**14**	**20**	--	--	**0.049**	--	**0.27**	**15**	<0.99	<0.20	**1.8**	**20**	**41**	--
RB4	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4	<0.93	**3.3**	**57**	--	**0.28**	<0.14	**15**	--	--	**4.1**	**11**	**29**	--	--	**0.32**	--	**0.59**	**14**	<0.93	<0.19	**1.6**	**22**	**90**	--
RB5	2	--	--	--	--	--	--	**15**	--	--	--	--	**120**	--	<0.050	**0.075**	--	--	--	--	--	--	--	--	--
	4	**9.9**	**5.0**	**500**	--	**0.25**	<0.15	**120**	**0.071**	<0.025	**5.7**	**150**	**3,800**	--	<0.050	**2.1**	<0.00050	**0.62**	**21**	<0.97	<0.19	<0.48	**16**	**1,100**	--
RB6	2	--	--	--	--	--	--	--	--	--	--	--	**29**	--	--	--	--	--	--	--	--	--	--	**39**	--
	4	**2.7**	**4.7**	**680**	--	<0.24	**3.1**	**20**	--	--	**2.9**	**46**	**240**	**100**	**0.61**	**0.067**	--	<0.24	**16**	<0.96	<0.19	**1.4**	**7.3**	**3,300**	**330**
RB7	2	--	**5.9**	**100**	--	--	--	**13**	--	--	--	--	**77**	--	--	--	--	--	--	--	--	--	--	--	--
	4	**5.9**	**20**	**1,200**	**13**	<0.24	<0.14	**72**	**0.19**	--	**7.1**	**170**	**940**	**100**	**0.83**	**0.44**	--	**1.9**	**120**	<0.96	<0.19	<0.48	**5.8**	**380**	--
RB8	2	<0.93	**3.2**	**72**	--	**0.27**	<0.14	**14**	--	--	**4.0**	**24**	**120**	**2.4**	<0.030	**0.15**	--	<0.23	**15**	<0.93	<0.19	**0.55**	**17**	**100**	--
	4	--	--	--	--	--	--	--	--	--	--	--	**46**	--	--	--	--	--	--	--	--	--	--	--	--
RB9	2	--	--	--	--	--	--	--	--	--	--	--	**41**	--	--	--	--	--	--	--	--	<0.49	--	--	--
	4	<0.95	**4.2**	**640**	--	**0.46**	<0.14	**20**	--	--	**7.6**	**16**	**120**	**190**	**0.093**	**0.45**	--	**0.32**	**16**	<0.95	**13**	**2.0**	**26**	**120**	--
RB10	2	**2.1**	**3.7**	**260**	--	**0.28**	<0.15	**40**	--	--	**5.1**	**42**	**420**	**53**	<0.050	**1.3**	--	**0.46**	**14**	<0.99	**0.65**	**1.1**	**19**	**630**	--
	4	--	--	--	--	--	--	--	--	--	--	--	**4,600**	--	**3.3**	--	--	--	--	--	--	--	--	--	--
RB11	2	<0.98	**3.4**	**74**	--	**0.26**	**0.19**	**19**	--	--	**3.2**	**12**	**21**	--	--	**0.065**	--	**1.4**	**16**	<0.98	<0.20	**2.0**	**31**	**51**	--
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.47	--	--	--
RB12	1	<0.99	**4.7**	**150**	--	**0.28**	**1.8**	**17**	--	--	**5.6**	**54**	**260**	**13**	**0.69**	**0.47**	--	<0.25	**19**	<0.99	<0.20	**0.61**	**20**	**630**	--
RB13	2	<0.95	**3.7**	**96**	--	**0.53**	<0.14	**23**	--	--	**3.0**	**12**	**5.6**	--	--	**0.034**	--	<0.24	**19**	<0.95	<0.19	**0.95**	**31**	**33**	--
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB14	2	<0.92	**4.9**	**53**	--	**0.32**	<0.14	**22**	--	--	**4.1**	**7.5**	**8.2**	--	--	**0.024**	--	**2.2**	**23**	<0.92	<0.18	**2.1**	**21**	**31**	--
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.48	--	--	--
RB15	2	<0.97	**3.9**	**25**	--	**0.29**	<0.15	**18**	--	--	**3.8**	**5.9**	**4.2**	--	--	**0.013**	--	**1.3**	**20**	<0.97	<0.19	**1.7**	**19**	**24**	--
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HP1	5	<0.93	**2.8**	**96**	--	**0.44**	<0.14	**12**	--	--	**6.4**	**6.1**	**5.2**	--	--	**0.0099**	--	<0.23	**12**	<0.93	<0.19	<0.46	**22**	**11**	--
	10	<0.92	**2.0**	**57**	--	**0.31**	<0.14	**11**	--	--	**2.5**	**6.3**	**4.9**	--	--	<0.010	--	<0.23	**8.2**	<0.92	<0.18	<0.46	**17**	**18**	--
HP2	5	<0.95	**2.4**	**95**	--	**0.42**	<0.14	**14**	--	--	**7.2**	**12**	**16**	--	--	**0.29**	--	<0.24	**14**	<0.95	<0.19	**0.76**	**22**	**32**	--
	10	<1.0	**5.2**	**44**	--	**0.50**	<0.15	**15**	--	--	**3.9**	**9.5**	**6.2**	--	--	<0.010	--	**0.64**	**19**	<1.0	<0.20	**1.0**	**23**	**31**	--
HP3	5	<0.97	**2.5**	**61**	--	**0.40**	<0.15	**13**	--	--	**5.4**	**8.4**	**10**	--	--	**0.028**	--	<0.24	**11**	<0.97	<0.19	**1.0**	**21**	**23**	--
	10	<0.97	**5.5**	**130**	--	**0.72**	<0.15	**25**	--	--	**6.4**	**23**	**100**	**0.34**	**0.056**	**0.17**	--	<0.24	**17**	<0.97	<0.19	**0.65**	**38**	**360**	--
HP4	5	<0.99	**4.1**	**36**	--	**0.27**	<0.15	**18**	--	--	**3.5**	**5.7**	**4.8**	--	--	**0.017**	--	**1.4**	**19**	<0.99	<0.20	**1.9**	**18**	**25**	--
	10	**1.2**	**3.9**	**360**	--	**0.29**	<0.14	**20**	--	--	**3.7**	**79**	**830**	**300**	**4.7**	**0.66**	--	<0.23	**15**	<0.93	**1.9**	**0.46**	**18**	**1,200**	--
HP5	5	<0.93	**3.2**	**130**	--	**0.51**	<0.14	**28**	--	--	**6.8**	**17**	**9.0**	--	--	**0.014**	--	<0.23	**33**	<0.93	<0.19	**2.8**	**34**	**200**	--
	10	**1.1**	**5.3**	**170**	--	**0.67**	<0.14	**44**	--	--	**8.7**	**20**	**7.1**	--	--	**0.016**	--	<0.23	**50**	<0.91	<0.18	**2.7**	**38**	**59**	--
Background Concentration		*0.15 - 1.95*	*0.6 - 11*	*133 - 1,400*		*0.25 - 2.70*	*0.05 - 1.70*	*23 - 1,579*			*2.7 - 46.9*	*9.1 - 96.4*	*12.4 - 97.1*			*0.05 - 0.90*		*0.1 - 9.6*	*9.0 - 509*	*0.015 - 0.430*	*0.10 - 8.3*	*0.17 - 1.1*	*39 - 288*	*88 - 236*	
EHS IL		*11*	*11*	*1,000*		*7.5*	*10*	*50*			*23*	*250*	*50*			*2*		*390*	*200*	*10*	*50*	*2*	*240*	*2,500*	
Tier 1		*11*	*0.067*	*390*		*5.0*	*1.9*	*16*			*23*	*18*	*32*			*13*		*6.9*	*86*	*2.4*	*25*	*0.78*	*18*	*34*	
ESLs (C/I)		*160*	*0.31*	*220,000*		*230*	*1,100*	*1,800,000*			*350*	*47,000*	*320*			*190*		*5,800*	*11,000*	*5,800*	*5,800*	*12*	*5,800*	*350,000*	
ESL (CW)		*50*	*0.98*	*3,000*		*27*	*5,100*	*53,000*			*28*	*14,000*	*160*			*44*		*1,800*	*86*	*1,700*	*1,800*	*3.5*	*470*	*110,000*	
TTLC		*500*	*500*	*10,000*		*75*	*100*	*2,500*			*8,000*	*2,500*	*1,000*			*20*		*3,500*	*2,000*	*100*	*500*	*700*	*2,400*	*5,000*	
STLC (mg/L)		*15*	*5*	*100*		*0.75*	*1*	*5*			*80*	*25*	*5*			*0.2*		*350*	*20*	*1*	*5*	*7*	*24*	*250*	
TCLP (mg/L)		*--*	*5*	*100*		*--*	*1*	*5*			*--*	*--*	*5*			*0.2*		*--*	*--*	*1*	*5*	*--*	*--*	*--*	

Soil samples collected by Rincon Consultants on April 16, 2019
Concentrations detected above the method detection limit are in **bold**
Concentrations detected above EHS ILs are highlighted grey
Background Concentration = Kearney, *Background Concentrations of Trace and Major Elements in California Soils*, University of California, 1996
EHS IL = Santa Barbara County Public Health Department, Environmental Health Services Division, Investigation Level
ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, January 2019, Rev. 1
Tier 1 ESL = Based on a generic conceptual site model designed for use at most sites
ESL (C/I) = Commercial/Industrial: Shallow Soil Exposure - Direct Exposure Human Health Risk Levels (Table S-1)
ESL (CW) = Any Land Use/Any Depth Soil Exposure: Construction Worker - Direct Exposure Human Health Risk Levels (Table S-1)
TTLC = Total Threshold Limit Concentration, California Code of Regulations, Title 22, Chapter 11, Article 3
STLC = Soluble Threshold Limit Concentration, California Code of Regulations, Title 22, Chapter 11, Article 3
TCLP = Toxicity characteristic leaching procedure, USEPA
mg/L = milligrams per liter
mg/kg = milligrams per kilogram
<0.1 = Not detected above the method detection limit
-- = Sample not analyzed or value not established
Soil samples analyzed by Oilfield Environmental and Compliance, Inc.

Analyses:
CAM17 Metals by EPA Method 6010B/7471A

TABLE 3
Summary of PAHs in Soil Matrix Samples
Ortega Park Phase II Environmental Site Assessment
604 East Ortega Street, Santa Barbara, California

Sample Location	Sample Depth (feet)	Acenaphthene	Acenaphthylene	Anthracene	Benz (a) anthracene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Benzo (g,h,i) perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene Toxicity Equivalent Concentration
		Results in milligrams per kilogram (mg/kg)																
RB1	2	<0.0060	**0.0060**	<0.0060	**0.020**	**0.031**	**0.032**	**0.059**	**0.072**	**0.029**	<0.010	**0.062**	<0.0060	**0.023**	<0.010	**0.023**	**0.14**	**0.067**
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB2	2	<0.0060	**0.0067**	<0.0060	**0.0080**	**0.0093**	**0.013**	**0.012**	<0.010	**0.013**	<0.010	**0.017**	<0.0060	<0.0060	**0.039**	**0.015**	**0.020**	**0.014**
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB3	2	<0.030	<0.030	<0.030	**0.050**	**0.097**	**0.077**	**0.14**	**0.21**	**0.067**	<0.050	**0.15**	<0.030	**0.063**	<0.050	**0.067**	**0.31**	**0.16**
	3	**0.042**	<0.0030	**0.096**	**0.22**	**0.23**	**0.19**	**0.21**	**0.060**	**0.26**	**0.014**	**0.480**	**0.040**	**0.063**	**0.018**	**0.39**	**0.40**	**0.28**
RB4	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4	<0.012	<0.012	<0.012	<0.012	**0.015**	**0.015**	**0.024**	**0.032**	**0.016**	<0.020	**0.031**	<0.012	<0.012	<0.020	**0.016**	**0.059**	**0.026**
RB5	2	<0.012	**0.020**	**0.012**	**0.051**	**0.11**	**0.088**	**0.19**	**0.28**	**0.077**	<0.020	**0.20**	<0.012	**0.083**	<0.020	**0.061**	**0.41**	**0.22**
	4	<0.060	**1.3**	**0.73**	**2.9**	**6.5**	**4.4**	**22**	**67**	**4.2**	**0.14**	**18**	**0.11**	**15**	**0.23**	**3.5**	**61**	**25**
RB6	2	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.040	<0.024	<0.040	<0.024	<0.024	<0.024	<0.040	<0.024	<0.024	ND
	4	**0.90**	**25**	**24**	**36**	**30**	**39**	**59**	**47**	**51**	**5.2**	**130**	**11**	**40**	**42**	**200**	**150**	**75**
RB7	2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.0	<0.60	<1.0	<0.60	<0.60	<0.60	<1.0	<0.60	<0.60	ND
	4	**0.92**	**0.91**	**0.85**	**1.7**	**3.8**	**2.6**	**12**	**42**	**2.4**	**0.11**	**11**	**0.21**	**8.5**	**0.23**	**4.6**	**31**	**14**
RB8	2	<0.024	**0.027**	**0.027**	**0.045**	**0.13**	**0.053**	**0.27**	**0.65**	**0.064**	<0.040	**0.39**	<0.024	**0.17**	<0.040	**0.15**	**0.81**	**0.31**
	4	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	**0.0030**	<0.0030	<0.0030	<0.0050	<0.0030	**0.0076**	ND
RB9	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4	<0.0030	<0.0030	**0.0030**	**0.010**	<0.0030	<0.0030	**0.014**	**0.011**	**0.012**	<0.0050	**0.017**	<0.0030	**0.0050**	<0.0050	**0.0090**	**0.021**	**0.016**
RB10	2	<0.0030	<0.0030	<0.0030	<0.0030	**0.0033**	<0.0030	<0.0030	<0.0050	**0.0083**	<0.0050	**0.0033**	<0.0030	<0.0030	<0.0050	**0.0040**	**0.0040**	**0.00034**
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB11	2	<0.0030	<0.0030	<0.0030	<0.0030	**0.0040**	<0.0030	**0.0033**	<0.0050	<0.0030	<0.0050	**0.0067**	<0.0030	<0.0030	<0.0050	**0.0043**	**0.0077**	**0.0037**
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB12	1	<0.0060	**0.0080**	<0.0060	**0.013**	<0.0060	<0.0060	**0.024**	**0.057**	**0.025**	<0.010	**0.033**	<0.0060	**0.014**	<0.010	**0.011**	**0.047**	**0.027**
RB13	2	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB14	2	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	**0.0037**	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	**0.000037**
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RB15	2	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HP1	5	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
	10	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
HP2	5	<0.0033	**0.0033**	<0.0030	**0.013**	<0.0030	<0.0030	**0.026**	**0.024**	**0.020**	<0.0050	**0.012**	<0.0030	**0.010**	<0.0050	**0.012**	**0.040**	**0.028**
	10	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
HP3	5	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.010	<0.0060	<0.010	**0.0060**	<0.0060	<0.0060	<0.010	<0.0060	**0.0060**	ND
	10	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
HP4	5	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
	10	<0.018	<0.018	<0.018	**0.042**	**0.054**	<0.018	**0.050**	**0.044**	**0.078**	<0.030	**0.034**	<0.018	<0.018	<0.030	**0.020**	**0.064**	**0.060**
HP5	5	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
	10	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0030	<0.0030	ND
Benzo (a) pyrene TEF		--	--	--	*0.1*	*0.1*	*0.01*	*1*	--	*0.001*	*1*	--	--	*0.1*	--*	--	--	--
EHS IL		*12*	*6.4*	*1.9*	*0.63*	*1.1*	*2.8*	*0.11*	*2.5*	*2.2*	*0.11*	*0.69*	*6.0*	*0.48*	*0.042*	*7.8*	*45*	*0.11*
Tier 1 ESL		*12*	*6.4*	*1.9*	*0.63*	*1.1*	*2.8*	*0.11*	*2.5*	*2.2*	*0.11*	*0.69*	*6.0*	*0.48*	*0.042*	*7.8*	*45*	*0.11*
ESL (C/I)		*45,000*	--	*230,000*	*20*	*21*	*210*	*20*	--	*2,100*	*2.1*	*30,000*	*30,000*	*21*	*17*	--	*23,000*	*20*
ESL (CW)		*10,000*	--	*50,000*	*11*	*11*	*910*	*110*	--	*9,100*	*11*	*6,700*	*6,700*	*110*	*400*	--	*5,000*	*110*

Soil samples collected by Rincon Consultants on April 16, 2019
Concentrations detected above the method detection limit are in **bold**
Concentrations detected above the EHS IL are **highlighted**
PAHs = Polycyclic Aromatic Hydrocarbons
Benzo (a) pyrene TEF = Relative Potency Factor values for carcinogenic PAHs (excluding naphthalene*), United States Environmental Protection Agency
*Naphthalene is evaluated separately from other carcinogenic PAHs, no TEF is listed
EHS IL = Santa Barbara County Public Health Department, Environmental Health Services Division, Investigation Level
ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, January 2019, Rev. 1
Tier 1 ESL = Based on a generic conceptual site model designed for use at most sites
ESL (C/I) = Commercial/Industrial: Shallow Soil Exposure - Direct Exposure Human Health Risk Levels (Table S-1)
ESL (CW) = Any Land Use/Any Depth Soil Exposure: Construction Worker - Direct Exposure Human Health Risk Levels (Table S-1)
mg/kg = milligrams per kilogram
<0.1 = Not detected above the method detection limit
-- = Value not established
Soil samples analyzed by Oilfield Environmental and Compliance, Inc.

Analyses:
PAHs by EPA Method 8270

TABLE 4

Summary of TPH and VOCs in Groundwater Samples

Ortega Park Phase II Environmental Site Assessment

604 East Ortega Street, Santa Barbara, California

Sample Location	TPH				VOCs				
	TPHg (C_4-C_{12})	TPHd (C_{13}-C_{22})	TPHo (C_{23}-C_{40})	Full Range TPH	Benzene	t-Butyl Alcohol	Toluene	Trichloroethene (TCE)	Other VOCs
	Results in micrograms per liter (µg/L)								
HP2	<20	<44	**57**	**57**	<0.25	<2.5	<0.25	**0.31**	ND
HP3	<200	**1,300**	**2,000**	**3,300**	<2.5	**26**	<2.5	<2.5	ND
HP4	<200	**170**	**520**	**690**	<2.5	<25	<2.5	<2.5	ND
HP5	<20	**81**	**170**	**251**	**1.0**	<2.5	**0.36**	<2.5	ND
EHS IL	*1,000*	*1,000*	*1,000*	*1,000*	*1*	--	*150*	*5*	*varies*
MCL	--	--	--	--	*1*	--	*150*	*5*	*varies*

Soil samples collected by Rincon Consultants on April 16, 2019

Concentrations detected above the method detection limit are in **bold**

Concentrations detected above EHS ILs are **highlighted**

TPH = Total Petroleum Hydrocarbons

TPHg = TPH as gasoline

TPHd = TPH as diesel fuel

TPHo = TPH as motor oil

VOCs = Volatile Organic Compounds

EHS IL = Santa Barbara County Public Health Department, Environmental Health Services Division, Investigation Level

MCL = Maximum Contaminant Levels for drinking water established by the California Department of Public Health, March 2018

<0.1, ND = Not detected above the method detection limit

-- = Sample not analyzed or value not established

Soil samples analyzed by Oilfield Environmental and Compliance, Inc.

Analyses:

TPHd and TPHo by EPA Method 8015M

VOCs including TPHg by EPA Method 8260B