Soil Removal Plan

James A. Garfield High School
5101 East 6th Street, East Los Angeles, California 90022

Prepared for

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Contents

Table

Figures

Acronyms and Abbreviations

bgs	below ground surface
COC	chain of custody
cy	cubic yards
DTSC	Department of Toxic Substances Control
ft^2	square feet
Garfield HS	James A. Garfield High School
GC	general contractor
HASP	health and safety plan
LAUSD	Los Angeles Unified School District
mg/kg	milligrams per kilogram
Millennium	Millennium Consulting Associates
OEHS	Office of Environmental Health & Safety
PEA-E	preliminary environmental assessment-equivalent
PEA-E Work Plan	*Preliminary Environmental Assessment-Equivalent Work Plan*
Phase I ESA	*Phase I Environmental Site Assessment Report*
QC	quality control
RACR	removal action completion report
Site	5101 East 6th Street in East Los Angeles, California
SCAQMD	South Coast Air Quality Management District
SRP	*Soil Removal Plan*
Terraphase	Terraphase Engineering Inc.
USA	Underground Service Alert

Signatures

	1/19/2024
Jonathan Marshak, PG, Senior Project Geologist	Date

All geologic information, conclusions, and recommendations in this document have been prepared under the responsible charge of a California-licensed Professional Geologist.

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1 Introduction

At the request of the Los Angeles Unified School District (LAUSD), Terraphase Engineering Inc. (Terraphase) has prepared this *Soil Removal Plan* (SRP) for the James A. Garfield High School (Garfield HS) at 5101 East 6th Street in East Los Angeles, California (Site; Figure 1)

LAUSD is undertaking a major modernization project at the Site to build a new four-story building and library. The development will involve demolishing two portable classrooms (AA-336 and AA-2554) and Buildings 100 and 200, shown on Figure 2. The *Phase I Environmental Assessment Report* (Phase I ESA) prepared for the Site (Millennium Consulting Associates [Millennium] 2022) and additional Site reconnaissance by Terraphase identified recognized environmental conditions within the development zone. Based on the recommendations from the Phase I ESA, a *Preliminary Environmental Assessment-Equivalent Work Plan* (PEA-E Work Plan) was prepared (Terraphase 2023a) to characterize potential environmental impacts in Site soil in the development zone.

The *Preliminary Environmental Assessment-Equivalent Report* (Terraphase 2023b) identified lead and arsenic impacts in several samples which exceeded the Site screening criteria. The calculated 95 percent upper confidence limit concentrations for arsenic and lead for the Site soil were below their respective screening criteria, and Terraphase determined that the South Coast Air Quality Management District (SCAQMD) Rule 1466 regulations were not applicable for the proposed redevelopment activities.[1] In consultation with LAUSD Office of Environmental Health & Safety (OEHS), Terraphase recommended excavation and removal of shallow soil impacted with arsenic and lead from areas which exceeded the screening criteria.

This SRP was prepared to describe excavation, segregation, and proper handling of soil with arsenic and lead exceedances identified in the *Preliminary Environmental Assessment-Equivalent Report Report* (Terraphase 2023b). The SRP includes the following elements:

- A summary of the preliminary environmental assessment-equivalent (PEA-E) investigation;
- A description of the proposed screening levels;
- Requirements for public participations;
- Excavation activities;
- Waste handling and storage;
- Confirmation soil sampling; and
- Reporting.

[1] https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466

2 Summary of PEA-E Investigation

A description of the Site and results of the PEA-E investigation are presented below.

2.1 Site Summary

The approximately 20-acre Site is an active high school comprised of various buildings, recreational fields, and parking lots. The Site is surrounded by residential properties with commercial businesses on its east side. The development zone, which was the focus of the PEA-E investigation, comprises approximately 1.8 acres and is in the southwest corner of the Site bounded by Fraser Avenue to the west and East 6th Street to the south. The development zone consists of a parking lot, two portable classrooms (AA-336 and AA-2554), and two buildings (Building 100, consisting of a parking garage and classrooms constructed circa 1963, and Building 200, consisting of a library and classrooms constructed circa 1975) planned for demolition. This area will be redeveloped with a four-story building and a new library. The development zone is shown on Figure 2.

Based on review of the Phase I ESA (Millennium 2022), the Site has been occupied by Garfield HS since approximately 1928. Aerial photographs show that the Site was undeveloped from as early as 1923. In 1928, the Site was developed with several buildings and recreational fields on the north side. The Site was further developed with buildings added on the southwestern corner between 1928 and 1938, and several residential buildings added on the north portion of the Site by 1948. Between 1972 and 1994, the majority of the Site remained unchanged except for several cycles of residential development and grading on the northwest portion of the Site. In 2012, a baseball field was added to the northwest corner of the Site. The Phase I ESA cited historical plans provided by LAUSD OEHS, which indicated that autobody, wood working, print, heavy metal shops, and a gun range formerly operated at the Site (Millennium 2022).

The Site is within the Los Angeles Basin in a low-lying area filled with unconsolidated alluvial deposits from the early Holocene and late Pleistocene period consisting of moderately drained silty clay (Millennium 2022). The Site is not located within an earthquake fault zone and the closest active fault is the East Montebello Fault 3.5 miles east of the Site (Millennium 2022).

The Site is within the California Coastal Basin Aquifer. Site soils are expected to have moderate infiltration rates, with expected groundwater flow towards the south along the general topographic gradient (Millennium 2022). Depth to groundwater was measured at 212 feet below ground surface (bgs) in state well 2847B, located adjacent to the east side of the Site, on December 31, 2021.[2]

[2] https://dpw.lacounty.gov/general/wells/#

2.2 PEA-E Work Plan

The PEA-E Work Plan proposed strategies (Terraphase 2023a) to characterize impacts to shallow soil at the Site from the recognized environmental conditions identified in the Phase I ESA. The following contaminants of potential concern were identified in shallow soil:

- Arsenic and organochloride pesticides from pesticide use;
- Asbestos and lead along building driplines due lead-based paint and building materials;
- Volatile organic compounds from a photograph development laboratory and former printing shop;
- Total petroleum hydrocarbons from a three-stage clarifier;
- Polychlorinated biphenyls from electrical transformers;
- SCAQMD toxic air contaminants including asbestos, cadmium, lead, mercury, nickel, organochloride pesticides, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls.

2.3 PEA-E Investigation

The PEA-E investigation was conducted in general accordance with the PEA-E Work Plan and with the California Environmental Protection Agency, Department of Toxic Substances Control's (DTSC) guidance for school sites (2006) and the *Preliminary Endangerment Assessment Guidance Manual* (2015). The work was conducted at the Site April 4–5, 2023.

A total of 118 soil samples were collected from 40 soil borings during the investigation. Most of the soil borings were advanced to 5 feet bgs with a hand auger and samples were collected at depths of 1, 3, and 5 feet bgs. Two borings in the vicinity of the three-stage clarifier were advanced to 15 feet bgs using a direct-push drilling rig, and samples were collected at depths of 1, 5, 10, and 15 feet bgs.

2.4 Chemicals of Concern

All contaminants of potential concern during the PEA-E investigation, except for arsenic and lead, were either not detected or were detected at concentrations that were below the Site screening criteria. Concentrations of arsenic and lead which exceeded the Site screening criteria in several samples are shown on Figure 3. Three samples (SB-13-1.0, SB-25-1.0, and SB-36-1.0) exceeded the Southern California background arsenic concentration of 12 milligrams per kilogram (mg/kg [Chernoff, Bosan, and Oudiz 2008]) at concentrations ranging from 13 (SB-25-1.0 and SB-36-1.0) to 79 mg/kg (SB-13-1.0). Five samples (DUP-04, SB-22-1.0, SB-34-3.0 and its duplicate sample DUP-08, and SB-36-1.0) exceeded the DTSC-modified screening level of 80 mg/kg (DTSC Human and Ecological Risk Office 2022) at concentrations ranging from 92 to 200 mg/kg (SB-36-1.0 andDUP-04, respectively). Therefore, arsenic and lead are the chemicals of concern for this SRP.

3 Screening Criteria

The following screening levels for arsenic and lead were established during the PEA-E investigation.

3.1 Arsenic

The screening level for arsenic is 12 mg/kg, consistent with the Southern California background arsenic concentration (Chernoff, Bosan, and Oudiz 2008).

3.2 Lead

The screening level for lead is 80 mg/kg, consistent with the DTSC-modified screening level for lead (DTSC Human and Ecological Risk Office 2022).

4 Proposed Excavation Areas

Soil excavation and removal was selected as the most appropriate removal action alternative for soil impacted with arsenic and/or lead. The proposed excavation areas are shown on Figure 4. The estimated excavation volumes are presented in Table 1.

There are six proposed excavation areas identified within the development zone that have soil containing lead and/or arsenic which exceed the screening criteria. The excavation areas are estimated around soil samples which exceeded the screening criteria in a given boring advanced during the PEA-E investigation. Since no additional soil characterization work has been performed around these borings where arsenic and lead exceeded the Site screening criteria, the extent of arsenic- and lead-impacted soil has not been defined. This SRP proposes a square excavation surrounding each of the borings, which extends 3 feet laterally in each cardinal direction for excavation areas of approximately 36 square feet (ft^2). If the edge of a building or another obstruction is encountered within the 3-foot extension, the excavation will terminate a safe distance from the edge of the building. The excavations are proposed to extend vertically approximately 6 inches beyond the impacted soil in each excavation area. The final depth of the excavations will depend on field measurements and confirmation soil sampling results. Each approximately 36 ft^2 (6 by 6 feet) excavation area is shown on Figure 4 and described below.

- **Excavation SB-13**: This excavation area is located around boring SB-13 at the south edge of Building 100. Sample SB-13-1.0 had an arsenic concentration of 79 mg/kg, and the deeper sample in boring SB-13-3.0 had a concentration of 5.7 mg/kg. The proposed excavation area of approximately 36 ft^2 to a depth of 1.5 feet bgs encompasses approximately 2 cubic yards (cy) of arsenic-impacted soil.
- **Excavation SB-14**: This excavation area is located around boring SB-14 at the north edge of Building 200. The duplicate sample (DUP-04) of SB-14-3.0 had a lead concentration of 200 mg/kg, and the deeper sample in boring SB-14-5.0 had a concentration of 53 mg/kg. The proposed excavation area of approximately 36 ft^2 to a depth of 3.5 feet bgs encompasses approximately 4.67 cy of lead-impacted soil.

- **Excavation SB-22**: This excavation area is located around boring SB-22 at the southeast corner of Building 200. Sample SB-22-1.0 had a lead concentration of 150 mg/kg, and the deeper sample in the boring SB-22-3.0 had a concentration of 13 mg/kg. The proposed excavation area of approximately 36 ft^2 to a depth of 1.5 feet bgs encompasses approximately 2 cy of lead-impacted soil.
- **Excavation SB-25**: This excavation area is located around boring SB-25 at the north edge of portable Building AA-336. Sample SB-25-1.0 had an arsenic concentration of 12 mg/kg, and the deeper sample in boring SB-25-3.0 had a concentration of 5.1 mg/kg. The proposed excavation area of approximately 36 ft^2 to a depth of 1.5 feet bgs encompasses approximately 2 cy of arsenic-impacted soil.
- **Excavation SB-34**: This excavation area is located around boring SB-34 in the parking lot south of Building 200. Sample SB-34-3.0 and its duplicate sample DUP-08 had lead concentrations of 110 and 100 mg/kg, respectively. The deeper sample in boring SB-34-5.0 had a concentration of 8.2 mg/kg. The proposed excavation area of approximately 36 ft^2 to a depth of 3.5 feet bgs encompasses approximately 4.67 cy of lead-impacted soil.
- **Excavation SB-36**: This excavation area is located around boring SB-36 in the northeast corner of Building AA-2554. Sample SB-36-1.0 had arsenic and lead concentrations of 13 and 92 mg/kg, respectively. The deeper sample in boring SB-34-3.0 had arsenic and lead concentrations of 4.4 and 3 mg/kg, respectively. The proposed excavation area of approximately 36 ft^2 to a depth of 1.5 feet bgs encompasses approximately 2 cy of arsenic- and lead-impacted soil.

The proposed excavations total approximately 17.33 cy of arsenic- and lead-impacted soils. The approximate volumes of excavated soil in each area are shown in Table 1. Analytical results from the PEA-E investigation have characterized the soil as non-hazardous for disposal purposes.

5 Removal Action Implementation

The general contractor (GC) is required to either contract a licensed excavation firm to provide qualified labor, appropriate equipment, materials, and transportation and disposal services to complete the removal actions, or internally execute these removal actions. LAUSD OEHS will separately contract with an environmental consultant to provide project oversight, air monitoring, health and safety compliance, confirmation sampling, and closure reporting. The GC is required to excavate the locations outlined in this SRP before any other subterranean work is completed in a 20-foot radius of each excavation area. LAUSD OEHS requires each SRP excavation to be conducted when students are not on campus (i.e., no SRP excavations during standard operating hours of 7:30 a.m. through 4:30 p.m. nor scheduled during after-school student activities on school or non-school days). Details of the proposed removal action activities are presented below.

5.1 Site Preparation

Prior to mobilization, Site preparation activities will include public notification, preparing a health and safety plan (HASP), obtaining permits, delineation of excavation areas, and utility clearances.

5.1.1 Public Participation

Prior to beginning fieldwork for the proposed removal action, LAUSD will distribute a Removal Action Work Notice to Garfield HS students and staff, and nearby residents and businesses (i.e., within line-of-sight). The notice will be printed in English and Spanish, laminated, and posted along the fence line of the project. It will provide a general description of the fieldwork that will occur, along with the telephone number of the LAUSD OEHS Project Manager for further information.

5.1.2 Health and Safety Plan

The removal contractor and an environmental consultant shall each prepare their own comprehensive HASPs prior to the implementation of the proposed removal activities at the Site. The intent of a HASP, which includes protocols to be followed during removal activities, is to ensure the health and safety of on-site project employees, subcontractors, visitors, and the public. A HASP identifies required policies, procedures, and systems to be followed by project personnel, and must be followed and signed by all field personnel, subcontractors, vendors, visitors, and agency representatives at the Site. Copies of the HASPs will be readily available during field activities.

All Site workers involved with the soil removal will be required to review and sign the HASP before conducting work at the Site. On the morning of each day of field activities, a health and safety meeting will be conducted to discuss the health and safety issues and concerns related to the specific work, including safety concerns regarding coordination of investigation activities. In addition, Site workers shall meet the training requirements specified in the United States Occupational Safety and Health Administration HAZWOPER Standard (29 CFR 1910.120[e]).[3]

5.1.3 Permits and Plans

The removal contractor will be responsible for obtaining necessary permits and developing the excavation plans for the removal action.

5.1.4 Delineation of Excavation Areas

Prior to initiating the soil excavation activities, the excavation areas will be marked with spray paint by the environmental consultant. In addition, prior to beginning field work, fencing may be installed around individual excavation areas to prevent unauthorized entry and minimize fugitive dust emissions during work activities by the removal contractor.

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[3] https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.120.

5.1.5 Utility Clearance

Clearance of utilities and other underground obstacles will be conducted by the removal contractor prior to initiating any subsurface investigation activities. Underground Service Alert (USA) will be notified at least 2 business days prior to commencing work at the Site, and after excavation locations are marked with white paint according to USA requirements. The USA ticket will be maintained as long as work continues at the Site and will be updated as necessary for excavation location adjustments.

A geophysical survey will also be completed in the excavation area to identify and mark out underground utilities potentially including, but not limited to, water lines, natural gas lines, electrical lines, telecommunication lines, sewer lines, and storm drainpipes within the excavation areas. The geophysical survey will utilize electromagnetic and ground penetrating radar to locate the underground utility lines and subsurface features and structures prior to the initiation of intrusive investigation activities.

5.1.6 Site Security

The school is secured by a perimeter fence. An exclusion zone will be maintained around the work areas by barricade and placement of signs and caution tape, as necessary. The contractor will place temporary fencing or caution tape around the excavation area any time the work area is left unattended and at the end of each workday until the excavation activities are completed. No one outside of the consultant field staff, removal contractor employees, or LAUSD OEHS authorized personnel will be permitted within the exclusion zone. The fence surrounding the Site will be closed and locked at the completion of each field day.

5.1.7 Dust Control

Dust control measures will be implemented by the removal contractor to stabilize exposed surfaces and minimize activities that suspend or track dust particles. Soil excavation and handling shall be accomplished in a manner that includes adequate measures to minimize and control dust and spillage of soil within the Site. All work shall follow applicable SCAQMD requirements. Specifically, the removal contractor is responsible for meeting requirements and implementing reasonable best management practices specified in SCAQMD Rules 401 (Visible Emissions) and 403 (Fugitive Dust).[4] Dust control measures shall include, but not be limited to, the following:

- Wet suppression of exposed soil during excavation, loading, and unloading of contaminated soil;
- Adequately tarping haul trucks transporting contaminated soil before leaving the Site;
- Appropriate measures implemented by the contractor to control track out of soil from the Site onto adjacent paved roads;
- Limited on-site traffic speed, reducing speed on unpaved areas; and

[4] https://www.aqmd.gov/docs/default-source/rule-book/outdated-sip-rules/rule-401-visible-emissions.pdf and https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf, respectively.

- Covering and securing stockpiles and exposed areas at the end of each workday.

5.2 Excavation Plan

The scope of the proposed removal action is to excavate approximately 17.33 cy of arsenic- and lead-impacted soil from six areas containing soil which exceeds the screening criteria of 12 and 80 mg/kg for arsenic and lead, respectively. Based on available analytical data, the arsenic- and lead-impacted soil has been characterized as non-hazardous.

5.2.1 Excavation Procedures

Soil will be excavated using conventional equipment such as an excavator or backhoe. Proposed excavation areas which contain asphalt or concrete will be saw cut or broken prior to subsurface work and those materials will be segregated from the soil waste.

Sloping and benching of sidewalls is not anticipated to be required for the excavations as proposed. If the confirmation samples indicate that the excavations would require extending beyond a 4-foot depth, the excavations may require those protective systems. The contractor will have a competent person on Site, knowledgeable of Occupational Safety and Health Administration and California Division of Occupational Safey and Health requirements for excavations and shoring, who will make the final determination whether the excavation shall be sloped, benched, or shored. If shoring is determined to be necessary, the contractor shall develop a shoring plan for review by the consultant.

After the of metals-impacted soil has been removed from the proposed excavation area, field staff will screen soil from all the excavation sidewalls and bottom using a handheld X-ray fluorescence (XRF) analyzer to assess approximate concentrations of arsenic and/or lead prior to collecting confirmation soil samples. If the XRF readings exceed the screening criteria for the specified contaminant, the excavation will be extended laterally or vertically beyond the impacted soil, and the new sidewall or bottom will be screened again. Once the readings on the XRF are below the screening criteria, confirmation soil samples will be collected to verify that all metal impacts have been removed. Confirmation soil sampling procedures are discussed in Section 5.4.

5.2.2 Decontamination Procedures

Protocols will be followed to prevent cross-contamination of impacted soil from equipment used during the removal action. The following decontamination procedures will be used by the removal contractor:

- Excavation equipment will be decontaminated using dry methods, such as brushing off excess soil, prior to leaving the Site.
- Water may be used to decontaminate soiled equipment as needed.
- Transport truck drivers will be required to inspect truck tires for loose soil debris. Excess soil will be removed with a wire brush or broom.

5.3 Soil Management

Impacted soils will be stockpiled, placed in bins or directly loaded onto dump trucks for immediate off-site disposal. Whenever possible, excavated soils will be loaded directly onto transportation trucks. If it is necessary to temporarily store the excavated soil on Site until off-site transportation and disposal are available, the following may apply:

- The staging process will be conducted in a manner to minimize the generation of dust. At the staging areas, excavated soil will be placed on an impermeable barrier base (e.g., plastic sheeting) and covered with tarps or other proper materials (e.g., plastic sheeting) to prevent any run-on and/or dust generation. If significant rainfall is anticipated, the staging areas will be bermed to contain any run-off.
- The temporary on-site storage of excavated soil wastes will be secured until they are ready for loading. Storage of waste for longer than 90 days after it is generated is not anticipated.
- Direct loading may take place concurrently with excavation operations, with access of loaders to the stockpile from outside the excavation areas, while excavation operations deposit impacted soil from the excavation areas to the staging areas.

During non-excavation hours, excavated soil stockpiles will be covered with plastic sheeting or other proper materials. Additional field applications may involve installation of a temporary canopy, liner, or other physical barrier that minimizes movement of materials from the Site by wind, water, or any other mechanism.

5.4 Confirmation Soil Sampling

Confirmation soil sampling within the excavation areas will be conducted upon completion of impacted soil removal at all excavation locations to evaluate whether all impacted soil has been removed. Confirmation soil samples will be collected from the base and/or sidewalls of the excavation from freshly uncovered soil.

When XRF readings indicate arsenic and/or lead is below respective screening criteria, confirmation samples will be collected for laboratory analysis. Sidewall samples will be collected at approximately one sample for each 10 linear feet of sidewall, with a minimum of one sidewall sample collected from each excavation sidewall, which is less than 10 linear feet wide. Each sidewall location will consist of one sample collected at the midpoint in depth (approximately halfway between the excavation floor and the ground surface surrounding the excavation perimeter). Bottom samples will be collected at the rate of one sample for each 400 square feet of excavation area at the midpoint of each interval.

Soil samples will be placed in appropriate containers provided by the analytical laboratory. Each sample container will be labeled with the sample ID number, sample depth, and date of collection. After the samples have been labeled and documented in the chain-of-custody (COC) record, they will be placed in a cooler with ice to maintain an approximate temperature of 4 degrees Celsius for transport to a state-certified laboratory. COC protocol will be followed for all soil samples selected for laboratory analysis. The COC form(s) will accompany the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis. Duplicate soil samples will be collected at a rate of 10 percent of the total samples.

Confirmation soil samples collected during removal activities will be analyzed for lead and arsenic using United States Environmental Protection Agency Method 6020 for lead and arsenic. If the results of laboratory analysis of confirmation samples indicate soil concentrations exceeding Site screening criteria remain in the subsurface, additional soil excavation will be conducted and additional confirmation samples will be collected to verify removal of the impacted soil.

5.5 Quality Assurance/Quality Control

Quality assurance and quality control (QC) samples will be collected to assess the consistency and performance of the sampling program. The types of field QC samples that will be collected during confirmation sampling for the remedial action are described below.

5.5.1 Field Duplicates

Field duplicate confirmation soil samples will be collected and analyzed to evaluate sampling and analytical precision. Field duplicates are collected and analyzed in the same manner as the primary samples. Agreement between duplicate sample results will indicate good sampling and analytical precision. Field duplicates will be collected at a frequency of 10 percent of the primary soil samples collected. The duplicate sample will be subject to the same laboratory analyses performed on the associated primary sample.

5.5.2 Temperature Blanks

One temperature blank will accompany each cooler containing project samples submitted to the subcontract laboratory. Temperature blanks typically consist of deionized water poured into a glass container. Laboratory personnel will obtain temperature measurements from the temperature blank upon receipt of sample shipment containers, and this measurement will be recorded on the COC.

5.5.3 Laboratory QC Samples and Criteria

Laboratory QC samples are used to ensure that conducted analyses are within QC limits and document the quality of analytical results. The types of QC samples the laboratory will employ depend on the particular methodology used to analyze the samples. Each analytical method has a required QC procedure that must meet laboratory-developed acceptance limits for the data to be considered valid.

5.5.4 Updated Profile Sampling

The laboratory analytical results from the PEA-E investigation have indicated that the soil waste is classified as non-hazardous. However, If the removal contractor determines that additional waste characterization samples are necessary to satisfy the disposal facility, the consultant will collect additional waste characterization samples as directed by the contractor.

5.6 Transportation Plan for Off-Site Disposal

The excavated soil will be managed as outlined in Section 5.3. Analytical data from the PEA-E investigation classified the soil as non-hazardous waste. As soil is excavated, it will be directly loaded onto trucks for transportation off Site or temporarily stockpiled or placed in bins on Site until off-site transportation and disposal is arranged. The non-hazardous soil will be transported to an approved landfill for disposal. The construction contractor will reference LAUSD Specification 01-4524 and consult with OEHS Site Assessment Project Manager for district-specific soil export requirements.[5]

5.7 Backfill and Site Restoration

LAUSD OEHS will provide approval for the completion of the soil removal action for each of the impacted soil areas. The approval will be based on the confirmation soil sampling meeting all objectives of this SRP and disposal of the impacted soil at an approved disposal facility. The removal contractor will be responsible for backfilling the excavated areas, if needed, and removing any site safety security barriers. Any import soil to fill excavation areas must comply with LAUSD Specification 01 4524 (Environmental Import/Export Material Testing) and have approval of the OEHS Project Manager prior to backfill.

5.8 Variances

If deviations from the procedures outlined in this SRP are necessary based on field conditions, the consultant will notify LAUSD OEHS and provide justification for the change. Variances will be documented in field notes and will be discussed in the removal action completion report (RACR).

6 Reporting

A RACR will be prepared by the environmental consultant, under the oversight of a California-licensed Professional Geologist or Civil Engineer, once all removal activities have been completed. The RACR will include but is not necessarily limited to:

- Summary of the removal action activities;
- Summary of public notification activities with a copy of the actual notice as an appendix;

[5] https://www.lausd.org/Guide Specifications.

- Analytical test results of excavation confirmation soil samples, including quality assurance/QC measures sample results;
- Location(s) and rationale for selection of sampling locations and depths;
- Observations and findings of the environmental controls and measurements;
- Photographic log of removal action activities;
- Final limits of soil excavation with the volumes of soil removed; and
- Documentation showing final disposal of all waste materials generated at the Site.

7 References

Chernoff, G., W. Bosan, and D. Oudiz. 2008. *Determination of a Southern California Regional Background Arsenic Concentration in Soil.* California Department of Toxic Substances Control (DTSC). 2009. https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Bagley-Major-Grading-Plan-Change/Determination-of-Background-Arsenic.pdf.

California DTSC. 2006. *Interim Guidance, Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers*. June 9; revised September 12.

California DTSC, Human and Ecological Risk Office. 2022. *Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs).* Release Date June 2020 – Revised May 2022.

California Environmental Protection Agency, DTSC. 2015. *Preliminary Endangerment Assessment Guidance Manual*. January 1994. Revised October 2015.

Millennium Consulting Associates (Millennium). 2022. *Phase 1 Environmental Site Assessment, Garfield High School, 5101 East 6th Street, Los Angeles, CA 90022.* January 27

San Francisco Bay Regional Water Quality Control Board. 2019. "Direct Exposure Human Health Risk Levels (Table S-1), Tier 1," *Environmental Screening Levels (ESLs).* Revision 2. January 24.

South Coast Air Quality Management District (SCAQMD). 1984. "Rule 401. Visible Emissions." Adopted February 4, 1977, last amended March 2, 1984. https://www.aqmd.gov/docs/default-source/rule-book/outdated-sip-rules/rule-401-visible-emissions.pdf.

———. 2005. "Rule 403. Fugitive Dust." Adopted May 7, 1976, last amended June 3, 2005. https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf.

———. 2021. "Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants." June 4. https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466.

Terraphase. 2023a. *Preliminary Environmental Assessment-Equivalent Work Plan, James A. Garfield High School, 5101 E 6th St, East Los Angeles, CA 90022.* March 29.

———. 2023b. *Preliminary Environmental Assessment-Equivalent Report, James A. Garfield High School, 5101 E 6th St, East Los Angeles, CA 90022.* July 3.

United States Environmental Protection Agency. 2002. *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites*. Office of Emergency and Remedial Response. December.

———. 2022. *Regional Screening Level (RSL) Resident Soil Summary Table* (TR=1E-06, HQ=1). November. https://www.dir.ca.gov/dosh/acru/acruregistration.htm

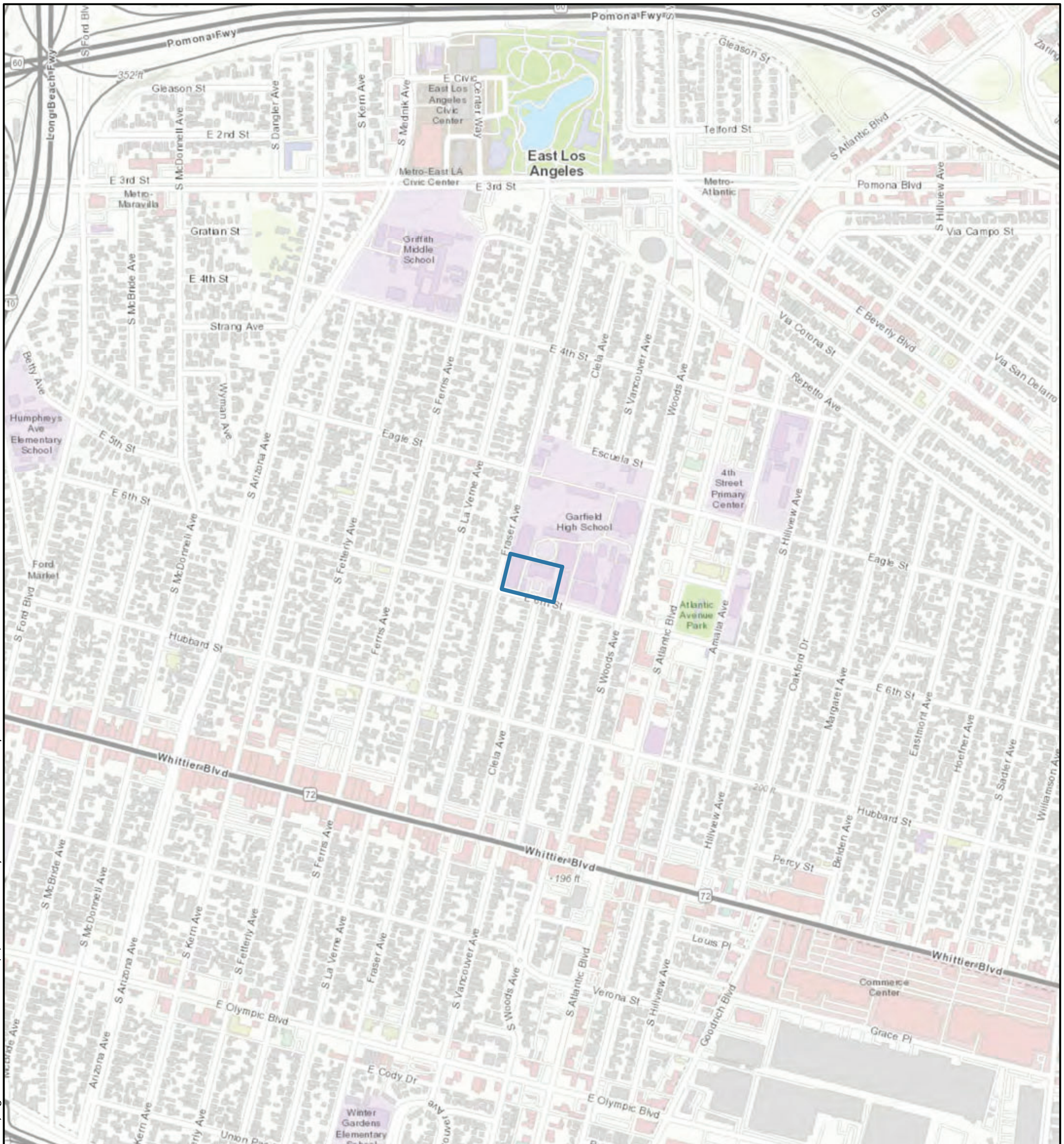
Table

Table 1
Proposed Soil Excavation Volume Estimations
Soil Removal Plan
James A. Garfield High School
5101 E 6th Street, East Los Angeles, California 90022

Primary Boring/Boring Group ID	COPCs Above Screening Criteria	Proposed Excavation Surface Area (square feet)	Proposed Excavation Depth (feet bgs)	Proposed Soil Excavation Volume (cubic yards)	Confirmation Sampling Recommendations
SB-13	Arsenic	36	1.5	2	Collect confirmation samples from sidewalls at approximately one sample for each 10 linear feat of sidewall, with a minimum of one sample per each excavation sidewall and one bottom sample for each 400 square feet at the midpoint of each interval
SB-14	Lead	36	3.5	4.67	
SB-22	Lead	36	1.5	2	
SB-25	Arsenic	36	1.5	2	
SB-34	Lead	36	3.5	4.67	
SB-36	Arsenic, Lead	36	1.5	2	
			Total Soil Volume	**17.33**	

Note:
COPC = chemical of potential concern
bgs = below ground surface
Proposed excavation extents are 6 feet long by 6 feet wide.

Figures



0 1,000 2,000 Feet 1 inch = 1,000 feet	N

Legend

Site Boundary

Base Map: ESRI World Topographic Map
(data providers include HERE, Garmin, USGS, et al.)

SAFETY FIRST	CLIENT: LAUSD	**Site Location**
terraphase engineering	PROJECT: 5101 E 6th Street, Los Angeles, CA 90022	
	PROJECT NUMBER: S030.064.001	**FIGURE 1**

File: N:\GIS\Prj\S030 LAUSD\S030.056_Garfield HS\MXDs\(20230501) Figure 1 - Site Location1.mxd 5/1/2023 Created by: Summer Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet

Aerial Imagery Source: Nearmap January 26, 2023

0 70 140 280 Feet

1 inch = 140 feet

N

SAFETY FIRST	CLIENT: LAUSD	Site Layout
terraphase engineering	PROJECT: 5101 E 6th Street, Los Angeles, CA 90022	
	PROJECT NUMBER: S030.064.001	FIGURE 2

File: N:\GIS\Prj\S030 LAUSD\S030.056_Garfield HS\MXDs\(20230501) Figure 2 - Site Layout.mxd 5/15/2023 Created by: Summer Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet

Aerial Imagery Source: Nearmap January 26, 2023

0 20 40 80 Feet

1 inch = 40 feet

N

SAFETY FIRST

terraphase engineering

CLIENT:	LAUSD
PROJECT:	5101 E 6th Street, Los Angeles, CA 90022
PROJECT NUMBER:	S030.064.001

Arsenic and Lead Concentrations Exceeding Screening Criteria

FIGURE 3

File: N:\GIS\Prj\S030 LAUSD\S030.056 Garfield HS\MXDs\(20230515) Figure 4 - Arsenic and Lead Soil Exceedances.mxd 5/25/2023 Created by: Summer Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet

Aerial Imagery Source: Nearmap January 26, 2023

SAFETY FIRST	CLIENT:	LAUSD	**Proposed Excavations**
terraphase engineering	PROJECT:	5101 E 6th Street, Los Angeles, CA 90022	
	PROJECT NUMBER:	S030.064.001	**FIGURE 4**

File: N:\GIS\Prj\S030 LAUSD\S030.056_Garfield HS\MXDs\(20230108) Figure 3 - Proposed Excavations.mxd 1/9/2024 Created by: S.Turner Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet