Boyle Heights Sports Center Gymnasium Project

Draft Initial Study/Mitigated Negative Declaration

June 2019

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ENGINEERING
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Acronyms and Abbreviations

AB52	Assembly Bill 52
ACMs	asbestos-containing materials
ADA	Americans with Disabilities Act
AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
City	City of Los Angeles
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPS Inventory	California Native Plant Society Inventory of Rare, Threatened, and Endangered Plants of California
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historical Resources
dBA	A-weighted decibel
EMG	Bureau of Engineering Environmental Management Group
FHWA	Federal Highway Administration
GHG	greenhouse gas
I-	Interstate
IPaC	Information for Planning and Consultation
LADOT	Los Angeles Department of Transportation
L_{max}	maximum noise levels
LST	Localized Significance Thresholds
Metro	Los Angeles County Metropolitan Transportation Authority
NAAQS	National Air Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NRHP	National Register of Historic Places

O_3	ozone
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
proposed Project	Boyle Heights Sports Center Gymnasium Project
RPR	California Rare Plant Rank
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCS	Sustainable Communities Strategy
SO_2	sulfur dioxide
SR	State Route
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
VOC	volatile organic compound
ZIMAS	Zone Information & Map Access System

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CITY OF LOS ANGELES

CALIFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY

(Article I - City CEQA Guidelines)

Council District: 14

Date: June 2019

Lead City Agency: City of Los Angeles Bureau of Engineering

Project Title: Boyle Heights Sports Center Gymnasium Project

CHAPTER I. INTRODUCTION

A. Document Format

This initial study is organized into eight sections, as follows:

- Section I, Introduction: provides an overview of the project and the CEQA environmental documentation process.
- Section II, Project Description: provides a description of the project location, project background, and project components.
- Section III, Existing Environment: provides a description of the existing environmental setting, with a focus on features of the environment that could affect the proposed Project or be affected by the proposed Project.
- Section IV, Environmental Effects/Initial Study Checklist: presents the CEQA Checklist for all impact areas and mandatory findings of significance. This section includes a discussion of the environmental effects and identifies applicable mitigation measures.

- Section V, Mitigation Measures: provides the mitigation measures that would be implemented to ensure that potential adverse impacts of the proposed Project would be reduced to a less than significant level.
- Section VI, Preparation: provides a list of key personnel involved in the preparation of this report and key personnel consulted.
- Section VII, Determination – Recommended Environmental Documentation: provides the recommended environmental documentation for the proposed Project.
- Section VIII, References: provides a list of reference materials used during the preparation of this report.

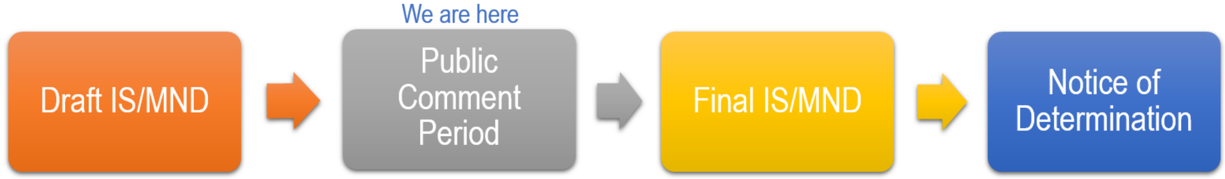
B. Purpose of an Initial Study

The California Environmental Quality Act (CEQA) was enacted in 1970 for the purpose of providing decision-makers and the public with information regarding environmental effects of proposed Projects, identifying means of avoiding environmental damage, and disclosing to the public the reasons behind a project's approval, even if it leads to environmental damage. The Bureau of Engineering Environmental Management Group (EMG) has determined the proposed Project is subject to CEQA, and no exemptions apply. Therefore, the preparation of an initial study is required.

An initial study is a preliminary analysis conducted by the lead agency, in consultation with other agencies (responsible or trustee agencies, as applicable), to determine whether there is substantial evidence that a project may have a significant effect on the environment. If the initial study concludes that the project, with mitigation, may have a significant effect on the environment, an environmental impact report should be prepared; otherwise, the lead agency may adopt a negative declaration or mitigated negative declaration.

This initial study has been prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.), the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.), and the L.A. CEQA Guidelines (1981, amended July 31, 2002).

C. CEQA Process & Availability of the Initial Study/Mitigated Negative Declaration



Once the adoption of a negative declaration (or mitigated negative declaration) has been proposed, a public comment period opens for no less than 20 days, or 30 days if there is state agency involvement. The purpose of this comment period is to provide public agencies and the general public an opportunity to review the initial study and comment on the adequacy of the analysis and the findings of the lead agency regarding potential environmental impacts of the proposed Project. If a reviewer believes the project may have a significant effect on the environment, the reviewer should (1) identify the specific effect, (2) explain why it is believed the effect would occur, and (3) explain why it is believed the effect would be significant. Facts or expert opinion supported by facts should be provided as the basis of such comments. Comments on the document and responses to comments will be included in the record and considered during by LABOE during preparation of the Final IS/MND.

Written comments must be received by July 8, 2019 at:

Christopher Adams, Environmental Specialist
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Los Angeles Bureau of Engineering, Environmental Management Group
1149 S. Broadway, Suite 600
Los Angeles, CA 90015

After the close of the public review period, the mitigated negative declaration, together with any comments received during the public review process, are considered and a recommendation is made to the Board of Recreation and Park Commissioners (Board) for project approval. The Board will consider the mitigated negative declaration, together with any comments received during the public review process, in the final decision to approve or disapprove the project.

During the project approval process, individuals and/or agencies may address the Board regarding the project. Agenda items for the Board can be accessed online at:

https://www.laparks.org/commissioners/agendas-minutes-reports/2019

If the project is approved, the City of Los Angeles (City) will file a Notice of Determination with the County Clerk within 5 days. The Notice of Determination will be posted by the County Clerk within 24 hours of receipt. This begins a 30-day statute of limitations on legal challenges to the approval under CEQA. The ability to challenge the approval in court may be limited to those persons who objected to the approval of the project, and to issues that were presented to the lead agency by any person, either orally or in writing, during the public comment period.

As a covered entity under Title II of the Americans with Disabilities Act (ADA), the City does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services, and activities.

CHAPTER II. PROJECT DESCRIPTION

A. Location

The proposed Boyle Heights Sports Center Gymnasium Project (proposed Project) is located at 2500 Whittier Boulevard in the Boyle Heights Community Plan area of the City of Los Angeles. Specifically, the proposed 0.96-acre project site is bounded by Whittier Boulevard on the north, South Mathews Street on the west, and the existing Boyle Heights Sports Center facilities to the east and south (see Figure 1, Vicinity Map). Two vacant single-story buildings currently occupy the site, which are approximately 2,500 square feet and 1,100 square feet in size. The site comprises two relatively flat areas, located in the northwest (higher area) and southeast (lower area) portions of the site, separated by a slope. A total of 57 trees, with an average height of 30 feet, are also located on or adjacent to the site.

<u>Surrounding Land Uses</u>

Land uses in the project area include multi- and single-family residences in the neighborhoods surrounding the project site and commercial uses along Whittier Boulevard. A number of public facilities are located in the vicinity of the project site, including Soto Street Elementary School along 7th Street, the SEA Charter School/Soto Education Center at the southwest corner of South Soto Street and Rogers Avenue, the Soto Street Children's Center at the southeast corner of South Flickett Street and Soto Street, and Park Place Head Start on the south side of 7th Street across from the Boyle Heights Sports Center. Bishop Mora Salesian High School and School of Santa Isabel are immediately west of the project site and the existing Boyle Heights Sports Center. The confluence of the Interstate (I-)5, State Route (SR-)60, and I-10 freeways is approximately 600 feet south of the site.

B. Project Objectives

The objectives of the proposed Project are to:

- Better serve East Los Angeles—in particular the community of Boyle Heights—with improved recreational facilities for local youths and families.
- Create a sustainable recreational facility, which may be designed to meet LEED-Net Zero certification requirements (producing as much or more energy than it consumes), with sustainable design principals, including drought-resistant landscaping.
- Provide increased access to the park and these new facilities by creating additional parking spaces, an ADA ramp, and additional pedestrian paths.

C. Background

The Boyle Heights Sports Center complex is in a high-density area with many schools and residential homes nearby. The current facility does not have an indoor gymnasium;

therefore, the proposed Project would allow the City of Los Angeles Department of Recreation and Parks to better serve the community of Boyle Heights. Funded through Proposition K, the purpose of the LA for KIDS Program is to combat the lack of infrastructure for youth interests in Los Angeles and create spaces for young people and their families to participate in fun, healthy activities.

D. Description

The proposed Project includes the construction of a new 17,500-square-foot facility that would consist of a full-sized basketball court, staff offices, equipment storage rooms, restrooms, showers, a community room, elevator, multi-purpose rooms (programming may consist of a dance studio, performing area, exercise/yoga, dance, and ballet), plaza for special gatherings, additional green space, pedestrian paths, and additional parking. Figures 2a and 2b depict the proposed site plan, and Figures 3a through 3d provide conceptual renderings of the building's exterior. The proposed gym building would be approximately 40 feet high.

Incorporating sustainable design principals and drought-resistant landscaping, the new facility is pursuing, as feasible, to be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility.

Once completed, the facility would be operated by the City of Los Angeles Department of Recreation and Parks. Anticipated activities to be held in the new facility include basketball or other recreational games, as well as community meetings. The gymnasium would be open to the public 7 days a week from 9:00 am to 10:00 pm, Monday through Friday, and from 9:00 am to 5:00 pm on Saturday and Sunday.

<u>Construction</u>

Construction of the proposed Project would require the demolition of the two buildings on the site (approximately 2,500 square feet and 1,000 square feet in size), removal of two on-site sheds (approximately 120 square feet and 100 square feet) and up to 25 trees, excavation (approximately 7,000 cubic yards) and grading of the site, and removal and relining of overhead utility lines leading from the existing buildings to nearby power poles on Matthew Street. Construction activities are expected to occur over a period of approximately 24 months.

<u>Project Actions and Approvals</u>

Additional anticipated approvals or permits for the proposed Project include, but are not limited to, the following:

Table 1. Responsible Agencies and Anticipated Permits and Approvals

Responsible Agency	Anticipated Permits and Approvals
Regional Water Quality Control Board	National Pollutant Discharge Elimination System (NPDES) permit
LA County Metropolitan Transit Authority (Metro)	Any applicable permits, coordination related to public transit, and adjacent facilities
City of Los Angeles Department of Recreation and Parks (RAP)	IS/MND approval Responsible for operation and maintenance of the park.
City of Los Angeles Bureau of Street Services, Urban Forestry Division	Tree removal permit
City of Los Angeles Department of Building and Safety	Building and safety permit

The analysis in this document assumes that, unless otherwise stated, the proposed Project would be designed, constructed, and operated under all applicable laws, regulations, ordinances, and formally adopted City standards, including, but not limited to:

- City of Los Angeles Municipal Code (Due to the authority granted to RAP by the Los Angeles City Charter Section 591, RAP projects are exempt from the regulation of Chapter 1 of the Los Angeles Municipal Code)
- Bureau of Engineering Standards
- Standard Specifications for Public Works Construction
- Work Area Traffic Control Handbook
- Additions and Amendments to Standard Specifications to Public Works Construction

Figure 1. Vicinity Map

Figure 2a. Project Site Plan

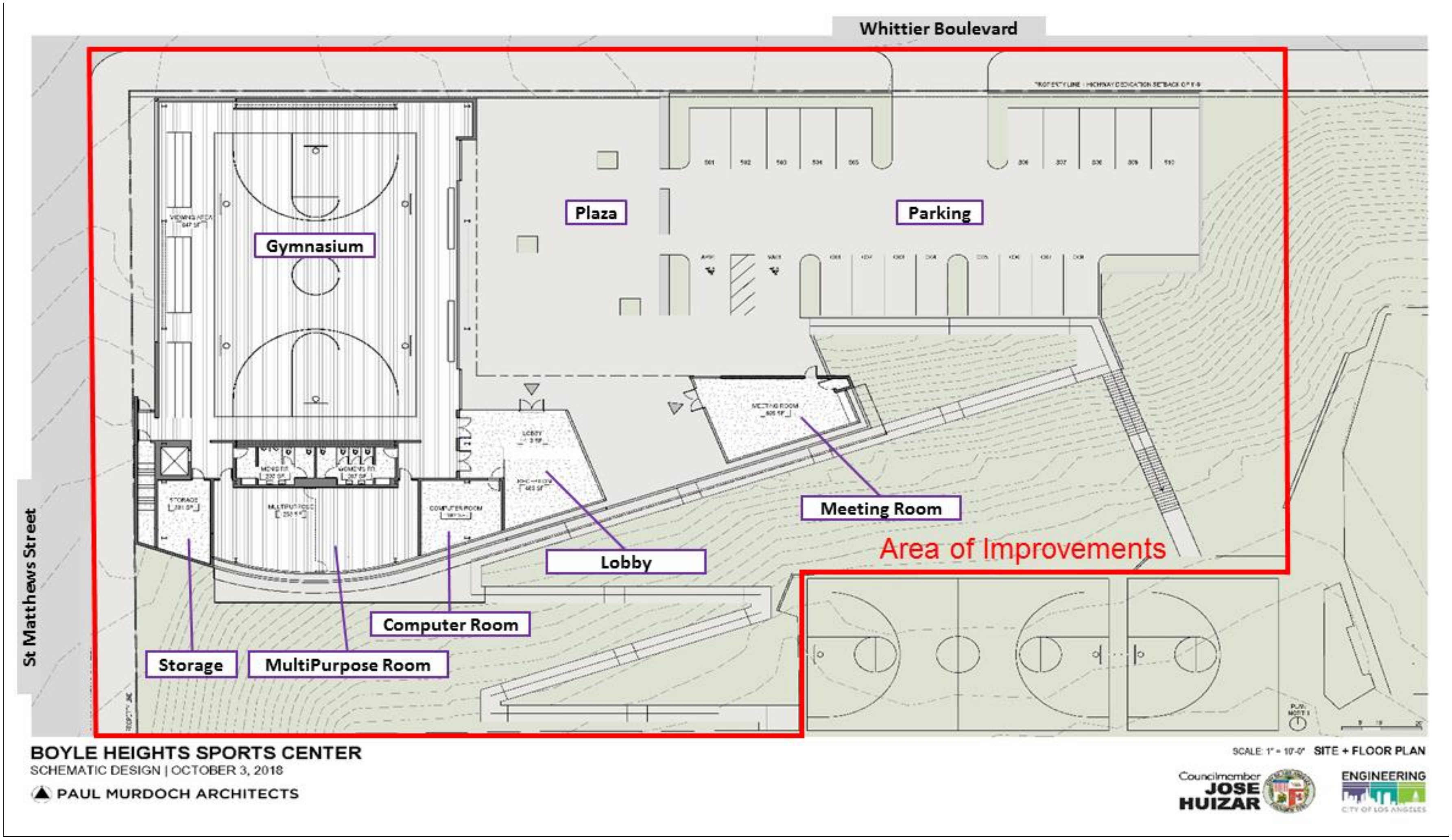

Figure 2b. Project Site Plan - Basement

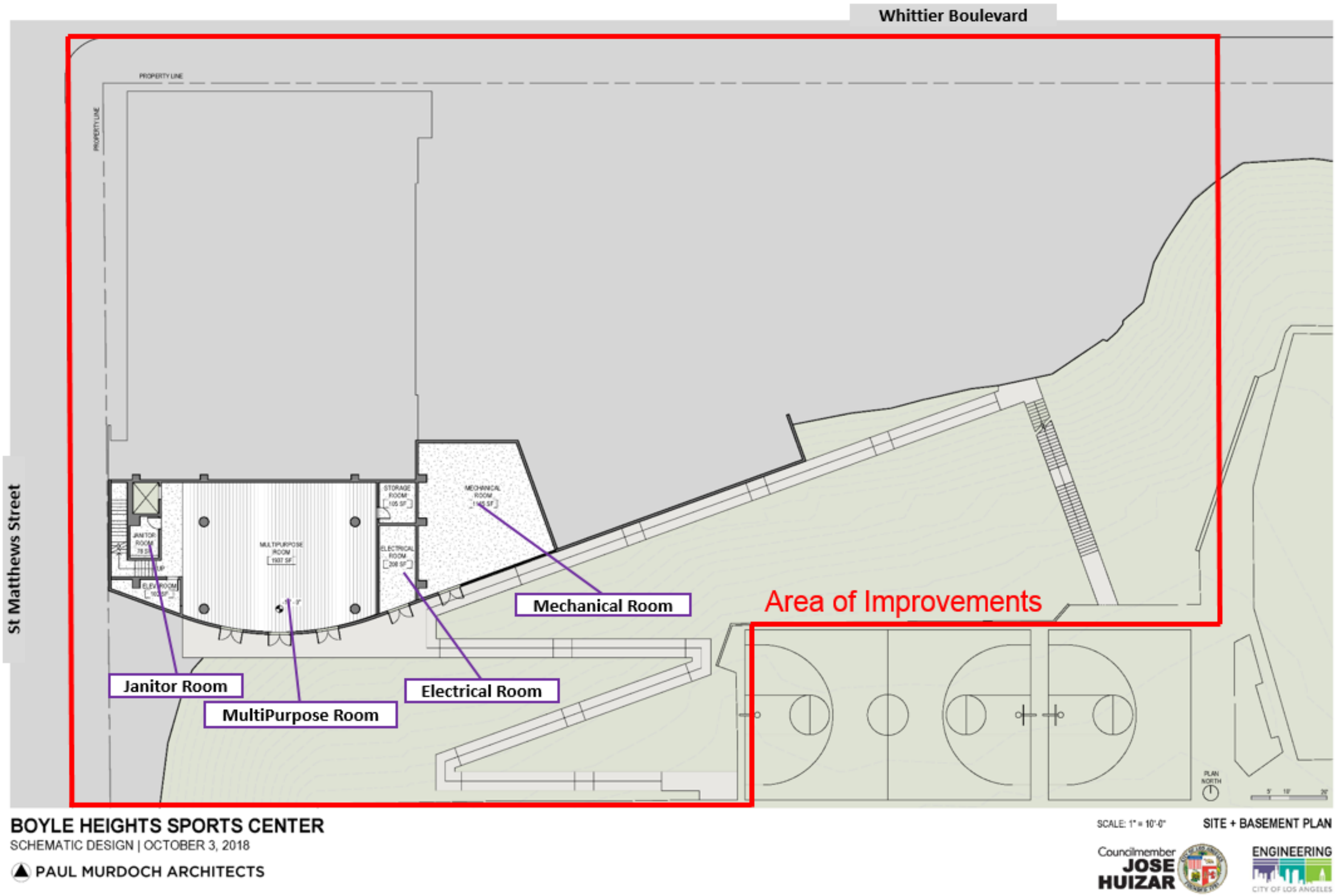

Figure 3a. Conceptual Rendering

VIEW FROM STREET INTERSECTION

BOYLE HEIGHTS SPORTS CENTER
SCHEMATIC DESIGN | OCTOBER 3, 2018
PAUL MURDOCH ARCHITECTS

Councilmember JOSE HUIZAR

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Figure 3b. Conceptual Rendering

PLAZA VIEW FROM SIDEWALK

BOYLE HEIGHTS SPORTS CENTER
SCHEMATIC DESIGN | OCTOBER 3, 2018
PAUL MURDOCH ARCHITECTS

Councilmember JOSE HUIZAR

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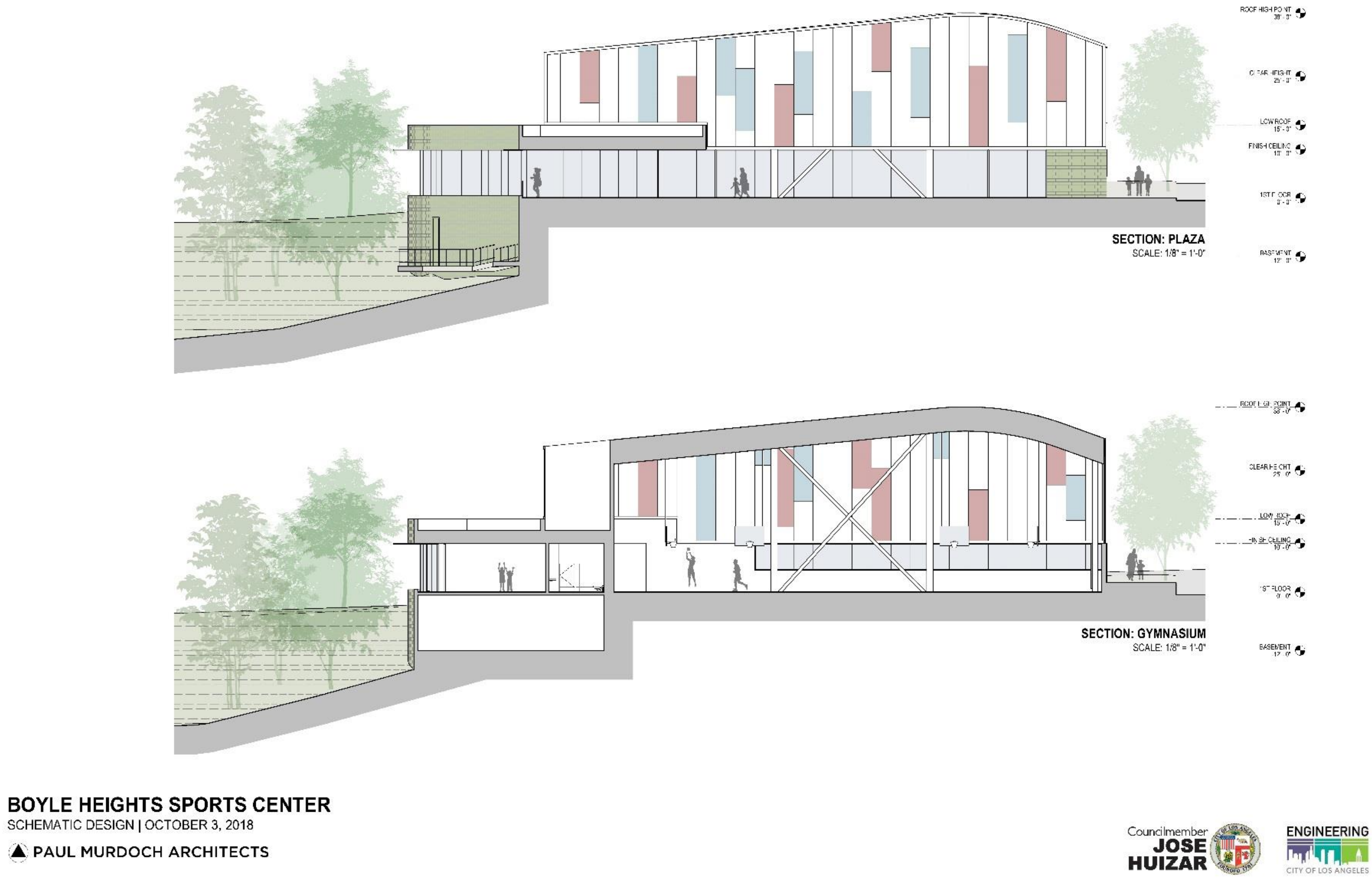
Figure 3c. Conceptual Rendering



CHAPTER III. INITIAL STUDY ENVIRONMENTAL CHECKLIST

The proposed Project is approximately 2 miles southeast of downtown Los Angeles in the Boyle Heights Community Plan area. It lies within the U.S. Geological Survey (USGS) Los Angeles topographic quadrangle and the Los Angeles River watershed. The proposed Project is within the existing Boyle Heights Sports Center, an approximately 7-acre park facility. The confluence of the I-5, SR-60, and I-10 freeways is approximately 600 feet south of the site.

The project site is zoned "OS-1XL-CUGU" Open Space under the City of Los Angeles General Plan, with CUGU referring to "Clean Up Green up." (City of Los Angeles 2014).

Environmental Factors Potentially Significantly Affected

The environmental factors checked below could be significantly affected, prior to implementation of mitigation measures, by the proposed Project. A detailed discussion of these potential environmental effects follows.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Geology/Soils
☐	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials	☐	Hydrology/Water Quality
☐	Land Use/Planning	☐	Mineral Resources	☒	Noise
☐	Population/Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities/Service Systems	☒	Mandatory Findings of Significance

A. Aesthetics

Aesthetics – Will the project**:**	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) Have a substantial adverse effect on a scenic vista?

No Impact. A scenic vista generally provides focal views of objects, settings, or features of visual interest, or panoramic views of large geographic areas of scenic quality, primarily from a given vantage point. A significant impact may occur if the proposed Project introduced incompatible visual elements within a field containing a scenic vista or substantially altered a view of a scenic vista (City of Los Angeles 2006).

No scenic vistas or corridors have been identified by the City of Los Angeles in the Boyle Heights Community Plan area within the immediate vicinity of the proposed Project (City of Los Angeles 2006). The proposed Project is in a heavily developed urban area near the confluence of three major highways. Since no scenic vistas or corridors have been identified, the proposed Project would not have a substantial adverse effect on a scenic vista and no impacts would occur during construction or operation.

Eligible and/or officially designated state and/or county scenic highways in Los Angeles County, as defined by the California Department of Transportation (2011), include portions of Pacific Coast Highway (SR-1), SR-2, I-5, SR-27, SR-39, SR-57, US-101, SR-118, SR-126, and I-210 (Caltrans 2011). No eligible and/or officially designated State and/or County Scenic Highways are in the vicinity of the proposed Project. The nearest officially designated scenic highway, a portion of I-210, is over 9 miles north of the proposed site.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. A significant impact may occur where scenic resources within a state scenic highway would be damaged or removed as a result of the proposed Project (City of Los Angeles 2006).

The project site is not along or near a designated State Scenic Highway or locally designated scenic highway. Therefore, no impact would occur on scenic highways and associated scenic resources due to construction and operation of the proposed Project.

Although up to 25 trees, including up to seven street trees, on the site could be removed to accommodate the proposed Project, none of the trees are protected species. Any removed park trees will be replaced according to RAP's requirements and in agreement with the RAP's arborist. Additionally, the proposed Project includes new landscaping and green space, plus 2:1 replacement of any removed street trees.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. A significant impact may occur if the proposed Project introduced incompatible visual elements to the project site or visual elements that would be incompatible with the character of the area surrounding the project site (City of Los Angeles 2006).

As mentioned, the Boyle Heights Sports Center complex is in a high-density area with many schools and residential homes nearby. In addition, the confluence of the I-5, SR-60, and I-10 freeways is approximately 600 feet south of the site. The project area is relatively flat, with views of streets with sparse trees, businesses, and nearby schools (see Figures 4 and 5 for community views of the project location). The nearest residences are approximately 200 feet from the project site.

During construction, site preparation and grading activities, construction staging, barricade installation, and the placement of minor structures and signage would be required to secure the construction site.

Project construction would disturb approximately 1 acre and could require the removal of up to 25 trees. Construction activities would temporarily diminish the visual quality or character of the immediate area and partially obstruct views in the immediate project vicinity. Residential viewer groups, who would have the highest sensitivity to the introduction of new, visual elements into the existing setting, are along South Mott Street between 7th Street and Wilshire Boulevard. This viewer group would be more sensitive to this type of temporary visual intrusion than recreationists and regular visitors to the Boyle Height Sports Complex and surrounding areas.

Figure 4. View from Whittier Boulevard Facing Northwest

Figure 5. View from Whittier Boulevard Facing Southwest

The proposed Project includes the construction of a new 17,500–square-foot facility that would consist of a full-sized basketball court, staff offices, equipment storage rooms, restrooms, showers, a community room, elevator, multi-purpose rooms (programming may consist of a dance studio, performing area, exercise/yoga, dance, and ballet), a plaza for special gatherings, additional green space, pedestrian paths, and additional parking. The new 8,000-square-foot gymnasium would be the primary built element to be constructed by the proposed Project. However, the gymnasium building would replace two existing vacant buildings that were constructed in the 1950s and are in disrepair. The proposed Project would incorporate sustainable design principals and drought-resistant landscaping. The proposed gym building would be approximately 40 feet high.

From a visual perspective, the proposed gymnasium and other project elements would not be incongruent with the current land use or the visual elements already present in the project area and would, in fact, present positive visual changes in the case of additional green space and the removal of vacant buildings on the site. Though viewer exposure and sensitivity would be higher for more accustomed viewer groups (i.e., residents and frequent visitors), given the nature and quality of existing viewsheds and constrained lines of sight to the proposed site, the proposed Project would not substantially diminish or alter the aesthetic value of the project area. Overall, the project area would remain fairly unified, and the proposed Project would not substantially compromise the visual coherence, line patterns, or overall scenery. Therefore, it would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be less than significant, and no mitigation measures are required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact. A significant impact would occur if the proposed Project caused a substantial increase in ambient illumination levels beyond the property line or caused new lighting to spill over onto light-sensitive land uses such as residences and some commercial and institutional uses that require minimum illumination for proper function and natural areas (City of Los Angeles 2006). If nighttime lighting at the construction site is required, lighting would be directed downward, and spill light would be minimized to the greatest extent practicable. Therefore, significant changes in ambient illumination levels as a result of project construction activities are not expected to occur, and construction lighting would not be a significant nuisance for nearby residents. Any impacts associated with nighttime construction activities, if necessary, would be temporary and minor. The proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Light fixtures used to illuminate the site at night would include shields to avoid spillover light impacts on any nearby sensitive uses. Impacts would be less than significant, and no mitigation measures are required.

B. Agriculture and Forestry Resources

Agriculture and Forest Resources – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. A significant impact would occur if the proposed Project resulted in the conversion of farmland of statewide importance from agricultural use to a non-agricultural use (City of Los Angeles 2006).

No prime or unique farmland, or farmland of statewide importance, exists within the proposed Project area (California State Department of Conservation 2018). The proposed Project would construct a new gymnasium building at an existing sports center. Land uses in the project area include multi- and single-family residences in the neighborhoods surrounding the project site and commercial uses along Whittier Boulevard. As such, no impacts on farmland of statewide importance would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. A significant impact would occur if the proposed Project resulted in the conversion of land zoned for agricultural use, or indicated under a Williamson Act contract, from agricultural use to a non-agricultural use (City of Los Angeles 2006).

No land on or near the project site is zoned for agricultural uses. As such, no impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. A significant impact would occur if the proposed Project conflicted with an existing zoning classification of forest land or timberland, or caused rezoning of an area classified as forest land or timberland (City of Los Angeles 2006).

The project site is zoned OS-1XL-CUGU (Open Space) (City of Los Angeles 2014). There are no forest or timberland areas in the vicinity of the proposed Project. As such, the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland, and no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Refer to Question B.c above.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. Refer to Questions B.a and B.c above.

C. Air Quality

Air Quality – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

The analysis in this section is based on the *Boyle Heights Sports Center Gym Air Quality and Greenhouse Gas Emissions Impact Study* prepared by Terry A. Hayes Associates (Appendix A).

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. A significant impact may occur if the proposed Project would conflict with or obstruct implementation of the applicable air quality plan (City of Los Angeles 2006).

The project site is in the South Coast Air Basin (SCAB). The SCAB is composed of Orange County and the urban, non-desert portions of Los Angeles, Riverside, and San Bernardino Counties.

The U.S. Environmental Protection Agency (USEPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead under the Clean Air Act. USEPA also establishes emission standards for on-road vehicles and off-road engines. The federal Clean Air Act forms the basis for national pollution control and delegates enforcement of the federal standards to the states. In California, the California Air Resources Board (CARB) and the local air agencies have the shared responsibility for enforcing air pollution regulations, with the local agencies having primary responsibility for regulating stationary emission sources. The South Coast Air Quality Management District (SCAQMD) is the local agency responsible for ensuring that federal and state ambient air quality standards are attained and maintained in the SCAB.

Attainment of the NAAQS and California Ambient Air Quality Standards (CAAQS), set by CARB, is characterized via a network of ambient air quality monitoring stations in the SCAB. Pollutants monitored include O_3, particulate matter, CO, NO_2, and SO_2.

O_3 is a unique criteria pollutant because it is not directly emitted from project-related sources. Rather, O_3 is a secondary pollutant, formed from precursor pollutants volatile organic compounds (VOCs) and nitrogen oxides (NO_X). VOCs and NO_X react to form O_3 in the presence of sunlight through a complex series of photochemical reactions. As a result, unlike inert pollutants, O_3 levels usually peak several hours after the precursors are emitted and many miles downwind of the source. Because of the complexity and uncertainty in predicting photochemical pollutant concentrations, O_3 impacts are indirectly addressed by comparing project-generated emissions of VOCs and NO_X to daily emission thresholds set by SCAQMD. CAAQS have also been established for lead, hydrogen sulfide, vinyl chloride, and visibility reducing particles, which are not pollutants of concern for the proposed Project because they will not be emitted.

Table 2 summarizes the federal and state attainment status of criteria pollutants for the SCAB based on the NAAQS and CAAQS, respectively.

Table 2. South Coast Air Basin Attainment Status

Pollutant	Attainment Status	
	Federal	State
O_3	Pending - Nonattainment	Nonattainment
PM_{10}	Attainment/Maintenance	Nonattainment
$PM_{2.5}$ annual	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Source: SCAQMD 2016.		

In areas where the NAAQS are not attained (federal nonattainment areas), the Clean Air Act requires preparation of a State Implementation Plan detailing how the state will attain the NAAQS within mandated timeframes. In response to this requirement, local air quality agencies, such as SCAQMD, in collaboration with other agencies, such as CARB and the Southern California Association of Governments, prepare Air Quality Management Plans (AQMPs) designed to bring the area into attainment with federal requirements and/or to incorporate the latest technical planning information. The AQMP for each nonattainment area is then incorporated into the State Implementation Plan, which is submitted by CARB to USEPA for approval.

SCAQMD prepared AQMPs for 1997, 2003, 2007, 2012, and most recently for 2016 (SCAQMD 2017). Each iteration of the AQMP serves as an update to the previous AQMP. The most recent publication, the 2016 AQMP, is intended to serve as a regional blueprint for achieving the federal air quality standards and healthful air. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour O_3 standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The AQMP acknowledged that the most significant air quality challenge in the SCAB is the reduction of NO_x emissions sufficient to meet the upcoming ozone standard deadlines. The 2016 AQMP also includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date.

According to SCAQMD, there are two key indicators of consistency with the applicable air quality plan: 1) whether the proposed Project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plan; and 2) whether the proposed Project would cause the project area to exceed the forecasted growth incorporated into the applicable air quality plan.

Construction

The first consistency criterion is related to violations of the CAAQS and NAAQS. Construction emissions associated with development of the proposed Project would be temporary in nature and would not have a long-term impact on the region’s ability to meet California and federal air quality standards. As described under the impact discussion for Question C.b below, maximum daily emissions of air pollutants from construction activities would not exceed regional or localized significance threshold values. In addition, construction activities associated with the proposed Project would comply with state and local strategies designed to control air pollution, such as SCAQMD Rules 402 and 403. By adhering to the stringent SCAQMD rules and regulations pertaining to fugitive dust control and maintaining maximum daily emissions below the SCAQMD mass daily thresholds, project construction activities would be consistent with the goals and objectives of the applicable air quality plan to improve air quality in the SCAB and would not result in an air quality violation.

The second consistency criterion requires that the proposed Project not exceed the assumptions incorporated into the applicable air quality plan. The most applicable air quality plans for the proposed Project are the 2016 AQMP, which is based on the Southern California Association of Governments' (SCAG's) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). A large-scale individual project could exceed assumptions in the air quality plan if it resulted in a zoning change that resulted in disproportionate growth relative to the land use types analyzed in the air quality plan. However, the air quality plan focuses on long-term, operational sources of air pollutants that contribute to the regional emission inventory. Short-term, temporary emissions associated with construction activities would not conflict with the air quality plan so long as no SCAQMD air quality mass daily thresholds of significance are exceeded. As shown in Table 4 under Question C.b, construction activities would not generate daily air pollutant emissions of sufficient magnitude to exceed any applicable threshold of significance and impacts listed in applicable air quality plans. Construction activities would be less than significant for the proposed Project, and no mitigation is required.

<u>Operation</u>

Implementation of the proposed Project would introduce a new public recreation facility in an existing public park to the community of Boyle Heights, which would generate a maximum of approximately 288 daily vehicle trips in the project area. Stationary source emissions associated with the proposed Project would be minimal, as shown in Table 5 under Question C.b. The emissions modeling results presented in Table 5 demonstrate that operation of the proposed Project would not exceed any applicable SCAQMD threshold. Furthermore, implementation of the proposed Project would not introduce any new residential or commercial land uses to the project area; therefore, population and employment projections for the region would not be affected. The proposed Project would not have any potential to result in growth that would exceed the projections incorporated into the AQMP or the SCAG 2016–2040 RTP/SCS. Therefore, the proposed Project would result in a less than significant impact related to operational air pollutant emissions as specified in applicable air quality plans. No mitigation is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact. A significant impact may occur if the proposed Project would violate any applicable air quality standards or contribute substantially to an existing or project-related air quality violation (City of Los Angeles 2006).

For purposes of this analysis, CEQA thresholds developed by SCAQMD were used as thresholds of significance to determine if the proposed Project would result in impacts on air quality (SCAQMD 2015). Table 3 presents the SCAQMD thresholds of significance for potential air quality impacts. The SCAQMD Localized Significance Thresholds (LST) were derived from regionally specific modeling of pollutant emissions and are designed to prevent localized pollutant concentrations from exceeding applicable ambient air quality standards near construction sites.

Table 3. SCAQMD Air Quality Significance Thresholds – Mass Daily Emissions

Pollutant	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
CONSTRUCTION						
Regional Threshold (lb/day)	75	100	550	150	150	55
Localized Threshold (lb/day)	--	74	680	--	5	3
OPERATION						
Regional Threshold (lb/day)	55	55	550	150	150	55

Note: LST values selected for 1-acre daily disturbance based on equipment inventory and 25-meter receptor distance in SRA 1.

Source: SCAQMD 2015.

<u>Construction</u>

The SCAB is designated as nonattainment of the CAAQS and NAAQS for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is an ongoing regional cumulative impact associated with these air pollutants. Taking into account the existing environmental conditions, SCAQMD propagated guidance that an individual project can emit allowable quantities of these pollutants on a regional scale without significantly contributing to the cumulative impacts.

As discussed above and shown below in Table 4, air pollutant emissions associated with construction of the proposed Project would not exceed any applicable SCAQMD air quality thresholds of significance. Despite the region being in nonattainment of the ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$, SCAQMD does not consider individual project emissions of lesser magnitude than the mass daily thresholds to be cumulatively considerable. Therefore, the proposed Project would not result in a cumulatively considerable net increase of nonattainment pollutants and the impact would be less than significant. No mitigation is required.

Table 4. Estimated Daily Construction Emissions

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
DEMOLITION						
On-Site Emissions	2.7	28.6	16.3	<0.1	1.3	1.2
Off-Site Emissions	0.2	5.5	1.9	<0.1	0.5	0.2
Total	***2.9***	***34.1***	***18.2***	***<0.1***	***1.8***	***4***
SITE PREPARATION						
On-Site Emissions	0.7	7.7	3.2	<0.1	0.3	0.2
Off-Site Emissions	0.1	1.1	0.9	<0.1	0.3	0.1
Total	***0.8***	***8.8***	***4.1***	***<0.1***	***0.6***	***0.3***
SITE GRADING						
On-Site Emissions	2.2	23.3	14.8	<0.1	3.7	2.3
Off-Site Emissions	0.2	5.5	1.9	<0.1	0.5	0.2
Total	***2.4***	***28.8***	***16.7***	***<0.1***	***4.2***	***2.5***
BUILDING CONSTRUCTION						
On-Site Emissions	1.6	17.2	16.7	<0.1	0.8	0.7
Off-Site Emissions	0.1	0.6	0.9	<0.1	0.3	0.1
Total	***1.7***	***17.8***	***17.6***	***<0.1***	***1.1***	***0.8***
PAVING + ARCHITECTURAL COATING						
On-Site Emissions	2.5	7.3	10.4	<0.1	0.3	0.3
Off-Site Emissions	0.1	1.0	0.7	<0.1	0.2	0.1
Total	***2.6***	***8.3***	***11.1***	***<0.1***	***0.5***	***0.4***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**2.9**	**34.1**	**18.2**	**<0.1**	**4.2**	**2.5**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	**--**	**28.6**	**16.7**	**--**	**3.7**	**2.3**
Localized Significance Threshold	--	74	680	--	5	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Emissions modeling files can be found in the Appendix A.
SOURCE: TAHA (See Appendix A) 2019.

Operation

Implementation of the proposed Project would create a new public recreation facility in an existing park in the community of Boyle Heights, and operational air pollutant emissions would be substantially below the applicable SCAQMD mass daily thresholds. Operation of the gym would not introduce a substantial source of long-term O_3 precursor emission or particulate matter emissions for which the SCAB is currently designated nonattainment. As discussed above, SCAQMD has propagated guidance that the project-specific mass daily thresholds may be used as a reference metric to evaluate the potential for cumulatively considerable net increases in nonattainment pollutants. If the SCAQMD mass daily thresholds were exceeded, further analysis would be warranted to ensure that emissions would not be cumulatively considerable. However, as shown in Table 5, operation of the proposed Project would not exceed the SCAQMD mass daily threshold for VOC, NO_X, or particulate matter. Furthermore, the new facility would be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, implementation of the proposed Project would result in a less than significant impact related to operational air pollutant emissions.

Table 5. Estimated Daily Operational Emissions

Source Category	Daily Emissions (Pounds Per Day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Facility	0.2	<0.1	<0.1	0	<0.1	<0.1
Energy (natural gas)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile	0.5	1.9	5.7	<0.1	1.9	0.5
ANALYSIS						
Regional total	**0.7**	**2.0**	**5.7**	**<0.1**	**2.1**	**0.5**
Regional significance threshold	55	55	550	150	150	55
Exceed threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Source: SCAQMD 2015; TAHA (See Appendix A) 2019.						

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. The SCAB is designated as nonattainment of the CAAQS and NAAQS for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is an ongoing regional cumulative impact associated with these air pollutants. Taking into account the existing environmental conditions, SCAQMD propagated guidance that an individual project can emit allowable quantities of these pollutants on a regional scale without significantly contributing to the cumulative impacts.

Construction

As discussed above and shown in Table 4 under Question C.b, air pollutant emissions associated with construction of the proposed Project would not exceed any applicable SCAQMD air quality thresholds of significance. Despite the region being in nonattainment of the ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$, SCAQMD does not consider individual project emissions of lesser magnitude than the mass daily thresholds to be cumulatively considerable. Therefore, the proposed Project would not result in a cumulatively considerable net increase of nonattainment pollutants and the impact would be less than significant. No mitigation is required.

Operation

Implementation of the proposed Project would create a new public recreation facility for the community of Boyle Heights, and operational air pollutant emissions would be substantially below the applicable SCAQMD mass daily thresholds. Operation of the gym would not introduce a substantial source of long-term O_3 precursor emission or particulate matter emissions for which the SCAB is currently designated nonattainment. As discussed above, SCAQMD has propagated guidance that the project-specific mass daily thresholds may be used as a reference metric to evaluate the potential for cumulatively considerable net increases in nonattainment pollutants. If the SCAQMD mass daily thresholds were exceeded, further analysis would be warranted to ensure that emissions would not be cumulatively considerable. However, as shown in Table 5 under Question C.b, operation of the proposed Project would not exceed the SCAQMD mass daily threshold for VOC, NO_X, or particulate matter. Furthermore, the new facility would be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, implementation of the proposed Project would result in a less than significant impact related to operational air pollutant emissions.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. A significant impact would occur if construction or operation of the proposed Project exposed sensitive receptors to substantial pollutant concentrations (City of Los Angeles 2006). Sensitive receptors closest to the project site include the Santa Isabel Catholic School/Church play yard approximately 100 feet to the west, residences approximately 150 feet to the southeast, and residences approximately 200 feet to the north.

Construction

SCAQMD devised its LST values to prevent the occurrence of localized hot spots of criteria pollutant concentrations at sensitive receptor locations surrounding the project site. The LST values were determined using emissions modeling based on ambient air quality measured throughout the SCAB. If maximum daily emissions remain below the LST values during construction activities, it is highly unlikely that air pollutant concentrations in ambient air would reach substantial levels sufficient to create public health concerns for sensitive receptors. As shown in Table 4 under Question C.b, maximum daily emissions of criteria pollutants and O_3 precursors from sources on the project site would not exceed any applicable LST values. Therefore, construction of the proposed Project would not result in exposure of sensitive receptors to substantial concentrations of criteria pollutants.

With regards to emissions of air toxics, carcinogenic risks, and non-carcinogenic hazards, the use of heavy duty construction equipment and haul trucks during construction activities would release diesel PM to the atmosphere through exhaust emissions. Diesel PM is a known carcinogen, and extended exposure to elevated concentrations of diesel PM can increase excess cancer risks in individuals. However, carcinogenic risks are typically assessed over timescales of several years to decades, as the carcinogenic dose response is cumulative in nature. Short-term exposures to diesel PM would have to involve extremely high concentrations in order to exceed the SCAQMD Air Quality Significance Threshold of 10 excess cancers per million.

Over the course of construction activities—even under the most conservative assumption that all equipment would be used continuously for 8 hours per day—average diesel PM emissions would be approximately 0.75 pounds per day on construction work days, and 0.54 pounds per day when accounting for weekends. Therefore, it is highly unlikely that diesel PM concentrations would be of any public health concern during the 24-month construction period, and diesel PM emissions would cease upon completion of construction activities. Therefore, the proposed Project would result in a less than significant impact related to construction toxic air contaminants.

<u>Operation</u>

The proposed Project would introduce a new recreational facility to the project area. The proposed Project does not include an industrial component that would constitute a new substantial stationary source of operational air pollutant emissions, nor does it include a land use that would generate a substantial number of heavy duty truck trips within the region. There would be no substantial source of air toxic emissions. Additionally, as shown in Table 5 under Question C.b, daily emissions of criteria pollutants would remain far below the applicable SCAQMD Air Quality Significance Thresholds. Therefore, the proposed Project would result in a less than significant impact related to operational toxic air contaminants.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact. A significant impact would occur if construction or operation of the proposed Project would result in the creation of nuisance odors that would be noxious to a substantial number of people (City of Los Angeles 2006).

Construction

Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other interior and exterior finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed Project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. They would not persist beyond the termination of construction activities. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. Therefore, the proposed Project would result in a less than significant impact related to construction odors.

Operation

The proposed Project would introduce a new recreational facility to the project area. According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The project site would not be developed with land uses that are typically associated with odor complaints. On-site trash receptacles would have the potential to create adverse odors. Trash receptacles would be located and maintained in a manner that promotes odor control in accordance with the Los Angeles Clean Streets Program, and no adverse odor impacts are anticipated from these types of land uses. Therefore, the proposed Project would result in a less than significant impact related to operational odors.

D. Biological Resources

Biological Resources - Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant Impact.

Special-Status Species

A significant impact would occur if the proposed Project would remove or modify habitat for any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS) (City of Los Angeles 2006).

A search of the California Natural Diversity Database (CNDDB); California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS Inventory); and USFWS Information for Planning and Consultation (IPaC) database was conducted in May 2018 to identify special-status plants and animals with the potential to occur in the project area and renewed in May 2019 (CDFW 2019; CNPS 2019; USFWS 2019). Due to the highly developed nature of the project site and its vicinity and the lack of any natural vegetation communities in the surrounding area, the search was restricted to the USGS quadrangle that the proposed Project occurs in, the Los Angeles 7.5-minute topographic quadrangle. For the purpose of this assessment, “special-status species” is defined as those species that meet one or more of the following criteria:

- Listed as threatened or endangered, or proposed or a candidate for listing, under the federal and/or California Endangered Species Act.
- California species of special concern or fully protected species.
- USFWS bird of conservation concern.
- Plants listed as rare under the California Native Plant Protection Act, or ranked as rare, threatened, or endangered in California (California Rare Plant Rank [RPR] of 1A, 1B, 2A, and 2B).

Species that were in the record search results but do not meet these criteria were not included in the analysis below.

Plant Species

A total of seven special-status plant species meeting the criteria above (with RPR of 1A, 1B, or 2B) are reported to occur within the USGS Los Angeles 7.5-minute topographic quadrangle based on the record search (Appendix H). None of these species are federally or state listed. All seven plant species are considered absent due to lack of suitable habitat on and around the project site. Because no special-status plant species are expected to occur on the site, there would be no impacts on special-status plant species; therefore, no avoidance and minimization or compensatory mitigation measures would be required. In addition, there would be no cumulative impacts on special-status plant species.

Wildlife Species

A total of 23 special-status wildlife species meeting the criteria above are reported to occur within the USGS Los Angeles 7.5-minute topographic quadrangle, based on the record search (Appendix H). Four species are federally and/or state listed: least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), bank swallow (*Riparia riparia*), and coastal California gnatcatcher (*Polioptila californica californica*).

Twenty-two of the 23 special-status wildlife species were determined to be absent on the project site due to lack of suitable habitat. However, one, Allen’s hummingbird (*Selasphorus sasin*), may occur on the project site. This is a USFWS bird of conservation concern that over the last several decades has, due to natural changes in its distribution and range, become a common year-round resident throughout much of coastal southern California. Due to the highly developed nature of the surrounding project vicinity, this species may or may not occur on site. If so, it is most likely to occur in the vegetation around the actual sports center and the playing fields, and not necessarily in the actual disturbance area of the project footprint. There may be temporary noise disturbance, but it would not be less than significant. The remainder of the special-status wildlife species, including bats and listed riparian birds, would not be expected to occur on site. In general, there would be no impacts on special-status wildlife species; therefore, no avoidance and minimization or compensatory mitigation measures would be required. In addition, there would be no cumulative impacts on special-status wildlife species.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The study area for the proposed Project consists of the existing Boyle Heights Sports Center property and the footprint for the new gymnasium building. The land cover in the study area is composed of developed areas (the concrete that the existing buildings and walkways are on) and ornamental/landscaped areas (the playing fields).

Only one special-status vegetation community was in the search results from the CNDDB (Appendix H). Based on an analysis of the study area, neither the single CNDDB special-status vegetation community nor any other special-status vegetation communities are present on the site. Because there are no special-status vegetation communities in the study area, there would be no impacts on them as a result of the proposed Project;

therefore, no avoidance and minimization or compensatory mitigation measures would be required. In addition, there would be no cumulative impacts on special-status vegetation communities.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. A significant impact would occur if federally protected wetlands as defined by Section 404 of the Clean Water Act were removed or modified (City of Los Angeles 2006).

There are no federally protected wetlands within the study area. Therefore, there would be no impacts on federally protected wetlands, and no avoidance and minimization measures or compensatory mitigation measures would be required. In addition, there would be no cumulative impacts on federally protected wetlands.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact with Mitigation. A significant impact would occur if the proposed Project would interfere with the movement of any native wildlife species through a migratory wildlife corridor, or impede the use of a native wildlife nursery site (City of Los Angeles 2006).

There are no wildlife movement corridors on or near the study area, and implementation of the proposed Project would not adversely affect the movements of fish or other wildlife. However, construction of the proposed Project may have impacts on nesting birds if there are any native wildlife nursery sites in the on-site vegetation, including trees that would be removed to accommodate the proposed Project. Mitigation measure **MM-BIO-1** below would avoid or minimize any potential impacts on nesting birds and native wildlife nursery sites. Therefore, the impact would be less than significant. No compensatory mitigation would be required, and there would be no cumulative impacts.

MM-BIO-1: If construction commences during the bird breeding season (approximately February 1–August 31), a preconstruction survey for nesting birds will occur within 3 days prior to construction activities by an experienced avian biologist. The survey will occur within all suitable nesting habitat within the project impact area and a 100-foot buffer. If nesting birds are found, an avoidance area will be established as appropriate by a qualified biologist around the nest until a qualified avian biologist has determined that young have fledged or nesting activities have ceased. The project site will be resurveyed if there is a lapse in construction activities for more than 7 days during the bird breeding season.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact with Mitigation. A significant impact would occur if the proposed Project would conflict with any local policies or ordinances protecting biological resources (City of Los Angeles 2006).

Native tree species that measure 4 inches or more in cumulative diameter, 4.5 feet above the ground—including native oak (*Quercus* spp.), southern California black walnut (*Juglans californica* var. *californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*)—are protected by the *Los Angeles Municipal Code*. If any qualifying trees need to be removed, relocated, or replaced, the proposed Project would have to comply with the City's protected tree ordinance. Based on a tree survey that was conducted within the study area (LABOE 2018), there are no protected trees on the site. However, the proposed Project would require the removal of up to seven street trees along the sidewalk of Whittier Boulevard. The City of Los Angeles Board of Public Works' tree removal policy requires replacing street trees at a 2:1 ratio for trees that are removed from the right-of-way. Mitigation measure **MM-BIO-2** below would require that all street trees removed be replaced on a 2:1 basis. In addition, Mitigation measure **MM-BIO-2** will also ensure that any removed park trees will be replaced according to RAP's requirements and in agreement with the RAP's arborist. Therefore, the impact would be less than significant.

> **MM-BIO-2:** If construction results in the removal of street trees planted in the City of Los Angeles' public right-of-way, a tree removal permit from the City of Los Angeles Department of Public Works Bureau of Street Services, Urban Forestry Division will be obtained, requiring the replacement of street trees on a 2:1 basis with the guidance of an appropriate investigator. In addition, any removed park trees will be replaced according to RAP's requirements and in agreement with the RAP's arborist.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. A significant impact would occur if the proposed Project were inconsistent with the provisions of an adopted Habitat Conservation Plan (City of Los Angeles 2006).

There are no habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans that cover the study area (City of Los Angeles 2006). The proposed Project would not be in conflict with any conservation plans; therefore, there would be no impact.

E. Cultural Resources

Cultural Resources – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

The analysis in this section is based on the *Draft Boyle Heights Sports Center Gymnasium CEQA Historical Resources Memo* prepared by ICF (Appendix B) and the *Cultural and Paleontological Resources Assessment for the Boyle Heights Sports Center Gym* prepared by Cogstone (Appendix C).

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. A significant impact may result if the proposed Project caused a substantial adverse change to the significance of a historical resource as defined in §15064.5 (City of Los Angeles 2006).

<u>Study Area</u>

A study area was established for the proposed Project to take into account the potential for both direct and indirect impacts of the proposed Project on historical resources, as defined by CEQA. The proposed demolition of the two buildings on Whittier Boulevard (known as the Sukaisian and Workshop Buildings) to construct the new gymnasium building is included within the boundary for the direct impacts study area. Demolition of the vacant buildings is anticipated to last approximately 3.5 weeks commencing in March 2021. The direct impact area is approximately 0.96 acres. The study area was expanded to include adjacent parcels within view of the existing the buildings, and the proposed new building, because buildings on those parcels have the potential to be indirectly affected by demolition and construction in the vicinity. The indirect study area includes only commercial buildings, although residences are located on perpendicular streets. The commercial buildings primarily date to the 1920s and currently house a variety of businesses. Mature trees line Whittier Boulevard's parkway. Remaining parcels in the immediate vicinity contain surface parking lots, and the Boyle Heights Sports Center Park is south and east of the project site. The Boyle Heights Sports Center Park and most of the surface parking lots were excluded from the study area because there is no potential impact on historical resources.

Records Search for Historical and Archaeological Resources and Other Sources Consulted

A records search was conducted at a California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC) on the campus of California State University, Fullerton on May 9, 2018. The records search covered a 1-mile radius of the study area. The results of the records search indicated that one prior cultural resources study has been conducted within the boundaries of the study area, while 20 additional cultural resources investigations have been completed previously within 1 mile of the study area. The results of the CHRIS search also indicated that no cultural resources have been previously recorded within the study area. A total of 131 cultural resources have been previously documented within a 1-mile radius of the study area.

General and property-specific archival research was conducted to establish a historic and archaeological context for the study area and inform the identification and analysis of historical resources. Materials examined included the previous cultural resources studies and records found during the formal literature review/records search, as well as primary and secondary resources from local repositories, including maps and photographs. In addition, the California State Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), the City of Los Angeles Historic-Cultural Monument listings, and the 2012 California State Historic Resources Inventory were reviewed.

In addition, previous historic resources surveys and evaluations of historical resources in the Boyle Heights area in the vicinity of the project site were reviewed. This effort included a review of the historic resources survey in the vicinity of the project site: "Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, CA," prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (June 2008) and the "Historic Resources Survey Report: Boyle Heights Community Plan Area," prepared by Architectural Resources Group, Inc. on behalf of the City of Los Angeles Department of City Planning, Office of Historic Resources (2014 SurveyLA). In addition, the following sources that inform the identification and analysis of historical resources within the study area were consulted:

- Historicaerials.com database
- Los Angeles County Tax Assessor records

- *Los Angeles Times* historical newspaper index
- Los Angeles Public Library's California index and photograph databases
- Original and alteration building permits from the Los Angeles Department of Building and Safety
- Sanborn fire insurance maps

Field Survey

The historic resources survey involved examining and evaluating all buildings and structures in the study area determined to be 50 years of age or older. On May 8, 2018, ICF architectural historians conducted the survey and evaluated all of the properties in the study area to determine their individual historical significance. Based upon a review of Los Angeles County Tax Assessor data, properties built in or before 1968 were identified and information was collected about their physical characteristics. Properties identified as 50 years of age or older were evaluated to determine their status as historical resources under CEQA and to analyze the proposed Project's potential impacts.

Cogstone archaeologist and cross-trained paleontologist Edgar Alvarez completed the intensive pedestrian survey of the entire 0.96-acre project site on May 18, 2018 (Cogstone 2018).

Results

The historical resources survey identified 11 buildings and structures within the study area, including the existing buildings on the project site at 2500 and 2510 Whittier Boulevard) (Sukaisian and Workshop Buildings). These resources were evaluated in the context of the current survey effort, and they are ineligible for listing in the NRHP and CRHR, and as City-designated Historic-Cultural Monuments. While the Sukaisian Building's design (constructed in 1953) includes some character-defining features of vernacular modernism, the building lacks sufficient quality of design. The Workshop Building, constructed between 1960 and 1964, was built outside of the significant commercial development period along Whittier Boulevard between 1914 and 1934, and it appears to be constructed of methods and materials common of the time period. Therefore, these buildings are not considered historical resources for the purposes of CEQA. Lastly, the park as a whole was evaluated for eligibility.

The archaeological and paleontological field surveys did not reveal any new cultural resources. Therefore, there are none to be considered eligible for the NRHP, CRHR, or as City-designated Historic-Cultural Monuments.

Conclusion

The buildings along Whittier Boulevard within the study area were previously surveyed and found ineligible for national, state, or local designation. Research and evaluation conducted for the proposed Project confirmed these findings. The park was also determined to be ineligible for the NRHP and the CRHR. No historical resources were identified in the study area. Because no historical resources were identified, mitigation measures are not applicable.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant Impact with Mitigation. A significant impact may occur if the proposed Project were to cause a substantial adverse change in the significance of an archaeological resource, which falls under the State CEQA Guidelines section cited above.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on April 27, 2018 to perform a Sacred Lands File search. The NAHC responded on April 30, 2018 stating that the search yielded negative results for sacred lands within a 1-mile radius of the project site. The NAHC also provided a list of 5 Native American tribal contacts. This list was further supplemented by the City of Los Angeles which provided contact information for five additional tribes who have requested consultation in the past.

Assembly Bill 52 Consultations

The City of Los Angeles conducted Assembly Bill 52 (AB52) consultations to fulfill the requirements of CEQA as the lead agency. Cogstone assisted the City by drafting and mailing the letters via certified mail on May 18, 2018. Cogstone then made 2 additional attempts to contact the tribes via email on June 4th and 20th, 2018. The consultation period allows 30 days for responses; and three responses were received and are summarized below:

1) In a phone conversation on June 7, 2018, Ms. Donna Yocum (who has taken over the position of Chairperson for the San Fernando Band of Missions Indians for the late Mr. John Valenzuela) indicated that she defers to the local Gabrielino tribes for projects within downtown LA and indicated her tribe comments on projects in the San Fernando Valley and in western San Bernardino County area.
2) Mr. John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation indicated via email on June 20, 2018 that he will respond to the City of Los Angeles on a future date. The City confirmed on March 22, 2019 that they received no further responses.
3) Mr. Robert F. Dorame of the Gabrielino Tongva Indians of California Tribal Council, requested in a phone conversation on June 21, 2018 that his tribal organization be

notified in the event that human remains or cultural resources are observed during construction activities. Additionally, Mr. Dorame requested to be notified when the Project is completed regardless if cultural resources are observed. He suggested that an archaeologist be present in some capacity during construction.

Pedestrian Field Survey and Project Area Sensitivity

Cogstone archaeologist and cross-trained paleontologist Edgar Alvarez conducted an intensive pedestrian survey of the entire project area on May 18, 2018. No archaeological resources were identified during the field survey. Planned cut depths are currently unknown, but utilities are typically 6 to 8 feet deep. Sensitivity for archaeological resources is considered low since none were encountered during previous work in the project area. As a result, there is a low likelihood of encountering archaeological resources during construction activities. Nonetheless, if previously unknown archaeological resources are encountered during construction, those resources could be damaged or destroyed by construction activities, a potentially significant impact. Implementation of mitigation measure **MM-ARCH-1**, below, would avoid or reduce any potential impacts. Therefore, the impact would be less than significant after mitigation.

MM-ARCH-1: In the event of an unanticipated archaeological discovery, all work will be suspended within 50 feet of the find until a qualified archaeologist can evaluate it. In the unlikely event that human remains are encountered during project development, State of California Health and Safety Code Section 7050.5 stipulates that no further disturbance will occur until the County Coroner has made a determination regarding the origin of the remains and the nature of their deposition pursuant to Public Resources Code Section 5097.98.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact with Mitigation. A significant impact may occur if grading or excavation activities associated with the proposed Project would disturb unique paleontological resources or unique geologic features (City of Los Angeles 2006).

A records search of the proposed Project was obtained from the Natural History Museum of Los Angeles County. Additional records from the University of California Museum of Paleontology database, the PaleoBiology Database, and print sources were searched for fossil records (Cogstone 2018).

No recorded paleontological localities producing vertebrate fossils were found within 1 mile of the project site. Three localities are known from Pleistocene deposits between 2 and 3 miles from the proposed Project in the fashion district and Lincoln Park areas. Extinct species of megafauna from the San Joaquin Marsh Local Fauna include Harlan's ground sloth (*Paramylodon harlani*), sabertoothed cat (*Smilodon fatalis*), American mastodon (*Mammut americanum*), mammoth (*Mammuthus* sp.), horse (*Equus* sp.), camel (*Camelops* sp.), and California turkey (*Melagris californica*).

No paleontological resources have been recorded in the project area. Ground disturbances associated with the proposed Project will primarily be shallow in nature, and are unlikely to encounter paleontological resources. Lastly, the majority of project construction would occur on 15 feet of artificial fill, which further reduces sensitivity and the potential for the proposed Project to uncover paleontological resources. Fossils are known in the vicinity but are relatively sparse and mostly at depths that would not be affected by the proposed Project. However, if construction occurs at depths that would affect previously undisturbed soils containing Pleistocene deposits and paleontological resources, those resources could be damaged or destroyed by construction activities, a potentially significant impact. Implementation of mitigation measure **MM-PALEO-1**, below, would avoid or reduce any potential impacts on inadvertently encountered fossils, should they exist. Therefore, the impact after mitigation would be less than significant.

MM-PALEO-1: If unanticipated fossils are unearthed during construction, work will be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

d) Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact. A significant impact may occur if grading or excavation activities associated with the proposed Project would disturb interred human remains.

No human remains are known to exist in the project area, and the location does not encompass any formal cemeteries. Additionally, most of project construction would occur on site on 15 feet of artificial fill, which further reduces sensitivity and the potential for the proposed Project to uncover human remains. There is an extremely low possibility of encountering human remains; therefore, no impacts are anticipated (Cogstone 2018).

Although the uncovering of human remains is not anticipated, if they are discovered, State Health and Safety Code Section 7050.5 requires that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the county coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, who will then notify the Most Likely Descendent. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable. Therefore, through compliance with existing regulations, construction of the proposed Project would not disturb any human remains, including those interred outside of formal cemeteries.

F. Geology and Soils

Geology and Soils – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

The analysis in this section is based on the Geotechnical Investigation Report prepared by Willdan Geotechnical (Appendix D).

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. A significant impact would occur if the proposed Project were within a state-designated Alquist-Priolo Earthquake Fault Hazard Zone and appropriate building practices were not followed (City of Los Angeles 2006).

No active faults intersect the project site; therefore, fault rupture is unlikely to occur during project implementation. Additionally, the project area is not within a State of California Alquist-Priolo Earthquake Fault Hazard Zone. The nearest active fault is the Elysian Park Blind Thrust Fault approximately 3 miles from the site. Although the fault might generate strong motion at the site, it is not considered to be capable of generating surface motion. As such, the proposed Project would not be exposed to substantial adverse effects from a rupture of a known earthquake fault. Lastly, construction of the proposed Project has no potential to rupture a known earthquake fault; therefore, no impact would occur.

ii) Strong seismic ground shaking?

Less than Significant Impact. A significant impact would occur if the proposed Project exposed peoples to strong seismic ground shaking without complying with building code requirements (City of Los Angeles 2006).

The nearest active fault is the Elysian Park Blind Thrust Fault approximately 3 miles from the site. As a result, the proposed Project could be subject to future seismic shaking and strong ground motion resulting from seismic activity, and damage could occur as a result of an earthquake in the region or immediate project area. Design and construction of the proposed Project would be consistent with the recommendations contained in the Geotechnical Investigation Report and City of Los Angeles Building Code, and other applicable federal, state, and local codes, which would reduce anticipated impacts by requiring the proposed Project to be built to withstand seismic ground shaking. While the impact of the proposed Project towards exposing peoples to strong seismic ground shaking will be less than significant, to ensure potential hazards would be minimized, the following measure will be implemented.

MM-GEO-1: The proposed Project grading and foundation plans and specifications will implement the recommendations presented in the Geotechnical Investigation Report prepared for LABOE. The proposed Project plans and specifications will be reviewed by the Geotechnical Engineering Group to ensure proper implementation and application of the recommendations.

iii) Seismic-related ground failure, including liquefaction?

No Impact. A significant impact would occur if the proposed Project were located in an area identified as having a high risk of liquefaction without the appropriate design measures (City of Los Angeles 2006).

Construction or implementation of the proposed Project would not expose people or structures to substantial adverse effects from seismic-related ground failure, including liquefaction. Liquefaction occurs when saturated, low-density, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. Liquefaction more often occurs in areas underlain by silts and fine sands and where shallow groundwater exists.

The project site has not been mapped as being within a zone susceptible to liquefaction as designated by the 1999 State of California Geological Survey. The soils underlying the project site consist of very dense soils, and the groundwater table at the project site is expected to be very deep. As such, liquefaction is not considered to be a potential hazard at the project site; no impact would occur.

iv) Landslides?

No Impact. A significant impact would occur if the proposed Project were located in an area identified as having a high risk of landslides and the appropriate design measures were not included as part of the proposed Project.

The project site has not been mapped as being within a zone susceptible to landslides as designated by the 1999 State of California Geological Survey. No evidence of landslide potential was observed in the vicinity of the site. Because of the lack of significant topographic changes at the project site as a result of the proposed Project, landslides are not considered a potential hazard at the project site; therefore, no impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. A significant impact would occur if the proposed Project would expose large areas to erosion for a prolonged period of time (City of Los Angeles 2006).

Implementation of the proposed Project would not result in substantial soil erosion or the loss of topsoil. Erosion is a condition that could adversely affect development on any site. Construction activities could exacerbate erosion conditions by exposing soils and adding water to the soil from irrigation and runoff from new impervious surfaces.

The proposed Project would comply with the Statewide Construction General Permit that requires implementation of a Storm Water Pollution Prevention Plan to address erosion and sedimentation at the project site during construction activities. Temporary BMPs—such as silt fences, straw waddles, sediment traps, gravel sandbag barriers, or other effective BMPs—would be implemented to control runoff and erosion during construction activities. Implementation of erosion and sediment control BMPs would prevent substantial soil erosion and sedimentation from exposed soils. In addition, post-construction measures—such as surface drainage design provisions and site maintenance practices—would reduce potential soil erosion during operations of the proposed Project. Therefore, potential impacts related to soil erosion or loss of topsoil would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. A significant impact would occur if the proposed Project were built in an unstable area without proper design features included, thus posing a hazard to human life and property (City of Los Angeles 2006).

The proposed Project site footprint has descending slopes from the southeast and the south of the project site, with a maximum relief of approximately 28 feet high. Based on field observations and slope stability analysis, the existing slope is considered stable. In addition, since the project site is not at risk for liquefaction, lateral spreading is not likely to occur at the project site. Impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than Significant Impact. A significant impact would occur if the proposed Project were built on expansive soils without proper site preparation or design features, thus posing risks to human life or property.

Implementation of the proposed Project would not be located on expansive soil, creating substantial risks to life or property. Expansive soils are fine-grained soils (generally high-plasticity clays) that can undergo a significant increase in volume with an increase in water content as well as a significant decrease in volume with a decrease in water content. Changes in the water content of highly expansive soils can result in severe distress for structures constructed on or against the soils.

Near-surface soils in the project site are predominantly of medium dense to very dense sandy materials interbedded with silt and clay layers. This is typical of soils found in the geologic region of the site, and these soils typically have a low expansion potential. Construction of the proposed Project would be subject to applicable ordinances of the

2013 California Building Code (CCR Title 24) and recommendations contained in the Geotechnical Engineering Report, as required by **MM-GEO-1**. Therefore, impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. A significant impact would occur if the project site is not served by a sewer system and is incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems (City of Los Angeles 2006).

The project site is served by an existing city sewer system, and no septic tanks or alternative wastewater disposal systems are proposed as part of the proposed Project. As such, no impact would occur.

G. Greenhouse Gas Emissions

Greenhouse Gas Emissions – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

The analysis in this section is based on the *Boyle Heights Sports Center Gym Air Quality and Greenhouse Gas Emissions Impact Study* prepared by Terry A. Hayes Associates (Appendix A).

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. A significant impact may occur if the proposed Project would generate greenhouse gas (GHG) emissions that would have a significant impact on the environment.

GHG emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. Carbon dioxide (CO_2) is the most abundant pollutant that contributes to climate change through fossil fuel combustion. Other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect.

GHGs are the result of both natural and human-influenced activities. Volcanic activity, forest fires, decomposition, industrial processes, landfills, consumption of fossil fuels for power generation, transportation, heating, and cooling are the primary sources of GHG emissions. Without human activity, the earth would maintain an approximate, but varied, balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) has contributed to a rapid increase in atmospheric levels of GHGs over the last 150 years.

CARB has prepared a statewide emissions inventory covering 2000 to 2015, which demonstrates that GHG emissions have decreased by 7.9 percent over that period. Emissions in 2014 from the transportation sector, which represents California's largest source of GHG emissions and contributed 37 percent of total annual emissions, declined marginally relative to 2011 even while the economy and population continued to grow over that 3-year time period. The long-term direction of transportation-related GHG emissions is another clear trend, with a 13-percent drop over the past 10 years.

GHG emissions that will be generated by the proposed Project were estimated using CalEEMod, as recommended by the SCAQMD. CalEEMod quantifies GHG emissions from construction activities and future operation of projects (California Air Pollution Control Officers Association 2017). Sources of GHG emissions during project construction would include heavy-duty off-road diesel equipment and vehicular travel to and from the project site. Sources of GHG emissions during project operation would include employee and delivery vehicular travel, natural gas demand, water use, and waste generation. In accordance with SCAQMD (2008) methodology, the total amount of GHG emissions that would be generated by construction of the proposed Project was amortized over a 30-year operational period to represent long-term impacts.

The proposed Project would generate GHG emissions from construction equipment and vehicular traffic. Table 6 presents the estimated emissions of GHGs that would be released to the atmosphere on an annual basis. Construction of the proposed Project would produce approximately 356.4 $MTCO_2e$, or 11.9 $MTCO_2e$ annually over a 30-year period. The total annual operating emissions would be approximately 423.3 $MTCO_2e$ per year after accounting for amortized construction emissions. This mass rate is substantially below the most applicable quantitative draft interim threshold of 3,000 $MTCO_2e$ per year as recommended by SCAQMD (2008). The new facility would be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility, using photovoltaics. Therefore, indirect electricity-related emissions have been excluded from the emissions summary. This would limit reliance from traditional means of electricity and would significantly decrease associated carbon emissions. Therefore, implementation of the proposed Project would result in a less than significant impact related to GHG emissions.

Table 6. Estimated Annual Greenhouse Gas Emissions

Scenario and Source	Annual GHG Emissions ($MTCO_2e$ per Year)
Construction Emissions Amortized (Direct)	11.9
Area Source Emissions (Direct)	<0.1
Mobile Source Emissions (Direct)	364.4
Energy – Natural Gas Emissions (Direct)	10.0
Waste Disposal Emissions (Indirect)	29.4
Water Distribution Emissions (Indirect)	7.5
Total Emissions	**423.3**
SCAQMD Draft Interim Significance Threshold	**3,000**
Exceed Threshold?	No

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. A significant impact may occur if the proposed Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

The proposed Project would comply with plans, policies and regulations adopted for reducing emissions of GHGs, including the Assembly Bill 32 Scoping Plan, which includes goals such as the expansion of energy efficiency and producing energy from renewable resources. The City has published *GreenLA, An Action Plan to Lead the Nation in Fighting Global Warming* (the LA Green Plan; City of Los Angeles 2007), where the City will increase renewable energy generation and improve energy conservation and efficiency. SB 375 requires the metropolitan planning organizations to prepare an SCS in their regional transportation plans to achieve the per capita GHG reduction targets, and the region's SCS is contained within SCAG's 2016–2040 RTP/SCS. The RTP/SCS focuses on job growth in high quality transit areas, resulting in more opportunity for transit-oriented development. The proposed Project would primarily serve the surrounding community and would be within walking distance of the Los Angeles County Metropolitan Transportation Authority (Metro) local bus station lines 18, 106, 251, and 252 and Metro RAPID 720 and 751 on Whitter Boulevard/Soto Street. These bus routes would provide convenient connection to the regional transit system. The proposed Project would be consistent with the mobility and transit accessibility objectives of the RTP/SCS.

Furthermore, the new facility would be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, the proposed Project would result in a less than significant impact related to GHG reduction plans.

H. Hazards and Hazardous Materials

Hazards and Hazardous Materials – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

The analysis in this section is based on the Hazardous Building Materials Survey Report prepared by Ninyo & Moore (Appendix E).

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. A significant impact would occur if the proposed Project would introduce substantial amounts of hazardous materials as part of its routine operations that could potentially pose a hazard to the public during transport, use, or disposal (City of Los Angeles 2006).

Implementation of the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction of the proposed Project is expected to last approximately 24 months, during which time routine transport, use, and disposal of hazardous materials—such as fuel, solvents, paints, oils, grease, and caulking—would occur. All storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances Control, USEPA, the City of Los Angeles Fire Department, and the Los Angeles County Department of Public Health. Although solvents, paints, oils, grease, and caulking would be transported, used, and disposed of during the construction phase, these materials are typically used in construction projects and would not represent the transport, use, and disposal of acutely hazardous materials. Short-term construction impacts would be less than significant.

The proposed Project involves the construction of a gymnasium for recreational and community use. As such, no hazardous materials would be used or stored on site during normal project operations. There would be no impact during project operation.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact with Mitigation. A significant impact would occur if the proposed Project created a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment (City of Los Angeles 2006).

The proposed Project would result in the planned demolition of four structures, including two vacant buildings and two sheds. On May 23, 2018, a hazardous building materials survey was conducted by two California Department of Occupational Safety and Health–accredited professionals from Ninyo & Moore.

Based on field observations and the analytical results of samples collected during the survey, asbestos-containing materials (ACMs) were detected within the two vacant structures planned for demolition. ACMs are materials that contain asbestos and were used routinely in many building materials in the past. While these materials do not pose a health risk when undisturbed, when damaged, the asbestos fibers become airborne and can be inhaled. These fibers are carcinogenic and can cause lung disease. California Department of Occupational Safety and Health regulations define asbestos-containing construction materials as materials that contain greater than 0.1 percent asbestos.

In addition, lead-containing surfaces were detected within the two vacant buildings and one of the sheds. These lead-containing surfaces, which were widely used in the past to coat and decorate buildings, can result in lead poisoning when consumed or inhaled. Like ACMs, they generally do not pose a health risk when undisturbed, but disturbance can cause hazardous exposure that can cause anemia and damage to the brain and nervous system, especially in children.

Implementation of mitigation measures **MM-HAZ-1** and **MM-HAZ-2** would ensure the safe removal of any identified ACMs or lead-containing materials. Impacts involving the accidental release of these hazardous materials into the environment would be less than significant with implementation of these measures.

MM-HAZ-1: Prior to demolition activities that would disturb identified ACMs, a licensed abatement removal contractor will remove these building materials. Asbestos-containing construction materials may stay in place during demolition, if the contractor is certified to perform asbestos abatement. Removal of ACMs will be done in compliance with the South Coast Air Quality Management District's Rule 1403, as well as all other state and federal rules and regulations.

MM-HAZ-2: Prior to demolition activities, a composite sample of the lead-containing material will be analyzed by a licensed abatement contractor with certified lead personnel for total lead for comparison with the Total Threshold Limit Concentration in accordance with the USEPA reference method SW-846. Based on that analysis, the contractor will dispose of the lead-containing waste material in accordance with all applicable local, state, and federal regulations.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. A significant impact would occur if the proposed Project were located within one-quarter mile of an existing or proposed school site and was projected to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste beyond regulatory thresholds (City of Los Angeles 2006).

A number of schools are in the vicinity of the project site, including Soto Street Elementary School along 7th Street (0.14 mile southwest), the SEA Charter School/Soto Education Center at the southwest corner of South Soto Street and Rogers Avenue (0.11 mile northwest), the Soto Street Children's Center at the southeast corner of South Flickett Street and Soto Street (0.13 mile southwest), and Park Place Head Start on the south side of 7th Street across from the Boyle Heights Sports Center (0.13 mile southwest). Bishop Mora Salesian High School and School of Santa Isabel are immediately west of the project site and the existing Boyle Heights Sports Center.

Routine transport, use, and disposal of hazardous materials such as fuel, solvents, paints, oils, grease, and caulking would occur during construction of the proposed Project. Such transport, use, and disposal would be compliant with applicable regulations. Although small amounts of hazardous materials would be transported, used, and disposed during construction, these materials are typically used in construction projects and would not represent the transport, use, and disposal of acutely hazardous materials. Furthermore, no hazardous materials would be used or stored on site during normal project operations. As such, impacts related to hazardous materials within a quarter mile of an existing or proposed school would be less than significant.

Also see the response to checklist Question H.b above.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. A significant impact would occur if the proposed Project were located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, created a significant hazard to the public or the environment (City of Los Angeles 2006).

The project site is not listed in the California State Water Resources Control Board (2018) GeoTracker system, which includes leaking underground fuel tank sites and spills, leaks, investigations, and cleanup sites; the Department of Toxic Substances Control (2018) EnviroStor Data Management System; or the USEPA's database of regulated facilities (USEPA 2018).

While unlikely, should contaminated soils be encountered during construction, proper removal procedures in accordance with federal, state, and local regulations and requirements would minimize any direct or indirect risk to the public or environment. As such, there would be no impact.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. A significant impact would occur if the project site were located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and created a safety hazard (City of Los Angeles 2006).

Implementation of the proposed Project would not result in a safety hazard for people residing or working in the project area because the proposed Project area is not within an airport land use plan area or within 2 miles of a public airport or public use airport (Los Angeles County Airport Land Use Commission 2012). The closest airports, Bob Hope Airport in Burbank and the San Gabriel Valley Airport, are both over 10 miles away. No impact would occur.

Operation of the proposed Project would not result in a safety hazard for people residing or working in the area because the project area is not within the vicinity of a private airstrip. No impact would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. A significant impact would occur if the proposed Project were in the vicinity of a private airstrip and resulted in a safety hazard for people residing or working in the project area (City of Los Angeles 2006).

The project site is not in the vicinity of a private airstrip. As such, no safety hazard is anticipated for people residing or working close to a private airport or airstrip.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. A significant impact would occur if the proposed Project would physically interfere with an adopted emergency response plan or emergency evacuation plan (City of Los Angeles 2006).

Implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed Project would not allow any construction vehicles or equipment to park or remain stationary for extensive periods of time within any of the main roadways leading into the project site. All large construction vehicles entering and exiting the site would be guided by personnel using signs and flags to direct traffic. Moreover, the project does not include any characteristics (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity. On the contrary, the proposed Project may be used as an emergency evacuation center in the event of an emergency, thus enhancing emergency response or evacuation preparedness of the community.

Project features such as not allowing construction vehicles and equipment to park or stop for extended amounts of time along main arterial roadways, the use of flag personnel to ensure the continued flow of traffic, and compliance with programs, rules, and regulations for emergency response would ensure that the proposed Project would not impair or interfere with implementation of an adopted emergency response plan or emergency evacuation plan. No impact would occur.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. A significant impact would occur if the proposed Project were located in a wildland area and poses a significant fire hazard, which could affect persons or structures in the area in the event of a fire (City of Los Angeles 2006).

Implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. According to information obtained from CAL FIRE, the proposed Project site does not exist within a CAL FIRE Very High Fire Hazard Severity Zones (CAL FIRE 2012). The proposed Project is in a heavily urbanized area within the City of Los Angeles. No impact would occur.

I. Hydrology and Water Quality

Hydrology and Water Quality – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

a) Violate any water quality standards or waste discharge requirements?

Less than Significant Impact. A significant impact would occur if the proposed Project would discharge water that does not meet the quality standards of agencies that regulate surface water quality and water discharge into stormwater drainage systems, such as the Los Angeles Regional Water Quality Control Board. These regulations include compliance with the Standard Urban Storm Water Mitigation Plan requirements to reduce potential water quality impacts (City of Los Angeles 2006).

Existing conditions on the project site consist mostly of paved and covered impervious services. Substantial changes in the site's impervious nature are not expected to occur as a result of the proposed Project. Construction activities, such as grading and excavation, would result in disturbance of soil and would temporarily increase the potential for soil erosion. In addition, on-site use, storage of fuels, lubricants, and other hydrocarbon fluids during construction would all carry the potential risk of affecting water quality. Storm events during construction could also carry disturbed sediments and spilled substances from construction activities off site to nearby receiving waters.

The proposed Project would be required to comply with NPDES permit requirements through the preparation and implementation of a Storm Water Pollution Prevention Plan for construction activities, which would identify structural and nonstructural BMPs to be implemented during the construction phase. With implementation of BMPs, the proposed Project would not violate any water quality standards or waste discharge requirements. As such, the proposed Project would not cause a violation of state water quality standards or otherwise substantially degrade water quality, and impacts would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact. A significant impact may occur if the proposed Project results in substantial depletion of groundwater supplies during construction or operation of the proposed Project (City of Los Angeles 2006).

The Geotechnical Report prepared for the proposed Project identified a very deep reported historic groundwater depth at the project site of approximately 150 to 200 feet below ground surface (Appendix D). Depth to groundwater can be expected to fluctuate both seasonally and from year to year. Fluctuations in the groundwater level may occur due to variations in precipitation, irrigation practices at the site and in the surrounding areas, climatic conditions, and pumping from wells. The proposed Project would result in the consumption of water as a result of construction and operational activities, and the sources of that water could include local groundwater supplies. However, the proposed Project would be relatively small and would be a LEED-Net Zero (producing as much or more energy than it consumes) facility with sustainable design principals, including drought-resistant landscaping. Therefore, consumption of significant amounts of groundwater that would lower groundwater levels or deplete local supplies is not anticipated. Additionally, proposed improvements on the project site, which contains mostly impervious surfaces, would not substantially increase the amount of impervious surfaces and interfere with groundwater recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

Less than Significant Impact. A significant impact would occur if the proposed Project would result in a substantial alteration of drainage patterns and an increase in erosion or siltation during construction or operation of the proposed Project (City of Los Angeles 2006).

The existing project site is primarily covered in impervious surfaces, and the proposed Project would substantially increase the amount of impervious surfaces on the project site. As such, the proposed Project would not substantially alter the existing drainage pattern of the project site or surrounding area. As previously discussed, the proposed Project would implement BMPs that would minimize short-term construction erosion impacts, and it would not result in altered drainage patterns.

No natural drainage or riparian areas remain within the project site or the surrounding area. In addition, no streams or rivers are in the immediate vicinity. As a result, the proposed Project would not result in the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on or off site. Impacts would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

No Impact. A significant impact may occur if the proposed Project were to impede or redirect flood flows contributing to flooding on or off site (City of Los Angeles 2006).

There are no lakes or streams in the immediate vicinity of the proposed Project area. The project area is primarily urbanized, and no natural stream channels remain. In addition, there would not be a measurable change in the quantity of stormwater surface runoff conveyed to the storm drain system based on the expected uses introduced by the proposed Project. As a result, no impacts on flooding on or off site are anticipated.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. A significant impact would occur if the volume of runoff would increase to the point where it exceeds the capacity of the storm drain system serving the project site or substantially increases the probability that polluted runoff would reach the storm drain system (City of Los Angeles 2006).

As discussed above, no substantial change in the site's previous impervious nature would occur due to construction or operation of the proposed Project. In addition, the proposed Project includes stormwater and drainage infrastructure that would improve the drainage pattern of the project site. BMPs would be implemented to control runoff from the project site during the construction phase. As such, the proposed Project would not contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the impact would be less than significant.

f) Otherwise substantially degrade water quality?

Less than Significant Impact. Apart from the on-site use and storage of fuels, lubricants, and other hydrocarbon fluids during construction, the proposed Project would not introduce any other potential source of contaminants that would otherwise substantially degrade water quality. With implementation of the aforementioned BMPs, construction runoff would be controlled to prevent it from contaminating nearby stormwater drainage systems. As such, impacts on water quality would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. A significant impact would occur if the proposed Project would place housing within a 100-year flood hazard area as mapped on a federal Flood Insurance Rate Map or other flood hazard delineation map (City of Los Angeles 2006).

The proposed Project does not include a residential component. As such, the proposed Project would not place housing within a 100-year flood zone, and no impact would occur. Additionally, according to Flood Insurance Rate Map Number 06037C1637F, the project site is within a 500-year flood hazard area, or Zone X, and is not within a 100-year flood zone (Federal Emergency Management Agency 2008).

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less than Significant Impact. A significant impact would occur if the proposed Project would place a structure within a 100-year flood hazard zone that would impede or redirect flood flows (City of Los Angeles 2006). As noted above, the project site is not within a 100-year flood hazard area (Federal Emergency Management Agency 2008). Additionally, the proposed Project includes stormwater and drainage infrastructure that would improve drainage on the project site. Impacts related to impeding or redirecting flood flows would be less than significant.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. A significant impact would occur if the proposed Project were located in an area that would expose people or structures to a significant risk of flooding as a result of the failure of a levee or dam (City of Los Angeles 2006).

According to the *City of Los Angeles General Plan Safety Element*, the project area is not within any potential inundation areas (City of Los Angeles 1996). As such, the proposed Project would not put people or structures at risk of flooding as a result of the failure of a levee or dam, and no impact would occur.

j) Inundation by seiche, tsunami, or mudflow

No Impact. According to the *City of Los Angeles General Plan Safety Element*, the project area is not within any potential inundation areas (City of Los Angeles 1996). The community of Boyle Heights in the City of Los Angeles is over 14 miles inland from the Pacific Ocean; therefore, the project area would not be exposed to the effects of a tsunami or seiche and no impact would occur.

J. Land Use and Planning

Land Use and Planning – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a) Physically divide an established community?

No Impact. A significant impact may occur if the proposed Project would result in the physical division of a community (City of Los Angeles 2006).

The proposed Project plans to construct a new gymnasium at an existing sports center. No residential uses or businesses would be displaced, and no communities would be divided as a result of the proposed Project. Therefore, no impact would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. A significant impact may occur if the proposed Project would be inconsistent with the general plan, another applicable plan, or the site's zoning if designated to avoid or mitigate a significant environmental impact (City of Los Angeles 2006).

Due to the authority granted to RAP by the Los Angele City Charter Section 591, RAP projects are exempt from the regulation of Chapter 1 of the Los Angeles Municipal Code. The project site is zoned as OS-1XL-CUGU Open Space in the City of Los Angeles General Plan (City of Los Angeles 2014). It also contains additional zoning designations related to the Adelante Eastside Redevelopment Project, Los Angeles State Enterprise Zone, Transit Priority Area, and Freeway Adjacent Advisory Notice of Sensitive Uses (City of Los Angeles 2017). The proposed Project would be consistent with the existing recreational facilities within the Boyle Heights Sports Center and with the surrounding community. As such, the proposed Project would not result in any unavoidable significant adverse impacts on the environment, nor would it conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No significant land use plan or policy conflict impacts would occur as a result of construction and operation of the proposed Project.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. A significant impact may occur if the proposed Project were within an area governed by a habitat conservation plan or natural community conservation plan and would conflict with such plan (City of Los Angeles 2006).

The project site is located within an urban area surrounded by developed properties. The proposed Project site is not within a habitat conservation plan or natural community conservation plan area. As such, no impact would occur.

K. Mineral Resources

Mineral Resources – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. A significant impact may occur if the proposed Project would result in the loss of the availability of a known mineral resource (City of Los Angeles 2006).

According to the Conservation Element of the Los Angeles City General Plan, the primary mineral resources within the city are rock, gravel, and sand deposits. The only currently available deposit site in the city is the Tujunga alluvial fan (City of Los Angeles 2001). The project site is not in an area designated as a Mineral Resource Zone (MRZ-2) by the Los Angeles Department of Regional Planning (Los Angeles County General Plan), which means that the project site does not contain potentially significant sand and gravel deposits identified for preservation.

The project site is not used for mineral extraction. No mineral extraction activities would be disrupted or removed under the proposed Project. The proposed Project includes the construction of a gymnasium at an existing sports center. Construction and operation of the proposed Project is not anticipated to result in the loss of the availability of a mineral resource or the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No impacts would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. See response to Question K.a above.

L. Noise

Noise – Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The analysis in this section is based on the *Trip Generation Assessment for the Boyle Heights Sports Center Gym Project* prepared by Fehr & Peers 2018 (Appendix G) and the *Boyle Heights Sports Center Gym Project – Environmental Noise Report* prepared by ICF (Appendix F).

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact with Mitigation. A significant impact would occur if the proposed Project would expose persons to or generate noise levels in excess of standards established in the City of Los Angeles General Plan or noise ordinance, or applicable standards of other agencies (City of Los Angeles 2006).

City of Los Angeles CEQA Thresholds Guide

The *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) defines noise-sensitive land uses as residences, transient lodgings, schools, day-care facilities, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. It also provides noise/land use compatibility guidelines and establishes significance criteria for four different types of noise sources: (1) construction, (2) operations, (3) railroads, and (4) airports.

A project would normally have a significant impact on noise levels from construction if any of the following would occur:

- Construction activities lasting more than 1 day would exceed existing ambient exterior noise levels by 10 A-weighted decibels (dBA) or more at a noise-sensitive use.
- Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.
- Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in Community Noise Equivalent Level, to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5-dBA or greater noise increase.

City of Los Angeles Municipal Code

Section 41.40 (a) of the City's Municipal Code prohibits the use, operation, repair, or servicing of construction equipment, as well as job-site delivery of construction materials between 9:00 p.m. and 7:00 a.m., where such activities would disturb "persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence." In addition, Section 41.40 (c) prohibits construction, grading, and related job site deliveries on or within 500 feet of land developed with residential structures before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday, or at any time on Sunday. Section 112.05 of the Municipal Code places limits on the maximum noise levels (75 dBA at a distance of 50 feet for typical construction equipment) that may be produced by powered equipment or tools in, or within 500 feet of, any residential zone between 7:00 a.m. and 10:00 p.m.

Chapter XI, “Noise Regulation,” of the City’s Municipal Code regulates noise from non-transportation noise sources such as commercial or industrial operations, mechanical equipment, or residential activities. It is noted that while these regulations do not apply to vehicles operating on public rights-of-way, they do apply to noise generated by vehicles on private property—such as truck operations at commercial or industrial facilities. The exact noise standards vary depending on the type of noise source, but the allowable noise levels are generally determined relative to the existing ambient noise levels at the affected location. Section 111.03 provides minimum ambient noise levels for residential land uses as 50 dBA and 40 dBA for the daytime (7 a.m.–10 p.m.) and nighttime (10 p.m.–7 a.m.) periods, respectively.

Existing Noise Levels

The existing noise-sensitive receivers in the immediate vicinity of the proposed Project, some as close as 100 feet from the proposed Project, include multi- and single-family residences primarily to the north and southeast, Soto Street Elementary School along 7th Street, the Soto Street Children’s Center at the southeast corner of South Flickett Street and 7th Street, Park Place Head Start Day Care Center adjacent to the Soto Street Children’s Center, and Bishop Mora Salesian High School and School of Santa Isabel located immediately west of the proposed Project site. Other land uses in the vicinity include commercial businesses and retail stores; the closest commercial uses to the project site are on the north side of Whittier Boulevard, directly across the street from the proposed Project site. The primary existing noise sources in the project area are traffic on local streets and nearby freeways, aircraft overflights, and exterior activities at nearby schools, fields, recreation areas, parking lots, and businesses.

In order to document the existing noise environment, short-term noise measurements (15 minutes in duration) were obtained at four locations in the vicinity of the project site on Wednesday, May 30, 2018. The locations are identified in Figure 6; additional details and a summary of the measurement results are provided in Table 7.

Table 7. Summary of Short-Term Noise Measurements

Location & Description	Measured Noise Levels, dBA	
	Date, Time	L_{eq}
ST-1, sidewalk in front of the Park Place Head Start Day Care Center at 2630 E. 7th Street	5/30/18, 9:57 a.m.–10:12 a.m.	57.9
ST-2, sidewalk along S. Mathews Street, behind the School of Santa Isabel at 2424 Whittier Boulevard	5/30/18, 10:23 a.m.–10:38 a.m.	60.8
ST-3, sidewalk in front of the single-family residence at 926 S. Mott Street	5/30/18, 11:17 a.m.–11:32 a.m.	57.3
ST-4, in alley adjacent to the single-family residence at 734 S. Mathews Street	5/30/18, 11:41 a.m.–11:56 a.m.	56.3
Source: Appendix F.		

Figure 6. Noise Measurement Locations

Construction

Construction-related noise was analyzed using data and modeling methodologies from the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (FHWA 2008), which predicts noise levels at nearby receptors by analyzing the type of equipment, the distance from source to receptor, usage factor, and the presence or absence of intervening shielding between source and receptor. Noise levels for each phase of construction were analyzed at four receptors in the vicinity of the project site, as shown in Figure 6. Noise associated with various types of construction equipment anticipated to be used is summarized in Table 8. The noise levels are provided for a reference distance of 50 feet. Consistent with the Roadway Construction Noise Model methodology, it was assumed that construction noise levels would be reduced at a rate of 6 dBA per doubling of distance from the source.

Table 8. Construction Equipment Reference Noise Levels

Equipment Item	Maximum Noise Level (L_{max}) at 50 feet, dBA	Average Noise Level (L_{eq}) at 50 feet, dBA
Bulldozer	81.7	77.7
Compactor	83.2	76.2
Concrete truck	81.4	74.4
Concrete saw	89.6	82.6
Crane	80.6	72.6
Dump truck	76.5	72.5
Excavator	80.7	76.7
Forklift	77.6	73.6
Front end loader	79.1	75.1
Generator	80.6	77.6
Electric power tools	85.2	82.2
Scraper	83.6	79.6
Scissor lift (boomlift)	74.7	67.7
Vibratory concrete mixer	80.0	73.0
Source: Appendix F.		

Construction of the proposed Project is anticipated to begin in March 2021 and last approximately 24 months. Day-to-day construction activities would vary throughout the construction process and would cease once construction of the proposed Project is completed. In accordance with the City of Los Angeles Municipal Code, construction would not take place outside the hours of 7 a.m. to 9 p.m. Monday through Friday, 8 a.m. to 6 p.m. on Saturdays or national holidays, or at any time on Sunday. Project construction would be broken down into phases. The phases of construction and anticipated construction equipment for each are summarized in Table 9.

Table 9. Anticipated Construction Phasing, Dates, and Equipment

Construction Phase	Anticipated Start Date	Anticipated End Date	Equipment (Number of Pieces)
Phase 1 - Demolition	09/02/19	10/04/19	Rubber-tired dozer (1)
			Concrete/industrial saw (1)
			Scraper (1)
			Front end loader (1)
Phase 2 - Site Preparation	10/07/19	10/18/19	Front end loader (2)
Phase 3 - Grading	10/21/19	11/22/19	Bulldozer (1)
			Hydraulic excavator (1)
			Dump truck (1)
			Compactor (1)
			Front end loader (1)
Phase 4 - Building Construction	11/25/19	04/09/21	Crane (1)
			Forklift (1)
			Concrete truck (1)
			Vibrator (1)
			Generator (1)
			Electric power tools (1)
			Boomlift (1)
			Scissor lift (1)
Phase 5 - Architectural Coating	04/12/21	06/30/21	Electric power tools (1)
			Boomlift (1)
			Forklift (1)
			Scissor lift (1)
Source: Appendix F,			

Based on City Municipal Code standards, construction noise would present a significant impact if maximum noise levels from on-site activity were to exceed 75 dBA at any residence. Table 10 summarizes the maximum noise levels (Lmax) that would be experienced at the closest sensitive receptors, some as close as 100 feet from construction activities, during each phase of construction. Maximum noise levels during the demolition, building construction, and architectural coating phases would exceed 75 dBA at receptors R2 and R3, which would be a significant impact. Therefore, the construction contractor would implement mitigation measures **MM-NOI-1 and MM-NOI-2** to ensure that noise levels at nearby homes would be reduced as necessary to comply with the City's standard.

Table 10. Maximum Noise Levels from Construction Equipment

	Maximum Noise Level (L_{max}) at Closest Sensitive Receptors, dBA			
Phase	**R1: Soto Street Children's Center (~750 feet)**	**R2: School of Santa Isabel (~100 feet)**	**R3: Single-family Residence at 924 S. Mott St (~300 feet)**	**R4: Single-family Residence at 741 S. Mathews St (~150 feet)**
Demolition	67	79	81	75
Site preparation	56	68	69	64
Grading	61	73	74	69
Building construction	63	75	76	71
Architectural coating	63	75	76	71
Significant Impact (Exceeds 75 dBA)?				
Demolition	No	**Yes**	**Yes**	No
Site preparation	No	No	No	No
Grading	No	No	No	No
Building construction	No	No	**Yes**	No
Architectural coating	No	No	**Yes**	No
Source: Appendix F				

According to the *L.A. CEQA Thresholds Guide*, because construction would last for more than 10 days in a 3-month period, a significant impact would occur if construction noise levels were to exceed the existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive land use. Based on the construction equipment information provided in Table 9, average hourly noise levels (i.e., 1 hour L_{eq}) were estimated for each phase of construction at each of the four construction receptors considered in the analysis (refer to Figure 6). The results of the analyses are summarized in Table 11. The table also indicates the average weekday daytime ambient noise levels at each receptor, based on the noise measurements summarized in Table 7. Referring to Table 11, impacts at receptor R1 would be less than significant during all of the construction phases. However, significant impacts would occur under all other analyzed scenarios, except for site preparation noise levels at R2 and R4. Therefore, the construction contractor would implement mitigation measures **MM-NOI-1 and MM-NOI-2** to ensure that construction noise levels at nearby homes would be reduced to within less than 5 dBA of ambient levels as required by the *L.A. CEQA Thresholds Guide* threshold.

Table 11. Estimated Construction Noise Levels

Phase	1-Hour L_{eq} at Closest Sensitive Receptors, dBA			
	R1: Soto Street Children's Center (~750 feet)	**R2: School of Santa Isabel (~100 feet)**	**R3: Single-family Residence at 924 S. Mott St (~300 feet)**	**R4: Single-family Residence at 741 S. Mathews St (~150 feet)**
Construction Noise Levels				
Demolition	62	71	71	67
Site preparation	55	63	64	60
Grading	59	68	69	64
Building construction	62	70	71	66
Architectural coating	59	68	69	64
Ambient Noise Levels				
Average ambient noise level	58	61	57	56
Construction Noise Increase over Ambient				
Demolition	4	10	14	11
Site preparation	0	2	7	4
Grading	1	7	12	8
Building construction	4	9	14	10
Architectural coating	1	7	12	8
Significant Impact (Exceeds Ambient by 5 dBA or more)?				
Demolition	No	**Yes**	**Yes**	**Yes**
Site preparation	No	No	**Yes**	No
Grading	No	**Yes**	**Yes**	**Yes**
Building construction	No	**Yes**	**Yes**	**Yes**
Architectural coating	No	**Yes**	**Yes**	**Yes**
Source: Appendix F.				

Table 12 summarizes the maximum noise levels (L_{max}) that would be experienced with implementation of mitigation measures **MM-NOI-1 and MM-NOI-2**. Table 13 summarizes the average hourly noise levels that would be experienced with implementation of mitigation measures **MM-NOI-1 and MM-NOI-2**, along with the corresponding noise increases relative to ambient noise. Based on the analyzed receptor locations and the heights, locations, and materials of the temporary construction noise barriers proposed in mitigation measure **MM-NOI-2**, construction noise attenuation of up to 12 dBA is predicted. As shown in Table 12 and Table 13, with implementation of mitigation measures **MM-NOI-1 and MM-NOI-2**, all maximum noise levels would be reduced to 75 dBA or less and all average hourly noise levels would be reduced to less than 5 dBA above ambient levels.

Table 12. Maximum Noise Levels from Construction Equipment with Mitigation Measure MM-NOI-1 and MM-NOI-2 Incorporated

	Maximum Noise Level (L_{max}) at Closest Sensitive Receptors with Mitigation Measures MM-NOI-1 and MM-NOI-2 Incorporated, dBA			
Phase	**R1: Soto Street Children's Center (~750 feet)**	**R2: School of Santa Isabel (~100 feet)**	**R3: Single-family Residence at 924 S. Mott St (~300 feet)**	**R4: Single-family Residence at 741 S. Mathews St (~150 feet)**
Demolition	60	71	69	67
Site preparation	54	63	60	59
Grading	56	66	63	62
Building construction	56	67	65	62
Architectural coating	56	67	65	62
Significant Impact (Exceeds 75 dBA)?				
Demolition	No	No	No	No
Site preparation	No	No	No	No
Grading	No	No	No	No
Building construction	No	No	No	No
Architectural coating	No	No	No	No
Source: Appendix F.				

Table 13. Estimated Construction Noise Levels with Implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2

	1-Hour L_{eq} at Closest Sensitive Receptors after Implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2, dBA			
Phase	**R1: Soto Street Children's Center (~750 feet)**	**R2: School of Santa Isabel (~100 feet)**	**R3: Single-family Residence at 924 S. Mott St (~300 feet)**	**R4: Single-family Residence at 741 S. Mathews St (~150 feet)**
Construction Noise Levels				
Demolition	58	64	61	60
Site preparation	52	58	54	54
Grading	56	62	59	58
Building construction	56	63	60	59
Architectural coating	53	61	58	57
Ambient Noise Levels				

Table 13. Estimated Construction Noise Levels with Implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2

	1-Hour L_{eq} at Closest Sensitive Receptors after Implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2, dBA			
Phase	**R1: Soto Street Children's Center (~750 feet)**	**R2: School of Santa Isabel (~100 feet)**	**R3: Single-family Residence at 924 S. Mott St (~300 feet)**	**R4: Single-family Residence at 741 S. Mathews St (~150 feet)**
Average ambient noise level	58	61	57	56
Construction Noise Increase Over Ambient				
Demolition	0	3	4	4
Site preparation	0	0	0	0
Grading	0	1	2	2
Building construction	0	2	3	3
Architectural coating	0	0	1	1
Significant Impact (Exceeds Ambient by 5 dBA or more)?				
Demolition	No	No	No	No
Site preparation	No	No	No	No
Grading	No	No	No	No
Building construction	No	No	No	No
Architectural coating	No	No	No	No
Source: Appendix F.				

With the implementation of mitigation measures **MM-NOI-1** and **MM-NOI-2**, construction noise would comply with both the City's Municipal Code Standards and the *L.A. CEQA Thresholds.* Impacts would be less than significant.

MM-NOI-1: Implement Construction Site Noise Control: The following methods will be included as part of the project to ensure compliance with the City's noise standards and CEQA thresholds for construction.

The construction contractor will conduct all activities in compliance with the applicable restrictions contained in the *L.A. CEQA Thresholds Guide,* including limiting construction noise levels to be less than 5 dBA over the existing ambient exterior noise levels at noise-sensitive land uses. The construction contractor will also comply with the City of Los Angeles Municipal Code, including limiting maximum noise levels at adjacent homes to 75 dBA or less.

MM-NOI-2: Compliance with the City of Los Angeles Municipal Code will be achieved using methods that may include, but are not limited to the following:

a. Construction activity (including deliveries, equipment maintenance, or operation of any construction equipment) will be prohibited at the project site before 7 a.m. or after 9 p.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday, or at any time on Sunday.

b. Temporary construction noise barriers will be installed as described below:

   i. A barrier with a minimum height of 15 feet above ground level will be installed along the eastern property line of the project site during all phases of construction. The barrier will wrap around the southern corner of the project site and extend an additional 100 feet to the east. The location of this barrier is identified in Figure 7.

   ii. A barrier with a minimum height of 12 feet above ground level will be installed along the northern and western property lines and a portion of the southern property line of the project site. This barrier will connect with the 15-foot barrier described above. The location of this barrier is identified in Figure 7.

   iii. The barriers will be constructed from acoustical blankets hung over or from a supporting frame. The blankets will provide a minimum sound transmission class rating of 28 and a minimum noise reduction coefficient of 0.80. They will be firmly secured to the framework, with the sound-absorptive side of the blankets oriented toward the construction equipment. The blankets will be overlapped by at least 4 inches at seams and taped and/or closed with hook-and-loop fasteners (e.g., Velcro®) so that no gaps exist. The largest blankets available should be used to minimize the number of seams. The blankets will be draped to the ground to eliminate any gaps at the base of the barrier.

c. Low-noise-generating construction equipment will be used.

d. All construction equipment, including mufflers and ancillary noise abatement equipment, will be maintained.

e. All mobile and stationary noise-producing construction equipment used on the project site that is regulated for noise output by a local, state, or federal agency will comply with such regulation while in the course of project activity.

f. High noise-producing activities will be scheduled during periods that are least sensitive.

g. Construction equipment will be switched off when not in use.

h. Stationary construction equipment, such as generators and compressors, will be positioned as far away as practical from noise-sensitive receptors.

i. Noise-producing signals—including horns, whistles, alarms, and bells—will be used for safety warning purposes only.

j. Construction-related truck traffic will be routed away from noise-sensitive areas.

k. Construction vehicle speeds will be reduced.

Figure 7. Location of Temporary Construction Noise Barriers

Operational Noise

The proposed Project would generate new vehicle trips that would add incrementally to traffic on surrounding streets and could change the associated traffic noise. According to the Trip Generation Assessment Memorandum for the proposed Project (Fehr and Peers 2018) the proposed Project is anticipated to generate a total of 288 daily trips, including 18 trips in the weekday a.m. peak hour and 23 trips in the weekday p.m. peak hour. Relative to existing traffic on nearby roadways, such small increases in traffic noise would generally be considered imperceptible. Therefore, the impact would be less than significant.

Activities at the proposed parking lot would generate sporadic noise from vehicles starting, car doors slamming, people talking, etc. Although short-term noise would likely be audible at nearby receptors, it would not generate substantial long-term noise levels (such as those measured by the 1-hour L_{eq} considered in the City Municipal Code). In addition, there is an existing parking lot associated with the School of Santa Isabel directly to the west of the project site, and street parking is currently available on S. Mott Street and Whittier Boulevard; therefore, the proposed parking lot would be consistent with the existing uses and outdoor activity in the vicinity of the project site. Noise impacts related to operation of the proposed Project's parking lot would be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. A significant impact would occur if the proposed Project would expose persons to or generate excessive groundborne vibration or groundborne noise levels (City of Los Angeles 2006).

None of the local laws and regulations discussed below provide any quantitative criteria regarding groundborne noise and vibration. Therefore, while the proposed Project would not be subject to oversight by the California Department of Transportation, guidance published by the agency nonetheless provides groundborne vibration criteria that are useful in establishing thresholds of impact. The department's widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013) provides guidance for two types of potential impact: (1) damage to structures, and (2) annoyance to people.

Based on these guidelines, a project would have a significant vibration impact, relative to potential building damage, if:

- Peak particle velocity vibration levels from construction equipment are 0.3 inches per second or greater at any existing residential structure, or 0.5 inches per second at nearby schools or commercial structures.

A project would have a significant vibration impact, relative to potential annoyance, if:

- Peak particle velocity vibration levels from construction equipment are 0.04 inches per second or greater at any existing residence.

Construction

Referring to the equipment schedule provided in Table 8 under Question L.a, various pieces of heavy equipment such as bulldozers and excavators would be used at the project site. Vibration levels (peak particle velocity, inches per second) were estimated at each of the four receptors considered in the construction analysis. The results of the analyses are summarized in Table 14, which show that groundborne vibration from construction would not exceed the thresholds developed either for potential annoyance at nearby homes or for potential vibration damage at nearby structures. As such, the impact associated with construction vibration would be less than significant.

Table 14. Estimated Construction Vibration Levels

	R1: Soto Street Children's Center	R2: School of Santa Isabel	R3: Single-family Residence at 924 S. Mott St	R4: Single-family Residence at 741 S. Mathews St
Estimated range of peak particle velocity at closest sensitive receptors, in/s	0.002-0.003	0.004-0.011	0.004-0.013	0.004-0.011
Significant impact relative to potential annoyance threshold (0.04 in/s at homes)?	No	No	No	No
Significant impact relative to potential damage threshold (0.3 in/s at homes, 0.5 in/s at schools)?	No	No	No	No
Source: Appendix F.				

Operational

Vehicles traveling to and from the project site for events and recreational activities would be the primary sources of project operational-related vibration. Vehicular movements would generate similar vibration levels as existing traffic conditions. The proposed Project would not introduce any significant stationary sources of vibration that would be perceptible at sensitive receptors. Mechanical equipment installed at the project site would produce some vibration that may be perceptible at nearby locations within the building. However, there would be no major operational vibration sources that would generate perceptible groundborne vibration at any nearby lands uses. As such, operational activity would result in in a less than significant impact related to vibration.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. A significant impact would occur if the proposed Project would result in substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the proposed Project (City of Los Angeles 2006).

As discussed under Question L.a above, the proposed Project would not generate a substantial amount of new trips or include a significant source of stationary noise. In addition, the proposed Project would require typical mechanical equipment for heating, ventilation, and air conditioning that would generate noise, but the associated noise levels would be consistent with those generated by similar equipment at the surrounding residences, schools, and commercial buildings. Given the heavily developed nature of the area, the proposed Project would not generate significant noise levels above those already experienced in the project vicinity, and it is not anticipated to cause increases in the existing ambient noise levels beyond those permitted by the City's Municipal Code. As such, the proposed Project would not result in a substantial permanent increase in ambient noise levels; impacts would be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact with Mitigation. A significant impact would occur if the proposed Project would create a substantial temporary increase in the ambient noise level that would conflict with the noise conditions allowed in local regulations (City of Los Angeles 2006).

As summarized under Question L.a, the proposed Project would result in a substantial temporary increase in ambient noise level during project construction. Mitigation measures **MM-NOI-1** and **MM-NOI-2** are provided to ensure that construction noise levels are reduced as necessary to comply with the *L.A. CEQA Thresholds Guide* threshold. With implementation of mitigation measures **MM-NOI-1** and **MM-NOI-2,** impacts related to the *L.A. CEQA Thresholds Guide* construction threshold would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. A significant impact may occur if the proposed Project were located within a public airport land use plan area, or within 2 miles of a public airport, and would create a safety hazard (City of Los Angeles 2006).

The project site is not located within an airport land use plan, or within 2 miles of a public airport or public use airport. The closest airports, Bob Hope Airport in Burbank and the

San Gabriel Valley Airport, are both over 10 miles away (Los Angeles Airport Land Use Commission 2012). As such, the proposed Project would not create a safety hazard for airport operations and no impact would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. A significant impact would occur if the proposed Project were in the vicinity of a private airstrip, or would result in a safety hazard for people residing or working in the project area.

The project site is not located in the vicinity of a private airstrip, nor would it result in a safety hazard for those working at an airstrip. No impact would occur.

M. Population and Housing

Population and Housing – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact. A significant impact may occur if the proposed Project would induce substantial population growth in an area, either directly or indirectly (City of Los Angeles 2006).

The proposed Project does not include the construction of any residential uses and therefore would not result in any direct residential growth. In addition, the proposed Project would not result in any new expanded infrastructure to accommodate additional growth in the area, such as improved utilities, roadways, and expanded public services. Therefore, so no indirect growth-inducing impacts would occur as a result of the proposed Project. The proposed Project is anticipated to result in three new employees for the new gymnasium. According to the SCAG, employment in the City of Los Angeles is projected to increase by 472,700 jobs, or a 28 percent increase, between 2012 and 2040 (SCAG 2016). Due to the urban nature of the city and the surrounding area, the minimal increase in employment associated with the proposed Project is expected to be accommodated by the existing and planned housing within the city and neighboring communities. Impacts caused by growth-inducement would be less than significant.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. A significant impact would occur if the proposed Project would displace a substantial amount of existing housing (City of Los Angeles 2006).

The proposed Project would be located at an existing sports center facility that does not contain any housing or residential components. Also, the proposed Project does not have a housing component. As such, no impact on housing would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. See response to Section M.b above.

N. Public Services

Public Services – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

No Impact. A significant impact may occur if the proposed Project were to result in an increase in demand for fire services that would exceed the capacity of the fire department responsible for serving the site (City of Los Angeles 2006).

The Los Angeles Fire Department's Central Bureau provides fire services to the project site and surrounding area. The Central Bureau is responsible for 23 fire stations and 645 fire personnel (Los Angeles Fire Department 2018). The nearest fire station, Station 25 (2927 Whittier Boulevard), is approximately 0.4 mile east of the proposed Project location. The need for new or physically altered governmental facilities generally occurs in cases where a project would result in population growth and public services are needed to serve that additional population. The proposed Project would not include housing and, as a result, there would be no direct increase in population resulting from construction or operation of the proposed Project. It is also reasonable to assume that most construction workers would not relocate their households to work on the proposed Project. Furthermore, the proposed facility does not propose to use hazardous materials or engage in hazardous activities that would require new or modified fire protection equipment to meet potential emergency demands. As a result, the proposed Project would not create any need for new or physically altered governmental facilities related to fire protection, and there would be no impact.

ii) Police protection?

No Impact. A significant impact may occur if the proposed Project were to result in an increase in demand for police services that would exceed the capacity of the police department responsible for serving the site (City of Los Angeles 2006).

Police services to the project site and surrounding area are provided by the Central Bureau of the Los Angeles Police Department, and more specifically the Hollenbeck Community Police Station. The Hollenbeck Community Police Station serves approximately 200,000 people within a 15.2-square-mile area that includes the communities of Aliso Village, Boyle Heights, El Sereno, Estrada Court, Hermon, Hillside Village, Lincoln Heights, Montecito Heights, Monterey Hills, Pico Gardens, Ramona Gardens, Rose Hills Courts, and University Hills (Los Angeles Police Department 2018). The Hollenbeck Community police station is located at 2111 E. 1st Street, approximately 1.2 miles north of the proposed Project location. As described above, there would be no direct increase in population resulting from construction or operation of the proposed Project. The proposed Project would not affect the service ratios, response times, or other performance objectives for police protection. In addition, the proposed gymnasium would not create any unique crime problems and such activities can be adequately handled with the existing level of police resources. The proposed Project would not create any need for new or physically altered governmental facilities related to police protection, and impacts would be less than significant.

iii) Schools?

No Impact. A significant impact may occur if the proposed Project would generate growth such that schools would be affected (City of Los Angeles 2006).

Several schools are found within the surrounding area of the project site, including Bishop Mora Salesian High School, Soto Street Elementary School, Hollenbeck Middle School, Sunrise Elementary School, and Euclid Avenue Elementary School.

Of these, Bishop Mora Salesian High School (960 S. Soto Street) is nearest to the proposed Project, directly to the west of the project site across Mathews Street. Again, as described above, there would be no direct increase in population resulting from construction or operation of the proposed Project. The proposed Project would not create any need for new school facilities, and therefore there would be no impact.

iv) Parks?

No Impact. A significant impact may occur if the recreation and park services available could not accommodate the population increase resulting from the implementation of the proposed Project and new or physically altered facilities were needed (City of Los Angeles 2006).

The proposed Project expands services provided at the existing Boyle Heights Sports Center, thus accommodating natural, preexisting growth in the city. Again, as described above, there would be no direct increase in population resulting from construction or operation of the proposed Project. The proposed Project would not create any need for new or physically altered governmental facilities related to park facilities; therefore, there would be no impact. Potential impacts on parks are discussed in greater detail in the Recreation section.

v) Other public facilities?

No Impact. A significant impact may occur if the proposed Project would generate growth such that public facilities would be affected (City of Los Angeles 2006).

The proposed Project would not create any need for new or physically altered governmental facilities related to other public facilities, and there would be no impact.

O. Recreation

Recreation – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact. A significant impact may occur if the proposed Project would increase the use of existing neighborhood and regional parks such that substantial physical deterioration of the facility would occur (City of Los Angeles 2006).

The proposed Project expands existing services provided at the current Boyle Heights Sports Center by constructing a new gymnasium. As such, the proposed Project would provide a public recreation benefit, providing a full-sized basketball court, equipment storage room, community room, plaza for special gatherings, green space, and pedestrian paths.

The proposed Project would potentially increase the use of this sports center by providing additional services that allow new and different users to access the park, including providing additional parking spaces for users. However, it’s not expected that introduction of the proposed Project would increase use to such a level that substantial physical deterioration of the facility would occur or be accelerated since the proposed Project would expand and improve an existing sports center, rather than create a new large attraction to the neighborhood. As mentioned above, in providing additional services not previously offered by the sports center, the proposed Project would provide a public recreation benefit. Impacts would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. A significant impact would occur if the proposed Project would require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment (City of Los Angeles 2006).

As discussed above, the expansion of uses provided by this sports center would allow new and different users to access the park. Similarly, due to the relative size and number of the parks and recreational facilities in the immediate project vicinity, introduction of the proposed Project would not require additional construction or expansion of recreational facilities. Impacts would be less than significant.

P. Transportation/Traffic

Transportation/Traffic – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

The analysis in this section is based on the *Trip Generation Assessment for the Boyle Heights Sports Center Gym Project* prepared by Fehr & Peers (Appendix G).

a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant Impact. A significant impact may occur if the proposed Project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

The Los Angeles Department of Transportation (LADOT) *Transportation Impact Study Guidelines* establish a standard that requires a technical memorandum be prepared when a project adds between 25 to 42 AM or PM peak hour trips or a traffic impact study when a project adds 43 or more AM or PM peak hour trips (LADOT 2016). The Traffic Generation Memorandum prepared for the proposed Project forecasts that the proposed Project would result in peak hour trip generation of 18 trips in the AM peak hour and 23 trips in the PM peak hour, as summarized in Table 15. As such, the number of trips falls below the LADOT threshold for trips generated and does not warrant further study. Therefore, the additional trips that would be generated by operation of the proposed Project are expected to result in a less than significant impact.

Table 15. Trip Generation

	Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Gymnasium	288	12	6	18	11	12	23
Source: Appendix G.							

Traffic impacts related to construction of the proposed Project would be correspondingly minimal, so long as any construction-related trips comply with LADOT regulations regarding haul truck traffic or other construction traffic. Construction vehicles and equipment would be accommodated on the existing Boyle Heights Sports Center property and would not disrupt traffic circulation on city roads. No road closures or detours are anticipated during construction of the proposed Project. Therefore, traffic generated during construction would result in a less than significant impact and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. See response to Question P.a above.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. A significant impact may occur if the proposed Project would result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The proposed Project would involve improvements to an existing sports facility and is not in proximity to any airport or helicopter landing pad. No project elements, or equipment needed to construct the proposed Project, are of a height capable of affecting air traffic patterns. Neither construction nor operation of the proposed Project would alter air traffic patterns. No impact would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. A significant impact may occur if the proposed Project would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

All construction would occur at off-street locations, and no modifications to the existing roadway or driveway would be necessary. Persons accessing the proposed parking lot would access via the existing driveway on Whittier Boulevard. Any use of the roadway by construction crews and equipment would be clearly demarcated to prevent hazards resulting from proximity to traffic. Equipment would be stored in the staging area such that no hazards to roadway users would be introduced. No impact would occur during the construction or operation period.

e) Result in inadequate emergency access?

No Impact. A significant impact may occur if the proposed Project would result in inadequate emergency access (City of Los Angeles 2006).

The project site would remain accessible to emergency service providers via Whittier Boulevard during the entirety of the construction period. Operation of the proposed Project would use the existing driveway at the project site and would not result in any changes to access for emergency providers. Therefore, the proposed Project would not affect emergency access or result in adequate emergency access. No impact related to emergency access would occur as a result of project implementation.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. A significant impact may occur if the proposed Project were to conflict with adopted policies, plans, or programs supporting alternative transportation (City of Los Angeles 2006).

There are multiple bus stops within 0.5 mile of the proposed Project on Whittier Boulevard, and the Soto stop for the LA Metro Gold Line is 1 mile away. The Metro local bus station lines 18, 106, 251, and 252 and Metro RAPID 720 and 751 on Whitter Boulevard/Soto Street primarily serve the surrounding community. These bus routes would provide convenient connection to the regional transit system. The proposed Project would not require relocation of bus stops, and there would be no impact on transit operations. The proposed Project is considering including elements such as bike racks and bike share programs. As such, operation of the proposed Project would enhance alternative transportation facilities within the project area and would be consistent with Mobility Plan 2035 and other general plan policies aimed at increasing use of non-motorized forms of transportation. No impact related to conflicts with alternative transportation plans would occur; therefore, there would be no impact.

Q. Utilities and Service Systems

Utilities and Service Systems – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. A significant impact would occur if the proposed Project would discharge wastewater that exceeds the requirements established by the Los Angeles Regional Water Quality Control Board (City of Los Angeles 2006).

While some utility extensions may be required on the site, no off-site utility improvements would be required for the proposed Project. The proposed Project would connect to the existing public water and sanitary sewer mains on adjacent streets. Due to the size of the proposed Project and anticipated uses, construction activities would not generate wastewater. Once the proposed Project is operational, wastewater flows associated with the project site would consist of the same kinds of substances typically generated by commercial uses. No modifications to any existing wastewater treatment systems or construction of new ones would be needed to accommodate the wastewater generated by the proposed Project. Therefore, the proposed Project would not generate wastewater that would exceed the Los Angeles Regional Water Quality Control Board's wastewater treatment requirements, and impacts would be less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. A significant impact would occur if the proposed Project would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities that could result in significant environmental effects (City of Los Angeles 2006).

As discussed in prior sections, the proposed Project is not expected to substantially increase the current amount of water used or wastewater beyond what is currently being generated at the project site. Therefore, the proposed Project would not require new water or wastewater treatment facilities or expand existing facilities. The impact would be less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. A significant impact would occur if the volume of stormwater runoff from the proposed Project would require the construction of new stormwater drainage facilities or expansion of existing facilities that would cause significant environmental effects (City of Los Angeles 2006).

The proposed Project would involve corresponding stormwater and drainage infrastructure to accommodate project improvements. These improvements would not require the construction or expansion of storm drain facilities outside of the project site. As such, the construction and operation of the proposed Project would result in less than significant impacts on the existing stormwater drainage system.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant Impact. A significant impact would occur if available water supplies used to serve the proposed Project from existing entitlements and resources would be insufficient and new or expanded entitlements are needed (City of Los Angeles 2006).

As stated above, the proposed Project would connect to the existing public water and sanitary sewer mains on adjacent streets. Although the proposed Project would increase water consumption on the site due to the gymnasium restroom and shower facilities, the minor incremental impact on city water supplies would not require new or expanded entitlements. Therefore, the impact would be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. A significant impact would occur if the wastewater treatment provider that serves the project area would not have adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments (City of Los Angeles 2006).

The proposed Project would increase the amount of wastewater generated on the project site. However, the incremental, minor increase in wastewater could be accommodated by the City's existing wastewater conveyance and treatment system. Impacts would be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact. A significant impact would occur if the proposed Project would result in solid waste generation of 5 tons or more per week (City of Los Angeles 2006).

Construction of the proposed Project would generate minor amounts of solid waste. Major landfills are defined as those facilities that receive more than 250,000 tons of solid waste per year. Given debris and solid waste generated by construction activities would be finite and limited to the construction period, existing landfills have sufficient long-term permitted capacity to accommodate construction-generated solid waste.

Operation of the proposed Project would also generate minor amounts of solid waste as a generally service-oriented use. Of the Class III solid waste disposal facilities in Los Angeles County, Sunshine Canyon has the largest remaining capacity at 72.61 millions of tons (Los Angeles County Department of Public Works 2016). Its estimated remaining life is 20 years. Adequate landfill capacity exists to accommodate project-generated waste. If disposal would occur at an off-site location, it would be disposed of in accordance with City of Los Angeles regulations. Therefore, through compliance with the applicable regulations, impacts on solid waste disposal needs would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. A significant impact would occur if the proposed Project would generate solid waste that is in excess of or is not disposed of in accordance with any applicable regulations (City of Los Angeles 2006).

As stated in the City of Los Angeles' Solid Waste Integrated Resources Plan, the City plans to achieve an overall waste diversion rate of 90 percent or more by the year 2025 (City of Los Angeles 2013). As discussed under Question Q.f, the proposed Project would generate minor amounts of solid waste, and waste would be disposed of by City-sanctioned waste haulers to regulated landfills with adequate capacity to accommodate the waste. Waste generated by the proposed Project, both during construction and operation, would comply with federal, state, and local regulations related to solid waste. As such, there would be no impact.

R. Mandatory Findings of Significance

Mandatory Findings of Significance – Does the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigation. Plant species that were observed within the study area are considered common within the study area vicinity. Wildlife species that were observed within the study area during field surveys are considered common to the general project vicinity. No known rare or endangered plants, animals, or habitats would be affected by the proposed Project. Measures for biological resources would ensure that the proposed Project would comply with Migratory Bird Treaty Act requirements for migratory birds and would ensure safe removal and replanting of any trees or other possible habitats for native wildlife. The proposed Project would not degrade the quality of the biological environment. The proposed Project would have no adverse effect on historical resources as none exist in the project footprint. Measures would be implemented to mitigate impacts on any previously unidentified archaeological or paleontological resources that may be encountered and disturbed or damaged during construction. Therefore, the proposed Project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant Impact. Although the proposed Project would have a less than significant impact on air, noise, biological resources, and water quality during construction, the proposed Project would not have cumulatively considerable impacts related to noise, air quality, biological resources, hazards and hazardous materials, and hydrology and water quality. “Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of probable future projects. It is assumed that the proposed Project and other related projects would implement all feasible measures to reduce construction-related air, hazardous materials, and noise impacts as well as impacts on biological resources and hydrology and water quality. As such, the proposed Project would have less than significant cumulatively considerable impacts.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact with Mitigation. The proposed Project could result in temporary noise impacts during construction that could adversely affect persons in the vicinity of construction sites or truck haul routes. Because portions of the project site are closer to residential uses than the distances noted in the table, significant impacts are anticipated relative to the City Municipal Code standards. Therefore, the construction contractor will implement mitigation measures **MM-NOI-1 and MM-NOI-2** to ensure that noise levels at nearby homes are reduced as necessary to comply with the City’s standard. With implementation of mitigation measure **MM-NOI-1 and MM-NOI-2,** impacts related to the City Municipal Code construction standards would be less than significant.

CHAPTER IV. MITIGATION MEASURES

The following summarizes mitigation measures that, if incorporated into the proposed Project, would reduce an effect to less than significant. It also briefly explains how each mitigation measure would reduce the effect to a less than significant level.

Biological Resources

MM-BIO-1: If construction commences during the bird breeding season (approximately February 1–August 31), a preconstruction survey for nesting birds will occur within 3 days prior to construction activities by an experienced avian biologist. The survey will occur within all suitable nesting habitat within the project impact area and a 100-foot buffer. If nesting birds are found, an avoidance area will be established as appropriate by a qualified biologist around the nest until a qualified avian biologist has determined that young have fledged or nesting activities have ceased. The project site will be resurveyed if there is a lapse in construction activities for more than 7 days during the bird breeding season.

MM-BIO-2: If construction results in the removal of street trees planted in the City of Los Angeles' public right-of-way, a tree removal permit from the City of Los Angeles Department of Public Works Bureau of Street Services, Urban Forestry Division would be obtained, requiring the replacement of street trees on a 2:1 basis with the guidance of an appropriate investigator. In addition, any removed park trees will be replaced according to RAP's requirements and in agreement with the RAP's arborist.

Archaeological Resources

MM-ARCH-1: In the event of an unanticipated archaeological discovery, all work will be suspended within 50 feet of the find until a qualified archaeologist can evaluate it. In the unlikely event that human remains are encountered during project development, State of California Health and Safety Code Section 7050.5 stipulates that no further disturbance will occur until the County Coroner has made a determination regarding the origin of the remains and the nature of their deposition pursuant to Public Resources Code Section 5097.98.

Paleontological Resources

MM-PALEO-1: If unanticipated fossils are unearthed during construction, work will be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

Geology and Soils

MM-GEO-1: The proposed Project grading and foundation plans and specifications will implement the recommendations presented in the *Geotechnical Investigation Report* prepared for LABOE. The proposed Project plans and specifications will be reviewed by the Geotechnical Engineering Group to ensure proper implementation and application of the recommendations.

Hazardous Materials

MM-HAZ-1: Prior to demolition activities that would disturb identified ACMs, a licensed abatement removal contractor will remove these building materials. Asbestos-containing construction materials may stay in place during demolition, if the contractor is certified to perform asbestos abatement. Removal of ACMs will be done in compliance with the South Coast Air Quality Management District's Rule 1403, as well as all other state and federal rules and regulations.

MM-HAZ-2: Prior to demolition activities, a composite sample of the lead-containing material will be analyzed by a licensed abatement contractor with certified lead personnel for total lead for comparison with the Total Threshold Limit Concentration in accordance with the USEPA reference method SW-846. Based on that analysis, the contractor will dispose of the lead-containing waste material in accordance with all applicable local, state, and federal regulations.

Noise

MM-NOI-1: Implement Construction Site Noise Control: The following methods will be included as part of the project to ensure compliance with the City's noise standards and CEQA thresholds for construction.

The construction contractor will conduct all activities in compliance with the applicable restrictions contained in the *L.A. CEQA Thresholds Guide,* including limiting construction noise levels to be less than 5 dBA over the existing ambient exterior noise levels at noise-sensitive land uses. The construction contractor will also comply with the City of Los Angeles Municipal Code, including limiting maximum noise levels at adjacent homes to 75 dBA or less.

MM-NOI-2: Compliance with the City of Los Angeles Municipal Code will be achieved using methods that may include, but are not limited to the following:

l. Construction activity (including deliveries, equipment maintenance, or operation of any construction equipment) will be prohibited at the project site before 7 a.m. or after 9 p.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday, or at any time on Sunday.

m. Temporary construction noise barriers will be installed as described below:

    i. A barrier with a minimum height of 15 feet above ground level will be installed along the eastern property line of the project site during all phases of construction. The barrier will wrap around the southern corner of the project site and extend an additional 100 feet to the east. The location of this barrier is identified in Figure 7.

ii. A barrier with a minimum height of 12 feet above ground level will be installed along the northern and western property lines and a portion of the southern property line of the project site. This barrier will connect with the 15-foot barrier described above. The location of this barrier is identified in Figure 7.

iii. The barriers will be constructed from acoustical blankets hung over or from a supporting frame. The blankets will provide a minimum sound transmission class rating of 28 and a minimum noise reduction coefficient of 0.80. They will be firmly secured to the framework, with the sound-absorptive side of the blankets oriented toward the construction equipment. The blankets will be overlapped by at least 4 inches at seams and taped and/or closed with hook-and-loop fasteners (e.g., Velcro®) so that no gaps exist. The largest blankets available should be used to minimize the number of seams. The blankets will be draped to the ground to eliminate any gaps at the base of the barrier.

n. Low-noise-generating construction equipment will be used.

o. All construction equipment, including mufflers and ancillary noise abatement equipment, will be maintained.

p. All mobile and stationary noise-producing construction equipment used on the project site that is regulated for noise output by a local, state, or federal agency will comply with such regulation while in the course of project activity.

q. High noise-producing activities will be scheduled during periods that are least sensitive.

r. Construction equipment will be switched off when not in use.

s. Stationary construction equipment, such as generators and compressors, will be positioned as far away as practical from noise-sensitive receptors.

t. Noise-producing signals—including horns, whistles, alarms, and bells—will be used for safety warning purposes only.

u. Construction-related truck traffic will be routed away from noise-sensitive areas.

v. Construction vehicle speeds will be reduced.

CHAPTER V. PREPARATION

City of Los Angeles Bureau of Engineering

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Jan Green Rebstock, Environmental Supervisor
Christopher Adams, Environmental Specialist

ICF

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Terry A Hayes Associates

Sam Silverman, Air Quality and Greenhouse Gas Emissions
Anders Sutherland, Associate Environmental Scientist

Cogstone

Tim Spillane, Principal Investigator
Molly Valasik, Principal Investigator

CHAPTER VI. DETERMINATION - RECOMMENDED ENVIRONMENTAL DOCUMENTATION

A. Summary

The Initial Study concluded that the proposed Project will better serve East Los Angeles, in particular the community of Boyle Heights, by creating a sustainable recreational facility for local youths and families and increased access to the existing sports center. It also will support the Proposition K, LA for Kids Program, purpose of combatting the lack of infrastructure for youth interests in Los Angeles and creating spaces for young people and their families to participate in fun, healthy activities. With implementation of mitigation measures, all impacts would be less than significant.

B. Recommended Environmental Documentation

On the basis of this initial evaluation:

I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the proposed Project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.

Prepared By: Lee Lisecki
Lee Lisecki
ICF International

Reviewed By: ______________________
Christopher Adams
Environmental Specialist II

Approved By: ______________________
Jan Green Rebstock
Environmental Supervisor II

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Appendix A

Air Quality & Greenhouse Gas Emissions Impact Study

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BOYLE HEIGHTS SPORTS CENTER GYM

AIR QUALITY AND GREENHOUSE GAS EMISSIONS IMPACT STUDY

Prepared for
LOS ANGELES BUREAU OF ENGINEERING

Prepared by
TERRY A. HAYES ASSOCIATES INC.

taha
environmental planners

January 2019

taha 2018-003

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1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. (TAHA) has completed an Air Quality and Greenhouse Gas (GHG) Emissions Impact Study for the Los Angeles Bureau of Engineering (LABOE) Boyle Heights Sports Center Gym (proposed project). The analyses assessed potential environmental impacts related to air pollutant and GHG emissions resulting from construction and operation of the proposed project. Emissions were evaluated for significance in accordance with applicable South Coast Air Quality Management District (SCAQMD) methodologies for individual development projects within the South Coast Air Basin (SCAB). The air quality impact assessment was conducted in accordance with the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist criteria. A summary describing the conclusions of potential air quality impacts associated with implementation of the proposed project is provided in **Table 1-1**.

TABLE 1-1: SUMMARY OF IMPACT STATEMENTS

Impact Statement	Level of Significance	Applicable Mitigation Measures
AIR QUALITY		
Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?	Less-Than-Significant Impact	None
Would the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Less-Than-Significant Impact	None
Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Less-Than-Significant Impact	None
Would the proposed project expose sensitive receptors to substantial pollutant concentrations?	Less-Than-Significant Impact	None
Would the proposed project create objectionable odors affecting a substantial number of people?	Less-Than-Significant Impact	None
GREENHOUSE GAS EMISSIONS		
Would the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-Than-Significant Impact	None
Would the proposed project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less-Than-Significant Impact	None

SOURCE: TAHA, 2018.

2.0 INTRODUCTION

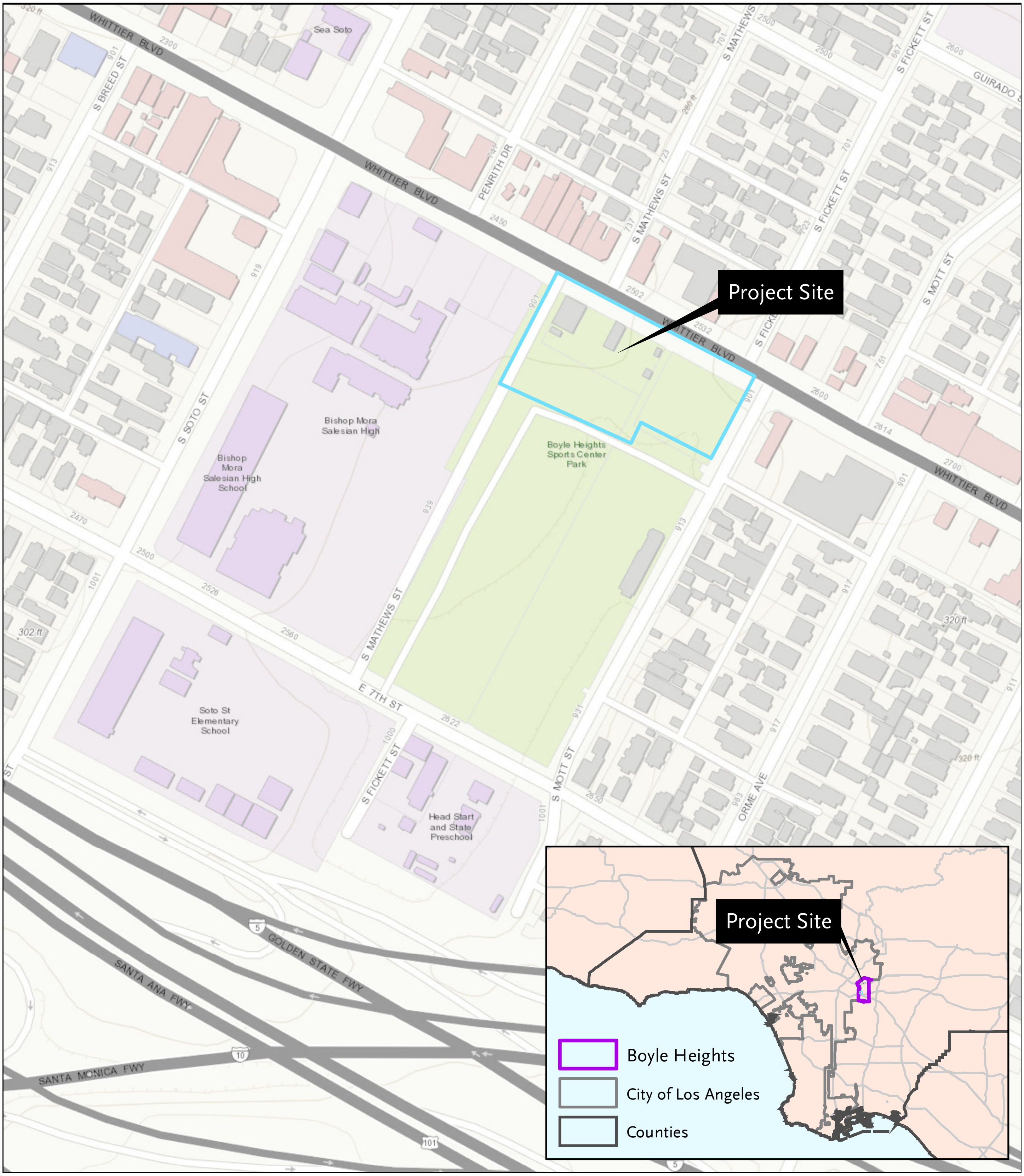
2.1 PURPOSE OF REPORT

The purpose of this report is to assess the potential significance of environmental impacts related to air quality and GHG emissions associated with construction and operation of the proposed project to satisfy the requirements of the CEQA Guidelines. Following the project description, the contents of the air quality assessment of this report include an overview of the topic of air quality, a summary of air quality management regulations relevant to the proposed project, a discussion of the existing environmental setting, and the assessment of potential environmental impacts based on the Appendix G Environmental Checklist criteria for Air Quality. The GHG emissions assessment provides an overview of the atmospheric processes that make GHG emissions an environmental concern, a summary of the regulatory framework established to control GHG emissions and a brief discussion of GHG emissions trends in California, and finally analyzes the GHG emissions associated with implementation of the proposed project in the context of applicable regulations and the Appendix G Environmental Checklist criteria criteria. Impact determinations are provided for each environmental checklist item.

2.2 PROJECT DESCRIPTION

The proposed project includes a new 10,000 square foot gym at the Boyle Heights Sports Center located at 933 South Mott Street in the City of Los Angeles. The new gym will offer multi-use space for the Boyle Heights community. It will include a full-sized basketball court, staff offices for the City of Los Angeles Department of Recreation and Parks, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Incorporating sustainable design principles and drought-resistant landscaping, the new facility will be certified as a Leadership in Energy and Environmental Design (LEED)-Net Zero (producing as much or more energy than it consumes) facility. The proposed project also includes an 8,700-square-foot surface parking lot.

The project site is currently occupied by two vacant dilapidated buildings situated along Whitter Boulevard, between Mott Street and Mathews Street. **Figure 2-1** shows the location of the project site. The adjacent land uses include commercial uses to the north, commercial and an automobile repair shop to the east, multi-family residential to the south and the Santa Isabel Catholic School/Church to the west.



Source: TAHA, 2018.

Boyle Heights Sports Center Gym
Air Quality and Greenhouse Gas Emissions Impact Study

FIGURE 2-1
PROJECT LOCATION

TAHA 2018-003 LABOE

3.0 AIR QUALITY

This section examines the degree to which the proposed project may result in changes to air quality on regional and local scales. This section also describes the characteristics and effects of air pollutants, the applicable regulatory framework, the existing air quality conditions, and methodology and significance thresholds in the proposed project area. This section assesses the potential significance of air pollutant emissions associated with construction and operation of the proposed project. Emissions are quantified in terms of pounds (lb/day) of pollutant emitted into the atmosphere on a daily basis. The concentration of a pollutant in ambient air is defined by the amount of air pollutant per volumetric unit of air, expressed in terms of parts-per-million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

3.1 AIR POLLUTANT CHARACTERISTICS AND EFFECTS

Air quality is characterized by ambient air concentrations of seven specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. These specific pollutants, known as “criteria air pollutants,” are pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal ambient concentration criteria are known as the National Ambient Air Quality Standards (NAAQS), and the California ambient concentration criteria are referred to as the California Ambient Air Quality Standards (CAAQS). Federal criteria air pollutants include ground-level ozone (O_3), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), respirable particulate matter ten microns or less in diameter (PM_{10}), fine particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead (Pb). The following descriptions of each criteria air pollutant and their health effects are based on information provided by the SCAQMD.[1]

3.1.1 Federal Criteria Air Pollutants

Ozone (O_3). O_3, a colorless gas with a sharp odor, is a highly reactive form of oxygen. High O_3 concentrations exist naturally in the stratosphere. However, it is also formed in the atmosphere when volatile organic compounds (VOC) and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight (also known as smog). The primary sources of VOC and NO_X, the components of O_3, are automobile exhaust and industrial sources. Some mixing of stratospheric O_3 downward through the troposphere to the earth’s surface does occur; however, the extent of O_3 transport is limited.

The propensity of O_3 for reacting with organic materials causes it to be damaging to living cells and cause health effects. O_3 enters the human body primarily through the respiratory tract and causes respiratory irritation and discomfort, makes breathing more difficult during exercise, and reduces the respiratory system’s ability to remove inhaled particles and fight infection. Individuals exercising outdoors, children and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for O_3 effects.

Nitrogen Dioxide (NO_2). NO_2 is a reddish-brown gas with a bleach-like odor. Nitric oxide (NO) is a colorless gas, formed from nitrogen (N_2) and oxygen (O_2) under conditions of high temperature and pressure which are generally present during combustion of fuels (e.g., motor vehicles); NO reacts rapidly with the oxygen in air to form NO_2. NO_2 is responsible for the brownish tinge of polluted air. The two gases, NO and NO_2, are referred to collectively as NO_X. In the presence of sunlight, atmospheric NO_2 reacts and splits to form a NO molecule and an oxygen atom. The oxygen atom can react further to form O_3, via a complex series of chemical reactions involving hydrocarbons.

[1] SCAQMD, *Final Program Environmental Impact Report for the 2016 AQMP*, May 2018.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California (fewer or no stoves). In healthy subjects, increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2. Larger decreases in lung functions are observed in individuals with asthma and/or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. More recent studies have found associations between NO_2 exposures and cardiopulmonary mortality, decreased lung function, respiratory symptoms and emergency room asthma visits.

Carbon Monoxide (CO). CO is a colorless, odorless, relatively inert gas. It is a trace constituent in the unpolluted troposphere and is produced by both natural processes and human activities. In remote areas far from human habitation, CO occurs in the atmosphere at an average background concentration of 0.04 ppm, primarily as a result of natural processes such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

Sulfur Dioxide (SO_2). SO_2 is a colorless gas with a sharp odor. It reacts in air to form sulfuric acid, which contributes to acid precipitation, and sulfates, which are components of particulate matter. Main sources of SO_2 include coal and oil used in power plants and industries. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics. All asthmatics are sensitive to the effects of SO_2. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, is observed after acute higher exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses, even after exposure to higher concentrations of SO_2.

Particulate Matter (PM_{10} and $PM_{2.5}$). Particles small enough to be inhaled into the deepest parts of the lung are of great concern to public health. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Emissions of $PM_{2.5}$ result from fuel combustion (e.g., motor vehicles, power generation and industrial facilities), residential fireplaces and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC.

Respirable particles (PM_{10}) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM. A consistent correlation between elevated ambient fine particulate matter ($PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. Studies have reported an association between long-term exposure to air pollution dominated by $PM_{2.5}$ and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to PM. In addition to children, the elderly, and people with pre-existing respiratory and/or cardiovascular disease appear to be more susceptible to the effects of PM_{10} and $PM_{2.5}$.

Lead (Pb). Pb in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric Pb over the past three decades. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death. There is no evidence to suggest that there are direct effects of Pb on the respiratory system.

3.1.2 State Criteria Air Pollutants

The State of California has established CAAQS for the following pollutants in addition to those that are regulated under the NAAQS.

Visibility-Reducing Particles. Deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality. Visibility reduction from air pollution is often due to the presence of sulfur and NO_X, as well as PM.

Sulfates (X-SO_4^{2-}). X-SO_4^{2-} are chemical compounds which contain the sulfate ion (SO_4^{2-}) and are part of the mixture of solid materials that comprise PM_{10}. Most of SO_X in the atmosphere are produced by oxidation of SO_2. Oxidation of SO_2 yields sulfur trioxide, which reacts with water to form sulfuric acid, which contributes to acid deposition. The reaction of sulfuric acid with basic substances such as ammonia yields SO_4^{2-}, a component of PM_{10} and $PM_{2.5}$. Both mortality and morbidity effects have been observed with an increase in ambient SO_4^{2-} concentrations. However, studies to separate the effects of SO_4^{2-} from the effects of other pollutants have generally not been successful. Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure.

Hydrogen Sulfide (H_2S). H_2S is a colorless, flammable, poisonous compound having a characteristic rotten-egg odor. It is used as a reagent and as an intermediate in the preparation of other reduced sulfur compounds. It is also a by-product of the desulfurization processes in the oil and gas industries and rayon production, sewage treatment, and leather tanning. Geothermal power plants, petroleum production and refining, and sewer gas are specific sources of H_2S in California. High H_2S exposure has been documented as a cause of sudden death in the workplace.

Vinyl Chloride. Vinyl chloride is a colorless, flammable gas at ambient temperature and pressure. It is also highly toxic and is classified as a known carcinogen by the American Conference of Governmental Industrial Hygienists and the International Agency for Research on Cancer. At room temperature, vinyl chloride is a gas with a sickly-sweet odor that is easily condensed. However, it is stored at cooler temperatures as a liquid. Due to the hazardous nature of vinyl chloride to human health, there are no end products that use vinyl chloride in its monomer form. Vinyl chloride is a chemical intermediate, not a final product.

Vinyl chloride is an important industrial chemical chiefly used to produce polyvinyl chloride (PVC). The process involves vinyl chloride liquid fed to polymerization reactors where it is converted from a monomer to a polymer PVC. The final product of the polymerization process is PVC in either a flake or pellet form. From its flake or pellet form, PVC is sold to companies that heat and mold the PVC into end products such as PVC pipe and bottles. Vinyl chloride is not only used to make PVC products, but it is also a natural degradation product of chlorinated industrial solvents (e.g., perchloroethylene, trichloroethene, etc.). Vinyl chloride emissions are historically associated primarily with landfills and sites contaminated with chlorinated solvents.

3.1.3 Air Toxics

Air toxics are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. Air toxics are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects; however, the emission of a toxic chemical does not automatically create a health hazard. Air toxics include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. According to the 2006 California Almanac of Emissions and Air Quality, the majority of the estimated health risks from air toxics can be attributed to relatively few compounds, the most important being PM from the exhaust of diesel-fueled engines (diesel PM). Diesel PM differs from other air toxics in that it is a complex mixture of hundreds of substances rather than a single substance.

Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, and some neurological effects, such as lightheadedness. Acute exposure may also elicit a cough or nausea, as well as exacerbate asthma. Chronic exposure to diesel PM in experimental animal inhalation studies has shown a range of dose-dependent lung inflammation and cellular changes in the lung and immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel PM is a likely carcinogen. Human epidemiological studies have demonstrated an association between diesel PM exposure and increased lung cancer rates in occupational settings.

3.2 REGULATORY FRAMEWORK

This portion of the air quality section provides brief discussions of the relevant regulations, policies, and programs that have been adopted by federal, state, and local agencies to protect air quality and public health.

Federal

The Clean Air Act (CAA) governs air quality at the national level and the USEPA is responsible for enforcing the regulations provided in the CAA. Under the CAA, the USEPA is authorized to establish NAAQS that set protective limits on concentrations of air pollutants in ambient air. Enforcement of the NAAQS is required under the 1977 CAA and subsequent amendments. As required by the CAA, NAAQS have been established for the seven criteria air pollutants: O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and Pb. These pollutants are common byproducts of human activities and have been documented through scientific research to cause adverse health effects. The CAA grants the USEPA authority to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS concentrations have been met on a regional scale relying upon air monitoring data from the most recent three-year period. The NAAQS are summarized in **Table 3-1**.

TABLE 3-1: AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS DESIGNATIONS

Pollutant	Averaging Period	California		Federal	
		Standards (CAAQS)	Attainment Status	Standards (NAAQS)	Attainment Status
Ozone (O_3)	1-Hour Average	0.09 ppm (180 μg/m^3)	Nonattainment	--	--
	8-Hour Average	0.070 ppm (137 μg/m^3)	Nonattainment	0.070 ppm (137 μg/m^3)	Pending – Nonattainment
Carbon Monoxide (CO)	1-Hour Average	20 ppm (23 mg/m^3)	Attainment	35.0 ppm (40 mg/m^3)	Attainment
	8-Hour Average	9.0 ppm (10 mg/m^3)	Attainment	9.0 ppm (10 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	1-Hour Average	0.18 ppm (338 μg/m^3)	Attainment	0.10 ppm (188 μg/m^3)	Attainment
	Annual Arithmetic Mean	0.03 ppm (57 μg/m^3)	Attainment	0.053 ppm (100 μg/m^3)	Attainment
Sulfur Dioxide (SO_2)	1-Hour Average	0.25 ppm (655 μg/m^3)	Attainment	0.075 ppm (196 μg/m^3)	Pending – Attainment
	24-Hour Average	0.04 ppm (105 μg/m^3)	Attainment	0.14 ppm (365 μg/m^3)	Attainment
	Annual Arithmetic Mean	--	--	0.030 ppm (80 μg/m^3)	Attainment
Respirable Particulate Matter (PM_{10})	24-Hour Average	50 μg/m^3	Nonattainment	150 μg/m^3	Attainment (Maintenance)
	Annual Arithmetic Mean	20 μg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-Hour Average	--	--	35 μg/m^3	Nonattainment
	Annual Arithmetic Mean	12 μg/m^3	Nonattainment	12.0 μg/m^3	Nonattainment
Lead (Pb)	30-day Average	1.5 μg/m^3	Attainment	--	--
	Calendar Quarter	--	--	1.5 μg/m^3	Unclassified/ Attainment
	Rolling 3-Month Average	--	--	0.15 μg/m^3	Unclassified/ Attainment
Sulfates	24-Hour Average	25 μg/m^3	Attainment	**No Federal Standards**	
Hydrogen Sulfide	1-Hour Average	0.03 ppm (42 μg/m^3)	Attainment		
Vinyl Chloride	24-Hour Average	0.01 ppm (26 μg/m^3)	Attainment		

ppm = Parts per million; μg/m^3 = micrograms per cubic meter.
SOURCE: SCAQMD, *NAAQS and CAAQS Attainment Status for South Coast Air Basin*, February 2016.

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

State

Air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). The CCAA is administered by the California Air Resources Board (CARB) at the state level and by the air quality management districts at the regional and local levels. The CCAA requires all areas of the state to achieve and maintain the CAAQS by the earliest feasible date, which is determined in the most recent SIP based on existing emissions and reasonably foreseeable control measures that will be implemented in the future. The CAAQS are also summarized in **Table 3-1**, which also presents the attainment status designations for the Los Angeles County portion of the SCAB. The CARB's statewide comprehensive air toxics program was established in the early 1980s. The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics. Under the Toxic Air Contaminant Identification and Control Act, the CARB is required to prioritize the identification and control of air toxics emissions. In selecting substances for review, the CARB must consider criteria relating to the risk of harm to public health, such as amount or potential amount of emissions, manner of and exposure to usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community.

Regional

The 1977 Lewis Air Quality Management Act established the SCAQMD in order to coordinate air quality planning efforts throughout Southern California. The SCAQMD has jurisdiction over a total area of 10,743 square miles, consisting of the SCAB—which comprises 6,745 square miles including Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties—and the Riverside County portion of the Salton Sea and Mojave Desert Air Basins. The proposed project would be located in the neighborhood of Reseda, which is situated in the SCAB portion of Los Angeles County and is within the jurisdiction of the SCAQMD.

The SCAQMD is tasked with preparing regional programs and policies designed to improve air quality within the SCAB, which are assessed and published in the form of the Air Quality Management Plan (AQMP). The AQMP is updated every four years to evaluate the effectiveness of the adopted programs and policies and to forecast attainment dates for nonattainment pollutants to support the SIP based on measured regional air quality and anticipated implementation of new technologies and emissions reductions. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options, and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in GHG emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour O_3 standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP acknowledged that the most significant air quality challenge in the SCAB is the reduction of NO_X emissions sufficient to meet the upcoming ozone standard deadlines. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approach attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date.

The 2016 AQMP includes an element that is related to transportation and sustainable communities planning. Pursuant to California Health and Safety Code Section 40450, the Southern California Association of Governments (SCAG)—the Metropolitan Planning Organization (MPO) for Southern California—has the responsibility of preparing and approving the portions of the 2016 AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The analysis incorporated into the 2016 AQMP is based on the forecasts contained within the SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Land use strategies outlined in the 2016–2040 RTP/SCS that will contribute to regional air quality improvements include: focusing new growth around transit/high quality transit areas (HQTAs), planning for growth around livable corridors, providing more options for short trips/neighborhood mobility areas, and supporting local sustainability planning.

The SCAQMD has also established various rules to manage and improve air quality in the SCAB. The project proponent shall comply with all applicable SCAQMD Rules and Regulations pertaining to construction activities, including, but not limited to:

- Rule 402 (Nuisance) states that a person should not emit air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- Rule 403 (Fugitive Dust) controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, limiting vehicle speeds on unpaved roads to 15 miles per hour, and maintaining effective cover over exposed areas. Rule 403 also prohibits the release of fugitive dust emissions from any active operation, open storage piles, or disturbed surface area beyond the property line of the emission source and prohibits particulate matter deposits on public roadways.

3.3 EXISTING ENVIRONMENTAL SETTING

3.3.1 Air Pollution Climatology

The project site is located within the SCAB, which is subject to some of the worst air pollution in the nation due to the immense magnitude of emissions sources and the combination of topography, low mean atmospheric mixing height, and abundant sunshine. Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The mountains and hills surrounding the SCAB contribute to the variation of rainfall, temperature, and winds throughout the region.

During the spring and early summer, pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the Earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants become more concentrated in urbanized areas with pollution sources of greater magnitude.

3.3.2 Local Climate Conditions

The mountains and hills within the SCAB contribute to the variation of rainfall, temperature, and winds throughout the region. The nearest meteorological station that collects data describing local climate conditions in the proposed project area is at the University of Southern California (USC) campus, which is situated approximately three miles west of the proposed project. The USC campus meteorological station continuously measures and records temperature and precipitation levels throughout the year. The annual average temperature in the proposed project area is 65.4 degrees Fahrenheit (°F).[2] The project site and surrounding area experience a mean winter temperature of 58.9°F and a mean summer temperature of 72.6°F.[3] Within the project site and its vicinity, the average wind speed is approximately 2.8 miles per hour from the west.[4]

According to the USC campus meteorological station data, total precipitation in the proposed project area averages approximately 14.9 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages 2.8 inches during the winter, 0.75 inches during the spring, 1.0 inch during the fall, and less than 0.1 inch during the summer.[5]

3.3.3 Local Air Quality Conditions

Air quality within the SCAB region is characterized by concentrations of air pollutants measured at 40 monitoring stations located throughout the SCAQMD jurisdiction. The SCAB is divided geographically into 38 source receptors areas (SRAs), each of which contains an air quality monitoring station. The SRA boundaries were drawn based on the local emission inventories and surrounding topography. The proposed project is located in SRA 1 (Central Los Angeles). The monitoring station that collects ambient air quality data in SRA 1 is the Los Angeles-North Main Street Monitoring Station located at 1630 North Main Street, Los Angeles, CA 90012 with data collected up to year 2016.[6] From the past five years of collected data, ozone and $PM_{2.5}$ pollutants have exceeded state and federal standards and PM_{10} pollutants have only exceeded state standards.[7]

3.3.4 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The CARB has identified the following groups who are most likely to experience adverse health effects due to exposure to air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, land uses that constitute sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and

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[2] Western Regional Climate Center, *Historical Climate Information*, http://www.wrrc.dri.edu, accessed on May 15, 2018.
[3] *Ibid*.
[4] SCAQMD, *Meteorological Data*, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod, accessed on May 15, 2018.
[5] Western Regional Climate Center, *Historical Climate Information*, http://www.wrrc.dri.edu, accessed on May 15, 2018.
[6] CARB, *Quality Assurance Air Monitoring Site Information*, accessed May 17, 2018.
[7] CARB, Air Quality Data Statistics, *Top 4 Summary*, accessed May 17, 2018.

retirement homes. As shown in **Figure 3-1**, the sensitive land uses in closest proximity to the project site include the Santa Isabel Catholic School/Church play yard located approximately 100 feet to the west, residences located approximately 150 feet to the southeast, and residences located approximately 200 feet to the north.

3.4 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

3.4.1 Methodology

Implementation of the proposed project will involve the construction and operation of a gym with an adjacent surface parking lot. The air quality analysis conducted for the proposed project is consistent with the methods described in the SCAQMD *CEQA Air Quality Handbook* (1993 edition), as well as the updates to the *CEQA Air Quality Handbook*, as provided on the SCAQMD website. The SCAQMD recommends the use of the California Emissions Estimator Model (CalEEMod, version 2016.3.1) as a tool for quantifying emissions of air pollutants that will be generated by constructing and operating development projects under CEQA. The detailed CalEEMod output files disclosing estimated air pollutant emissions can be found in the **Appendix**.

Sources of air pollutant emissions associated with construction activities include off-road equipment exhaust, fugitive dust particulate matter (PM_{10} and $PM_{2.5}$) from earthmoving activities, and vehicle trips to and from the project site for construction workers and material delivery and hauling disposal of demolition debris. Construction of the proposed project is anticipated to take a total of approximately 68 weeks. Existing structures on the project site include two vacant dilapidated buildings, with asphalt paving that would be removed prior to construction activities. Demolition of the two vacant buildings is anticipated to last approximately three and a half weeks commencing in March 2021. Subsequently, construction of the proposed project will involve site preparation and grading of the project site which will last approximately four weeks, followed by an approximate 51-week facility construction phase. Paving of the parking lots and finishing of the building structures will occur during the final eight weeks of construction. The CalEEMod software was utilized to quantify estimates of maximum daily air pollutant emissions from construction equipment use and vehicular travel.

The SCAQMD recommends that air pollutant emissions generated by construction activities be assessed for potentially significant air quality impacts at regional and local scales. Regional emissions include air pollutant emissions from all sources associated with construction activities, while localized emissions refer specifically to those emissions generated by sources on the project site. Maximum daily emissions were quantified for each construction activity based on the number and type of equipment required and daily hours of use, in addition to vehicle trips to and from the project site. The CalEEMod model provides regionally-specific default values for daily equipment usage rates and worker trip lengths, as well as emissions factors for heavy duty equipment and passenger vehicles that have been derived by the CARB through extensive air quality investigations and surveys.

Localized air pollutant emissions from construction activities were analyzed in accordance with the SCAQMD Localized Significance Threshold (LST) methodology. The LST methodology was devised to prevent small-scale hot spot concentrations of air pollutants from exceeding ambient air quality standards at nearby sensitive receptors. The project site is located in the Central Los Angeles SRA, which is identified as SRA 1 within the SCAQMD jurisdiction.

Source: TAHA, 2018.

Boyle Heights Sports Center Gym
Air Quality and Greenhouse Gas Emissions Impact Study

TAHA 2018-003

LABOE

FIGURE 3-1

SENSITIVE RECEPTORS

The LST methodology document contains SRA-specific values for maximum allowable on-site emissions (i.e., construction equipment and fugitive dust) during construction based on locally monitored air quality, the size of maximum daily disturbed area, and the proximity of sensitive receptors. Maximum on-site emissions resulting from construction activities were quantified and assessed against the applicable LST values for a one-acre project site having sensitive receptors within 80 feet (approximately 25 meters) of the project site boundary in SRA 1; the applicable LST values are shown in **Table 3-2** below.

The CalEEMod software also generates estimates of air pollutant emissions that will be generated during future operation of the proposed project. The primary sources of operational air pollutant emissions are stationary sources associated with VOC off-gassing from the paved parking lot and vehicle trips by patrons to and from the project site. The transportation study for the proposed project determined that there would be approximately 288 daily trips per day.

3.4.2 CEQA Significance Thresholds

In accordance with Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on the environment related to air quality if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan;
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
d) Expose sensitive receptors to substantial pollutant concentrations; or
e) Create objectionable odors affecting a substantial number of people.

The SCAQMD published a *CEQA Air Quality Handbook* to guide air quality assessments for CEQA projects within its jurisdiction. SCAQMD methodologies recommend that air pollutant emissions be analyzed in both regional and local contexts. Regional emissions refer to all emissions that would be associated with construction and operation of a project, while localized emissions refer to only those emissions that would be produced by sources located on the project site. To assist in the assessment of air pollutant emissions under impact criteria a), b), and c) above, the SCAQMD established maximum daily threshold values for air pollutant emissions from CEQA projects within the SCAB. The mass daily thresholds were derived using regional emissions modeling techniques to prevent the occurrence of air quality violations that would obstruct implementation of the regional AQMP and hinder efforts to improve regional air quality.

Table 3-2 presents the SCAQMD mass daily air quality significance thresholds for regional and localized emissions of regulated pollutants resulting from construction activities.[8] The localized air quality significance thresholds are specific to SRA 1 for a one-acre construction site with sensitive receptors within 80 feet (approximately 25 meters) and were obtained from the SCAQMD LST guidance document.[9,10] The LST values were derived from regionally-specific modeling of pollutant emissions and are designed to prevent localized pollutant concentrations from exceeding applicable ambient air quality standards near construction sites. Also presented in **Table 3-2** are the operational mass daily thresholds applicable within the SCAQMD jurisdiction.

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[8]SCAQMD, *SCAQMD Air Quality Significance Thresholds – Mass Daily Thresholds*, March 2015.
[9]SCAQMD, *Final Localized Significance Threshold Methodology Appendix C Mass Rate Lookup Tables*, October 21, 2009.
[10]SCAQMD, *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*, 2008.

TABLE 3-2: SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS – MASS DAILY EMISSIONS

Pollutant	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
CONSTRUCTION						
Regional Threshold (lb/day)	75	100	550	150	150	55
Localized Threshold (lb/day)	--	74	680	--	5	3
OPERATION						
Regional Threshold (lb/day)	55	55	550	150	150	55

Note: LST values selected for 1-acre daily disturbance based on equipment inventory and 25-meter receptor distance in SRA 1.
SOURCE: SCAQMD, 2015.

3.5 ENVIRONMENTAL IMPACTS

3.5.1 Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

Construction. According to the SCAQMD, there are two key indicators of consistency with the applicable air quality plan: 1) whether the proposed project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plan; and 2) whether the proposed project would cause the project area to exceed the forecasted growth incorporated into the applicable air quality plan.

The first consistency criterion is related to violations of the CAAQS and NAAQS. Construction emissions associated with development of the proposed project would be temporary in nature and would not have a long-term impact on the region's ability to meet California and federal air quality standards. As described under the impact discussion for **Criterion 3.5.2** (Section 3.5.2), maximum daily emissions of air pollutants from construction activities would not exceed regional or localized significance threshold values. In addition, construction activities associated with the proposed project would comply with State and local strategies designed to control air pollution, such as SCAQMD Rules 402 and 403. By adhering to the stringent SCAQMD rules and regulations pertaining to fugitive dust control and maintaining maximum daily emissions below the SCAQMD mass daily thresholds, project construction activities would be consistent with the goals and objectives of the applicable air quality plan to improve air quality in the SCAB and would not result in an air quality violation.

The second consistency criterion requires that the proposed project not exceed the assumptions incorporated into the applicable air quality plan. The most applicable air quality plans for the proposed project are the 2016 AQMP, which is based on the SCAG 2016–2040 RTP/SCS. A large-scale individual project could potentially exceed assumptions in the air quality plan if it resulted in a zoning change that resulted in disproportionate growth relative to the land use types analyzed in the air quality plan. However, the air quality plan focuses on long-term, operational sources of air pollutants that contribute to the regional emission inventory. Short-term, temporary emissions associated with construction activities would not conflict with the air quality plan so long as no SCAQMD air quality mass daily thresholds of significance are exceeded. As shown in **Table 3-3** under **Criterion 3.5.2**, construction activities would not generate daily air pollutant emissions of sufficient magnitude to exceed any applicable threshold of significance and impacts under **Criterion 3.5.1** associated with construction activities would be less than significant for the proposed project, and no mitigation is required.

TABLE 3-3: ESTIMATED DAILY CONSTRUCTION EMISSIONS

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
DEMOLITION						
On-Site Emissions	2.7	28.6	16.3	<0.1	1.3	1.2
Off-Site Emissions	0.2	5.5	1.9	<0.1	0.5	0.2
Total	***3.0***	***34.1***	***18.2***	***<0.1***	***1.8***	***1.3***
SITE PREPARATION						
On-Site Emissions	0.7	7.7	3.2	<0.1	0.3	0.2
Off-Site Emissions	0.1	1.1	0.9	<0.1	0.3	0.1
Total	***0.8***	***8.9***	***4.1***	***<0.1***	***0.5***	***0.3***
SITE GRADING						
On-Site Emissions	2.2	23.3	14.8	<0.1	3.7	2.3
Off-Site Emissions	0.2	5.5	1.9	<0.1	0.5	0.2
Total	***2.5***	***28.8***	***16.8***	***<0.1***	***4.2***	***2.5***
BUILDING CONSTRUCTION						
On-Site Emissions	1.6	17.2	16.7	<0.1	0.8	0.7
Off-Site Emissions	0.1	0.6	0.9	<0.1	0.3	0.1
Total	***1.7***	***17.8***	***17.7***	***<0.1***	***1.0***	***0.8***
PAVING + ARCHITECTURAL COATING						
On-Site Emissions	2.5	7.3	10.4	<0.1	0.3	0.3
Off-Site Emissions	0.1	1.0	0.7	<0.1	0.2	0.1
Total	***2.6***	***8.3***	***11.1***	***<0.1***	***0.5***	***0.4***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**3.0**	**34.1**	**18.2**	**<0.1**	**4.2**	**2.5**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	**--**	**28.6**	**16.7**	**--**	**3.7**	**2.3**
Localized Significance Threshold	--	74	680	--	5	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Emissions modeling files can be found in the **Appendix**.
SOURCE: TAHA, 2019.

Operation. Implementation of the proposed project would introduce a new public recreation facility to the community of Boyle Heights, which would generate a maximum of approximately 288 daily vehicle trips in the project area. Stationary source emissions associated with the proposed project would be minimal, as shown in **Table 3-4** under **Criterion 3.5.2**. The emissions modeling results presented in **Table 3-4** demonstrate that operation of the proposed project would not exceed any applicable SCAQMD threshold. Furthermore, implementation of the proposed project would not introduce any new residential or commercial land uses to the project area, and therefore population and employment projections for the region would not be affected. The proposed project would not have any potential to result in growth that would exceed the projections incorporated into the AQMP or the SCAG 2016–2040 RTP/SCS. Therefore, the proposed project would result in a less than significant impact related to operational air pollutant emissions under **Criterion 3.5.1**, and no mitigation is required.

3.5.2 Would the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact Analysis

Construction. Construction of the proposed project would have a potentially significant air quality impact under this criterion if maximum daily emissions of any regulated pollutant exceeded the applicable SCAQMD air quality significance thresholds presented in **Table 3-2**. Daily emissions of regulated pollutants were quantified following the methodology described in Section 3.4.1 for each phase of construction activity. The estimate of fugitive dust emissions account for Rule 403 compliance. Examples of Rule 403 compliance include: a) All exposed areas will be frequently watered to reduce the generation of dust, and b) Vehicle speed of construction vehicles/equipment in exposed areas (i.e., unpaved access) shall be reduced to reduce the generation of dust.

Table 3-3 shows a comparison of the maximum daily emissions during each phase of construction to the applicable SCAQMD air quality significance thresholds. Maximum daily emissions of air pollutants that would be generated by proposed project construction activities would not exceed any applicable regional or localized threshold values. Impacts would be less than significant and no mitigation is required.

Operation. Implementation of the proposed project would introduce approximately 288 daily vehicle trips to the project area and marginally increase area source emissions. The new facility will be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, electricity-related emissions have been excluded from the emissions summary. The results of operational emissions modeling are presented in **Table 3-4**. Maximum daily emissions of all regulated pollutants would remain substantially below the applicable SCAQMD operational mass daily thresholds. Therefore, implementation of the proposed project would result in a less than significant impact related to operational air pollutant emissions, and no mitigation is required.

TABLE 3-4: ESTIMATED DAILY OPERATIONAL EMISSIONS

Source Category	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.2	<0.1	<0.1	0	<0.1	<0.1
Energy (Natural Gas)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile	0.5	1.9	5.7	<0.1	1.9	0.5
ANALYSIS						
Regional Total	**0.7**	**2.0**	**5.7**	**<0.1**	**2.1**	**0.5**
Regional Significance Threshold	55	55	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
SOURCE: TAHA, 2018.						

3.5.3 Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Impact Analysis

Construction. The SCAB is designated as nonattainment of the CAAQS and NAAQS for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is an ongoing regional cumulative impact associated with these air pollutants. Taking into account the existing environmental conditions, the SCAQMD propagated guidance that an individual project can emit allowable quantities of these pollutants on a regional scale without significantly contributing to the cumulative impacts.

As discussed above and shown in **Table 3-3**, air pollutant emissions associated with construction of the proposed project would not exceed any applicable SCAQMD air quality thresholds of significance. Despite the region being in nonattainment of the ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$, the SCAQMD does not consider individual project emissions of lesser magnitude than the mass daily thresholds to be cumulatively considerable. Therefore, the proposed project would not result in a cumulatively considerable net increase of nonattainment pollutants and the impact would be less than significant, no mitigation is required.

Operation. Implementation of the proposed project would create a new public recreation facility to the community of Boyle Heights, and operational air pollutant emissions would be substantially below the applicable SCAQMD mass daily thresholds. Operation of the gym would not introduce a substantial source of long-term O_3 precursor emission or particulate matter emissions for which the SCAB is currently designated nonattainment. As discussed above, the SCAQMD has propagated guidance that the project-specific mass daily thresholds may be used as a reference metric to evaluate the potential for cumulatively considerable net increases in nonattainment pollutants. If the SCAQMD mass daily thresholds were exceeded, further analysis would be warranted to ensure that emissions would not be cumulatively considerable. However, as shown in **Table 3-4**, operation of the proposed project would not exceed the SCAQMD mass daily threshold for VOC, NO_X, or particulate matter. Furthermore, the new facility will be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, implementation of the proposed project would result in a less than significant impact related to operational air pollutant emissions.

3.5.4 Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis

Construction. The SCAQMD devised its LST values to prevent the occurrence of localized hot spots of criteria pollutant concentrations at sensitive receptor locations surrounding the project site. The LST values were determined using emissions modeling based on ambient air quality measured throughout the SCAB. If maximum daily emissions remain below the LST values during construction activities, it is highly unlikely that air pollutant concentrations in ambient air would reach substantial levels sufficient to create public health concerns for sensitive receptors. As shown in **Table 3-3**, maximum daily emissions of criteria pollutants and O_3 precursors from sources located on the project site would not exceed any applicable LST values. Therefore, construction of the proposed project would not result in exposure of sensitive receptors to substantial concentrations of criteria pollutants.

With regards to emissions of air toxics, carcinogenic risks, and non-carcinogenic hazards, the use of heavy duty construction equipment and haul trucks during construction activities would release diesel PM to the atmosphere through exhaust emissions. Diesel PM is a known carcinogen, and extended exposure to elevated concentrations of diesel PM can increase excess cancer risks in individuals. However, carcinogenic risks are typically assessed over timescales of several years to decades, as the carcinogenic dose response is cumulative in nature. Short term exposures to diesel PM would have to involve extremely high concentrations in order to exceed the SCAQMD Air Quality Significance Threshold of 10 excess cancers per million.

Over the course of construction activities, average diesel PM emissions from on-site equipment would be approximately 0.75 pounds per day on construction work days, and 0.54 pounds per day when accounting for weekends. Therefore, it is highly unlikely that diesel PM concentrations would be of any public health concern during the 22-month construction period, and diesel PM emissions would cease upon completion of construction activities. Therefore, the proposed project would result in a less than significant impact related to construction toxic air contaminants.

Operation. The proposed project would introduce a new recreational facility to the project area. The proposed project does not include an industrial component that would constitute a new substantial stationary source of operational air pollutant emissions, nor does it include a land use that would generate a substantial number of heavy duty truck trips within the region. There would be no substantial source of air toxic emissions. Additionally, as shown in **Table 3-4**, daily emissions of criteria pollutants would remain far below the applicable SCAQMD Air Quality Significance Thresholds. Therefore, the proposed project would result in a less than significant impact related to operational toxic air contaminants.

3.5.5 Would the proposed project create objectionable odors affecting a substantial number of people?

Impact Analysis

Construction. A significant impact would occur if construction or operation of the proposed project would result in the creation of nuisance odors that would be noxious to a substantial number of people. Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other interior and exterior finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site, and would be temporary in nature and would not persist beyond the termination of construction activities. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. Therefore, the proposed project would result in a less than significant impact related to construction odors.

Operation. The proposed project would introduce a new recreational facility to the Project area. According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The project site would not be developed with land uses that are typically associated with odor complaints. On-site trash receptacles would have the potential to create adverse odors. Trash receptacles would be located and maintained in a manner that promotes odor control in accordance with the Los Angeles Clean Streets program and no adverse odor impacts are anticipated from these types of land uses. Therefore, the proposed project would result in a less than significant impact related to operational odors.

3.6 CUMULATIVE IMPACTS

Refer to **Criterion 3.5-3**, above, for a discussion of the cumulative impacts. The SCAQMD has indicated that the project-level air quality significance thresholds may be used as an indicator to determine if project emissions contribute considerably to an existing cumulative impact. As discussed in **Criterion 3.5-2**, air pollutant emissions associated with construction and operation of the proposed project would not exceed any applicable SCAQMD regional or localized air quality thresholds of significance. Therefore, implementation of the proposed project would not contribute to a cumulatively considerable net increase of criteria pollutants or O_3 precursors. Furthermore, the new facility will be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Cumulative impacts would be less than significant and no mitigation is required.

4.0 GREENHOUSE GAS

The purpose of this section is to discuss describe how the proposed project would affect regional GHG emissions. GHG emissions refer to airborne pollutants that are generally believed to affect global climate conditions. These pollutants have the effect of trapping heat in the atmosphere, thereby altering weather patterns and climatic conditions.

4.1 POLLUTANTS AND EFFECTS

GHG emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60°F. Without the natural greenhouse effect, the Earth's surface would be about 61°F cooler.[11]

In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), black carbon (black carbon is the most strongly light-absorbing component of particulate matter emitted from burning fuels such as coal, diesel, and biomass), and water vapor. CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. **Table 4-1** shows various GWP.

TABLE 4-1: GLOBAL WARMING POTENTIAL FOR VARIOUS GREENHOUSE GASES

Pollutant	Lifetime (Years)	Global Warming Potential (20-Year)	Global Warming Potential (100-Year)
Carbon Dioxide (CO_2)	--	1	1
Methane (CH_4)	12	21	25
Nitrous Oxide (N_2O)	114	310	298
Nitrogen Trifluoride	740	Unknown	17,200
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800
Perfluorocarbons (PFCs)	2,600-50,000	6,500-9,200	7,390-12,200
Hydrofluorocarbons (HFCs)	1-270	140-11,700	124-14,800

SOURCE: CARB, *Global Warming Potentials*, https://www.arb.ca.gov/cc/inventory/background/gwp.htm, accessed on May 21, 2018.

4.2 REGULATORY FRAMEWORK

In response to growing scientific and political concern with global climate change, a series of federal and state laws have been adopted to reduce GHG emissions. The following provides a brief summary of GHG regulations and policies. This is a not a n exhaustive list of all regulations and policies.

[11]California Environmental Protection Agency Climate Action Team, *Climate Action Report to Governor Schwarzenegger and the California Legislator*, March 2006.

Federal

- ***Massachusetts vs. Environmental Protection Agency, 127 S. Ct. 1438 (2007)*** **-** A supreme court ruling that CO_2 and other GHGs are pollutants under the CAA.

- **Energy Independence and Security Act -** This act set a Renewable Fuel Standard of 36 billion gallons of biofuel usage by 2022, increases Corporate Average Fuel Economy Standards of setting 35 miles per gallon of cars and light trucks by 2020 and sets new standards for lighting and residential and commercial appliance equipment.

- **National Fuel Efficiency Policy and Fuel Economy Standards -** This 2009 policy was designed to increase fuel economy by more than five percent by 2016 starting with model year 2012 cars and trucks.

- **Heavy-Duty Vehicle Program** – This 2011 program established the first fuel efficiency requirements for medium- and heavy-duty vehicles beginning with model year 2014.

State

- **Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24 of the California Code of Regulations)** – Title 24 standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings.

- **California Green Building Code -** Also referred to as CalGreen, lays out minimum requirements for newly constructed buildings in California, which will reduce GHG emissions through improved efficiency and process improvements.

- **Senate Bill 1078 (SB 1078), Senate Bill 107 (SB 107), and Executive Order (E.O.) S-14-08 (Renewables Portfolio Standard) -** Signed on September 12, 2002, SB 1078 required California to generate 20 percent of its electricity from renewable energy by 2017. SB 107, signed on September 26, 2006 changed the due date for this goal from 2017 to 2010, which was achieved by the state. On November 17, 2008, E.O. S-14-08, which established a Renewables Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

- **Executive Order (E.O.) S-3-05 -** E.O. S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

- **Assembly Bill 32 -** The California Global Warming Solutions Act of 2006, also known as Assembly Bill 32, was signed into law. Assembly Bill 32 focuses on reducing GHG emissions in California and requires the CARB to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020. The 2020 target reductions were estimated to be 174 million metric tons of CO_2e. In November 2017 CARB adopted the final 2017 Scoping Plan: The Strategy for Achieving California's 2030 GHG target (2017 Scoping Plan). The 2017 Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals.

- **Senate Bill 375 (SB 375) -** Provides a means for achieving Assembly Bill 32 goals through the reduction in emissions by cars and light trucks. SB 375 requires Regional Transportation Plans (RTPs) prepared by Metropolitan Planning Organizations (MPOs) to include Sustainable Communities Strategies (SCSs).

- **Senate Bill 743 (SB 743) -** Encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT), which contribute to GHG emissions, as required by Assembly Bill 32.

- **Executive Order (E.O) B-30-15 -** This policy set a goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. The E.O. establishes GHG emissions reduction targets to reduce emissions to 80 percent below 1990 levels by 2050 and sets an interim target of emissions reductions for 2030 as being necessary to guide regulatory policy and investments in California and put California on the most cost-effective path for long-term emissions reductions.

- **Senate Bill 32 (SB 32)** – This bill required a commitment to reducing statewide GHG emissions by 2020 to 1990 levels and by 2030 to 40 percent less than 1990 levels.

Regional

- **Southern California Association of Governments (SCAG) 2016–2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) -** SCAG is the MPO for the six-county region that includes Los Angeles, Orange, Riverside, Ventura, San Bernardino and Imperial counties. The 2016-2040 RTP/SCS includes commitments to reduce emissions from transportation sources to comply with SB 375. Goals and policies included in the 2016-2040 RTP/SCS to reduce air pollution consist of adding density in proximity to transit stations, mixed-use development and encouraging active transportation (i.e., non-motorized transportation such as bicycling).

Local

- **GreenLA Climate Action Plan -** The City of Los Angeles has issued guidance promoting sustainable development to reduce GHG emissions citywide in the form of a Climate Action Plan. The objective of GreenLA is to reduce GHG emissions 35 percent below 1990 levels by 2030.

- **ClimateLA -** In order to provide detailed information on action items discussed in GreenLA, the City published an implementation document titled ClimateLA. ClimateLA presents the existing GHG inventory for the City, describes enforceable GHG reduction requirements, provides mechanisms to monitor and evaluate progress, and includes mechanisms that allow the plan to be revised in order to meet targets. By 2030, the plan aims to reduce GHG emissions by 35 percent from 1990 levels which were estimated to be approximately 54.1 million metric tons.

- **Sustainable City pLAn -** The pLAn is a roadmap to reducing GHG emissions by 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050, all against a 1990 baseline.

- **Green Building Program -** The purpose of the City's Green Building Program is to reduce the use of natural resources, create healthier living environments and minimize the negative impacts of development on local, regional, and global ecosystems. The program consists of a Standard of Sustainability and Standard of Sustainable Excellence.

- **Los Angeles Green Building Code -** The Green Building Code is applicable to new buildings and alterations with building valuations over $200,000 (residential and non-residential). The Green Building Code is based on CalGreen and developed to reduce energy use, water use, and waste.

- **Existing Buildings Energy and Water Efficiency Ordinance -** This Ordinance is designed to facilitate the comparison of buildings' energy and water consumption, and reduce building operating costs, leading to reduced GHG emissions.

4.3 EXISTING ENVIRONMENTAL SETTING

GHGs are the result of both natural and human-influenced activities. Volcanic activity, forest fires, decomposition, industrial processes, landfills, consumption of fossil fuels for power generation, transportation, heating, and cooling are the primary sources of GHG emissions. Without human activity, the Earth would maintain an approximate, but varied, balance between the emission of GHGs into the atmosphere and the storage of GHG in oceans and terrestrial ecosystems. Increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) has contributed to a rapid increase in atmospheric levels of GHGs over the last 150 years.

CARB has prepared a statewide emissions inventory covering 2000 to 2015, which demonstrates that GHG emissions have decreased by 7.9 percent over that period.[12] Emissions in 2014 from the transportation sector, which represents California's largest source of GHG emissions and contributed 37 percent of total annual emissions, declined marginally relative to 2011 even while the economy and population continued to grow over that three year time period.[13] The long-term direction of transportation-related GHG emissions is another clear trend, with a 13 percent drop over the past ten years. **Table 4-2** shows GHG emissions from 2006 to 2015 in California.

TABLE 4-2: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY TREND

Sector	CO_2e Emissions (Million Metric Tons)									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Transportation	184	184	173	166	163	160	159	158	160	165
Industrial	93	90	90	87	91	91	91	93	94	92
Electric Power	105	114	120	101	90	88	95	90	88	84
Commercial and Residential	43	43	43	44	45	45	43	43	37	38
Agriculture	36	36	36	34	35	35	36	35	36	35
High Global Warming Potential	10	11	12	12	14	15	16	17	18	19
Recycling and Waste	8	8	8	8	8	8	8	8	9	9
Emissions Total	**479**	**486**	**483**	**453**	**446**	**442**	**445**	**445**	**442**	**440**

SOURCE: CARB, *California Greenhouse Gas Inventory 2000-2015*, June 6, 2017.

4.4 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

4.4.1 Methodology

GHG emissions that will be generated by the proposed project were estimated using CalEEMod, as recommended by the SCAQMD. CalEEMod quantifies GHG emissions from construction activities and future operation of projects. Sources of GHG emissions during project construction will include heavy-duty off-road diesel equipment and vehicular travel to and from the project site. Sources of GHG emissions during project operation will include employee and delivery vehicular travel, natural gas demand, water use, and waste generation. In accordance with SCAQMD methodology, the total amount of GHG emissions that would be generated by construction of the proposed project was amortized over a 30-year operational period to represent long-term impacts.

[12]CARB, *California Greenhouse Gas Inventory for 2000-2015 – by Category as Defined in the 2008 Scoping Plan,* June 6, 2017.

[13]*Ibid.*

4.4.2 CEQA Significance Criteria

In accordance with Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to GHG if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The CEQA Guidelines require lead agencies to adopt GHG thresholds of significance. When adopting these thresholds, the amended Guideline allows lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence, and/or to develop their own significance threshold. Neither the City nor the SCAQMD has officially adopted a quantitative threshold value for determining the significance of GHG emissions that will be generated by projects under CEQA. The SCAQMD published the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* in October 2008.[14] The document evaluated the analyses of the California Air Pollution Control Officers Associations (CAPCOA) White Paper as they applied to emissions of GHGs within the SCAQMD jurisdiction.

The SCAQMD convened a GHG CEQA Significance Threshold Stakeholder Working Group beginning in April of 2008 to examine alternatives for establishing quantitative GHG thresholds. A tiered screening methodology was outlined in the minutes of the final Working Group meeting on September 28, 2010.[15] Tier I consisted of determining whether the project qualified for an applicable categorical exemption under CEQA. A vast majority of projects do not qualify for such an exemption, and the GHG analysis would progress to Tier II. The Tier II screening would be based upon examining the project's consistency with a GHG reduction plan, typically included in a local general plan. The GHG reduction plan would comprise compliance with Assembly Bill 32 reduction goals, preparation of emissions estimates agreed upon by either CARB or the SCAQMD and compiled in a GHG emission inventory tracking system, and a process to monitor progress in achieving reduction targets and enforcement of corrective actions if Assembly Bill 32 goals were not met. In the absence of a local GHG reduction plan, or in the event that the project did not incorporate GHG reduction design features, the Working Group suggested moving on to a Tier III screening threshold based on annual mass emissions of carbon dioxide equivalents.

Under the Tier III methodology, the Working Group proposed a 10,000 metric tons of carbon dioxide equivalents ($MTCO_2e$) per year threshold for industrial projects and a 3,000 $MTCO_2e$ annual threshold for commercial and residential projects, including mixed-use. On December 5, 2008, the SCAQMD adopted the 10,000 $MTCO_2e$ for industrial projects where the SCAQMD is the lead agency. The Working Group proposed to extend this threshold for use by all lead agencies within the SCAQMD jurisdiction. The 3,000 $MTCO_2e$ annual threshold value for commercial and residential projects was selected based on a regional capture rate of 90 percent of all proposed CEQA projects in the SCAQMD jurisdiction, consistent with the methodology employed by the CAPCOA White Paper. At the Tier III analysis level, a project's GHG emissions would be less than significant if they remained below 3,000 $MTCO_2e$ on an annual basis.

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[14] SCAQMD, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

[15] SCAQMD, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15*, September 28, 2010, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf?sfvrsn=2, accessed on February 14, 2018.

The final proposed methodology, Tier V, relates to mitigation and CEQA offsets outlined in the CEQA Guidelines. Tier V would be utilized only if a project did not satisfy one of the previously outlined criteria for demonstrating less than significant impacts from GHG emissions. For the purposes of this environmental assessment, the interim Tier III screening threshold value of 3,000 $MTCO_2e$ per year is the most appropriate comparison value for impacts determination based on the commercial elements comprising the proposed project.

4.5 ENVIRONMENTAL IMPACTS

4.5-1 Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (*Less-Than-Significant Impact*)

Impact Analysis

The proposed project would generate GHG emissions from construction equipment and vehicular traffic. CalEEMod was used to prepare estimates of annual GHG emissions. **Table 4-3** presents the estimated emissions of GHGs that would be released to the atmosphere on an annual basis. Construction of the proposed project would produce approximately 356.4 $MTCO_2e$, or 11.9 $MTCO_2e$ annually over a 30-year period. The total annual operating emissions would be approximately 423.3 $MTCO_2e$ per year after accounting for amortized construction emissions. This mass rate is substantially below the most applicable quantitative draft interim threshold of 3,000 $MTCO_2e$ per year as recommended by the SCAQMD. The new facility will be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, indirect electricity-related emissions have been excluded from the emissions summary. Furthermore, the new facility will be certified as a LEED-Net Zero and would utilize photovoltaic installations for electricity needs. This would limit reliance from traditional means of electricity and would significantly decrease associated carbon emissions. Therefore, implementation of the proposed project will result in a less-than-significant impact related to GHG emissions.

TABLE 4-3: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS

Scenario and Source	Annual GHG Emissions ($MTCO_2e$ per Year)
Construction Emissions Amortized (Direct) /a/	11.9
Area Source Emissions (Direct)	<0.1
Mobile Source Emissions (Direct)	364.4
Energy – Natural Gas Emissions (Direct)	10.0
Waste Disposal Emissions (Indirect)	29.4
Water Distribution Emissions (Indirect)	7.5
Total Emissions	**423.3**
SCAQMD Draft Interim Significance Threshold	**3,000**
Exceed Threshold?	No

/a/ Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.
SOURCE: TAHA, 2018.

Mitigation Measure

Impacts will be less-than-significant, and no mitigation measures are required.

4.5-2 Would the proposed project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (*Less-Than-Significant Impact*)

Impact Analysis

The proposed project would comply with plans, policies and regulations adopted for reducing emissions of GHGs including Assembly Bill 32 Scoping Plan, which includes goals such as the expansion of energy efficiency and producing energy from renewable resources. The City of Los Angeles has published the GreenLA, An Action Plan to Lead the Nation in Fighting Global Warming (the LA Green Plan), where the City will increase renewable energy generation, improve energy conservation and efficiency. SB 375 requires the metropolitan planning organizations to prepare a SCS in their regional transportation plans to achieve the per capita GHG reduction targets and the region's SCS is contained within SCAG's 2016–2040 RTP/SCS. The RTP/SCS focuses on job growth in high quality transit areas, resulting in more opportunity for transit-oriented development. The proposed project would be located within walking distance of the Los Angeles County Metropolitan Transportation Authority (Metro) Local bus station lines 18, 106, 251, 252 and Metro RAPID 720 and 751 on Whitter Boulevard/Soto Street and would primarily serve the surrounding community. These bus routes would provide convenient connection to the regional transit system. The proposed project would be consistent with the mobility and transit accessibility objectives of the RTP/SCS.

Furthermore, the new facility would be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility. Therefore, the proposed project would result in a less-than-significant impact related to GHG reduction plans.

Mitigation Measure

Impacts would be less-than-significant, and no mitigation measures are required.

4.6 CUMULATIVE IMPACTS

The State of California, through Assembly Bill 32, has acknowledged that GHG emissions are a Statewide impact. Emissions generated by the proposed project combined with past, present, and reasonably probable future projects could contribute to this impact. The CEQA Guidelines emphasize that the effects of GHG emissions are cumulative in nature and should be analyzed in the context of CEQA's existing cumulative impacts analysis. The Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project. As discussed above, the proposed project would be LEED-Net Zero, consistent with Assembly Bill 32, and the 2016–2040 RTP/SCS. Therefore, the proposed project incremental contribution to that significant cumulative impact is not cumulatively considerable.

5.0 REFERENCES

California Air Pollution Control Officers Association, *California Emissions Estimator Model (CalEEMod v2016.3.2) User's Guide*, October 2017.

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Western Regional Climate Center, *Local Climate Data Summaries*, available at http://www.wrrc.dri.edu

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APPENDIX

Air Quality Calculations

LABOE Boyle Heights Sports Center

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.60	1000sqft	0.13	5,600.00	0
Other Non-Asphalt Surfaces	3.68	1000sqft	0.08	3,680.00	0
Parking Lot	8.70	1000sqft	0.20	8,700.00	0
Racquet Club	10.26	1000sqft	0.24	10,260.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Specific land uses

Construction Phase - Construction Schedule Provided

Off-road Equipment - construction info provided

Boomlift is classified as an 'aerial lift'

Off-road Equipment - Construction equipment inventory provided by project team
*Other construction equipment with 300 HP is a Concrete Truck
Scissor Lift and Boom Lift are classified as 'aerial lifts'
'Paving Equipment' is assigned to the vibrator.

Off-road Equipment - Construction Info Provided

Off-road Equipment - construction info provided

Off-road Equipment - Parking Lot Assumption

Off-road Equipment - Construction Info Provided

Trips and VMT - Construction Project Info

Demolition - 100 CY of materials exported, provided by client.

Grading - contruction info provided

Vehicle Trips - 288 total daily trips per trip report.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - compliance with scaqmd rule 403

Area Mitigation -

Energy Mitigation - Net Zero

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	58.00

tblConstructionPhase	NumDays	100.00	360.00
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	NumDays	2.00	25.00
tblConstructionPhase	NumDays	5.00	58.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	AcresOfGrading	0.00	12.50
tblGrading	MaterialExported	0.00	4,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblTripsAndVMT	HaulingTripNumber	12.00	500.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	5.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	12.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	12.00
tblVehicleTrips	CC_TTP	69.50	100.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	11.50	0.00

tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	ST_TR	21.35	28.10
tblVehicleTrips	SU_TR	17.40	28.10
tblVehicleTrips	WD_TR	14.03	28.10

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.9507	34.0585	18.2383	0.0533	7.0990	1.2690	8.2296	3.5135	1.1819	4.5543	0.0000	5,328.2809	5,328.2809	1.0965	0.0000	5,355.6929
2022	2.5999	15.8776	17.4487	0.0330	0.2620	0.6797	0.9417	0.0704	0.6371	0.7075	0.0000	3,199.5548	3,199.5548	0.7603	0.0000	3,218.5611
Maximum	**2.9507**	**34.0585**	**18.2383**	**0.0533**	**7.0990**	**1.2690**	**8.2296**	**3.5135**	**1.1819**	**4.5543**	**0.0000**	**5,328.2809**	**5,328.2809**	**1.0965**	**0.0000**	**5,355.6929**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.9507	34.0585	18.2383	0.0533	3.0910	1.2690	4.2217	1.4577	1.1819	2.4985	0.0000	5,328.2809	5,328.2809	1.0965	0.0000	5,355.6929
2022	2.5999	15.8776	17.4487	0.0330	0.2620	0.6797	0.9417	0.0704	0.6371	0.7075	0.0000	3,199.5548	3,199.5548	0.7603	0.0000	3,218.5610
Maximum	**2.9507**	**34.0585**	**18.2383**	**0.0533**	**3.0910**	**1.2690**	**4.2217**	**1.4577**	**1.1819**	**2.4985**	**0.0000**	**5,328.2809**	**5,328.2809**	**1.0965**	**0.0000**	**5,355.6929**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.45**	**0.00**	**43.70**	**57.36**	**0.00**	**39.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2372	3.0000e-005	2.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1800e-003	6.1800e-003	2.0000e-005		6.5900e-003
Energy	5.4900e-003	0.0499	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003		59.8569	59.8569	1.1500e-003	1.1000e-003	60.2126
Mobile	0.4385	1.9020	5.6705	0.0213	1.8745	0.0165	1.8910	0.5016	0.0154	0.5170		2,173.7469	2,173.7469	0.1092		2,176.4772
Total	**0.6812**	**1.9519**	**5.7153**	**0.0216**	**1.8745**	**0.0203**	**1.8948**	**0.5016**	**0.0192**	**0.5208**		**2,233.6100**	**2,233.6100**	**0.1104**	**1.1000e-003**	**2,236.6963**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2372	3.0000e-005	2.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1800e-003	6.1800e-003	2.0000e-005		6.5900e-003
Energy	5.4900e-003	0.0499	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003		59.8569	59.8569	1.1500e-003	1.1000e-003	60.2126
Mobile	0.4385	1.9020	5.6705	0.0213	1.8745	0.0165	1.8910	0.5016	0.0154	0.5170		2,173.7469	2,173.7469	0.1092		2,176.4772
Total	**0.6812**	**1.9519**	**5.7153**	**0.0216**	**1.8745**	**0.0203**	**1.8948**	**0.5016**	**0.0192**	**0.5208**		**2,233.6100**	**2,233.6100**	**0.1104**	**1.1000e-003**	**2,236.6963**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	4/2/2021	5	25	
2	Site Preparation	Site Preparation	4/5/2021	4/16/2021	5	10	
3	Grading	Grading	4/19/2021	5/21/2021	5	25	
4	Building Construction	Building Construction	5/24/2021	10/7/2022	5	360	
5	Paving	Paving	10/10/2022	12/28/2022	5	58	
6	Architectural Coating	Architectural Coating	10/10/2022	12/28/2022	5	58	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 0.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,390; Non-Residential Outdoor: 5,130; Striped Parking Area: 1,079 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Scrapers	1	8.00	367	0.48
Site Preparation	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Excavators	1	8.00	158	0.38
Grading	Other Construction Equipment	1	8.00	172	0.42
Grading	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	1	8.00	172	0.42
Building Construction	Paving Equipment	1	8.00	132	0.36
Building Construction	Rough Terrain Forklifts	1	8.00	100	0.40
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Air Compressors	1	8.00	78	0.48
Architectural Coating	Rough Terrain Forklifts	1	8.00	100	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	16.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	16.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	16.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	12.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1027	0.0000	0.1027	0.0156	0.0000	0.0156			0.0000			0.0000
Off-Road	2.7036	28.5757	16.3152	0.0362		1.2508	1.2508		1.1646	1.1646		3,493.1546	3,493.1546	0.9725		3,517.4669
Total	**2.7036**	**28.5757**	**16.3152**	**0.0362**	**0.1027**	**1.2508**	**1.3535**	**0.0156**	**1.1646**	**1.1801**		**3,493.1546**	**3,493.1546**	**0.9725**		**3,517.4669**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1708	5.4306	1.3339	0.0153	0.3497	0.0167	0.3664	0.0959	0.0160	0.1119		1,663.566 2	1,663.566 2	0.1189		1,666.539 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.2471**	**5.4828**	**1.9231**	**0.0171**	**0.5286**	**0.0182**	**0.5467**	**0.1433**	**0.0173**	**0.1606**		**1,835.126 4**	**1,835.126 4**	**0.1240**		**1,838.226 0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0401	0.0000	0.0401	6.0700e-003	0.0000	6.0700e-003			0.0000			0.0000
Off-Road	2.7036	28.5757	16.3152	0.0362		1.2508	1.2508		1.1646	1.1646	0.0000	3,493.154 6	3,493.154 6	0.9725		3,517.466 9
Total	**2.7036**	**28.5757**	**16.3152**	**0.0362**	**0.0401**	**1.2508**	**1.2909**	**6.0700e-003**	**1.1646**	**1.1707**	**0.0000**	**3,493.154 6**	**3,493.154 6**	**0.9725**		**3,517.466 9**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1708	5.4306	1.3339	0.0153	0.3497	0.0167	0.3664	0.0959	0.0160	0.1119		1,663.5662	1,663.5662	0.1189		1,666.5396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.2471**	**5.4828**	**1.9231**	**0.0171**	**0.5286**	**0.0182**	**0.5467**	**0.1433**	**0.0173**	**0.1606**		**1,835.1264**	**1,835.1264**	**0.1240**		**1,838.2260**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6860	7.7275	3.1974	0.0125		0.2577	0.2577		0.2371	0.2371		1,210.4525	1,210.4525	0.3915		1,220.2396
Total	**0.6860**	**7.7275**	**3.1974**	**0.0125**	**0.0000**	**0.2577**	**0.2577**	**0.0000**	**0.2371**	**0.2371**		**1,210.4525**	**1,210.4525**	**0.3915**		**1,220.2396**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0342	1.0861	0.2668	3.0700e-003	0.0699	3.3400e-003	0.0733	0.0192	3.2000e-003	0.0224		332.7132	332.7132	0.0238		333.3079
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.1104**	**1.1383**	**0.8560**	**4.7900e-003**	**0.2488**	**4.7900e-003**	**0.2536**	**0.0666**	**4.5300e-003**	**0.0711**		**504.2734**	**504.2734**	**0.0288**		**504.9943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6860	7.7275	3.1974	0.0125		0.2577	0.2577		0.2371	0.2371	0.0000	1,210.4525	1,210.4525	0.3915		1,220.2396
Total	**0.6860**	**7.7275**	**3.1974**	**0.0125**	**0.0000**	**0.2577**	**0.2577**	**0.0000**	**0.2371**	**0.2371**	**0.0000**	**1,210.4525**	**1,210.4525**	**0.3915**		**1,220.2396**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0342	1.0861	0.2668	3.0700e-003	0.0699	3.3400e-003	0.0733	0.0192	3.2000e-003	0.0224		332.7132	332.7132	0.0238		333.3079
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.1104**	**1.1383**	**0.8560**	**4.7900e-003**	**0.2488**	**4.7900e-003**	**0.2536**	**0.0666**	**4.5300e-003**	**0.0711**		**504.2734**	**504.2734**	**0.0288**		**504.9943**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Fugitive Dust					6.5704	0.0000	6.5704	3.3702	0.0000	3.3702			0.0000			0.0000
Off-Road	2.2279	23.2936	14.8438	0.0288		1.1125	1.1125		1.0235	1.0235		2,785.3837	2,785.3837	0.9009		2,807.9050
Total	**2.2279**	**23.2936**	**14.8438**	**0.0288**	**6.5704**	**1.1125**	**7.6829**	**3.3702**	**1.0235**	**4.3937**		**2,785.3837**	**2,785.3837**	**0.9009**		**2,807.9050**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1708	5.4306	1.3339	0.0153	0.3497	0.0167	0.3664	0.0959	0.0160	0.1119		1,663.566 2	1,663.566 2	0.1189		1,666.539 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.2471**	**5.4828**	**1.9231**	**0.0171**	**0.5286**	**0.0182**	**0.5467**	**0.1433**	**0.0173**	**0.1606**		**1,835.126 4**	**1,835.126 4**	**0.1240**		**1,838.226 0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5625	0.0000	2.5625	1.3144	0.0000	1.3144			0.0000			0.0000
Off-Road	2.2279	23.2936	14.8438	0.0288		1.1125	1.1125		1.0235	1.0235	0.0000	2,785.383 7	2,785.383 7	0.9009		2,807.905 0
Total	**2.2279**	**23.2936**	**14.8438**	**0.0288**	**2.5625**	**1.1125**	**3.6749**	**1.3144**	**1.0235**	**2.3379**	**0.0000**	**2,785.383 7**	**2,785.383 7**	**0.9009**		**2,807.905 0**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1708	5.4306	1.3339	0.0153	0.3497	0.0167	0.3664	0.0959	0.0160	0.1119		1,663.566 2	1,663.566 2	0.1189		1,666.539 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.2471**	**5.4828**	**1.9231**	**0.0171**	**0.5286**	**0.0182**	**0.5467**	**0.1433**	**0.0173**	**0.1606**		**1,835.126 4**	**1,835.126 4**	**0.1240**		**1,838.226 0**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5804	17.1502	16.7464	0.0294		0.7749	0.7749		0.7263	0.7263		2,833.762 5	2,833.762 5	0.7468		2,852.432 2
Total	**1.5804**	**17.1502**	**16.7464**	**0.0294**		**0.7749**	**0.7749**		**0.7263**	**0.7263**		**2,833.762 5**	**2,833.762 5**	**0.7468**		**2,852.432 2**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.5813	0.1685	1.5000e-003	0.0384	1.2300e-003	0.0396	0.0111	1.1800e-003	0.0122		160.4073	160.4073	0.0104		160.6662
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1145**	**0.6466**	**0.9050**	**3.6500e-003**	**0.2620**	**3.0400e-003**	**0.2650**	**0.0704**	**2.8400e-003**	**0.0732**		**374.8575**	**374.8575**	**0.0167**		**375.2742**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5804	17.1502	16.7464	0.0294		0.7749	0.7749		0.7263	0.7263	0.0000	2,833.7625	2,833.7625	0.7468		2,852.4322
Total	**1.5804**	**17.1502**	**16.7464**	**0.0294**		**0.7749**	**0.7749**		**0.7263**	**0.7263**	**0.0000**	**2,833.7625**	**2,833.7625**	**0.7468**		**2,852.4322**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.5813	0.1685	1.5000e-003	0.0384	1.2300e-003	0.0396	0.0111	1.1800e-003	0.0122		160.4073	160.4073	0.0104		160.6662
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1145**	**0.6466**	**0.9050**	**3.6500e-003**	**0.2620**	**3.0400e-003**	**0.2650**	**0.0704**	**2.8400e-003**	**0.0732**		**374.8575**	**374.8575**	**0.0167**		**375.2742**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4412	15.2662	16.6109	0.0294		0.6769	0.6769		0.6345	0.6345		2,833.6587	2,833.6587	0.7446		2,852.2728
Total	**1.4412**	**15.2662**	**16.6109**	**0.0294**		**0.6769**	**0.6769**		**0.6345**	**0.6345**		**2,833.6587**	**2,833.6587**	**0.7446**		**2,852.2728**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.1075**	**0.6114**	**0.8378**	**3.5700e-003**	**0.2620**	**2.8300e-003**	**0.2648**	**0.0704**	**2.6400e-003**	**0.0730**		**365.8961**	**365.8961**	**0.0157**		**366.2883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4412	15.2662	16.6109	0.0294		0.6769	0.6769		0.6345	0.6345	0.0000	2,833.658 7	2,833.658 7	0.7446		2,852.272 8
Total	**1.4412**	**15.2662**	**16.6109**	**0.0294**		**0.6769**	**0.6769**		**0.6345**	**0.6345**	**0.0000**	**2,833.658 7**	**2,833.658 7**	**0.7446**		**2,852.272 8**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.1075**	**0.6114**	**0.8378**	**3.5700e-003**	**0.2620**	**2.8300e-003**	**0.2648**	**0.0704**	**2.6400e-003**	**0.0730**		**365.8961**	**365.8961**	**0.0157**		**366.2883**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3244	2.8353	3.5008	6.1300e-003		0.1283	0.1283		0.1204	0.1204		556.2906	556.2906	0.1577		560.2338
Paving	9.0300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3334**	**2.8353**	**3.5008**	**6.1300e-003**		**0.1283**	**0.1283**		**0.1204**	**0.1204**		**556.2906**	**556.2906**	**0.1577**		**560.2338**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3244	2.8353	3.5008	6.1300e-003		0.1283	0.1283		0.1204	0.1204	0.0000	556.2906	556.2906	0.1577		560.2338
Paving	9.0300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3334**	**2.8353**	**3.5008**	**6.1300e-003**		**0.1283**	**0.1283**		**0.1204**	**0.1204**	**0.0000**	**556.2906**	**556.2906**	**0.1577**		**560.2338**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.7261					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4567	4.4788	6.8945	0.0108		0.1814	0.1814		0.1756	0.1756		1,034.2582	1,034.2582	0.2376		1,040.1973
Total	**2.1828**	**4.4788**	**6.8945**	**0.0108**		**0.1814**	**0.1814**		**0.1756**	**0.1756**		**1,034.2582**	**1,034.2582**	**0.2376**		**1,040.1973**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0300	0.9208	0.2658	2.4800e-003	0.0640	1.7900e-003	0.0658	0.0184	1.7100e-003	0.0202		264.9703	264.9703	0.0167		265.3866
Worker	0.0537	0.0354	0.4070	1.2500e-003	0.1341	1.0500e-003	0.1352	0.0356	9.7000e-004	0.0365		124.1483	124.1483	3.4200e-003		124.2338
Total	**0.0837**	**0.9561**	**0.6728**	**3.7300e-003**	**0.1982**	**2.8400e-003**	**0.2010**	**0.0540**	**2.6800e-003**	**0.0567**		**389.1186**	**389.1186**	**0.0201**		**389.6204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.7261					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4567	4.4788	6.8945	0.0108		0.1814	0.1814		0.1756	0.1756	0.0000	1,034.2582	1,034.2582	0.2376		1,040.1973
Total	**2.1828**	**4.4788**	**6.8945**	**0.0108**		**0.1814**	**0.1814**		**0.1756**	**0.1756**	**0.0000**	**1,034.2582**	**1,034.2582**	**0.2376**		**1,040.1973**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0300	0.9208	0.2658	2.4800e-003	0.0640	1.7900e-003	0.0658	0.0184	1.7100e-003	0.0202		264.9703	264.9703	0.0167		265.3866
Worker	0.0537	0.0354	0.4070	1.2500e-003	0.1341	1.0500e-003	0.1352	0.0356	9.7000e-004	0.0365		124.1483	124.1483	3.4200e-003		124.2338
Total	**0.0837**	**0.9561**	**0.6728**	**3.7300e-003**	**0.1982**	**2.8400e-003**	**0.2010**	**0.0540**	**2.6800e-003**	**0.0567**		**389.1186**	**389.1186**	**0.0201**		**389.6204**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4385	1.9020	5.6705	0.0213	1.8745	0.0165	1.8910	0.5016	0.0154	0.5170		2,173.746 9	2,173.746 9	0.1092		2,176.477 2
Unmitigated	0.4385	1.9020	5.6705	0.0213	1.8745	0.0165	1.8910	0.5016	0.0154	0.5170		2,173.746 9	2,173.746 9	0.1092		2,176.477 2

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Racquet Club	288.31	288.31	288.31	881,524	881,524
Total	288.31	288.31	288.31	881,524	881,524

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Racquet Club	16.60	8.40	6.90	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Parking Lot	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Racquet Club	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.4900e-003	0.0499	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003		59.8569	59.8569	1.1500e-003	1.1000e-003	60.2126
NaturalGas Unmitigated	5.4900e-003	0.0499	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003		59.8569	59.8569	1.1500e-003	1.1000e-003	60.2126

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	508.784	5.4900e-003	0.0499	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003		59.8569	59.8569	1.1500e-003	1.1000e-003	60.2126
Total		**5.4900e-003**	**0.0499**	**0.0419**	**3.0000e-004**		**3.7900e-003**	**3.7900e-003**		**3.7900e-003**	**3.7900e-003**		**59.8569**	**59.8569**	**1.1500e-003**	**1.1000e-003**	**60.2126**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	0.508784	5.4900e-003	0.0499	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003		59.8569	59.8569	1.1500e-003	1.1000e-003	60.2126
Total		**5.4900e-003**	**0.0499**	**0.0419**	**3.0000e-004**		**3.7900e-003**	**3.7900e-003**		**3.7900e-003**	**3.7900e-003**		**59.8569**	**59.8569**	**1.1500e-003**	**1.1000e-003**	**60.2126**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2372	3.0000e-005	2.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1800e-003	6.1800e-003	2.0000e-005		6.5900e-003
Unmitigated	0.2372	3.0000e-005	2.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1800e-003	6.1800e-003	2.0000e-005		6.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0274					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2095					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1800e-003	6.1800e-003	2.0000e-005		6.5900e-003
Total	**0.2372**	**3.0000e-005**	**2.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.1800e-003**	**6.1800e-003**	**2.0000e-005**		**6.5900e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0274					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2095					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1800e-003	6.1800e-003	2.0000e-005		6.5900e-003
Total	**0.2372**	**3.0000e-005**	**2.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.1800e-003**	**6.1800e-003**	**2.0000e-005**		**6.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LABOE Boyle Heights Sports Center

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.60	1000sqft	0.13	5,600.00	0
Other Non-Asphalt Surfaces	3.68	1000sqft	0.08	3,680.00	0
Parking Lot	8.70	1000sqft	0.20	8,700.00	0
Racquet Club	10.26	1000sqft	0.24	10,260.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Specific land uses

Construction Phase - Construction Schedule Provided

Off-road Equipment - construction info provided

Boomlift is classified as an 'aerial lift'

Off-road Equipment - Construction equipment inventory provided by project team
*Other construction equipment with 300 HP is a Concrete Truck
Scissor Lift and Boom Lift are classified as 'aerial lifts'
'Paving Equipment' is assigned to the vibrator.

Off-road Equipment - Construction Info Provided

Off-road Equipment - construction info provided

Off-road Equipment - Parking Lot Assumption

Off-road Equipment - Construction Info Provided

Trips and VMT - Construction Project Info

Demolition - 100 CY of materials exported, provided by client.

Grading - contruction info provided

Vehicle Trips - 288 total daily trips per trip report.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - compliance with scaqmd rule 403

Area Mitigation -

Energy Mitigation - Net Zero

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	58.00

tblConstructionPhase	NumDays	100.00	360.00
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	NumDays	2.00	25.00
tblConstructionPhase	NumDays	5.00	58.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	AcresOfGrading	0.00	12.50
tblGrading	MaterialExported	0.00	4,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblTripsAndVMT	HaulingTripNumber	12.00	500.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	5.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	5.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	12.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	12.00
tblVehicleTrips	CC_TTP	69.50	100.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	11.50	0.00

tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	ST_TR	21.35	28.10
tblVehicleTrips	SU_TR	17.40	28.10
tblVehicleTrips	WD_TR	14.03	28.10

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2063	2.2573	1.8703	3.9800e-003	0.1182	0.0935	0.2117	0.0517	0.0873	0.1390	0.0000	354.3884	354.3884	0.0813	0.0000	356.4208
2022	0.2292	1.8293	2.0669	3.9000e-003	0.0313	0.0770	0.1084	8.4500e-003	0.0724	0.0808	0.0000	343.0590	343.0590	0.0799	0.0000	345.0555
Maximum	**0.2292**	**2.2573**	**2.0669**	**3.9800e-003**	**0.1182**	**0.0935**	**0.2117**	**0.0517**	**0.0873**	**0.1390**	**0.0000**	**354.3884**	**354.3884**	**0.0813**	**0.0000**	**356.4208**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2063	2.2573	1.8702	3.9800e-003	0.0673	0.0935	0.1608	0.0259	0.0873	0.1132	0.0000	354.3880	354.3880	0.0813	0.0000	356.4205
2022	0.2292	1.8293	2.0669	3.9000e-003	0.0313	0.0770	0.1084	8.4500e-003	0.0724	0.0808	0.0000	343.0586	343.0586	0.0799	0.0000	345.0552
Maximum	**0.2292**	**2.2573**	**2.0669**	**3.9800e-003**	**0.0673**	**0.0935**	**0.1608**	**0.0259**	**0.0873**	**0.1132**	**0.0000**	**354.3880**	**354.3880**	**0.0813**	**0.0000**	**356.4205**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.04**	**0.00**	**15.90**	**42.91**	**0.00**	**11.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2021	5-31-2021	0.9004	0.9004
2	6-1-2021	8-31-2021	0.6399	0.6399
3	9-1-2021	11-30-2021	0.6333	0.6333
4	12-1-2021	2-28-2022	0.5830	0.5830
5	3-1-2022	5-31-2022	0.5723	0.5723
6	6-1-2022	8-31-2022	0.5721	0.5721
7	9-1-2022	9-30-2022	0.1866	0.1866
		Highest	0.9004	0.9004

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0433	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	1.0000e-003	9.1000e-003	7.6500e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	75.0361	75.0361	1.7300e-003	5.0000e-004	75.2282
Mobile	0.0779	0.3521	1.0470	3.9400e-003	0.3346	2.9900e-003	0.3376	0.0897	2.7800e-003	0.0925	0.0000	363.9994	363.9994	0.0180	0.0000	364.4484
Waste						0.0000	0.0000		0.0000	0.0000	11.8709	0.0000	11.8709	0.7016	0.0000	29.4097
Water						0.0000	0.0000		0.0000	0.0000	0.1925	6.7021	6.8946	0.0199	5.0000e-004	7.5417
Total	**0.1222**	**0.3612**	**1.0551**	**3.9900e-003**	**0.3346**	**3.6800e-003**	**0.3383**	**0.0897**	**3.4700e-003**	**0.0932**	**12.0634**	**445.7382**	**457.8016**	**0.7412**	**1.0000e-003**	**476.6288**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0433	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	1.0000e-003	9.1000e-003	7.6500e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.9100	9.9100	1.9000e-004	1.8000e-004	9.9689
Mobile	0.0779	0.3521	1.0470	3.9400e-003	0.3346	2.9900e-003	0.3376	0.0897	2.7800e-003	0.0925	0.0000	363.9994	363.9994	0.0180	0.0000	364.4484
Waste						0.0000	0.0000		0.0000	0.0000	11.8709	0.0000	11.8709	0.7016	0.0000	29.4097
Water						0.0000	0.0000		0.0000	0.0000	0.1925	6.7021	6.8946	0.0199	5.0000e-004	7.5417
Total	**0.1222**	**0.3612**	**1.0551**	**3.9900e-003**	**0.3346**	**3.6800e-003**	**0.3383**	**0.0897**	**3.4700e-003**	**0.0932**	**12.0634**	**380.6121**	**392.6755**	**0.7396**	**6.8000e-004**	**411.3694**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**14.61**	**14.23**	**0.21**	**32.00**	**13.69**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	4/2/2021	5	25	
2	Site Preparation	Site Preparation	4/5/2021	4/16/2021	5	10	
3	Grading	Grading	4/19/2021	5/21/2021	5	25	
4	Building Construction	Building Construction	5/24/2021	10/7/2022	5	360	
5	Paving	Paving	10/10/2022	12/28/2022	5	58	
6	Architectural Coating	Architectural Coating	10/10/2022	12/28/2022	5	58	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 0.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,390; Non-Residential Outdoor: 5,130; Striped Parking Area: 1,079 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Scrapers	1	8.00	367	0.48
Site Preparation	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Excavators	1	8.00	158	0.38
Grading	Other Construction Equipment	1	8.00	172	0.42
Grading	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	1	8.00	172	0.42
Building Construction	Paving Equipment	1	8.00	132	0.36
Building Construction	Rough Terrain Forklifts	1	8.00	100	0.40
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Air Compressors	1	8.00	78	0.48
Architectural Coating	Rough Terrain Forklifts	1	8.00	100	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	16.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	16.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	16.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	12.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2800e-003	0.0000	1.2800e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0338	0.3572	0.2039	4.5000e-004		0.0156	0.0156		0.0146	0.0146	0.0000	39.6117	39.6117	0.0110	0.0000	39.8874
Total	**0.0338**	**0.3572**	**0.2039**	**4.5000e-004**	**1.2800e-003**	**0.0156**	**0.0169**	**1.9000e-004**	**0.0146**	**0.0148**	**0.0000**	**39.6117**	**39.6117**	**0.0110**	**0.0000**	**39.8874**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0692	0.0161	1.9000e-004	4.3000e-003	2.1000e-004	4.5000e-003	1.1800e-003	2.0000e-004	1.3800e-003	0.0000	19.0574	19.0574	1.3200e-003	0.0000	19.0905
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**2.9700e-003**	**0.0699**	**0.0237**	**2.1000e-004**	**6.4900e-003**	**2.3000e-004**	**6.7100e-003**	**1.7600e-003**	**2.2000e-004**	**1.9800e-003**	**0.0000**	**21.0352**	**21.0352**	**1.3800e-003**	**0.0000**	**21.0698**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-004	0.0000	5.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0338	0.3572	0.2039	4.5000e-004		0.0156	0.0156		0.0146	0.0146	0.0000	39.6117	39.6117	0.0110	0.0000	39.8874
Total	**0.0338**	**0.3572**	**0.2039**	**4.5000e-004**	**5.0000e-004**	**0.0156**	**0.0161**	**8.0000e-005**	**0.0146**	**0.0146**	**0.0000**	**39.6117**	**39.6117**	**0.0110**	**0.0000**	**39.8874**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0692	0.0161	1.9000e-004	4.3000e-003	2.1000e-004	4.5000e-003	1.1800e-003	2.0000e-004	1.3800e-003	0.0000	19.0574	19.0574	1.3200e-003	0.0000	19.0905
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**2.9700e-003**	**0.0699**	**0.0237**	**2.1000e-004**	**6.4900e-003**	**2.3000e-004**	**6.7100e-003**	**1.7600e-003**	**2.2000e-004**	**1.9800e-003**	**0.0000**	**21.0352**	**21.0352**	**1.3800e-003**	**0.0000**	**21.0698**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0386	0.0160	6.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	5.4905	5.4905	1.7800e-003	0.0000	5.5349
Total	**3.4300e-003**	**0.0386**	**0.0160**	**6.0000e-005**	**0.0000**	**1.2900e-003**	**1.2900e-003**	**0.0000**	**1.1900e-003**	**1.1900e-003**	**0.0000**	**5.4905**	**5.4905**	**1.7800e-003**	**0.0000**	**5.5349**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	5.5400e-003	1.2900e-003	2.0000e-005	3.4000e-004	2.0000e-005	3.6000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.5246	1.5246	1.1000e-004	0.0000	1.5272
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.7000e-004	3.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7911	0.7911	2.0000e-005	0.0000	0.7917
Total	**5.1000e-004**	**5.8100e-003**	**4.3200e-003**	**3.0000e-005**	**1.2200e-003**	**3.0000e-005**	**1.2400e-003**	**3.2000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**2.3157**	**2.3157**	**1.3000e-004**	**0.0000**	**2.3190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0386	0.0160	6.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	5.4905	5.4905	1.7800e-003	0.0000	5.5349
Total	**3.4300e-003**	**0.0386**	**0.0160**	**6.0000e-005**	**0.0000**	**1.2900e-003**	**1.2900e-003**	**0.0000**	**1.1900e-003**	**1.1900e-003**	**0.0000**	**5.4905**	**5.4905**	**1.7800e-003**	**0.0000**	**5.5349**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	5.5400e-003	1.2900e-003	2.0000e-005	3.4000e-004	2.0000e-005	3.6000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.5246	1.5246	1.1000e-004	0.0000	1.5272
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.7000e-004	3.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7911	0.7911	2.0000e-005	0.0000	0.7917
Total	**5.1000e-004**	**5.8100e-003**	**4.3200e-003**	**3.0000e-005**	**1.2200e-003**	**3.0000e-005**	**1.2400e-003**	**3.2000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**2.3157**	**2.3157**	**1.3000e-004**	**0.0000**	**2.3190**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0821	0.0000	0.0821	0.0421	0.0000	0.0421	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0279	0.2912	0.1856	3.6000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	31.5857	31.5857	0.0102	0.0000	31.8411
Total	**0.0279**	**0.2912**	**0.1856**	**3.6000e-004**	**0.0821**	**0.0139**	**0.0960**	**0.0421**	**0.0128**	**0.0549**	**0.0000**	**31.5857**	**31.5857**	**0.0102**	**0.0000**	**31.8411**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0692	0.0161	1.9000e-004	4.3000e-003	2.1000e-004	4.5000e-003	1.1800e-003	2.0000e-004	1.3800e-003	0.0000	19.0574	19.0574	1.3200e-003	0.0000	19.0905
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**2.9700e-003**	**0.0699**	**0.0237**	**2.1000e-004**	**6.4900e-003**	**2.3000e-004**	**6.7100e-003**	**1.7600e-003**	**2.2000e-004**	**1.9800e-003**	**0.0000**	**21.0352**	**21.0352**	**1.3800e-003**	**0.0000**	**21.0698**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0320	0.0000	0.0320	0.0164	0.0000	0.0164	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0279	0.2912	0.1856	3.6000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	31.5857	31.5857	0.0102	0.0000	31.8411
Total	**0.0279**	**0.2912**	**0.1856**	**3.6000e-004**	**0.0320**	**0.0139**	**0.0459**	**0.0164**	**0.0128**	**0.0292**	**0.0000**	**31.5857**	**31.5857**	**0.0102**	**0.0000**	**31.8411**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0692	0.0161	1.9000e-004	4.3000e-003	2.1000e-004	4.5000e-003	1.1800e-003	2.0000e-004	1.3800e-003	0.0000	19.0574	19.0574	1.3200e-003	0.0000	19.0905
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**2.9700e-003**	**0.0699**	**0.0237**	**2.1000e-004**	**6.4900e-003**	**2.3000e-004**	**6.7100e-003**	**1.7600e-003**	**2.2000e-004**	**1.9800e-003**	**0.0000**	**21.0352**	**21.0352**	**1.3800e-003**	**0.0000**	**21.0698**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1264	1.3720	1.3397	2.3500e-003		0.0620	0.0620		0.0581	0.0581	0.0000	205.6597	205.6597	0.0542	0.0000	207.0146
Total	**0.1264**	**1.3720**	**1.3397**	**2.3500e-003**		**0.0620**	**0.0620**		**0.0581**	**0.0581**	**0.0000**	**205.6597**	**205.6597**	**0.0542**	**0.0000**	**207.0146**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4900e-003	0.0474	0.0128	1.2000e-004	3.0200e-003	1.0000e-004	3.1200e-003	8.7000e-004	9.0000e-005	9.6000e-004	0.0000	11.8318	11.8318	7.3000e-004	0.0000	11.8500
Worker	6.8800e-003	5.3600e-003	0.0605	1.8000e-004	0.0175	1.4000e-004	0.0177	4.6600e-003	1.3000e-004	4.7900e-003	0.0000	15.8227	15.8227	4.7000e-004	0.0000	15.8343
Total	**8.3700e-003**	**0.0527**	**0.0734**	**3.0000e-004**	**0.0206**	**2.4000e-004**	**0.0208**	**5.5300e-003**	**2.2000e-004**	**5.7500e-003**	**0.0000**	**27.6545**	**27.6545**	**1.2000e-003**	**0.0000**	**27.6843**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1264	1.3720	1.3397	2.3500e-003		0.0620	0.0620		0.0581	0.0581	0.0000	205.6594	205.6594	0.0542	0.0000	207.0144
Total	**0.1264**	**1.3720**	**1.3397**	**2.3500e-003**		**0.0620**	**0.0620**		**0.0581**	**0.0581**	**0.0000**	**205.6594**	**205.6594**	**0.0542**	**0.0000**	**207.0144**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4900e-003	0.0474	0.0128	1.2000e-004	3.0200e-003	1.0000e-004	3.1200e-003	8.7000e-004	9.0000e-005	9.6000e-004	0.0000	11.8318	11.8318	7.3000e-004	0.0000	11.8500
Worker	6.8800e-003	5.3600e-003	0.0605	1.8000e-004	0.0175	1.4000e-004	0.0177	4.6600e-003	1.3000e-004	4.7900e-003	0.0000	15.8227	15.8227	4.7000e-004	0.0000	15.8343
Total	**8.3700e-003**	**0.0527**	**0.0734**	**3.0000e-004**	**0.0206**	**2.4000e-004**	**0.0208**	**5.5300e-003**	**2.2000e-004**	**5.7500e-003**	**0.0000**	**27.6545**	**27.6545**	**1.2000e-003**	**0.0000**	**27.6843**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1441	1.5266	1.6611	2.9400e-003		0.0677	0.0677		0.0635	0.0635	0.0000	257.0652	257.0652	0.0676	0.0000	258.7538
Total	**0.1441**	**1.5266**	**1.6611**	**2.9400e-003**		**0.0677**	**0.0677**		**0.0635**	**0.0635**	**0.0000**	**257.0652**	**257.0652**	**0.0676**	**0.0000**	**258.7538**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7500e-003	0.0563	0.0152	1.5000e-004	3.7800e-003	1.1000e-004	3.8900e-003	1.0900e-003	1.0000e-004	1.1900e-003	0.0000	14.6599	14.6599	8.8000e-004	0.0000	14.6818
Worker	8.0700e-003	6.0500e-003	0.0697	2.1000e-004	0.0219	1.7000e-004	0.0221	5.8200e-003	1.6000e-004	5.9800e-003	0.0000	19.0831	19.0831	5.3000e-004	0.0000	19.0962
Total	**9.8200e-003**	**0.0623**	**0.0849**	**3.6000e-004**	**0.0257**	**2.8000e-004**	**0.0260**	**6.9100e-003**	**2.6000e-004**	**7.1700e-003**	**0.0000**	**33.7430**	**33.7430**	**1.4100e-003**	**0.0000**	**33.7780**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1441	1.5266	1.6611	2.9400e-003		0.0677	0.0677		0.0635	0.0635	0.0000	257.0649	257.0649	0.0676	0.0000	258.7535
Total	**0.1441**	**1.5266**	**1.6611**	**2.9400e-003**		**0.0677**	**0.0677**		**0.0635**	**0.0635**	**0.0000**	**257.0649**	**257.0649**	**0.0676**	**0.0000**	**258.7535**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7500e-003	0.0563	0.0152	1.5000e-004	3.7800e-003	1.1000e-004	3.8900e-003	1.0900e-003	1.0000e-004	1.1900e-003	0.0000	14.6599	14.6599	8.8000e-004	0.0000	14.6818
Worker	8.0700e-003	6.0500e-003	0.0697	2.1000e-004	0.0219	1.7000e-004	0.0221	5.8200e-003	1.6000e-004	5.9800e-003	0.0000	19.0831	19.0831	5.3000e-004	0.0000	19.0962
Total	**9.8200e-003**	**0.0623**	**0.0849**	**3.6000e-004**	**0.0257**	**2.8000e-004**	**0.0260**	**6.9100e-003**	**2.6000e-004**	**7.1700e-003**	**0.0000**	**33.7430**	**33.7430**	**1.4100e-003**	**0.0000**	**33.7780**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4100e-003	0.0822	0.1015	1.8000e-004		3.7200e-003	3.7200e-003		3.4900e-003	3.4900e-003	0.0000	14.6351	14.6351	4.1500e-003	0.0000	14.7388
Paving	2.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.6700e-003**	**0.0822**	**0.1015**	**1.8000e-004**		**3.7200e-003**	**3.7200e-003**		**3.4900e-003**	**3.4900e-003**	**0.0000**	**14.6351**	**14.6351**	**4.1500e-003**	**0.0000**	**14.7388**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4100e-003	0.0822	0.1015	1.8000e-004		3.7200e-003	3.7200e-003		3.4900e-003	3.4900e-003	0.0000	14.6351	14.6351	4.1500e-003	0.0000	14.7388
Paving	2.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.6700e-003**	**0.0822**	**0.1015**	**1.8000e-004**		**3.7200e-003**	**3.7200e-003**		**3.4900e-003**	**3.4900e-003**	**0.0000**	**14.6351**	**14.6351**	**4.1500e-003**	**0.0000**	**14.7388**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0501					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.1299	0.1999	3.1000e-004		5.2600e-003	5.2600e-003		5.0900e-003	5.0900e-003	0.0000	27.2096	27.2096	6.2500e-003	0.0000	27.3659
Total	**0.0633**	**0.1299**	**0.1999**	**3.1000e-004**		**5.2600e-003**	**5.2600e-003**		**5.0900e-003**	**5.0900e-003**	**0.0000**	**27.2096**	**27.2096**	**6.2500e-003**	**0.0000**	**27.3659**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.5000e-004	0.0272	7.3400e-003	7.0000e-005	1.8300e-003	5.0000e-005	1.8800e-003	5.3000e-004	5.0000e-005	5.8000e-004	0.0000	7.0856	7.0856	4.2000e-004	0.0000	7.0962
Worker	1.4000e-003	1.0500e-003	0.0121	4.0000e-005	3.8100e-003	3.0000e-005	3.8400e-003	1.0100e-003	3.0000e-005	1.0400e-003	0.0000	3.3205	3.3205	9.0000e-005	0.0000	3.3227
Total	**2.2500e-003**	**0.0282**	**0.0195**	**1.1000e-004**	**5.6400e-003**	**8.0000e-005**	**5.7200e-003**	**1.5400e-003**	**8.0000e-005**	**1.6200e-003**	**0.0000**	**10.4061**	**10.4061**	**5.1000e-004**	**0.0000**	**10.4189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0501					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.1299	0.1999	3.1000e-004		5.2600e-003	5.2600e-003		5.0900e-003	5.0900e-003	0.0000	27.2096	27.2096	6.2500e-003	0.0000	27.3659
Total	**0.0633**	**0.1299**	**0.1999**	**3.1000e-004**		**5.2600e-003**	**5.2600e-003**		**5.0900e-003**	**5.0900e-003**	**0.0000**	**27.2096**	**27.2096**	**6.2500e-003**	**0.0000**	**27.3659**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.5000e-004	0.0272	7.3400e-003	7.0000e-005	1.8300e-003	5.0000e-005	1.8800e-003	5.3000e-004	5.0000e-005	5.8000e-004	0.0000	7.0856	7.0856	4.2000e-004	0.0000	7.0962
Worker	1.4000e-003	1.0500e-003	0.0121	4.0000e-005	3.8100e-003	3.0000e-005	3.8400e-003	1.0100e-003	3.0000e-005	1.0400e-003	0.0000	3.3205	3.3205	9.0000e-005	0.0000	3.3227
Total	**2.2500e-003**	**0.0282**	**0.0195**	**1.1000e-004**	**5.6400e-003**	**8.0000e-005**	**5.7200e-003**	**1.5400e-003**	**8.0000e-005**	**1.6200e-003**	**0.0000**	**10.4061**	**10.4061**	**5.1000e-004**	**0.0000**	**10.4189**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0779	0.3521	1.0470	3.9400e-003	0.3346	2.9900e-003	0.3376	0.0897	2.7800e-003	0.0925	0.0000	363.9994	363.9994	0.0180	0.0000	364.4484
Unmitigated	0.0779	0.3521	1.0470	3.9400e-003	0.3346	2.9900e-003	0.3376	0.0897	2.7800e-003	0.0925	0.0000	363.9994	363.9994	0.0180	0.0000	364.4484

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Racquet Club	288.31	288.31	288.31	881,524	881,524
Total	288.31	288.31	288.31	881,524	881,524

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Racquet Club	16.60	8.40	6.90	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Parking Lot	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Racquet Club	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	65.1261	65.1261	1.5400e-003	3.2000e-004	65.2594
NaturalGas Mitigated	1.0000e-003	9.1000e-003	7.6500e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.9100	9.9100	1.9000e-004	1.8000e-004	9.9689
NaturalGas Unmitigated	1.0000e-003	9.1000e-003	7.6500e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.9100	9.9100	1.9000e-004	1.8000e-004	9.9689

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	185706	1.0000e-003	9.1000e-003	7.6500e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.9100	9.9100	1.9000e-004	1.8000e-004	9.9689
Total		**1.0000e-003**	**9.1000e-003**	**7.6500e-003**	**5.0000e-005**		**6.9000e-004**	**6.9000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**9.9100**	**9.9100**	**1.9000e-004**	**1.8000e-004**	**9.9689**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	185706	1.0000e-003	9.1000e-003	7.6500e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.9100	9.9100	1.9000e-004	1.8000e-004	9.9689
Total		**1.0000e-003**	**9.1000e-003**	**7.6500e-003**	**5.0000e-005**		**6.9000e-004**	**6.9000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**9.9100**	**9.9100**	**1.9000e-004**	**1.8000e-004**	**9.9689**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3045	1.6960	4.0000e-005	1.0000e-005	1.6994
Racquet Club	113886	63.4301	1.5000e-003	3.1000e-004	63.5599
Total		**65.1261**	**1.5400e-003**	**3.2000e-004**	**65.2594**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0433	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Unmitigated	0.0433	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0382					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0433**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0382					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0433**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.8946	0.0199	5.0000e-004	7.5417
Unmitigated	6.8946	0.0199	5.0000e-004	7.5417

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0.606809 / 0.371915	6.8946	0.0199	5.0000e-004	7.5417
Total		**6.8946**	**0.0199**	**5.0000e-004**	**7.5417**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0.606809 / 0.371915	6.8946	0.0199	5.0000e-004	7.5417
Total		**6.8946**	**0.0199**	**5.0000e-004**	**7.5417**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.8709	0.7016	0.0000	29.4097
Unmitigated	11.8709	0.7016	0.0000	29.4097

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	58.48	11.8709	0.7016	0.0000	29.4097
Total		**11.8709**	**0.7016**	**0.0000**	**29.4097**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	58.48	11.8709	0.7016	0.0000	29.4097
Total		**11.8709**	**0.7016**	**0.0000**	**29.4097**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B
Historical Built Environment Resources Memorandum

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Memorandum

To:	Nur Malhis, M.S., P.E. Project Manager
From:	Margaret Roderick, ICF Architectural Historian
Date:	June 6, 2018
Re:	**Boyle Heights Sports Center Gymnasium CEQA Historical Resources Analysis (Built Environment Only) Memorandum**

Executive Summary

This memorandum discusses the potential for impacts on built environment historical resources under the California Environmental Quality Act (CEQA) resulting from the proposed development of the Boyle Heights Sports Center project at 2500 Whittier Boulevard in Los Angeles, California (project). The project proposes demolition of the existing two buildings on the project site (the Sukaisian and Workshop Buildings), removal of associated surface parking; and construction of a new 10,000-square-foot gymnasium that would consist of a full-sized basketball court, staff offices, equipment storage rooms, restrooms, showers, a community room, a plaza for special gatherings, additional green space, pedestrian paths, and additional parking..

The project is located in the Boyle Heights community, east of downtown. Located northeast of the Interstate (I-) 5, I-10, State Route (SR) 101, and SR 60 freeway interchange, Boyle Heights is a densely developed urban environment including a mix of residential, commercial, and industrial buildings (Figure 1).

A study area was established for the proposed project to take into account the potential for both direct and indirect impacts of the project on historical resources, as defined by CEQA. This evaluation concludes that no significant impacts would result from the proposed project because no historical resources are present within the study area. Neither building located on the project site is eligible for listing in the National Register of Historic Places (NRHP), in the California Register of Historical Resources (CRHR), as a City of Los Angeles Historic-Cultural Monument (HCM), or as a contributor to a Historic Preservation Overlay Zone (HPOZ), nor is the Boyle Heights Sports Center Park itself eligible for any of these registration programs. As such, none are historical resources under CEQA. None of the other buildings in the study area appear to be historical resources under

CEQA. Therefore, the proposed project would not have a significant impact on built environment historical resources because none are present within the study area.

Please note that archaeological and tribal historical resources are evaluated separately. For the purposes of this memorandum, the term "historical resources" is limited to built environment resources.

Figure 1. Vicinity Map

Regulatory Setting

Federal, state, and local regulations recognize the public's interest in historical resources and the public benefit of preserving them. These laws and regulations require analysts to consider how a project might affect historical resources and take steps to avoid or reduce potential damage to them.

The proposed project is subject to the requirements of CEQA, and also may be affected by other state and municipal laws and regulations regarding historical resources. These include the CRHR and City of Los Angeles HCM and HPOZ programs. In addition, the City of Los Angeles requires that cultural resources studies, surveys, and reports, such as this technical report, consider potential eligibility of properties for listing in the NRHP.

This memorandum was prepared to satisfy requirements of all applicable historical resources regulations.

Federal

National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the NRHP was established by the National Historic Preservation Act of 1966 as "an authoritative guide to be used by federal, state, and local governments; private groups; and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties that are significant at the national, state, and local levels. Ordinarily, birthplaces, cemeteries, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years are typically not considered eligible for the NRHP, unless they satisfy certain conditions.

According to NRHP guidelines, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess and meet any of the following criteria:

a. **Criterion A.** A property is associated with events that have made a significant contribution to the broad patterns of our history.

b. **Criterion B.** A property is associated with the lives of persons significant in our past.

c. **Criterion C.** A property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.

d. **Criterion D.** A property yields, or may be likely to yield, information important in prehistory or history.

The NRHP requires that a resource must not only meet one of these criteria, but must also possess integrity. Integrity is the ability of a property to convey historical significance. The evaluation of a resource's integrity must be grounded in an understanding of that resource's physical characteristics and how those characteristics relate to its significance. The NRHP recognizes seven aspects or qualities that, in various combinations, define the integrity of a property: location, design, setting, materials, workmanship, feeling, and association.

A property listed in or formally determined eligible for listing in the NRHP is automatically included in the CRHR and is, therefore, a historical resource for the purposes of CEQA.

State

California Register of Historical Resources

The National Historic Preservation Act mandated the selection and appointment in each state of a State Historic Preservation Officer (SHPO). Each SHPO is tasked, among other duties, with maintaining an inventory of historic properties. In California, the state legislature established additional duties for the SHPO. These duties include the maintenance of the CRHR. Established by California Public Resources Code Section 5024.1(a) in 1992, the CRHR serves as "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent feasible, from substantial adverse change." According to California Public Resources Code Section 5024.1(c), the CRHR criteria broadly mirror those of the NRHP. The CRHR criteria are found in California Public Resources Code Section 5024.1(c). They are as follows:

"An historical resource must be significant at the local, state, or national level, under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method or construction, or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation."

The general rule is that a resource must be at least 50 years old to qualify for the CRHR. In addition, the resource must meet one or more of the aforementioned criteria and must possess integrity. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance."

There are several ways for resources to be included in the CRHR. A resource can be listed in the CRHR based upon a nomination and public consideration process. Additionally, a resource that is subject to a discretionary action by a governmental agency will be evaluated for eligibility for the CRHR. As previously stated, properties listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

California Environmental Quality Act

Established in 1970, CEQA requires state and local government agencies to analyze and publicly disclose potentially significant environment impacts of proposed projects. Moreover, it requires the development and adoption of mitigation measures to lessen significant impacts. At Section 21060.5, the State CEQA Guidelines define the environment to include "objects of historic . . . significance." The definition of "historical resources" is provided by Section 15064.5(a) of the State CEQA Guidelines. The following is an abbreviated and excerpted summary of this definition:

- A resource listed in, or determined eligible by the State Historical Resources Commission, for listing in the CRHR.
- A resource included in a local register of historical resources or identified as significant in an historical resource survey shall be presumed historically significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR.

The State CEQA Guidelines also address tribal cultural resources, which are defined in Section 21074 as "sites, features, places, cultural landscapes, sacred places or objects with cultural value to a California Native American Tribe." They may include archaeological resources. California Native American Tribes include those tribes included among the contacts maintained by the Native American Heritage Commission and may include tribes that are not federally recognized. Section 21080.3.1 of the State CEQA Guidelines additionally requires that lead agencies begin consultation with California Native American Tribes prior to the release of an environmental document (negative declaration, mitigated negative declaration, or environmental impact report) for a project.

Archaeological and tribal resources are evaluated separately.

Local

The City of Los Angeles provides for the protection and preservation of recognized cultural resources, including designated buildings, sites, objects, and districts, through two programs administered by the Los Angeles Department of City Planning. The City designates local landmarks, which it calls HCMs, according to the Chapter 9, Division 22 (Cultural Heritage Ordinance) of the Los Angeles Municipal Code, and recognizes local historic districts, which are referred to as HPOZs codified in Section 12.20.3, of the Los Angeles Municipal Code.

Historical-Cultural Monuments

The criteria for designation as an HCM are codified in Chapter 9, Section 22 of the City of Los Angeles Administrative Code. A HCM is any site (including significant trees or other plant life located thereon), building, or structure of particular historic or cultural significance to the City of Los Angeles. Designated resources may include historic structures or sites:

- In which the broad cultural, political, economic, or social history of the nation, state, or community is reflected or exemplified; or
- That are identified with historic personages or with important events in the main currents of national, state, or local history; or

- That embody the distinguishing characteristics or an architectural-type specimen, inherently valuable for a study or a period style or method of construction; or
- That represent notable work of a master builder, designer, or architect whose individual genius influenced his age.

HCMs are historical resources for the purposes of CEQA pursuant to State CEQA Guidelines Section 15064.5(2). Alterations to or demolition of sites that have been designated as HCMs are subject to review by the City of Los Angeles Cultural Heritage Commission.

Historic Preservation Overlay Zones

The procedures for designating a HPOZ are found in Section 12.20.3 of the Los Angeles Municipal Code. HPOZs are historical resources for the purposes of CEQA pursuant to State CEQA Guidelines Section 15064.5(2). Alterations to or demolition of properties included in an HPOZ are subject to review by the City of Los Angeles Department of City Planning.

Other Regulations

The Secretary of the Interior Standards for the Treatment of Historic Properties and the California State Historical Building Code do not apply to the project because the study area does not contain any historical resources for the purposes of CEQA.

Study Area

A study area was established for the project to take into account the potential for both direct and indirect impacts of the project on historical resources, as defined by CEQA (Figure 2). The Boyle Heights Sports Center Park, which is the project site, including the Sukaisian and the Workshop Buildings proposed for demolition, are included within the boundary of the direct impacts study area. The study area also includes adjacent parcels within view of the existing Sukaisian Building and Workshop Building, and the proposed new building, because buildings on those parcels have the potential to be indirectly affected by demolition and new construction in the vicinity. The indirect study area includes only commercial buildings, although residences are located on perpendicular streets. The commercial buildings primarily date to the 1920s and currently house a variety of businesses. Remaining parcels in the immediate vicinity contain surface parking lots. The surface parking lots were excluded from the study area because there is no potential to affect historical resources.

Figure 2. Study Area for Historical Resources

Identification of Cultural Resources

Research and Field Methods

ICF conducted general and property-specific archival research to establish a historic context for the study area and inform the identification and analysis of historical resources. This included the results of a formal records search found during a record search performed by a professionally qualified archaeologist. Several commercial buildings, residences, and institutional buildings have been recorded within a quarter-mile of the project site, but none are present within the study area. For a more detailed summary of the records search results, see the *Cultural and Paleontological Resources Assessment for the Boyle Heights Sports Center Gym, Los Angeles, CA* prepared by Cogstone and associated with the CEQA review for this project. ICF also reviewed primary and secondary resources from local repositories, including maps and photographs. In addition, the California State Points of Historical Interest, the California Historical Landmarks, the CRHR, the NRHP, the City of Los Angeles HCM listings, and the 2012 California State Historic Resources Inventory were reviewed.

ICF consulted previous historic resources surveys and evaluations of historical resources in the Boyle Heights area in the vicinity of the project site. This effort included a review of the historic resources survey in the vicinity of the project site titled *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California* (PCR Services Corporation 2008) and the *Historic Resources Survey Report: Boyle Heights Community Plan Area* (Architectural Resources Group, Inc. 2014). In addition, ICF consulted the following sources to inform the identification and analysis of historical resources within the study area:

- Historicaerials.com database
- Los Angeles County Tax Assessor Records
- Los Angeles Times Historical Newspaper Index
- Los Angeles Public Library's California Index and photograph databases
- Original and alteration building permits from the Los Angeles Department of Building & Safety
- Sanborn Fire Insurance Maps

ICF carried out field investigations of the project site and study area using standard industry-accepted methods appropriate for identifying and recording historical resources. These methods consisted of a pedestrian historical resources field survey of the study area.

The historic resources survey involved examining and evaluating all buildings and structures in the study area determined to be 50 years of age or older. On May 8, 2018, ICF architectural historians Margaret Roderick and Katrina Castañeda, under the supervision of Colleen Davis, MA, conducted the survey and evaluated all of the properties in the study area to determine their individual historical significance. Based upon a review of Los Angeles County Tax Assessor data, properties built in or before 1968 were identified and information was collected about their physical characteristics. The data collected included one or more photographs of each property from the public right-of-way, the architectural style of each resource (if identifiable), the type and materials of significant features, and the existence of alterations and overall physical integrity. Properties identified as 50 years of age or older were evaluated to determine their status as historical resources under CEQA and to analyze the project's potential impacts. Colleen Davis meets the U. S. Secretary of the Interior's Professional Qualification Standards for History and Architectural History.

Survey Results

The historical resources survey identified a total of 12buildings and structures within the study area, including the Boyle Heights Sports Center Park and the existing buildings on the project site at 2500 and 2510 Whittier Boulevard, the Sukaisian and Workshop Buildings.

Table 1 below lists the buildings located within the study area that were constructed in the past 50 years. The NRHP and CRHR generally agree that in order to be eligible or listed, buildings or structures must be at least 50 years of age. The NRHP and CRHR criteria allow for exceptions to this age threshold for resources of possessing exceptional significance. In all cases, ICF found no evidence to suggest that any of these buildings or structures is exceptionally important. They are not, therefore, considered eligible for listing in the NRHP or CRHR, and are not historical resources for the purposes of CEQA. As such, impacts need not be analyzed.

Table 1. Properties Under 50 Years of Age

Address	Year Built
2513 Whittier Boulevard	2009
Source: Los Angeles County Tax Assessor 2018	

The buildings listed in Table 2 were reviewed in the context of the Adelante Eastside Redevelopment Area project (PCR Services Corporation 2008) and SurveyLA historic resources survey for the Boyle Heights Community Plan Area (Architectural Resources Group, Inc. 2014). The Adelante Eastside Redevelopment Area project effort did not determine that any of these resources appeared eligible for listing in the NRHP or CRHR, or for designation as HCMs.

ICF evaluated these resources in the context of the current survey effort and agreed that they are ineligible for listing in the NRHP and CRHR, and as HCMs. Therefore, they are not considered historical resources for the purposes of CEQA. Because the resources listed in Table 2 are not historical resources under CEQA, impacts need not be analyzed.

Table 2. Properties Over 50 Years of Age

Address	Year Built
933 S. Mott Street, Boyle Heights Sports Center Park	circa 1966
2457 Whittier Boulevard	1936
2561 Whittier Boulevard	1941
2563 Whittier Boulevard	1924
2565 Whittier Boulevard	1924
2467 Whittier Boulevard	1926

Address	Year Built
2471 Whittier Boulevard	1925
2500 Whittier Boulevard (Sukaisian building, Project Site)	1953
2501 Whittier Boulevard	1922
2510 Whittier Boulevard (Workshop building, Project Site)	circa 1960
2517 Whittier Boulevard	1925
Source: Los Angeles County Tax Assessor 2018	

Because the proposed project involves the demolition of the existing buildings associated with the current Boyle Heights Sports Center Park, it was appropriate to research, evaluate, and document the park and the two buildings to analyze potential eligibility for listing in the NRHP and CRHR, and as HCMs. The results of this evaluation and analysis are summarized below. (Please see attached Appendices A through C for Department of Parks and Recreation 523 Forms documenting these evaluations.)

Historic Context

Boyle Heights

Following the establishment of the San Gabriel Mission in 1771, the Spanish established the Pueblo of Nuestra Señora de la Reina de Los Angeles de Porciuncula on September 4, 1781 (Dillon 1994:31–37). Eleven families, a total of 44 people, recruited as colonists from Sinaloa, Mexico, founded the Pueblo (Dillon 1994:31–37). By 1800, the pueblo consisted of 30 adobe buildings surrounding a central plaza, including a town hall, barracks, bodege (storehouse), and calabozo (jail), surrounded by an adobe wall (Dillon 1994:43). Originally located close to the Los Angeles River, the Pueblo relocated to higher ground circa 1820 after several severe floods. *El Paredon Blanco*, or the White Bluff, east of the river, was included within the original pueblo boundary and would later become known as Boyle Heights (Japanese American National Museum undated).

Among the oldest communities in Los Angeles, Boyle Heights was first settled by members of the pioneering Lopez family in the 1830s after they granted land by the Mexican government. At that time, the area was rural, with small-scale agricultural efforts primarily for wine production. Over time, however, the Lopez family sold portions of its land to persons including Andrew Boyle, George Cummings, and A.H. Judson and his Brooklyn Land and Building Company, among others. In the late 1850s, Andrew Boyle purchased 44 acres of land and maintained the rural setting through agricultural pursuits such as orange, peach, and fig orchards, and cattle ranching. Residential subdivision and development of the area began in the 1870s when William Henry Workman, son-in-law of Boyle, along with financers, began to divide and sell the lands inherited from Boyle's estate. The subdivision included a water main and Workman named the subdivision "Boyle Heights" to honor Andrew Boyle. Other subdivisions in this era included the Mount Pleasant tract and Brooklyn Heights, located at the western edge of the Boyle Heights community, nearest to Downtown (Architectural Resources Group, Inc. 2014:8–9).

Residential development came to a halt when then local economy collapsed in 1889 (PCR Services Corporation 2008:29). Soon enough, however, a second real estate boom in the 1890s, spurred by the completion of the transcontinental railroad in 1885, which triggered significant population increase across the region (Architectural Resources Group, Inc. 2014:10–12). Seeking profits from residential and commercial land sales, Workman donated plots of land to religious institutions. Along with Elizabeth Hollenback, he donated 21 acres for park use. By 1900, the horse-drawn streetcar was replaced by the electric streetcar, which further supported the growth of the community and its development as a streetcar suburb of Los Angeles. For example, First Street and Brooklyn Avenue contained streetcar lines and developed as commercial districts between the 1890s and the 1920s. Boyle Heights' separation from downtown, east of the peripatetic and the sometimes unpredictable Los Angeles River, however, somewhat chilled the area's development potential.

Within the study area, Whittier Boulevard primarily developed as a commercial district between 1913 and 1934 (PCR Services Corporation 2008:34, 59). Specifically, the section of Whittier Boulevard within the study area developed during the 1920s: Sanborn Fire Insurance Maps from 1921 evidence large, unimproved parcels within the study area. Significantly, the Viaduct Bond Act of 1923 led to the construction of multiple viaducts spanning the Los Angeles River from Downtown to Boyle Heights, including the 6th Street Viaduct located at the western terminus of Whittier Boulevard and the 7th Street Viaduct, both of which provided safe passage between Whittier Boulevard and downtown Los Angeles.

Boyle Heights historically featured a multicultural population demographic. The restrictive covenants that disallowed non-whites from owning property in much of the Los Angeles region were not implemented widely in Boyle Heights (Architectural Resources Group, Inc. 2014:13–15). Large numbers of Japanese Americans and Russian and Eastern Jews settled in Boyle Heights in the early 1900s, joining the already significant population of whites and Mexican Americans. Indeed, members of the Japanese Club at Roosevelt High School designed, built, and maintained a Japanese Garden on the school premises in 1933 (Roosevelt High School 1933). Meanwhile, the Jewish community in Los Angeles has strong historical ties to Boyle Heights; in the early 1900s, it "boasted one of the largest Jewish populations in the western United States" (Architectural Resources Group, Inc. 2014:15). Additionally, Boyle Heights hosted smaller populations of African American, Armenian, Greek, Italian, Polish, and Slavic groups.

During and after World War II, Boyle Heights underwent significant cultural and physical changes. Japanese internment during World War II affected the cultural landscape of Boyle Heights (and the physical—the Japanese garden at Roosevelt High School was demolished), a removal of restrictive covenants initiated the relocation of many Jewish community members to other locales within the city, and the multi-level east Los Angeles freeway interchange and related freeways decimated blocks of residential and commercial buildings in Boyle Heights and severed portions of the community (Architectural Resources Group, Inc. 2014:15–16). The Mexican American population in Boyle Heights continued to grow after World War II and with the influx of immigrants in the 1970s as a result of economic and civil unrest in Mexico. Moreover, Boyle Heights is strongly associated with the Chicano Movement in the 1960s and 1970s.

Mid-Century Park Development in Los Angeles

After World War II, a park was viewed as a public service necessary to the community, like a firehouse or local school (City of Los Angeles 2017a:29). Numerous parks in the late post-World War II era were constructed as the result of a 1957 bond measure that allowed $39.5 million for the construction of parks. By 1959, the Department of Recreation and Parks had completed 35 projects, with an additional 21 in process (City of Los Angeles 2017a:36). Parks from this era included parking for its patrons as a defining feature, but also included outdoor recreation areas that facilitated physical activity such as athletic and ball fields, tennis and basketball courts, tracks for running, and outdoor pools. A park from this period may also contain social recreational aspects such as activity centers, playgrounds, picnic tables, and auditoriums (City of Los Angeles 2017a:36–39, 53–55). An ideal example of a park could provide the community with a swimming pool, multiple field and courts, with a variety of sports, multiple public buildings for indoor social activities and events for all ages. Indeed, swimming pools played an important role in city parks, and were constructed at multiple new recreation centers including Northridge, Mar Vista, and Sepulveda, all of which are still extant and used by City residents today. Bath houses accompanied swimming pools; at the Sepulveda Recreation Center, a three-building bath house corresponded to the swimming pool (City of Los Angeles 2017a:30; 36).

New parks in already developed urban areas were often compact and acted as infill in an already established neighborhood. The Lemon Grove Park in Hollywood is an example of this type, as is the Boyle Heights Sports Center. Both these parks originally contained residences that were razed for new, recreational development (Historicaerials.com 1964a). In contrast, new parks constructed in suburban areas such as the San Fernando Valley, which was primarily developed in the post-World War II era, contained large, expansive parks such as the Sepulveda Center in Panorama City, which included a club house, swimming pool, tennis courts, basketball courts, and two baseball fields (City of Los Angeles 2017a:38).

Developed by the Los Angeles Department of Recreation and Parks in the early 1960s, the Boyle Heights Sports Center is bound by Whittier Boulevard to the north, South Mathews Street to the west, 7th Street to the south, and South Mott Street to the east. The park is located south of the Sukaisian and the Workshop Buildings, which are located in the northern portion of the Sports Center and face north onto Whittier Boulevard.

The area around the park was subdivided between 1916 and 1922, which spurred development in the neighborhoods along Whittier Boulevard (Los Angeles County Department of Public Works 1916, 1921, 1922a, 1922b). According to a Sanborn Map, by 1921, modest one-story residences lined South Mott Street as well as portions of 7th Street. The segment of South Mathews Street crossing Whittier Boulevard and continuing to 7th Street (and Fickett Street) and its adjoining parcels was subdivided in 1922 (Sanborn Map Company 1921; Los Angeles County Department of Public Works 1922b). By 1949, nearly all parcels within the Park boundary were improved with modest dwellings and flats (Sanborn Map Company 1949). Starting in 1960, Los Angeles Times articles report that "[t]he City Recreation and Park Commission…authorized the acquisition" of parcels "as part of the site for the proposed Boyle Heights Sports Center" (Los Angeles Times 1960a). By October 9, 1961, the Commission only needed to acquire six more parcels for the Park's construction (Los Angeles Times 1961). By 1964, all buildings located south of Whittier Boulevard, east of South Matthews Street, north of 7th Street, and west of South Mott Street, except for the Sukaisian and the Workshop Buildings, had been razed (Historicaerials.com 1964b). By 1972, the Boyle Heights Sports Center Park was completed and included baseball and soccer fields and a basketball court as it does today (Historicaerials.com 1972).

Commercial Property Development in Boyle Heights

The first commercial district in Boyle Heights developed along 1st Street between Boyle Avenue and Chicago Street as a result of the 1889 extension of the Los Angeles Cable Railway (PCR Services Corporation 2008:24). Although the Los Angeles Cable Railway was short-lived, soon the Los Angeles Railway Company and the Pacific Electrical Railway Company (Red Car) traversed the gap between downtown and Boyle Heights, contributing to the development of additional commercial districts, such as Brooklyn Avenue, Fourth Street, and Whittier Boulevard (then Stephenson Avenue) (PCR Services Corporation 2008:24–25). As the value of land increased, the railyards located in Boyle Heights near the Los Angeles River removed some of their maintenance facilities and warehouses and built new roads and extended old roads in their place; the new network of streets allowed for further growth of the commercial districts as bridges connected Boyle Heights to downtown (PCR Services Corporation 2008:25).

Commercial buildings constructed in Boyle Heights in the late 1800s and early 1900s were often two stories, with storefront below and residential quarters above, a plan that followed through into the 1930s (PCR Services Corporation 2008:58). With the availability of plate glass and shop owners' desire to draw attention to their wares, commercial architecture changed in the early 1900s (Gottfried and Jennings 2009:233). Architects and builders transformed facades with brick and terra cotta, and marble or other extravagant materials could be applied to the entry to accentuate a building (Gottfried and Jennings 2009:233). Popular throughout the United States, Romanesque, Classical, and Italianate styles featured in many storefronts (Gottfried and Jennings 2009:235–239). Common types of building organization included the corner or commercial block, single or double front, enframed window wall, temple front (often used in banks), and arcaded block, to name a few (Gottfried and Jennings 2009:242–250; Longstreth 2000). Early commercial buildings within the study area appear to have been constructed of brick, with terra cotta embellishments. The single front type, as visible in 2463 Whittier Boulevard as built in 1924, prevailed.

Typically, the commercial properties developed in Boyle Heights at this time were owned by members of the large local Jewish community. Many of these buildings evinced a Mediterranean Revival style of architecture, popular at this time. The commercial corridors typically depended on streetcar access for success and commercial buildings did not yet accommodate the automobile by providing parking. Early commercial development along Whittier Boulevard appears confined to the western portion of the street near South Boyle Avenue and South Chicago Street. Development included a drugstore, several additional stores, a gas station, and a restaurant. It was in the period from circa 1915 to 1935 that commercial buildings replaced residential properties along the major commercial districts in Boyle Heights, which is evidenced by Sanborn Fire Insurance Maps from 1921 and 1949 for properties along Whittier Boulevard. By 1949 numerous stores, a clothing manufacturer, an office building, a second gas station, a theater, and an office building aligned Whittier Boulevard from South Boyle Avenue to South Soto Street, with only a few remaining residences.

The commercial development along Whittier Boulevard from South Boyle Avenue to South Mott Street, which includes the study area, mirrors the residential development of the area. Areas near the intersection of Whittier Boulevard and South Boyle Avenue were subdivided as early as 1902, according to tract maps recorded with Los Angeles County. Meanwhile, the areas around the intersections of Whittier Boulevard and South Soto Street and Whittier Boulevard and South Mott Street were subdivided around 1916. The area between South Soto Street and South Mott Street along Whittier Boulevard was not significantly subdivided until 1921–1922. Along with the subdivision and subsequent residential development, commercial development evolved along Whittier Boulevard. The oldest building within the study area dates to 1922, with an additional six buildings constructed in the 1920s (PCR Services Corporation 2008:59–60).

According to Sanborn Fire Insurance Maps, by 1949, the study area still included several unimproved parcels along Whittier Boulevard interspersed between stores, often of one story rather than the more common two-story buildings discussed above. This portion of Whittier Boulevard's commercial development differs from the common commercial trends occurring elsewhere in Boyle Heights and Los Angeles at large, in which two-story commercial buildings held storefronts on the ground floor with apartments above, although some commercial buildings contained a dwelling unit to the rear as evidenced by 1920s original building permits on file with Los Angeles Department of Building and Safety (LADBS). In 1949, area businesses included a restaurant located at 2471 Whittier Boulevard; a paint and building materials facility at 2513–2515 Whittier Boulevard, which is no longer extant; and a baby shoe bronzing facility at 2524 Whittier Boulevard. In the late 1950s and early 1960s, businesses located within the study area appear to have served the large Mexican-American population, with business such as "El Gallo Mexican Chocolate" at 2465 Whittier Boulevard, "El Charro Grocery Store" at 2465 Whittier Boulevard, and "Pablo Chee Market" at 2501 Whittier Boulevard (Pacific Telephone and Telegraph Company 1960:863).

Although subdivided by 1922, the parcel at 2500 Whittier Boulevard remained unimproved until the 1950s. In 1953, Sam Sukaisian requested permission to erect a hardware store at 2500 Whittier Boulevard, to be designed by engineer A.R. Laker and constructed by contractor John Dinoto (Los Angeles Department of Building and Safety 1953a, 1953b). The permit called for a 20-foot-tall, 42-foot by 58-foot stucco building with a cement floor, a small mezzanine to the rear, and a flat, composition roof. In 1954, Sukaisian converted the building for use as a market and installed interior partitions (Los Angeles Department of Building and Safety 1954). By 1956, Gardner Food Products operated from the building and offered a delivery service to the community (Los Angeles Times 1956:50; Pacific Telephone and Telegraph Company 1956:819). In 1958, the grocery business operating at 2500 Whittier Boulevard sought to expand the business by establishing a franchise store at another location (Los Angeles Times 1958a:57). However, by 1960, the building was vacant and available for rent or lease (Los Angeles Times 1960c:70). The City of Los Angeles Recreation and Parks Commission acquired properties south of the subject property along South Matthews Street, South Fickett Street, South Mott Street, and East 7th Street in 1960 and 1961 for the construction of the Boyle Heights Sports Center (Los Angeles Times 1960a:30, 1960b:25, 1961:34). It may have also acquired the former store located at 2500 Whittier Boulevard at this same time, although the historical record is less clear on this point.

The American Rubbish Company appears to have operated a facility at 2510 Whittier Boulevard at least from 1958 to 1960, and a historic aerial image from 1952 depicts a fenced-off property at this location (Pacific Telephone and Telegraph Company 1956:819, 1960:863; Historicaerials.com 1952). However, it does not appear that any buildings or permanent structures were constructed by the American Rubbish Company on this property. By 1962, the American Rubbish Company had vacated the premises and by 1974 the City of Los Angeles owned the property (Pacific Telephone and Telegraph Company 1962:264).

Construction along Whittier Boulevard in the 1950s and 1960s is uncommon for the area because by circa 1950, the "neighborhood shopping center" geared toward automobile traffic became the prevalent type of commercial development in Los Angeles (City of Los Angeles 2017b:30). In contrast, most development in the study area corresponds to construction in the 1920s and earlier. The only other construction in the general area from the 1950s or after is the addition of a building to the Santa Isabel Church and School in 1957. Strip mall development at the intersection of Whittier Boulevard and South Soto Street dates to circa 1980 and later.

Modern Commercial Architecture and Mid-Century Modernism

Modern storefront buildings "relie[d] on abstract geometry to create identity" in the post-World War II era (Gottfried and Jennings 2009:239). Whereas prior to World War II commercial buildings often displayed Mediterranean revival styles or elements of Art Deco, Mid-Century Modern vernacular commercial buildings focused on the "general reduction of elements to single effect" and the "exploit[ation of] the materiality of construction products, clean surfaces, straight lines, and contemporary materials and technology" (Gottfried and Jennings 2009:239). One prominent type of commercial structure was the enframed window wall, consisting of a large window display defined by a simple surround. This type was common through the 1940s and is represented by the Sukaisian Building (Longstreth 2000:68–69). By 1952, however, "store design [had] gone through a complete overhaul," which included an open storefront that operated as a "silent salesman" operating 24 hours a day (Hornbostel 1952:1–2; Longstreth 2000:65). Materials and color abound in modern commercial architecture, as they did in residential architecture of the period (Hornbostel 1952:1, 22). The exterior of a commercial building often would be painted to attract patrons. Portions of the building acted as billboards, featuring large signage. The interior of a building's color scheme was used to emphasize merchandise (Hornbostel 1952:1–2, 22–23; Gottfried and Jennings 2009:233).

Mid-Century Modern architecture denotes a post-World War II regional trend in modernism that responded to the International Style's sterile qualities by organically incorporating a variety of materials, color, and shapes (Historic Resources Group and Pasadena Heritage 2007:16). The term "Mid-Century Modern" is commonly used in Southern California to describe a regional post-World War II architectural vernacular that, perhaps because of its location, loosens the dogma, rules, and orthodoxy of East Coast and European International Style modernism. It does so through a more casual and variegated use of materials, massing, textures, compositions, and other formal elements.

In contrast to the International Style, Mid-Century Modern architectural design included more solid walls and the use of stucco, wood, rock, and brick cladding for construction materials, as evident in the Sukaisian Building (Christopher A. Joseph & Associates 2009:16). In particular, the use of stacked brick features in many commercial and educational buildings (Christopher A. Joseph & Associates 2009:16). Additional materials found in Mid-Century architecture are concrete block, terrazzo, and ceramic tile (Christopher A. Joseph & Associates 2009:16; Brown 2010:115). Although the variety of materials lends a multitude of color, stucco and wood could also be painted colorfully (Brown 2010:115). Exposed rafters often support low-pitched gable or shed roofs with moderate to deep eaves, but roofs were also flat with no overhang. Aside from the basic characteristics of Mid-Century Modern buildings, the style often featured recessed entrances, which could include an atrium or courtyard entry; built-in planters; screen walls, often of perforated concrete block or solid concrete block with two-dimensionally projecting geometric elements; and canted walls (Brown 2010:115–116). As with the International Style, Mid-Century Modern buildings were often asymmetrical.

The Sukaisian Building, originally built as a store, contains elements of both an enframed storefront type, popular through the 1940s, and Mid-Century Modern architecture. It also incorporated elements of the modern storefront: the distillation of elements and the emphasis on new materials evidenced through the stonework, and use of straight lines evidenced by the narrow cantilevered overhang above the fenestration. Furthermore, the building features elements of the Mid-Century Modern style through its use of multiple cladding materials, the recessed entrances, and canted walls. However, a significant example would include deep as opposed to shallow cantilevered overhang, an atrium or courtyard, built-in planters of stone or brick, and screen walls.

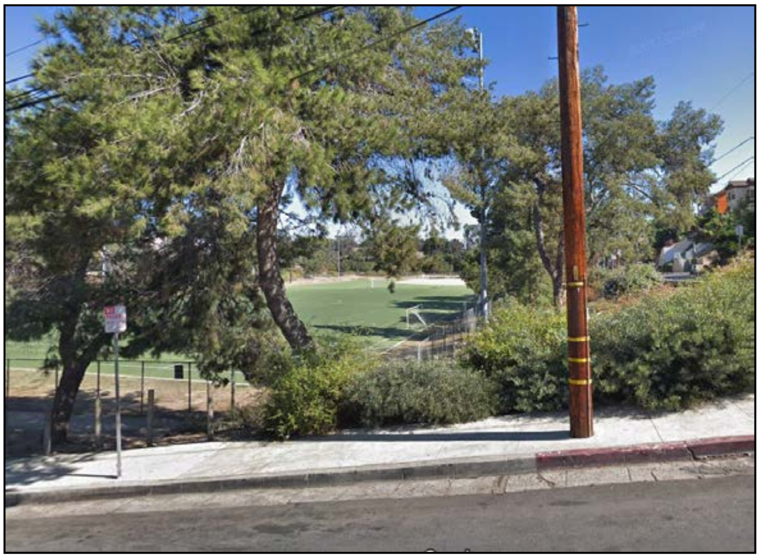
The Workshop Building has an asymmetrical primary elevation, but this is the only element of the building that evidences a modern architectural style. Used at least in part as a storage facility, the building is a stucco-clad box and lacks distinctive features.

Evaluation of Historical Resources

National Register of Historic Places, California Register of Historical Resources, and Los Angeles Historic-Cultural Monument Criteria

Boyle Heights Sports Center Park

The Boyle Heights Sports Center Park was constructed as one of numerous parks in the post-World War II era as a result of a 1957 bond measure that allowed $39.5 million for the construction of parks. By 1959, the Department of Recreation and Parks had completed 35 projects, with an additional 21 in process, possibly including the Boyle Heights Sports Center Park (City of Los Angeles 2017a:36). While the park provides the community with various activity space and facilities, the park lacks additional sports areas such as tennis courts, multiple baseball fields, or multiple indoor spaces such as an auditorium. Moreover, the park lacks a swimming pool and a bath house, both significant aspects of post-World War II park construction in Los Angeles. Therefore, the Boyle Heights Sports Center Park is not eligible for the NRHP, CRHR, or as an HCM under Criteria A/1. The park is not associated with the productive life of persons significant to our past and newspaper articles from the period do not discuss any individuals associated with the park's plan or construction. Therefore, the Boyle Heights Sports Center Park is not eligible for the NRHP, CRHR, or as an HCM under Criteria B/2. The Park design is commonplace, with a few linear pathways amidst a large soccer and baseball field, playground, and basketball court. The Park is surrounded by mature trees interspersed on patchy, narrow lawns, but otherwise lacks vegetation. Nothing in its design suggests that the Park is the work of a master designer. Therefore, the Park is not eligible for the NRHP, CRHR, or as an HCM under Criteria C/3. The landscape, field, and structure designs for the Boyle Heights Sports Center represent commonplace examples from the period. Their planning and construction do not evidence any significant techniques in design, construction, or engineering technologies, methods, or materials. Therefore, the Park is not likely to yield significant information important to our history and is not eligible under NRHP or CRHR Criteria D/4 (Figure 3).



Source: Google 2017

Figure 3. Boyle Heights Sports Center Park, Camera Facing North

For a detailed assessment of significance and eligibility of Boyle Heights Sports Center Park, please see Appendix A.

The Sukaisian Building

Constructed in 1953, the Sukaisian Building at 2500 Whittier Boulevard does not correspond to significant commercial development along Whittier Boulevard (Figure 4). The period of significance for commercial development along Whittier Boulevard is 1914 to 1934, evidenced by a significant number of buildings constructed in the 1920s within the study area. Therefore, the Sukaisian Building does not appear eligible for the NRHP, CRHR, or HCM under Criteria A/1. Local context and newspaper research did not yield information regarding the building's owner at the time of construction, Sam Sukaisian. Therefore, the Sukaisian Building does not appear eligible for the NRHP, CRHR, or HCM under Criteria B/2. Information regarding engineer A.R. Laker and contractor John Dinoto was also sparse. It appears that Dinoto may have been a resident of Montebello and a member of the Montebello Realty Board (Los Angeles Times 1958b:187). The three men associated with the property do not appear to have made a significant contribution to history, nor are Laker or Dinoto considered masters of their professions. While the building's design includes some character-defining features of vernacular modernism, the building lacks sufficient quality of design. For example, the building lacks built-in planters of stone or brick along the primary elevation, or original signage identifying the original use of the building. Therefore, the Sukaisian Building is not eligible for the NRHP, CRHR, or HCM under Criteria C/3. Finally, the property is located in an urban setting and constructed of common methods and materials. Therefore, the Sukaisian Building is not eligible for the NRHP or CRHR under Criteria D/4. The building has also incurred alterations that affect its integrity.

For a detailed assessment of significance and eligibility of 2500 Whittier Boulevard, please see Appendix B.

Source: ICF 2018

Figure 4. The Sukaisian Building, Camera Facing Southwest

The Workshop Building

Constructed between 1960 and 1964, the Workshop Building at 2510 Whittier Boulevard also does not correspond to significant commercial development along Whittier Boulevard (Figure 5). The period of significance for commercial development along Whittier Boulevard is 1914 to 1934, evidenced by a significant number of buildings constructed in the 1920s within the study area. The parcel remained unimproved, although the American Rubbish Company held operations at this address in the 1950s. Therefore, the Workshop Building does not appear eligible for the NRHP, CRHR, or HCM under Criteria A/1. The American Rubbish Company does not appear in newspaper articles from the 1950s and no persons have been identified as associated with the building. Therefore, the Workshop Building does not appear eligible for the NRHP, CRHR, or HCM under Criteria B/2. No permits from the building's initial construction are on file with LADBS, but the modest building does not appear to be the work of a master architect, builder, or engineer. Therefore, the Workshop Building does not appear eligible for the NRHP, CRHR, or HCM under

Criteria C/3. Finally, the property is located in an urban setting and constructed of common methods and materials. Therefore, the Workshop Building does not appear eligible for the NRHP or CRHR under Criteria D/4. The building has also incurred alterations that affect its integrity.

For a detailed assessment of significance and eligibility of 2510 Whittier Boulevard, please see Appendix C.

Source: ICF 2018

Figure 5. The Workshop Building, Camera Facing Southwest

Built Environment Resources in the Indirect Study Area

In addition to the Boyle Heights Sports Center Park including Sukaisian Building and the Workshop Building, eight buildings within the study area boundary are over 50 years of age (see Table 3). None of these buildings were identified in the *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California* report published in 2008, which surveyed Whittier Boulevard in Boyle Heights. This evaluation reviewed that document and conducted newspaper, directory, and LADBS building permit research on these eight buildings.

Table 3. Resources in the Indirect Study Area

Address	Year Built
2457 Whittier Boulevard	1936
2561 Whittier Boulevard	1941
2563 Whittier Boulevard	1924

Address	Year Built
2565 Whittier Boulevard	1924
2467 Whittier Boulevard	1926
2471 Whittier Boulevard	1925
2501 Whittier Boulevard	1922
2517 Whittier Boulevard	1925
Source: Los Angeles County Tax Assessor 2016	

Six of these building were constructed in the 1920s and correspond to typical development patterns in Boyle Heights along Whittier Boulevard. However, all of the buildings lack sufficient integrity to convey a significant pattern of commercial development. Since their construction, most of the buildings have been clad with stucco, storefronts have been resized and infilled, windows and doors have been replaced, security doors and bars have been installed, and any architectural detailing has been removed (Figures 6 through 10). Los Angeles City directories from 1927, 1929, and 1932 provided the names of persons living and/or working at the subject properties along Whittier Boulevard, but newspaper research did not identify anyone that made a significant contribution to our history. The buildings are constructed of common methods and materials. LADBS building permit research and visual inspection identified significant alterations. These alterations render the buildings ineligible for the NRHP, CRHR, or as an HCM due to a loss of integrity.

2457 Whittier Boulevard was constructed in 1936, according to the Los Angeles County Assessor records. A 1923 permit is on file at the Los Angeles Department of Building and Safety, however, suggesting an earlier construction date than indicated by county records. The 1923 permit identified D. Laubito as the building owner and Bungalow Craft as the architect (Los Angeles Department of Building and Safety 1923). The two-story building was constructed for use as a store and residence. This building has been significantly altered since its construction in 1923. (Alterations in 1936 may account for the county assessor date.) The west elevation is clad with narrow clapboard siding, possibly original. However, the primary elevation has been re-clad with stucco; windows in the second floor have been resized and replaced with metal sliding sashes; security doors and grates have been affixed to the first story fenestration; and visual inspection reveals alterations to the storefront including extensive infill of original storefront windows with stucco-cladding over an unknown material. In addition, a metal canopy has been added over the primary entrance and accompanying window (Figure 6). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

2461 Whittier Boulevard, constructed in 1941, was built for use as a restaurant by Manuel Cirica. Cirica commissioned engineer George J. Fosdyke and contractor J. B. Aquist to design and build the one-story brick and concrete building (Los Angeles Department of Building and Safety 1941a). In 1945, the owner requested the construction of a second building on the parcel for storage (Los Angeles Department of Building and Safety 1945). Visual inspection notes multiple alterations to the building. In particular, the entire storefront has been infilled with concrete block. The doors and windows have applied security screens that obscure the materials and configurations behind them, but were likely replaced when the storefront was infilled (Figure 6). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

2463 Whittier Boulevard, constructed in 1924, was built as storerooms for cask products by Peter J. Farney, G. E. Farney, and H. H. Howard (Los Angeles Department of Building and Safety 1924a). In 1941, Peter Farney requested permission to repair damage to his storage rooms (Los Angeles Department of Building and Safety 1941b). According to a 1949 Sanborn Map, the building was classified as a store at that time. Remnants of the original storefront are visible in the recessed door flanked by canted, windowed walls with windows along the street. However, the original doors and windows have been replaced, and transom windows of the storefront have been infilled. A security gate and screens secure the building's fenestration. Finally, the building has been clad with non-original rough textured stucco. Although the original construction material is not documented, the building was likely constructed of brick (Figure 6). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

2465 Whittier Boulevard, built in 1924, is a tall, one-story building that was altered during the mid-twentieth century. Elona Schemmit built this one-story brick building with a composition roof for use as a store and a dwelling. A permit was also requested for a private garage on the parcel. By 1932, Fred Pacheco, grocer, is listed as a tenant of the building (Pacific Telephone and Telegraph Company 1932:1617). This building contains more architectural detailing than most of the other buildings in the study area, such as its embellished parapet. Originally constructed of brick, the building has since been completely re-clad with non-original stucco on all the exterior walls and stone around the entrance. The storefront also underwent alterations such as the resizing and replacement of fenestration in the 1950s or 1960s. A large metal security gate secures the front of the building (Figure 6). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

Source: ICF 2018

Figure 6. 2457–2465 Whittier Boulevard, Camera Facing North

2467 Whittier Boulevard, constructed in 1926, was designed as a two-story building with two stores and a dwelling. E. T. Emberton did not include an architect, engineer, or contractor on his permit. The permit indicates that the building was composed of a brick exterior elevation, with a cement foundation and first floor, a wooden second floor, and a composition roof (Los Angeles Department of Building and Safety 1926). The 1949 Sanborn Fire Insurance Map depicting 2467 Whittier Boulevard also indicates that the building was two stories tall, supporting the filed permit (Sanborn Map Company 1949). The Los Angeles County Assessor assigned 1959 as the effective year date assigned to this property. Visual inspection revealed multiple alterations including non-original stucco cladding over brick, and alterations to the building's two storefronts including replacement of materials. Security grates cover the fenestration. Moreover, the building is a one-story building today and neither permits nor visual inspection can provide a narrative regarding this discrepancy (Figure 7). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

Source: ICF 2018

Figure 7. 2467 Whittier Boulevard, Camera Facing North

2471 Whittier Boulevard, constructed in 1924–1925, is located on the northwest corner of the intersection of Whittier Boulevard and South Mathews Street. Guiseppe Occardo commissioned contractor Atlas Building Material and Wreck Co. to build a one-story brick building for use as stores and a dwelling (Los Angeles Department of Building and Safety 1924b). In the later 1920s and early 1930s, the building was listed in the Los Angeles City Directories as a billiards establishment. In 1934, the building was at least partially used as a beer tavern and was owned by Matrin Zuniga, who requested permission to install a sidewalk canopy (Los Angeles Department of Building and Safety 1934). However, by 1949, the building housed two stores and a restaurant (Sanborn Map Company 1949). This building has undergone multiple alterations, although minor remnants of its original 1920s appearance are visible in the white terracotta bricks and white terracotta embellishments at the roofline, most visible near the corner entrance. All three of the building's storefronts have been altered, resized, and infilled, and security doors and grilles have been affixed. Visible brick has been repointed or painted over, while the western storefront has been re-clad with non-original thick stucco work, with an incised diamond pattern above the entrance (Figure 8). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

Source: ICF 2018

Figure 8. 2471 Whittier Boulevard, Camera Facing North

2501 Whittier Boulevard, constructed in 1922, is located on the northeast corner of the intersection of Whittier Boulevard and South Mathews Street. The building features a rectangular plan with a flat roof and parapet. Harry Bunum commissioned architect J. J. Donnellan and contractors Eslep and Kohler to design and build the 15-foot, one-story building to contain stores and a dwelling (Los Angeles Department of Building and Safety 1922; Pacific Telephone and Telegraph Company 1923:3744).[1] Other than a concrete foundation and a composition roof, construction materials are not identified on the original building permit. Visual inspection suggests the building was constructed of unreinforced masonry. William and Hulda Hoffman maintained a market at this property through 1932 (Pacific Telephone and Telegraph Company 1932:2630). The building has undergone multiple alterations since its construction: the building has been clad with non-original stucco; windows and doors have been replaced and likely resized; and security doors and grilles have been applied. With the exception of one door (secondary) that likely dates to the 1920s, no features of the building evoke its 1922 construction date. Any architectural detailing in the brickwork or applied decoration has been lost (Figure 9). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

[1] The last name of the owner on the permit is illegible, but the Los Angeles City Directory from 1923 provided the correct spelling through a search of the owner address "2709 Brooklyn Ave," as listed on the permit.

Source: ICF 2018

Figure 9. 2501 Whittier Boulevard, Camera Facing North

2517 Whittier Boulevard, constructed in 1925, has an irregular footprint, with a rectangular portion along Whittier Boulevard and a cross-shaped portion adjoined to the rear. M. Chernick commissioned architect Louis Scisarek and contractor Sam D. Eutehman to design and construct the building (Los Angeles Department of Building and Safety 1925). To operate as a store and dwellings, the one-story building rose to a height of 23 feet, and was constructed of brick and cement. In 1929, the property housed Root and Willard, washing machine operators, and in 1932 C. L Fink operated a housekeeping shop from this location (Pacific Telephone and Telegraph Company 1929:1843, 1932:2760). By 1949, the property contained a baby shoe bronzing facility (Sanborn Map Company 1949). The property has been significantly altered since its construction. Visual inspection showed that the building was clad with non-original stucco, and that the storefront points of fenestration and egress have been altered. Several windows have been infilled, one doorway has been moved and/or resized, and security doors have been installed. Recessed arches over the building's two primary doors and a projecting strings course suggest that the building once displayed patterned brickwork and other architectural features (Figure 10). The building lacks sufficient integrity, and nothing regarding its history suggests it is eligible for the NRHP, CRHR, or as a local HCM.

Source: ICF 2018

Figure 10. 2517 Whittier Boulevard, Camera Facing North

Los Angeles Historic Preservation Overlay Zone Criteria

None of the 12 buildings or structures within the study area are located in the boundary of a designated Los Angeles HPOZ or were identified by the *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, CA* report to be within the boundary of a potential HPOZ. Due to the lack of integrity of all buildings located within the study area, these buildings are not eligible for designation as HPOZ contributors. Originally, the buildings' brick construction was visible and included some decorative elements such as the addition of string courses, shaped parapets, or terra cotta elements. However, all but one exposed brick building has been re-clad with stucco. As discussed above, the buildings' alterations are substantial and include not only non-original cladding materials, but the resizing and replacement of fenestration. Additionally, the buildings together do not appear to represent a significant aspect of commercial development and architecture in Boyle Heights; are not associated with the productive lives of any persons significant to Los Angeles history; are not the work of master architects, builders, or engineers; and do not reflect significant architecture in Los Angeles. Therefore, neither the area nor the buildings and features within the study area are eligible for designation as an HPOZ.

Environmental Impact Analysis

The thresholds of significance defined in Appendix G of the State CEQA Guidelines and Los Angeles CEQA Threshold Guide (2006) do not apply to this project because there are no historical resources within the study area.

Construction Impacts

Would the project result in a substantial adverse change in the significance of a historical resource due to demolition, relocation, conversion, rehabilitation, or alteration of a historical resource?

Because the Boyle Heights Sports Center Park, Sukaisian Building, and Workshop Building are not historical resources pursuant to CEQA, the proposed project would not result in a substantial adverse change in the significance of a historical resource during construction. None of the other nine buildings over 50 years of age within the study area are historical resources pursuant to CEQA, and they would not be affected by the proposed project.

Operation Impacts

Would the project result in a substantial adverse change in the significance of a historical resource due to demolition, relocation, conversion, rehabilitation, or alteration of a historical resource?

Because the Boyle Heights Sports Center Park, Sukaisian Building, and Workshop Building are not historical resources pursuant to CEQA, the proposed project would not result in a substantial adverse change in the significance of a historical resource during operation. None of the remaining nine buildings over 50 years of age within the study area are historical resources pursuant to CEQA. Similarly, they would not be affected by the proposed project.

Conclusions

The buildings along Whittier Boulevard within the study area were previously surveyed and found ineligible for national, state, or local designation. Research and evaluation conducted for the current project confirmed these findings. No buildings or features within the study area are historical resources for the purposes of CEQA. Therefore, no historical resources would undergo a substantial adverse change in their significance due to construction or operation of the proposed project because there are no historical resources within the study area.

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Appendix A Boyle Heights Sports Center Park DPR 523 Forms

State of California ♁ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code   Reviewer   Date

 ***Resource Name or #:** Boyle Heights Sports Center Park
P1. Other Identifier: 933 South Mott Street

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** Los Angeles **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Los Angeles **Date** 1979 **T** Unsectioned; **R** ; ☐ **of** ☐ **of** ; **B.M.**
c. Address 933 South Mott Street City Los Angeles Zip 90023
d. UTM: Zone 11, 387890.98 mE/ 3766394.95 mN
e. Other Locational Data: APNs: 5189-010-920; 5189-010-922, and 5189-010-924.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Boyle Heights Sports Center Park, located at 933 South Mott Street, displays a rectangular plan and is bound by Whittier Boulevard to the north, South Mathews Street to the west, 7th Street to the south, and south Mott Street to the east. The varied topography features a hillside to the north. To ensure the park's fields maintained a flat surface, the park is slightly sunken below South Matthews Street and South Mott Street. As such, the park is accessed by short staircases and ramps along the north, west, and east elevations. A large lawn that includes a soccer field and a baseball field dominates the park. The park also contains a one and a half basketball court to the north, as well as an irregularly shaped playground. See continuation sheet.

***P3b. Resource Attributes:** HP37. Other

P5a. Photograph or Drawing

***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo: South portion of park, detail of soccer field, camera facing north. Google, 2017.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both 1960s (historicaerials.com & *Los Angeles Times*)

***P7. Owner and Address:**
City of Los Angeles,
Department of Bureau of Engineering
1149 S Broadway
Los Angeles, CA 90015

***P8. Recorded by:**
Margaret Roderick, ICF
501 W. 5th Street, Suite 900
Los Angeles, CA 90071

***P9. Date Recorded:**
6/4/2018

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation**: ICF, June 2018. *Draft Boyle Heights Sports Center Gymnasium CEQA Historical Resources Memo.*
***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♁ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** Boyle Heights Sports Center Park ***NRHP Status Code** 6Z

B1. Historic Name: Boyle Heights Sports Center Park
B2. Common Name: Boyle Heights Sports Center Park
B3. Original Use: Park B4. Present Use: Park ***B5. Architectural Style:** Post-World War II Municipal Recreation Facility; Mid-Century Modern

***B6. Construction History:** Constructed between 1960 and 1972 (historicaerials.com and *Los Angeles Times*).

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:**

B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** Boyle Heights; Mid-Century Modern **Area** Boyle Heights, Los Angeles
Period of Significance 1960s **Property Type** Workshop **Applicable Criteria** N/A

See continuation sheet.

B11. Additional Resource Attributes: (List attributes and codes) N/A
***B12. References:**

See continuation sheet.

B13. Remarks: N/A

***B14. Evaluator:** Margaret Roderick, ICF
***Date of Evaluation:** 6/4/2018

(This space reserved for official comments.)

P3a. Description, continued:

A narrow Mid-Century Modern building that likely provides restroom facilities and a public community space is located on South Mott Street, approximately at the Park's mid-way point. Two additional buildings, the Sukaisian Building and the Workshop Building located at 2500 and 2510 Whittier Boulevard, reside atop the Park's northern hill and face north onto the street. These two buildings are discussed in separate 523 DPR form sets. A picnic area with multiple tables is located north of the building. Hardscape features include linear pathways. Vegetation is primarily noted by grass composing the fields. In addition, a patchy lawn interspersed with mature trees surrounds the park's boundary (Figures 523a, 1 through 3).

Figure 1: Boyle Heights Sports Center Park, image facing north. Google, 2017.

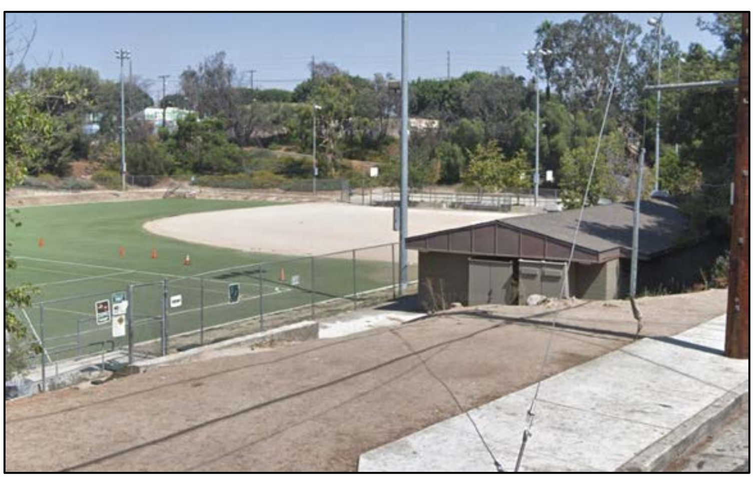

Figure 2: Boyle Heights Sports Center Park, detail of baseball field and recreation building, image facing northwest. Google, 2017.

Figure 3: Boyle Heights Sports Center Park, detail of pathway, basketball court, and playground, image facing west. Google, 2017.

B10. Significance, continued:

Context

Boyle Heights

Following the establishment of the San Gabriel Mission in 1771, the Spanish established the Pueblo of Nuestra Señora de la Reina de Los Angeles de Porciuncula on September 4, 1781.[1] Eleven families, a total of 44 people, recruited as colonists from Sinaloa, Mexico, founded the Pueblo.[2] By 1800, the pueblo consisted of 30 adobe buildings surrounding a central plaza, including a town hall, barracks, bodege (storehouse), and calabozo (jail), surrounded by an adobe wall.[3] Originally located close to the Los Angeles River, the Pueblo relocated to higher ground circa 1820 after several severe floods. *El Paredon Blanco*, or the White Bluff, east of the river, was included within the original pueblo boundary and would later become known as Boyle Heights.[4]

Among the oldest communities in Los Angeles, Boyle Heights was first settled by members of the pioneering Lopez family in the 1830s, after they granted land by the Mexican government. At that time, the area was rural, with small-scale agricultural efforts primarily for wine production. Over time, however, the Lopez family sold portions of its land to persons including Andrew Boyle, George Cummings, and A.H. Judson and his Brooklyn Land and Building

[1] Brian D. Dillon, “Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research,” (On file, South Central Coastal Information Center, California Historical Resources Information System, 1994), 31–37.
[2] Brian D. Dillon, “Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research,” (On file, South Central Coastal Information Center, California Historical Resources Information System, 1994), 31–37.
[3] Dillon, 43.
[4] Japanese American National Museum, “Timeline,” Exhibition: Boyle Heights Project (September 2002–February 2003), np, accessed 5/16/2018, http://www.janm.org/exhibits/bh/exhibition/timeline.htm.

Company, among others. In the late 1850s, Andrew Boyle purchased 44 acres of land and maintained the rural setting through agricultural pursuits such as orange, peach, and fig orchards, and cattle ranching. Residential subdivision and development of the area began in the 1870s when William Henry Workman, son-in-law of Boyle, along with financers, began to divide and sell the lands inherited from Boyle's estate. The subdivision included a water main and Workman named the subdivision "Boyle Heights" to honor Andrew Boyle. Other subdivisions in this era included the Mount Pleasant tract and Brooklyn Heights, located at the western edge of the Boyle Heights community, nearest to Downtown.[5]

Residential development came to a halt when then local economy collapsed in 1889.[6] Soon enough, however, a second real estate boom in the 1890s, spurred by the completion of the transcontinental railroad in 1885, triggered significant population increase across the region.[7] Seeking profits from residential and commercial land sales, Workman donated plots of land to religious institutions. Along with Elizabeth Hollenbeck, he donated 21 acres for park use. By 1900, the horse-drawn streetcar was replaced by the electric streetcar, which further supported the grown of the community and its development as a streetcar suburb of Los Angeles. For example, First Street and Brooklyn Avenue contained streetcar lines and developed as commercial districts between the 1890s and the 1920s. Boyle Heights' separation from downtown, east of the peripatetic and sometimes unpredictable Los Angeles River, however, somewhat chilled the area's development potential.

Within the study area, Whittier Boulevard primarily developed as a commercial district between 1913 and 1934.[8] Specifically, the section of Whittier Boulevard within the study area developed during the 1920s: Sanborn Fire Insurance Maps from 1921 show large, unimproved parcels within the study area. Significantly, the Viaduct Bond Act of 1923 led to the construction of multiple viaducts spanning the Los Angeles River from Downtown to Boyle Heights, including the 6th Street Viaduct located at the western terminus of Whittier Boulevard and the 7th Street Viaduct, both of which provided safe passage between Boyle Heights and downtown Los Angeles.

Boyle Heights historically featured a multicultural population demographic. The restrictive covenants that disallowed non-whites from owning property in much of the Los Angeles region were not implemented widely in

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[5] The information in this paragraph was derived from *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 8–9, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

[6] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 29, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

[7] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 10–12, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

[8] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 34 & 59, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

Boyle Heights.[9] Large numbers of Japanese Americans and Russian and Eastern Jews settled in Boyle Heights in the early 1900s, joining the already significant population of whites and Mexican Americans. Indeed, members of the Japanese Club at Roosevelt High School designed, built, and maintained a Japanese Garden on the school premises in 1933.[10] Meanwhile, the Jewish community in Los Angeles has strong historical ties to Boyle Heights; in the early 1900s, it "boasted one of the largest Jewish populations in the western United States."[11] Additionally, Boyle Heights hosted smaller populations of African American, Armenian, Greek, Italian, Polish, and Slavic groups.

During and after World War II, Boyle Heights underwent significant cultural and physical changes. Japanese internment during World War II affected the cultural landscape of Boyle Heights (and the physical—the Japanese garden at Roosevelt High School was demolished), a removal of restrictive covenants initiated the relocation of many Jewish community members to other locales within the city, and the multi-level east Los Angeles freeway interchange and related freeways decimated blocks of residential and commercial buildings in Boyle Heights and severed portions of the community.[12] The Mexican American population in Boyle Heights continued to grow after World War II and with the influx of immigrants in the 1970s as a result of economic and civil unrest in Mexico. Moreover, Boyle Heights is strongly associated with the Chicano Movement in the 1960s and 1970s.

Mid-Century Park Development in Los Angeles

After World War II, a park was viewed as a public service necessary to the community, like a firehouse or local school.[13] Numerous parks in the late post-World War II era were constructed as the result of a 1957 bond measure that allowed $39.5 million for the construction of parks. By 1959, the Department of Recreation and Parks had completed 35 projects, with an additional 21 in process.[14] Parks from this era included parking for its patrons as a defining feature, but also included outdoor recreation areas that facilitated physical activity such as athletic and ball

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[9] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 13–15, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.
[10] Roosevelt High School, Yearbook, 1933.
[11] *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 15, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.
[12] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 15–16, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.
[13] "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017), 29, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.
[14] "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017), 36, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.

fields, tennis and basketball courts, tracks for running, and outdoor pools. A park from this period may also contain social recreational aspects such as activity centers, playgrounds, picnic tables, and auditoriums.[15] An ideal example of a park could provide the community with multiple field and courts, with a variety of sports, and multiple public buildings for indoor social activities and events for all ages.[16]

New parks in already developed urban areas were often compact and acted as infill in an already established neighborhood. The Lemon Grove Park in Hollywood is an example of this type, as is the Boyle Heights Sports Center. Both these parks originally contained residences that were razed for new, recreational development.[17] In contrast, new parks constructed in suburban areas such as the San Fernando Valley, which was primarily developed in the post-World War II era, contained large, expansive parks such as the Sepulveda Center in Panorama City, which included a club house, swimming pool, tennis courts, basketball courts, and two baseball fields.[18]

Developed by the Los Angeles Department of Recreation and Parks in the early 1960s, the Boyle Heights Sports Center is bound by Whittier Boulevard to the north, South Mathews Street to the west, 7th Street to the south, and South Mott Street to the east. The Park is located south of the Sukaisian Building and the Workshop Building, which are located in the northern portion of the Sports Center and face north onto Whittier Boulevard.

The area around the Park was subdivided between 1916 and 1922, which spurred development in the neighborhoods along Whittier Boulevard.[19] According to a Sanborn Map, by 1921, modest one-story residences lined South Mott Street as well as portions of 7th Street. The segment of South Mathews Street crossing Whittier Boulevard and continuing to 7th Street (and Fickett Street) and its adjoining parcels was subdivided in 1922.[20] By 1949, nearly all parcels within the Park boundary were improved with modest dwellings and flats.[21] Starting in 1960, *Los Angeles Times* articles report that "[t]he City Recreation and Park Commission…authorized the acquisition" of parcels "as part of the site for the proposed Boyle Heights Sports Center."[22] By October 9, 1961, the Commission only needed to acquire six more parcels for the Park's construction.[23] By 1964, all buildings located south of Whittier Boulevard, east of South Matthews Street, north of 7th Street, and west of South Mott Street, except for the Sukaisian Building

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15 "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017), 36–39 and 53–55, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.
16 "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017), 30, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.
17 Historicaerials.com, "805 North Hobart, Hollywood," (1964), no page.
18 "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017), 38, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.
19 Los Angeles Tract Map, No. 2564 (1916); Los Angeles Tract Map, No. 4433 (1921); Los Angeles Tract Map, No. 4887 (1922); Los Angeles Tract Map, No. 5299 (1922).
20 Sanborn Fire Insurance Map, *Los Angeles, Volume 14, Sheet 1464* (1921); Los Angeles Tract Map, No. 5299 (1922).
21 Sanborn Fire Insurance Map, *Los Angeles*, *Volume 14, Sheet 1464* (1949).
22 "Center Land OKd," *Los Angeles Times* (May 16, 1960), 30.
23 "Boyle Heights Project Nears," *Los Angeles Times* (October 9, 1961), 34.

and the Workshop Building, had been razed.[24] By 1972, the Boyle Heights Sports Center Park was completed and included baseball and soccer fields and a basketball court as it does today.[25]

Mid-Century Modernism

Mid-Century Modern architecture denotes a post-World War II regional trend in modernism that responded to the International Style's sterile qualities by organically incorporating a variety of materials, color, and shapes.[26] The term "Mid-Century Modern" is commonly used in Southern California to describe a regional post-World War II architectural vernacular that, perhaps because of its location, loosens the dogma, rules, and orthodoxy of East Coast and European International Style modernism. It does so through a more casual and variegated use of materials, massing, textures, compositions, and other formal elements.

In contrast to the International Style, Mid-Century Modern architectural design included more solid walls and the use of stucco, wood, rock, and brick cladding for construction materials.[27] In particular, the use of stacked brick features in many commercial and educational buildings.[28] Additional materials found in Mid-Century architecture are concrete block, terrazzo, and ceramic tile.[29] Although the variety of materials lends a multitude of color, stucco and wood could also be painted colorfully.[30] Exposed rafters often support low-pitched gable or shed roofs with moderate to deep eaves, but roofs were also flat with no overhang. Aside from the basic characteristics of Mid-Century Modern buildings, the style often featured recessed entrances, which could include atrium or courtyard entry; built-in planters; screen walls, often of perforated concrete block or solid concrete block with two-dimensionally projecting geometric elements; and canted walls.[31] As with the International Style, Mid-Century Modern buildings were often asymmetrical.

<u>Criteria for NRHP, CRHR, and LAHCM Eligibility of a Park</u>

The following guidelines informed the evaluation of the Boyle Heights Sports Center Park at 933 South Mott Street. According to the *Los Angeles Citywide Historic Context Statement* on "Public and Private Institutional Development, 1850-1980," a Municipal Recreational Facility in Los Angeles, constructed between 1932 and 1978, would be eligible for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or as a City of Los Angeles Historic-Cultural Monument (LAHCM) under Criteria A/3 or C/3.[32] The park

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[24] "2500 Whittier Boulevard, Los Angeles," *Historicaerials.com* (1964).
[25] "2500 Whittier Boulevard, Los Angeles," *Historicaerials.com* (1972).
[26] Historic Resources Group and Pasadena Heritage, "Mid-Century Modern," *Cultural Resources of the Recent Past* (Pasadena, CA: City of Pasadena, 2007), 67.
[27] Christopher A. Joseph & Associates, "Mid-Century Modern," *City of Riverside Modernism Context Statement* (Riverside, CA: City of Riverside, 2009), 16.
[28] *Riverside Modernism Context*, 16.
[29] *Riverside Modernism Context*, 16; Mary Brown, "Midcentury Modern (1945-1965)," *San Francisco Modern Architecture and Landscape Design 1935-1970: Historic Context Statement* (San Francisco, CA: City of San Francisco, 2010), 115.
[30] *San Francisco Modern*, 115.
[31] *San Francisco Modern*, 115–116.
[32] "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017),

would need to include recreation areas that facilitated physical activity such as athletic and ball fields, tennis and basketball courts, tracks for running, and outdoor pools. In addition, the park would need to be an excellent example of its type and/or the work of a master landscape architect. Character-defining features of the park may also contain storage buildings; social recreational aspects such as activity centers, playgrounds, picnic tables, and auditoriums; and buildings or structures that are an excellent example of their architectural style and/or constructed by a master architect. Features from outside the period may also be present, including aspects associated with WPA programs. The park should retain integrity of location, design, setting, feeling, and association. Alterations may be present in the form of new planting, but the present appearance must resemble the original appearance, including visual, spatial, and contextual relationships.

Evaluation

NRHP, CRHR, and LAHCM Criteria A/1

The Boyle Heights Sports Center Park contains recreation areas and facilities, including a soccer field, a baseball field, and a basketball court. The park also contains a building along South Mott Street, which likely includes restrooms and some sort of activity center, a picnic area, and a playground. Although it contains these aspects that could elevate the status of a park for the NRHP, CRHR, or as an LAHCM, the park was constructed as one of numerous parks in the post-World War II era as a result of a 1957 bond measure that allowed $39.5 million for the construction of parks. By 1959, the Department of Recreation and Parks had completed 35 projects, with an additional 21 in process, possibly including the Boyle Heights Sports Center Park.[33] Containing various facilities, activity spaces, and greenery, the park lacks additional features such as a swimming pool or an auditorium that could elevate the significance of this park. Therefore, the Boyle Heights Sports Center Park is not eligible for the NRHP, CRHR, or as an LAHCM under Criteria A/1.

NRHP, CRHR, and LAHCM Criteria B/2

The Boyle Heights Sports Center Park is not associated with the productive life of historically significant persons. Newspaper articles from the period do not discuss any individuals associated with the Park's plan or construction. Moreover, it is unlikely that a park would be significant under this criterion. Therefore, the Boyle Heights Sports Center Park is not eligible for the NRHP, CRHR, or as an LAHCM under Criteria B/2.

NRHP, CRHR, and LAHCM Criteria C/3

As it was constructed by the Department of Recreation and Parks, no original building permits are available in the Los Angeles Department of Buildings and Safety database. In addition, newspaper articles from the era do not discuss the park design or mention a landscape architect. The Park design is commonplace, with a few linear pathways amidst a large soccer and baseball field, playground, and basketball court. The park is surrounded by mature trees interspersed

36–39 and 53–55, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.

[33] "Public and Private Institutional Development, 1850-1980," *Los Angeles Citywide Historic Context Statement*, prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources (December 2017), 36, accessed 6/4/2018, https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.

on patchy, narrow lawns, but otherwise lacks vegetation. The plan is compact, and disallows for meandering paths or a sprawling park plan; all its features are grouped close together and the park contains little landscaping beyond its sports facilities and surrounding trees. Nothing in the landscape design suggests it is the work of a master designer. In addition, the Mid-Century Modern building located along South Mott Street mid-way along the park is also not a significant example of its type and does not appear to be the work of a master architect. A significant example would likely include multiple cladding materials, a dramatic roofline, screen walls, and built-in planters. Therefore, the Boyle Heights Sports Center Park is not eligible for the NRHP, CRHR, or as an LAHCM under Criteria C/3.

NRHP and CRHR Criteria D/4

The landscape, field, and structure designs for the Boyle Heights Sports Center represent commonplace examples from the period. Their planning and construction do not evidence any significant techniques in design, construction, or engineering technologies, methods, or materials. Moreover, the property has been improved on multiple times since its initial development in the 1920s and is unlikely to yield significant archaeology. Therefore, the Boyle Heights Sports Center Park is not likely to yield significant information important to our history and is not eligible under the NRHP or CRHR under Criteria D/4.

Los Angeles HPOZ

Residential buildings in the vicinity along South Mott Street to the east of the Park were constructed before the park was developed. Indeed, improved parcels were cleared in circa 1960 to provide vacant land for the construction of the Park. The surrounding neighborhoods are not eligible for designation as a Los Angeles Historic Preservation Overlay Zone (HPOZ) because the area does not contain significance or contain sufficient integrity. As such, the Park is not eligible as a contributor to a potential HPOZ.

Integrity

The Boyle Heights Sports Center Park appears to retain integrity overall, with a few alterations. According to historic aerial imagery, the Park retains its original sports fields, landscaping with trees surrounding the Park, its hardscaping features, and its playground. The only visible alteration from the historic aerial imagery is to the basketball court: what was once two separate courts is now one and a half combined. In addition, the playground equipment has been updated, which is a common alteration for this equipment. As such, design, materials, workmanship have compromised integrity, but it is minimal in the overall context of the park.

B12. References, continued:

Dillon, Brian D. “Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research.” On file, South Central Coastal Information Center, California Historical Resources Information System, 1994.

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———. 1964.
———. 1972.

Historic Resources Survey Report: Boyle Heights Community Plan Area. Prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles. Los Angeles, City of Los Angeles, 2014.

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Los Angeles Department of Building and Safety. *1953LA66896*. August 18, 1953.
———. *1953LA68109*. August 25, 1953.
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———. "Boyle Heights Project Nears." October 9, 1961.
———. "BLDG. 3000' + Mez." Advertisement. April 11, 1960.
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———. "Congratulations…" June 3, 1948.
———. "Distributors—Franchise." May 26, 1958.
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———. "Driver-Salesman." August 28, 1955.
———. "Handicraft for Parks Leaders." November 8, 1972.
———. "Installation Set for Montebello Realty Board." November 30, 1958.
———. "Valentines to Theme Guild Show." January 29, 1961.

Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory. 1956.
———. March 1960.
———. July 1962.

Pasadena Independent. "Gardners Mark Gold Date." November 1, 1979.

"Public and Private Institutional Development, 1850-1980." *Los Angeles Citywide Historic Context Statement*. Prepared for the City of Los Angeles, Department of City Planning, Office of Historic Resources, December 2017. Accessed 6/4/2018. https://preservation.lacity.org/sites/default/files/MunicipalParksRecreationAndLeisure_1886-1978_2.pdf.

Roosevelt High School. *Yearbook*. 1933.

Sanborn Fire Insurance Map. *Los Angeles, Volume 14, Sheet 1464*. 1921.
———. 1949.

Appendix B   Sukaisian Building DPR 523 Forms

State of California ☐The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

Page 1 **of** 16 ***Resource Name or #:** Sukaisian Building
P1. Other Identifier: 2500 Whittier Blvd

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** Los Angeles **and**
***b. USGS 7.5' Quad** Los Angeles **Date** 1979 **T** Unsectioned; **R** ; ☐ **of** ☐ **of Sec** ; **B.M.**
c. Address 2500 Whittier Blvd. City Los Angeles Zip 90023
d. UTM: Zone 11 , 387905.06 mE/ 3766538.81 mN
e. Other Locational Data: APN: 5189-010-911; west building on parcel; located on the southwest corner of the intersection of Whittier Blvd. and Soto St. in the Boyle Heights community of the City of Los Angeles.

***P3a. Description:**
The Sukaisian Building is located at 2500 Whittier Boulevard in the Boyle Heights community in the city of Los Angeles. Located on the southeast corner of the intersection of Whittier Boulevard and South Mathews Street, the rectangular building has a zero setback and is, therefore, immediately adjacent to the sidewalk. A parkway strip between the sidewalk and curb contains large, mature trees along Whittier Boulevard and a parkway strip along South Mathews Street contains dirt but no vegetation. The rectangular building's footprint measures approximately 40 feet by 60 feet. At the street elevation, the building rises to a height of one story while the rear elevation rises slightly taller. The front, single-story portion of the building extends approximately 45 feet south of the primary elevation. The taller rear portion of the building extends approximately 15 feet. The rear portion of the building is taller, rising approximately 2 feet above the front portion's roof height. See continuation sheet.

***P3b. Resource Attributes:** HP6. 1-3 story commercial building

P5a. Photograph or Drawing

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***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)
P5b. Description of Photo: Primary elevation, camera facing south. ICF, 2018.
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1960-1964 (*Los Angeles Times* & Historicaerials.com)
***P7. Owner and Address:**
City of Los Angeles,
Department of Bureau of Engineering
1149 S Broadway
Los Angeles, CA 90015
***P8. Recorded by:**
Margaret Roderick, ICF
501 W. 5th Street, Suite 900
Los Angeles, CA 90071
***P9. Date Recorded:**
5/18/2018
***P10. Survey Type:** (Describe)
Intensive
***P11. Report Citation**:
ICF, June 2018. *Draft Boyle Heights Sports Center Gymnasium CEQA Historical Resources Memo.*
***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♁ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #:** Sukaisian Building ***NRHP Status Code** 6Z

B1. Historic Name: Sukaisian Building

B2. Common Name: Recreation and Parks Office and Shop Building B3. Original Use: Store

B4. Present Use: Vacant

***B5. Architectural Style:** Vernacular Modern

***B6. Construction History:**

The Building was constructed in 1953 (1953LA66896); during construction the foundation plan was revised to include bell caissons (1953LA68109); partitions were added to the interior in 1954 (1954LA81736); unknown alterations appear to have occurred in 1974 (1974LA96925); visual alterations at dates unknown (visual inspection).

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A

***B8. Related Features: N/A**

B9a. Architect: N/A b. Builder: J. Dinoto

***B10. Significance: Theme** Boyle Heights; Commercial Development **Area** Boyle Heights, Los Angeles
Period of Significance 1953 **Property Type** Commercial **Applicable Criteria** N/A

See continuation sheet.

B11. Additional Resource Attributes: (List attributes and codes) N/A

***B12. References:**

See continuation sheet.

B13. Remarks: N/A

***B14. Evaluator:** Margaret Roderick ***Date of Evaluation:** 5/18/2018

(This space reserved for official comments.)

P3a. Description, continued:

According to a 1954 permit, the rear portion contained a mezzanine level.[1] Because of the variation in height, the building features two flat roofs, each surrounded by a shallow parapet. The primary (north) elevation contains minimal architectural and stylistic detailing, while the remaining three elevations contain irregular fenestration and lack architectural or stylistic details. All elevations contain alterations.

The primary (north) elevation faces north onto Whittier Boulevard and is symmetrically composed and divided into two sections (Figure 1). This elevation is clad in a combination of Permastone and smooth stucco. The east section contain a solid pedestrian door oriented to the west of the section. A rectangular opening containing a storefront window is arranged to the east. A ribbon consisting of three two-light hopper sashes occupies the top third of the opening. Metal security screens have been installed over the windows, obscuring the sash details. The bottom of the ribbon is punctuated by a projecting still that extends the entire width of the opening. The bottom two-thirds of the opening are infilled with a smooth stucco wall. Unpainted plywood infills the western ribbon window's center window (Figure 2). A narrow cantilevered overhang extends the full width of the primary elevation: below, the elevation is clad with Permastone and above, the elevation is clad with smooth stucco. Each storefront located below the narrow cantilevered overhang cants inward in the middle, creating two angled, recessed walls (Figure 3). One rectangular piece of Permastone roughly centered on the elevation reads, "2500"—the numeric address of the building. Above, signage on the elevation's stucco cladding reads, "DEPT. OF RECREATION AND PARKS CITY OF LOS ANGELES."

Figure 1: Primary elevation, detail, camera facing southwest. ICF, 2018.

[1] LA195481736.

Figure 2: Primary elevation, detail showing west storefront, camera facing south west. ICF, 2018.

Figure 3: Primary elevation, detail showing canted walls, camera facing southeast. ICF, 2018.

The east elevation contains irregular fenestration on an otherwise solid wall. Toward the center of the elevation, a pedestrian door is accessed by a short concrete staircase with a single metal balustrade to the south. A small porch surmounts the door. A secondary punctuation in the solid wall is located to the north of the door: an unglazed opening with a small platform attached to the exterior. A shallow concrete planter that contains several bushes surrounds the porch (Figure 4).

CONTINUATION SHEET

Figure 4: Primary and east elevation, camera facing south. ICF, 2018.

The west elevation also contains irregular fenestration on an otherwise solid wall. Located to the south along the elevation, two 4-light operable, metal casement sashes form the elevation's only window. A metal security grate covers this clerestory window. At the northern portion of the west elevation, an air conditioning unit has been installed in the wall and ghost lettering, "HANDICRA," remains visible. The elevation has otherwise been painted white (Figure 5).

Figure 5: West elevation, camera facing southeast. ICF, 2018.

The rear (south) elevation is two stories tall to correspond to an interior mezzanine space. The symmetrical rear elevation contains four bays in the first floor and two in the second floor. On the first floor, two doors, located in the outer bays, have been infilled with stucco. A concrete porch connects the two doors, with a staircase located to the east and a ramp to the west. Separating the two doors, the two center bays each consist of a window. Details of the windows are unknown: The western window is broken while a metal security grate covers the eastern window. Each bay in the second story contains one window. Each window is aligned with the now infilled door in the first story below. The eastern window is boarded up with plywood. The western window, covered with a metal security grate, is formed by two 4-light operable, metal casement sashes (Figure 6).

Figure 6: Rear elevation, camera facing northeast. ICF, 2018.

B10. Significance, continued:

Context

Boyle Heights

Following the establishment of the San Gabriel Mission in 1771, the Spanish established the Pueblo of Nuestra Señora de la Reina de Los Angeles de Porciuncula on September 4, 1781.[2] Eleven families, a total of 44 people, recruited as colonists from Sinaloa, Mexico, founded the Pueblo.[3] By 1800, the pueblo consisted of 30 adobe buildings surrounding a central plaza, including a town hall, barracks, bodege (storehouse), and calabozo (jail),

[2] Brian D. Dillon, "Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research," (On file, South Central Coastal Information Center, California Historical Resources Information System, 1994), 31–37.
[3] Brian D. Dillon, "Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research," (On file, South Central Coastal Information Center, California Historical Resources Information System, 1994), 31–37.

surrounded by an adobe wall.[4] Originally located close to the Los Angeles River, the Pueblo relocated to higher ground circa 1820 after several severe floods. *El Paredon Blanco*, or the White Bluff, east of the river, was included within the original pueblo boundary and would later become known as Boyle Heights.[5]

Among the oldest communities in Los Angeles, Boyle Heights was first settled by members of the pioneering Lopez family in the 1830s, after they granted land by the Mexican government. At that time, the area was rural, with small-scale agricultural efforts primarily for wine production. Over time, however, the Lopez family sold portions of its land to persons including Andrew Boyle, George Cummings, and A.H. Judson and his Brooklyn Land and Building Company, among others. In the late 1850s, Andrew Boyle purchased 44 acres of land and maintained the rural setting through agricultural pursuits such as orange, peach, and fig orchards, and cattle ranching. Residential subdivision and development of the area began in the 1870s when William Henry Workman, son-in-law of Boyle, along with financers, began to divide and sell the lands inherited from Boyle's estate. The subdivision included a water main and Workman named the subdivision "Boyle Heights" to honor Andrew Boyle. Other subdivisions in this era included the Mount Pleasant tract and Brooklyn Heights, located at the western edge of the Boyle Heights community, nearest to Downtown.[6]

Residential development came to a halt when then local economy collapsed in 1889.[7] Soon enough, however, a second real estate boom in the 1890s, spurred by the completion of the transcontinental railroad in 1885, triggered significant population increase across the region.[8] Seeking profits from residential and commercial land sales, Workman donated plots of land to religious institutions. Along with Elizabeth Hollenbeck, he donated 21 acres for park use. By 1900, the horse-drawn streetcar was replaced by the electric streetcar, which further supported the grown of the community and its development as a streetcar suburb of Los Angeles. For example, First Street and Brooklyn Avenue contained streetcar lines and developed as commercial districts between the 1890s and the 1920s. Boyle Heights' separation from downtown, east of the peripatetic and sometimes unpredictable Los Angeles River, however, somewhat chilled the area's development potential.

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[4] Dillon, 43.
[5] Japanese American National Museum, "Timeline," Exhibition: Boyle Heights Project (September 2002–February 2003), np, accessed 5/16/2018, http://www.janm.org/exhibits/bh/exhibition/timeline.htm.
[6] The information in this paragraph was derived from *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 8–9, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.
[7] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 29, accessed 5/16/2018,
https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[8] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 10–12, accessed 5/16/2018,
http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

Within the study area, Whittier Boulevard primarily developed as a commercial district between 1913 and 1934.[9] Specifically, the section of Whittier Boulevard within the study area developed during the 1920s: Sanborn Fire Insurance Maps from 1921 show large, unimproved parcels within the study area. Significantly, the Viaduct Bond Act of 1923 led to the construction of multiple viaducts spanning the Los Angeles River from Downtown to Boyle Heights, including the 6th Street Viaduct located at the western terminus of Whittier Boulevard and the 7th Street Viaduct, both of which provided safe passage between Boyle Heights and downtown Los Angeles.

Boyle Heights historically featured a multicultural population demographic. The restrictive covenants that disallowed non-whites from owning property in much of the Los Angeles region were not implemented widely in Boyle Heights.[10] Large numbers of Japanese Americans and Russian and Eastern Jews settled in Boyle Heights in the early 1900s, joining the already significant population of whites and Mexican Americans. Indeed, members of the Japanese Club at Roosevelt High School designed, built, and maintained a Japanese Garden on the school premises in 1933.[11] Meanwhile, the Jewish community in Los Angeles has strong historical ties to Boyle Heights; in the early 1900s, it "boasted one of the largest Jewish populations in the western United States."[12] Additionally, Boyle Heights hosted smaller populations of African American, Armenian, Greek, Italian, Polish, and Slavic groups.

During and after World War II, Boyle Heights underwent significant cultural and physical changes. Japanese internment during World War II affected the cultural landscape of Boyle Heights (and the physical—the Japanese garden at Roosevelt High School was demolished), a removal of restrictive covenants initiated the relocation of many Jewish community members to other locales within the city, and the multi-level east Los Angeles freeway interchange and related freeways decimated blocks of residential and commercial buildings in Boyle Heights and severed portions of the community.[13] The Mexican American population in Boyle Heights continued to grow after World War II and with the influx of immigrants in the 1970s as a result of economic and civil unrest in Mexico. Moreover, Boyle Heights is strongly associated with the Chicano Movement in the 1960s and 1970s.

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[9] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 34 & 59, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

[10] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 13–15, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

[11] Roosevelt High School, Yearbook, 1933.

[12] *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 15, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

[13] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 15–16, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

Developed by the Los Angeles Department of Recreation and Parks in the early 1960s, the Boyle Heights Sports Center is bound by Whittier Boulevard to the north, South Mathews Street to the west, 7th Street to the south, and South Mott Street to the east. The Sukaisian Building and the Workshop Building are located at the northern extreme of the Park and face north onto Whittier Boulevard.

The area to the north and south of the Park were subdivided between 1916 and 1922, which spurred development in the neighborhoods along Whittier Boulevard.[14] According to a Sanborn Map, by 1921, modest one-story residences aligned South Mott Street as well as portions of 7th Street. The segment of South Mathews Street crossing Whittier Boulevard and continuing to 7th Street (and Fickett Street) and its adjoining parcels was subdivided in 1922.[15] By 1949, nearly all parcels within what is now the Park boundary were improved with modest dwellings and flats.[16] Starting in 1960, Los Angeles Times articles report that "[t]he City Recreation and Park Commission…authorized the acquisition" of parcels "as part of the site for the proposed Boyle Heights Sports Center."[17] By October 9, 1961, the Commission only needed to acquire six more parcels for the Park's construction.[18] By 1964, all buildings located south of Whittier Boulevard, east of South Matthews Street, north of 7th Street, and west of South Mott Street, except for the Sukaisian Building and the Workshop Building, had been razed.[19] By 1972, the Boyle Heights Sports Center Park was completed and included baseball and soccer fields and a basketball court, as it does today.[20]

Commercial Property Development in Boyle Heights, 1913–1934

The first commercial district in Boyle Heights developed along 1st Street between Boyle Avenue and Chicago Street as a result of the 1889 extension of the Los Angeles Cable Railway.[21] Although the Los Angeles Cable Railway was short-lived, soon the Los Angeles Railway Company and the Pacific Electrical Railway Company (Red Car) traversed the gap between downtown and Boyle Heights, contributing to the development of additional commercial districts, such as Brooklyn Avenue, Fourth Street, and Whittier Boulevard (then Stephenson Avenue).[22] As the value of land increased, the railyards located in Boyle Heights near the Los Angeles River removed some of their

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[14] Los Angeles Tract Map, No. 2564 (1916); Los Angeles Tract Map, No. 4433 (1921); Los Angeles Tract Map, No. 4887 (1922); Los Angeles Tract Map, No. 5299 (1922).
[15] Sanborn Fire Insurance Map, *Los Angeles, Volume 14, Sheet 1464* (1921); Los Angeles Tract Map, No. 5299 (1922).
[16] Sanborn Fire Insurance Map, *Los Angeles, Volume 14, Sheet 1464* (1949).
[17] "Center Land OKd," *Los Angeles Times* (May 16, 1960), 30.
[18] "Boyle Heights Project Nears," *Los Angeles Times* (October 9, 1961), 34.
[19] "2500 Whittier Boulevard, Los Angeles," *Historicaerials.com* (1964).
[20] "2500 Whittier Boulevard, Los Angeles," *Historicaerials.com* (1972).
[21] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 24, accessed 5/23/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[22] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 24–25, accessed 5/23/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

maintenance facilities and warehouses and built new roads and extended old roads in their place; the new network of streets allowed for further growth of the commercial districts as bridges connected Boyle Heights to downtown.[23]

Commercial buildings constructed in Boyle Heights in the late 1800s and early 1900s were often two stories, with storefront below and residential quarters above, a plan that followed through into the 1930s.[24] With the availability of plate glass and shop owners' desire to draw attention to their wares, commercial architecture changed in the early 1900s.[25] Architects and builders transformed facades with brick and terra cotta, and marble or other extravagant materials could be applied to the entry to accentuate a building.[26] Popular throughout the United States, Romanesque, Classical, and Italianate styles featured in many storefronts.[27] Common types of building organization included the corner or commercial block, single or double front, enframed window wall, temple front (often used in banks), and arcaded block, to name a few.[28] Early commercial buildings within the study area appear to have been constructed of brick, with terra cotta embellishments. The single front type, as visible in 2463 Whittier Boulevard as built in 1924, prevailed.

Typically, commercial properties developed in Boyle Heights at this time were owned by members of the large local Jewish community. Many of these buildings evinced a Mediterranean Revival style of architecture, popular at this time. The commercial corridors typically depended on streetcar access for success and commercial buildings did not yet accommodate the automobile by providing parking. Early commercial development along Whittier Boulevard appears confined to the western portion of the street near South Boyle Avenue and South Chicago Street. Development included a drugstore, several additional stores, a gas station, and a restaurant. It was in the period from circa 1915 to 1935 that commercial buildings replaced residential properties along the major commercial thoroughfares in Boyle Heights, which is evidenced by Sanborn Fire Insurance maps from 1921 and 1949 for properties along Whittier Boulevard. By 1949 numerous stores, a clothing manufacturer, an office building, a second gas station, a theater, and an office building aligned Whittier Boulevard from South Boyle Avenue to South Soto Street, with only a few remaining residences.

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[23] "Intensive Historic Resources Survey" Adelante Eastside Redevelopment Area, Los Angeles, CA," prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (Just 2008), 25, accessed 5/16/2018,
https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[24] "Intensive Historic Resources Survey" Adelante Eastside Redevelopment Area, Los Angeles, CA," prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (Just 2008), 58, accessed 5/16/2018,
https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[25] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 233.
[26] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 233.
[27] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 235-39.
[28] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 242-250; Richard Longstreath, *The Buildings of Main Street: A Guide to American Commercial Architecture, updated edition* (Walnut Creek, Lanham, New York, and Oxford: Alta Mira Press, 2000), contents.

The commercial development along Whittier Boulevard from South Boyle Avenue to South Mott Street, which includes the study area, mirrors the residential development of the area. Areas near the intersection of Whittier Boulevard and South Boyle Avenue were subdivided as early as 1902, according to tract maps recorded with Los Angeles County. Meanwhile, the areas around the intersections of Whittier Boulevard and South Soto Street and Whittier Boulevard and South Mott Street were subdivided around 1916. The area between South Soto Street and South Mott Street along Whittier Boulevard was not significantly subdivided until 1921–1922. Along with the subdivision and subsequent residential development, commercial development evolved along Whittier Boulevard. The oldest building within the study area dates to 1922, with six buildings constructed in the 1920s.[29]

According to Sanborn Fire Insurance maps, by 1949, the study area still included several unimproved parcels along Whittier Boulevard interspersed between stores, often of one story rather than the more common two-story buildings discussed above. This portion of Whittier Boulevard's commercial development differs from the common commercial trends occurring elsewhere in Boyle Heights and Los Angeles at large, in which two-story commercial buildings held storefronts on the ground floor with apartments above, although some commercial buildings contained a dwelling unit to the rear as evidenced by 1920s original building permits. In 1949, area businesses included a restaurant located at 2471 Whittier Boulevard; a paint and building materials facility at 2513–2515 Whittier Boulevard, which is no longer extant; and a baby shoe bronzing facility at 2524 Whittier Boulevard. In the late 1950s and early 1960s, businesses located within the study area appear to have served the large Mexican-American population, with business such as "El Gallo Mexican Chocolate" at 2465 Whittier Boulevard, "El Charro Grocery Store" at 2465 Whittier Boulevard, and "Pablo Chee Market" at 2501 Whittier Boulevard.[30]

Although subdivided by 1922, the parcel at 2500 Whittier Boulevard remained unimproved until the 1950s. In 1953, Sam Sukaisian requested permission to erect a hardware store at 2500 Whittier Boulevard, to be designed by engineer A. R. Laker and constructed by contractor John Dinoto.[31] The permit called for a 20-foot-tall, 42-foot by 58-foot stucco building with a cement floor, a small mezzanine to the rear, and a flat, composition roof. In 1954, Sukaisian converted the building for use as a market and installed interior partitions.[32] By 1956, Gardner Food Products operated from the building and offered a delivery service to the community.[33] In 1958, the grocery business operating at 2500 Whittier Boulevard sought to expand the business by establishing a franchise store at another location.[34] However, by 1960, the building was vacant and available for rent or lease.[35] The City of Los Angeles Recreation and Parks Commission acquired properties south of the subject property along South Matthews Street, South Fickett Street, South Mott Street, and East 7th Street in 1960 and 1961 for the construction of the Boyle

[29] This paragraph is derived from the following resource: *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (Just 2008), 59–60, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[30] Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory (March 1960), 863.
[31] 1953LA66896 and 1953LA68109.
[32] 1954LA81736.
[33] "Driver," Los Angeles Times (June 29, 1956), 50; Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory (1956), 819.
[34] "Distributors—Franchise," *Los Angeles Times* (May 26, 1958), 57.
[35] "BLDG 3000'," *Los Angeles Times* (April 11, 1960), 70.

Heights Sports Center.[36] It may have also acquired the former store located at 2500 Whittier Boulevard at this same time, although the historical record is less clear on this point.

Construction along Whittier Boulevard in the 1950s and 1960s is uncommon for the area because by circa 1950, the "neighborhood shopping center" geared toward automobile traffic became the prevalent type of commercial development in Los Angeles.[37] In contrast, most development in the study area corresponds to construction in the 1920s and earlier. The only other construction in the general area from the 1950s or after is the addition of a building to the Santa Isabel Church and School in 1957. Strip mall development at the intersection of Whittier Boulevard and South Soto Street dates to circa 1980 and later.

Modern Commercial Architecture and Mid-Century Modernism

Modern storefront buildings "relie[d] on abstract geometry to create identity" in the post-World War II era.[38] Whereas prior to World War II commercial buildings often displayed Mediterranean revival styles or elements of Art Deco, Mid-Century Modern vernacular commercial buildings focused on the "general reduction of elements to single effect" and the "exploit[ation of] the materiality of construction products, clean surfaces, straight lines, and contemporary materials and technology."[39] One prominent type of commercial structure was the enframed window wall, consisting of a large window display defined by a simple surround. This type was common through the 1940s and is represented by the Sukaisian Building.[40] By 1952, however, "store design [had] gone through a complete overhaul," which included an open storefront that operated as a "silent salesman" operating 24 hours a day.[41] Materials and color abound in modern commercial architecture, as they did in residential architecture of the period.[42] The exterior of a commercial building often would be painted to attract patrons. Portions of the building acted as billboards, featuring large signage. The interior of a building's color scheme was used to emphasize merchandise.[43]

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[36] "Center Land Sought," Los Angeles Times (June 20, 1960), 25; "Center Land OKd," Los Angeles Times (May 16, 1960), 30; "Boyle Heights Project Nears," Los Angeles Times (October 9, 1961), 34.
[37] City of Los Angeles, "Context: Commercial Development, 1859-1980, Theme: Neighborhood Commercial Development, 1880-1980," *SurveyLA: Los Angeles Citywide Historic Context Statement* (Los Angeles: City of Los Angeles, 2017), 30, accessed 5/23/2018, http://preservation.lacity.org/sites/default/files/NeighborhoodCommercialDevelopment_1880-1980.pdf
[38] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 239.
[39] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 239.
[40] Richard Longstreath, *The Buildings of Main Street: A Guide to American Commercial Architecture, updated edition* (Walnut Creek, Lanham, New York, and Oxford: Alta Mira Press, 2000), 68–69.
[41] Caleb Hornbostel, "Store Design" *Architectural Record* (July 1952), republished in *Design for Modern Merchandising: Stores, Shopping Centers, Showrooms* (New York: F.W. Dodge Corporation, 1954), 1-2; Richard Longstreth, *The Buildings of Main Street: A Guide to American Commercial Architecture, updated edition* (Walnut Creek, Lanham, New York, and Oxford: Alta Mira Press, 2000), 65.
[42] Caleb Hornbostel, "Store Design" *Architectural Record* (July 1952), republished in *Design for Modern Merchandising: Stores, Shopping Centers, Showrooms* (New York: F.W. Dodge Corporation, 1954), 1; 22.
[43] Caleb Hornbostel, "Store Design" *Architectural Record* (July 1952), republished in *Design for Modern Merchandising: Stores, Shopping Centers, Showrooms* (New York: F.W. Dodge Corporation, 1954), 1–2, 22–23; Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 233.

Mid-Century Modern architecture denotes a post-World War II regional trend in modernism that responded to the International Style's sterile qualities by organically incorporating a variety of materials, color, and shapes.[44] The term "Mid-Century Modern" is commonly used in Southern California to describe a regional post-World War II architectural vernacular that, perhaps because of its location, loosens the dogma, rules, and orthodoxy of East Coast and European International Style modernism. It does so through a more casual and variegated use of materials, massing, textures, compositions, and other formal elements.

In contrast to the International Style, Mid-Century Modern architectural design included more solid walls and the use of stucco, wood, rock, and brick cladding for construction materials, as evident in the Sukaisian Building.[45] In particular, the use of stacked brick features in many commercial and educational buildings.[46] Additional materials found in Mid-Century architecture are concrete block, terrazzo, and ceramic tile.[47] Although the variety of materials lends a multitude of color, stucco and wood could also be painted colorfully.[48] Exposed rafters often support low-pitched gable or shed roofs with moderate to deep eaves, but roofs were also flat with no overhang. Aside from the basic characteristics of Mid-Century Modern buildings, the style often featured recessed entrances, which could include an atrium or courtyard entry; built-in planters; screen walls, often of perforated concrete block or solid concrete block with two-dimensionally projecting geometric elements; and canted walls.[49] As with the International Style, Mid-Century Modern buildings were often asymmetrical.

The Sukaisian Building, originally built as a store, contains elements of both an enframed storefront type, popular through the 1940s, and Mid-Century Modern architecture. It also incorporated elements of the modern storefront: the distillation of elements and the emphasis on new materials evidenced through the stonework, and use of straight lines evidenced by the narrow cantilevered overhang above the fenestration. Furthermore, the building features elements of the Mid-Century Modern style through its use of multiple cladding materials, the recessed entrances, and canted walls. However, a significant example would include deep as opposed to shallow cantilevered overhang, an atrium or courtyard, built-in planters of stone or brick, and screen walls.

Evaluation:

Criteria A/1

Constructed in 1953, the Sukaisian Building at 2500 Whittier Boulevard does not correspond to significant commercial development along Whittier Boulevard. The period of significance for commercial development along Whittier Boulevard is 1914 to 1934, evidenced by a significant number of buildings constructed in the 1920s located nearby. The 1920 buildings were constructed as modest masonry buildings, of one or two stories with mixed-use for commercial and residential purposes. For example, permit and directory research establish that multiple buildings

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[44] Historic Resources Group and Pasadena Heritage, "Mid-Century Modern," *Cultural Resources of the Recent Past* (Pasadena, CA: City of Pasadena, 2007), 67.
[45] Christopher A. Joseph & Associates, "Mid-Century Modern," *City of Riverside Modernism Context Statement* (Riverside, CA: City of Riverside, 2009), 16.
[46] *Riverside Modernism Context*, 16.
[47] *Riverside Modernism Context*, 16; Mary Brown, "Midcentury Modern (1945-1965)," *San Francisco Modern Architecture and Landscape Design 1935-1970: Historic Context Statement* (San Francisco, CA: City of San Francisco, 2010), 115.
[48] *San Francisco Modern*, 115.
[49] *San Francisco Modern*, 115–116.

from 2457 to 2517 Whittier Boulevard contained both commercial and residential use, with either an apartment on the second floor or a dwelling to the rear. Not only was the Sukaisian Building constructed outside the period of significance, but it was constructed only for use as a store. Therefore, the Sukaisian Building located at 2500 Whittier Boulevard is not eligible for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or as a City of Los Angeles Historic-Cultural Monument (LAHCM) under Criteria A/2.

Criteria B/2

A 1953 building permit identified the original owner of the Sukaisian Building as Sam Sukaisian. *Los Angeles Times* newspaper research did not yield information regarding Sukaisian. In 1958, Gardner Food Products operated from the building. William Gardner founded Gardner Food Products after moving to Los Angeles in 1925 and the company had at least three locations in Los Angeles.[50] However, this business is similar to many businesses throughout the city and Gardner does not appear to have made a significant contribution to history. Therefore, the Sukaisian Building located at 2500 Whittier Boulevard is not eligible for the NRHP, CRHR, or as an LAHCM under Criteria B/2.

Criteria C/3

The Sukaisian Building was engineered by A.R. Laker and build by John Dinoto. Newspaper research yielded no results for Laker and very few results for Dinoto. Dinoto built a seven-room Ranch house for Gerald Fasoli in San Marino.[51] In addition, Dinoto appears to have been a resident of Montebello and a member of the Montebello Realty Board.[52] While the building's design includes some character-defining features of vernacular modernism, such as canted walls, the building lacks sufficient quality of design. For example, the building lacks built-in planters of stone or brick along the primary elevation, or original signage identifying the original use of the building. Therefore, the Sukaisian Building located at 2500 Whittier Boulevard is not eligible for the NRHP, CRHR, or as an LAHCM under Criteria C/3.

Criteria D/4

The Sukaisian Building is located in an urban setting and constructed of common methods and materials. As such, the property is unlikely to yield information significant to our history regarding construction or engineering technology, methods, or materials. Therefore, the Sukaisian Building located at 2500 Whittier Boulevard is not eligible for the NRHP or CRHR under Criteria D/4.

Los Angeles HPOZ

The Sukaisian Building is not located in the boundary of a designated Los Angeles Historic Preservation Overlay Zone (HPOZ) or identified by the *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California* report to be within the boundary of a potential HPOZ. Due to the lack of integrity of all

[50] "Gardners Mark Gold Date," *Pasadena Independent* (November 1, 1979), 18; "Congratulations…" *Los Angeles Times* (June 3, 1948), 57; "Driver-Salesman," *Los Angeles Times* (August 28, 1955), 177.
[51] "Who's Building That," *Independent Star News* (July 21, 1957), 19.
[52] Installation Set for Montebello Realty Board, *Los Angeles Times* (November 30, 1958), 187.

buildings located in the immediate vicinity, the Sukaisian Building is not eligible for designation as a contributor or a non-contributor to an HPOZ. Originally, the brick construction of the buildings located along the north side of Whittier Boulevard, opposite the Sukaisian Building, was visible and included some decorative elements such as the addition of string courses, shaped parapets, or terra cotta elements. However, all but one exposed brick building has been re-clad with stucco. The buildings' alterations are substantial and include not only non-original cladding materials, but the resizing and replacement of fenestration. Additionally, the buildings together do not appear to represent a significant aspect of commercial development and architecture in Boyle Heights; are not associated with the productive lives of any persons significant to Los Angeles history; are not the work of master architects, builders, or engineers; and do not reflect significant architecture in Los Angeles. In addition, the Sukaisian Building was built in 1953, much later than the majority of the nearby commercial buildings, and would likely be outside any period of significance. Therefore, the buildings within the immediate area of the Sukaisian Building, including the Sukaisian Building, are not eligible for designation as an HPOZ.

Integrity

The Sukaisian Building has not been moved from its original location and, therefore, retains integrity of location; design, materials, and workmanship have compromised integrity due to the storefront alterations. The two original storefront windows have been infilled with a three-narrow but long ribbon window configuration set above a solid wall. This alteration significantly alters the original appearance of the building and its use as a market. Likewise, alterations to the building's rear elevation affect its integrity of design, materials, and workmanship. The setting has also been compromised. At the time of construction in 1953, the Sukaisian Building was surrounded by single- and small multi-family residential properties to the south and by a commercial district along Whittier Boulevard. Although the commercial district is still extant, the buildings along Whittier Boulevard have undergone substantial alterations including infill of windows and doors and re-cladding with non-original materials. These alterations also include the removal of any applied decoration that was likely present on the 1920s buildings. Moreover, the commercial building directly to the west, across South Mathews Street, has been demolished (circa 1960) and is now a surface parking lot. The residences to the south, bound by South Mathews Street to the west, East 7th Street to the south, South Mott Street to the east, and Mathews Place to the north, were acquired by the City of Los Angeles Department of Recreation and Parks in circa 1960. These residences were demolished for the construction of the Boyle Heights Sports Center. Because of alterations to the building's design, materials, workmanship, and setting, the building's ability to convey integrity of feeling and association has also been compromised.

B12. References, continued:

Dillon, Brian D. "Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research." On file, South Central Coastal Information Center, California Historical Resources Information System, 1994.

Historicaerials.com. Search term: 2500 Whittier Blvd., Los Angeles. 1952.
———. 1964.
———. 1972.

Historic Resources Survey Report: Boyle Heights Community Plan Area. Prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles. Los Angeles, City of Los Angeles, 2014.

Independent Star News. “Who’s Building That!” July 21, 1957.

Intensive Historic Resources Survey: Adelante Eastside Redevelopment Area, Los Angeles, California. Prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency. July 2008. Accessed 5/16/2018. https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

Japanese American National Museum. “Timeline.” *Exhibition: Boyle Heights Project*. September 2002–February 2003. Accessed 5/16/2018. http://www.janm.org/exhibits/bh/exhibition/timeline.htm

Los Angeles County Tax Assessor Database

Los Angeles Department of Building and Safety. *1953LA66896*. August 18, 1953.
———. *1953LA68109*. August 25, 1953.
———. *1954LA81736*. March 3, 1954.
———. *1974LA96922*. September 16, 1974.
———. *1974LA96924*. September 16, 1974.
———. *1974LA96925*. September 16, 1974.

Los Angeles Times. “Application for U.S. Aid Approved by Park Unit.” December 5, 1965.
———. “Boyle Heights Project Nears.” October 9, 1961.
———. “BLDG. 3000’ + Mez.” Advertisement. April 11, 1960.
———. “Center Land Bought.” June 20, 1960.
———. “Center Land OKd.” May 16, 1960.
———. “Congratulations…” June 3, 1948.
———. “Distributors—Franchise.” May 26, 1958.
———. “Driver.” June 29, 1956.
———. “Driver-Salesman.” August 28, 1955.
———. “Handicraft for Parks Leaders.” November 8, 1972.
———. Installation Set for Montebello Reality Board, Los Angeles Times. November 30, 1958.
———. “Valentines to Theme Guild Show.” January 29, 1961.

Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory. 1956.
———. March 1960.
———. July 1962.

Pasadena Independent. “Gardners Mark Gold Date.” November 1, 1979.

Roosevelt High School. *Yearbook*. 1933.

Sanborn Fire Insurance Map. *Los Angeles, Volume 14, Sheet 1464*. 1921.
———.1949.

Appendix C Workshop Building DPR 523 Forms

State of California ♁ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

 ***Resource Name or #:** Workshop Building
P1. Other Identifier: 2510 Whittier Blvd.

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** Los Angeles **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Los Angeles **Date** 1979 **T** Unsectioned; **R** ; ☐ **of** ☐ **of** ; **B.M.**
c. Address 2510 Whittier Blvd City Los Angeles Zip 90023
d. UTM: Zone 11, 387929.25 mE/ 3766523.10 mN
e. Other Locational Data: APN: 5189-010-911, east building on parcel

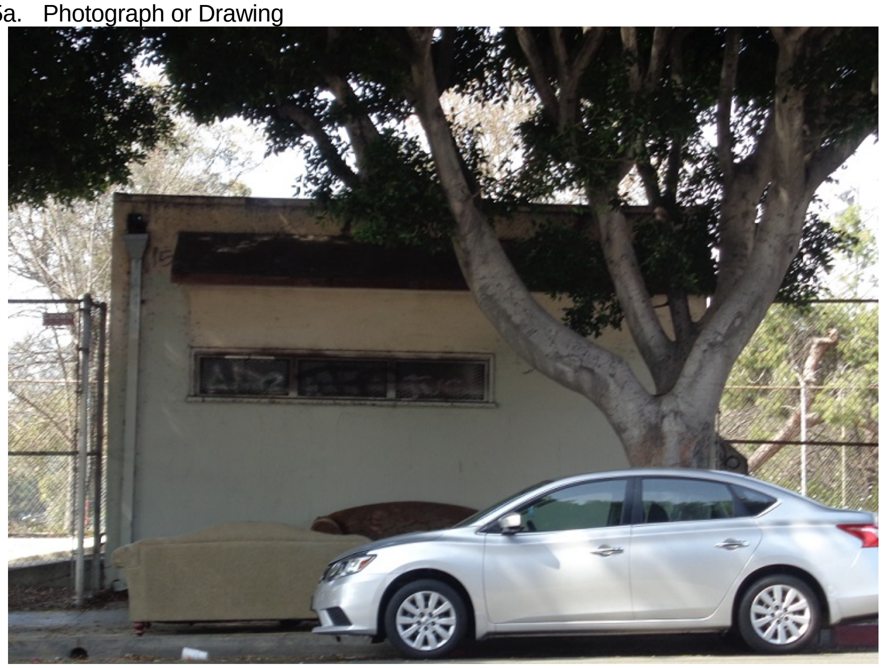
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Workshop Building, located in the Boyle Heights community in the city of Los Angeles, is located at 2510 Whittier Boulevard, east of the Sukaisian Building. The one-story rectangular building faces northeast onto Whittier Boulevard and is sited adjacent to the sidewalk. Large, mature trees align the sidewalk at regular intervals, with one directly in front of the building. The building is surrounded on its remaining three sides by surface parking and/or cement slabs. Capped by a flat roof, the building also has a parapet.

See continuation sheet.

***P3b. Resource Attributes:** HP1. Unknown

P5a. Photograph or Drawing



***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo: Primary elevation, camera facing southeast. ICF, 2018.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1960-1964 (Los Angeles Times & Historicaerials.com)

***P7. Owner and Address:**
City of Los Angeles,
Department of Bureau of Engineering
1149 S Broadway
Los Angeles, CA 90015

***P8. Recorded by:**
Margaret Roderick, ICF
501 W. 5th Street, Suite 900
Los Angeles, CA 90071

***P9. Date Recorded:**
5/18/2018

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation**:
ICF, June 2018. *Draft Boyle Heights Sports Center Gymnasium CEQA Historical Resources Memo.*

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♁ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** Workshop Building ***NRHP Status Code** 6Z

B1. Historic Name: Workshop Building; Shop Building; Recreation and Parks Shop
B2. Common Name: Workshop Building
B3. Original Use: Workshop for LA City Dept. Of Rec. and Parks B4. Present Use: Unknown
***B5. Architectural Style:** Vernacular

***B6. Construction History:**
The building was constructed between 1960 and 1964 (Los Angeles Times and Historicaerials.com); unidentified alterations in 1974 (LADBS, Permit #1974LA96925), alteration to east elevation loading/garage doors at an unknown date (visual inspection).

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** A small shed located east of the building, built in 1974 (1974LA96922). Currently in poor condition, may have been altered.

B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** Boyle Heights; Commercial Property Development **Area** Boyle Heights, Los Angeles

Period of Significance c. 1964 **Property Type** Workshop **Applicable Criteria** N/A

See continuation sheet.

B11. Additional Resource Attributes: (List attributes and codes) N/A
***B12. References:**

See continuation sheet.

B13. Remarks: N/A

***B14. Evaluator:** Margaret Roderick, ICF
***Date of Evaluation:** 5/18/2018

(This space reserved for official comments.)

P3a. Description, continued:

The asymmetrical primary elevation contains a ribbon window located slightly to the east along the elevation and flanked by two areas of solid, unpunctuated wall. The ribbon window is formed by three long but narrow windows divided by mullions. The exact type and material of the windows are unknown: metal security grates have been installed over the windows. A projecting jamb and sill surround the ribbon window. Below the primary elevation's roofline, a pent, or awning, extends nearly the length of the building, but stops before the eastern edge of the building where a rooftop drain and downspout are located. The elevation may have originally had a pedestrian door to the west of the ribbon window, but visual inspection was inconclusive (Figure on 523a form, Figures 1 and 2 below).

Three bays form the east elevation. A metal roll-up door forms each bay, which are evenly spaced along the elevation. A cement ramp provides access for each entrance. A narrow, raised cement walkway connects the two northern ramps along the building. Visual inspection suggests that either the metal roll-up doors were originally installed on the exterior of the building or the three entrances were shortened in height (Figure 1).

Figure 1: Primary and East Elevations, camera facing west. ICF, 2018.

The west elevation of the building consists of an unpunctuated wall, with a small shed attached to the wall toward Whittier Boulevard (Figure 2).

The rear, or south, elevation was not accessible from the public right-of-way.

Figure 1: Primary and west elevations, camera facing south. ICF, 2018.

B10. Significance, continued:

<u>Context</u>

Boyle Heights

Following the establishment of the San Gabriel Mission in 1771, the Spanish established the Pueblo of Nuestra Señora de la Reina de Los Angeles de Porciuncula on September 4, 1781.[1] Eleven families, a total of 44 people,

[1] Brian D. Dillon, "Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research," (On file, South Central Coastal Information Center, California Historical Resources Information System, 1994), 31–37.

recruited as colonists from Sinaloa, Mexico, founded the Pueblo.[2] By 1800, the pueblo consisted of 30 adobe buildings surrounding a central plaza, including a town hall, barracks, bodege (storehouse), and calabozo (jail), surrounded by an adobe wall.[3] Originally located close to the Los Angeles River, the Pueblo relocated to higher ground circa 1820 after several severe floods. *El Paredon Blanco*, or the White Bluff, east of the river, was included within the original pueblo boundary and would later become known as Boyle Heights.[4]

Among the oldest communities in Los Angeles, Boyle Heights was first settled by members of the pioneering Lopez family in the 1830s, after they granted land by the Mexican government. At that time, the area was rural, with small-scale agricultural efforts primarily for wine production. Over time, however, the Lopez family sold portions of its land to persons including Andrew Boyle, George Cummings, and A.H. Judson and his Brooklyn Land and Building Company, among others. In the late 1850s, Andrew Boyle purchased 44 acres of land and maintained the rural setting through agricultural pursuits such as orange, peach, and fig orchards, and cattle ranching. Residential subdivision and development of the area began in the 1870s when William Henry Workman, son-in-law of Boyle, along with financers, began to divide and sell the lands inherited from Boyle's estate. The subdivision included a water main and Workman named the subdivision "Boyle Heights" to honor Andrew Boyle. Other subdivisions in this era included the Mount Pleasant tract and Brooklyn Heights, located at the western edge of the Boyle Heights community, nearest to Downtown.[5]

Residential development came to a halt when then local economy collapsed in 1889.[6] Soon enough, however, a second real estate boom in the 1890s, spurred by the completion of the transcontinental railroad in 1885, triggered significant population increase across the region.[7] Seeking profits from residential and commercial land sales, Workman donated plots of land to religious institutions. Along with Elizabeth Hollenbeck, he donated 21 acres for park use. By 1900, the horse-drawn streetcar was replaced by the electric streetcar, which further supported the grown of the community and its development as a streetcar suburb of Los Angeles. For example, First Street and Brooklyn Avenue contained streetcar lines and developed as commercial districts between the 1890s and the 1920s.

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[2] Brian D. Dillon, "Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research," (On file, South Central Coastal Information Center, California Historical Resources Information System, 1994), 31–37.
[3] Dillon, 43.
[4] Japanese American National Museum, "Timeline," Exhibition: Boyle Heights Project (September 2002–February 2003), np, accessed 5/16/2018, http://www.janm.org/exhibits/bh/exhibition/timeline.htm.
[5] The information in this paragraph was derived from *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 8–9, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.
[6] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 29, accessed 5/16/2018,
https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[7] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 10–12, accessed 5/16/2018,
http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

Boyle Heights' separation from downtown, east of the peripatetic and sometimes unpredictable Los Angeles River, however, somewhat chilled the area's development potential.

Within the study area, Whittier Boulevard primarily developed as a commercial district between 1913 and 1934.[8] Specifically, the section of Whittier Boulevard within the study area developed during the 1920s: Sanborn Fire Insurance Maps from 1921 show large, unimproved parcels within the study area. Significantly, the Viaduct Bond Act of 1923 led to the construction of multiple viaducts spanning the Los Angeles River from Downtown to Boyle Heights, including the 6th Street Viaduct located at the western terminus of Whittier Boulevard and the 7th Street Viaduct, both of which provided safe passage between Boyle Heights and downtown Los Angeles.

Boyle Heights historically featured a multicultural population demographic. The restrictive covenants that disallowed non-whites from owning property in much of the Los Angeles region were not implemented widely in Boyle Heights.[9] Large numbers of Japanese Americans and Russian and Eastern Jews settled in Boyle Heights in the early 1900s, joining the already significant population of whites and Mexican Americans. Indeed, members of the Japanese Club at Roosevelt High School designed, built, and maintained a Japanese Garden on the school premises in 1933.[10] Meanwhile, the Jewish community in Los Angeles has strong historical ties to Boyle Heights; in the early 1900s, it "boasted one of the largest Jewish populations in the western United States."[11] Additionally, Boyle Heights hosted smaller populations of African American, Armenian, Greek, Italian, Polish, and Slavic groups.

During and after World War II, Boyle Heights underwent significant cultural and physical changes. Japanese internment during World War II affected the cultural landscape of Boyle Heights (and the physical—the Japanese garden at Roosevelt High School was demolished), a removal of restrictive covenants initiated the relocation of many Jewish community members to other locales within the city, and the multi-level east Los Angeles freeway interchange and related freeways decimated blocks of residential and commercial buildings in Boyle Heights and severed portions of the community.[12] The Mexican American population in Boyle Heights continued to grow after

[8] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 34 & 59, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

[9] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 13–15, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

[10] Roosevelt High School, Yearbook, 1933.

[11] *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 15, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

[12] Information in this paragraph was derived from the following resource unless otherwise noted: *Historic Resources Survey Report: Boyle Heights Community Plan Area*, prepared by Architectural Resources Group, Inc. on behalf of the Office of Historic Resources, Department of City Planning, City of Los Angeles (Los Angeles, City of Los Angeles, 2014), 15–16, accessed 5/16/2018, http://preservation.lacity.org/sites/default/files/SurveyLABoyleHeights_SurveyReport.pdf.

World War II and with the influx of immigrants in the 1970s as a result of economic and civil unrest in Mexico. Moreover, Boyle Heights is strongly associated with the Chicano Movement in the 1960s and 1970s.

Developed by the Los Angeles Department of Recreation and Parks in the early 1960s, the Boyle Heights Sports Center is bound by Whittier Boulevard to the north, South Mathews Street to the west, 7th Street to the south, and South Mott Street to the east. The Sukaisian Building and the Workshop Building are located at the northern extreme of the Park and face north onto Whittier Boulevard.

The area to the north and south of the Park were subdivided between 1916 and 1922, which spurred development in the neighborhoods along Whittier Boulevard.[13] According to a Sanborn Map, by 1921, modest one-story residences aligned South Mott Street as well as portions of 7th Street. The segment of South Mathews Street crossing Whittier Boulevard and continuing to 7th Street (and Fickett Street) and its adjoining parcels was subdivided in 1922.[14] By 1949, nearly all parcels within what is now the Park boundary were improved with modest dwellings and flats.[15] Starting in 1960, Los Angeles Times articles report that "[t]he City Recreation and Park Commission…authorized the acquisition" of parcels "as part of the site for the proposed Boyle Heights Sports Center."[16] By October 9, 1961, the Commission only needed to acquire six more parcels for the Park's construction.[17] By 1964, all buildings located south of Whittier Boulevard, east of South Matthews Street, north of 7th Street, and west of South Mott Street, except for the Sukaisian Building and the Workshop Building, had been razed.[18] By 1972, the Boyle Heights Sports Center Park was completed and included baseball and soccer fields and a basketball court, as it does today.[19]

Commercial Property Development in Boyle Heights

The first commercial district in Boyle Heights developed along 1st Street between Boyle Avenue and Chicago Street as a result of the 1889 extension of the Los Angeles Cable Railway.[20] Although the Los Angeles Cable Railway was short-lived, soon the Los Angeles Railway Company and the Pacific Electrical Railway Company (Red Car) traversed the gap between downtown and Boyle Heights, contributing to the development of additional commercial districts, such as Brooklyn Avenue, Fourth Street, and Whittier Boulevard (then Stephenson Avenue).[21] As the value of land increased, the railyards located in Boyle Heights near the Los Angeles River removed some of their

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[13] Los Angeles Tract Map, No. 2564 (1916); Los Angeles Tract Map, No. 4433 (1921); Los Angeles Tract Map, No. 4887 (1922); Los Angeles Tract Map, No. 5299 (1922).
[14] Sanborn Fire Insurance Map, *Los Angeles, Volume 14, Sheet 1464* (1921); Los Angeles Tract Map, No. 5299 (1922).
[15] Sanborn Fire Insurance Map, *Los Angeles, Volume 14, Sheet 1464* (1949).
[16] "Center Land OKd," *Los Angeles Times* (May 16, 1960), 30.
[17] "Boyle Heights Project Nears," *Los Angeles Times* (October 9, 1961), 34.
[18] "2500 Whittier Boulevard, Los Angeles," *Historicaerials.com* (1964).
[19] "2500 Whittier Boulevard, Los Angeles," *Historicaerials.com* (1972).
[20] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California,* prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 24, accessed 5/23/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[21] *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California,* prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (July 2008), 24–25, accessed 5/23/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

maintenance facilities and warehouses and built new roads and extended old roads in their place; the new network of streets allowed for further growth of the commercial districts as bridges connected Boyle Heights to downtown.[22]

Commercial buildings constructed in Boyle Heights in the late 1800s and early 1900s were often two stories, with storefront below and residential quarters above, a plan that followed through into the 1930s.[23] With the availability of plate glass and shop owners' desire to draw attention to their wares, commercial architecture changed in the early 1900s.[24] Architects and builders transformed facades with brick and terra cotta, and marble or other extravagant materials could be applied to the entry to accentuate a building.[25] Popular throughout the United States, Romanesque, Classical, and Italianate styles featured in many storefronts.[26] Common types of building organization included the corner or commercial block, single or double front, enframed window wall, temple front (often used in banks), and arcaded block, to name a few.[27] Early commercial buildings within the study area appear to have been constructed of brick, with terra cotta embellishments. The single front type, as visible in 2463 Whittier Boulevard as built in 1924, prevailed.

Typically, commercial properties developed in Boyle Heights at this time were owned by members of the large local Jewish community. Many of these buildings evinced a Mediterranean Revival style of architecture, popular at this time. The commercial corridors typically depended on streetcar access for success and commercial buildings did not yet accommodate the automobile by providing parking. Early commercial development along Whittier Boulevard appears confined to the western portion of the street near South Boyle Avenue and South Chicago Street. Development included a drugstore, several additional stores, a gas station, and a restaurant. It was in the period from circa 1915 to 1935 that commercial buildings replaced residential properties along the major commercial thoroughfares in Boyle Heights, which is evidenced by Sanborn Fire Insurance maps from 1921 and 1949 for properties along Whittier Boulevard. By 1949 numerous stores, a clothing manufacturer, an office building, a second gas station, a theater, and an office building aligned Whittier Boulevard from South Boyle Avenue to South Soto Street, with only a few remaining residences.

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[22] "Intensive Historic Resources Survey" Adelante Eastside Redevelopment Area, Los Angeles, CA," prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (Just 2008), 25, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

[23] "Intensive Historic Resources Survey" Adelante Eastside Redevelopment Area, Los Angeles, CA," prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (Just 2008), 58, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf

[24] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 233.

[25] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 233.

[26] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 235-39.

[27] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 242-250; Richard Longstreath, *The Buildings of Main Street: A Guide to American Commercial Architecture, updated edition* (Walnut Creek, Lanham, New York, and Oxford: Alta Mira Press, 2000), contents.

The commercial development along Whittier Boulevard from South Boyle Avenue to South Mott Street, which includes the study area, mirrors the residential development of the area. Areas near the intersection of Whittier Boulevard and South Boyle Avenue were subdivided as early as 1902, according to tract maps recorded with Los Angeles County. Meanwhile, the areas around the intersections of Whittier Boulevard and South Soto Street and Whittier Boulevard and South Mott Street were subdivided around 1916. The area between South Soto Street and South Mott Street along Whittier Boulevard was not significantly subdivided until 1921–1922. Along with the subdivision and subsequent residential development, commercial development evolved along Whittier Boulevard. The oldest building within the study area dates to 1922, with six buildings constructed in the 1920s.[28]

According to Sanborn Fire Insurance maps, by 1949, the study area still included several unimproved parcels along Whittier Boulevard interspersed between stores, often of one story rather than the more common two-story buildings discussed above. This portion of Whittier Boulevard's commercial development differs from the common commercial trends occurring elsewhere in Boyle Heights and Los Angeles at large, in which two-story commercial buildings held storefronts on the ground floor with apartments above, although some commercial buildings contained a dwelling unit to the rear as evidenced by 1920s original building permits. In 1949, area businesses included a restaurant located at 2471 Whittier Boulevard; a paint and building materials facility at 2513–2515 Whittier Boulevard, which is no longer extant; and a baby shoe bronzing facility at 2524 Whittier Boulevard. In the late 1950s and early 1960s, businesses located within the study area appear to have served the large Mexican-American population, with business such as "El Gallo Mexican Chocolate" at 2465 Whittier Boulevard, "El Charro Grocery Store" at 2465 Whittier Boulevard, and "Pablo Chee Market" at 2501 Whittier Boulevard.[29]

Although subdivided by 1922, the parcel at 2500 Whittier Boulevard remained unimproved until the 1950s. In 1953, Sam Sukaisian requested permission to erect a hardware store at 2500 Whittier Boulevard, to be designed by engineer A. R. Laker and constructed by contractor John Dinoto.[30] The American Rubbish Company appears to have operated a facility at 2510 Whittier Boulevard at least from 1958 to 1960, and a historic aerial image from 1952 depicts a fenced-off property at this location.[31] However, it does not appear that any buildings or permanent structures were constructed by the American Rubbish Company on this property. By 1962, the American Rubbish Company had vacated the premises and by 1974, City of Los Angeles owned the property.[32]

Construction along Whittier Boulevard in the 1950s and 1960s is uncommon for the area because by circa 1950, the "neighborhood shopping center" geared toward automobile traffic became the prevalent type of commercial development in Los Angeles.[33] In contrast, most development in the study area corresponds to construction in the

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[28] This paragraph is derived from the following resource: *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California*, prepared by PCR Services on behalf of the City of Los Angeles Community Redevelopment Agency (Just 2008), 59–60, accessed 5/16/2018, https://www.preservation.lacity.org/files/Adelante%20Draft%20Report%20revised%20FINAL_print_0.pdf
[29] Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory (March 1960), 863.
[30] 1953LA66896 and 1953LA68109.
[31] Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory (March 1960), 863; Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory (1956), 819; historicaerials.com, "2500 Whittier Boulevard, Los Angeles" (1952), accessed 5/17/2018, https://www.historicaerials.com/viewer.
[32] Pacific Telephone and Telegraph Company, Los Angeles Street Address Directory (July 1962), 264.
[33] City of Los Angeles, "Context: Commercial Development, 1859-1980, Theme: Neighborhood Commercial Development, 1880-1980," *SurveyLA: Los Angeles Citywide Historic Context Statement* (Los Angeles: City of Los

1920s and earlier. The only other construction in the general area from the 1950s or after is the addition of a building to the Santa Isabel Church and School in 1957. Strip mall development at the intersection of Whittier Boulevard and South Soto Street dates to circa 1980 and later.

Modern Commercial Architecture and Mid-Century Modernism

Modern storefront buildings “relie[d] on abstract geometry to create identity” in the post-World War II era.[34] Whereas prior to World War II commercial buildings often displayed Mediterranean revival styles or elements of Art Deco, Mid-Century Modern vernacular commercial buildings focused on the “general reduction of elements to single effect” and the “exploit[ation of] the materiality of construction products, clean surfaces, straight lines, and contemporary materials and technology.”[35] One prominent type of commercial structure was the enframed window wall, consisting of a large window display defined by a simple surround. This type was common through the 1940s and is represented by the Sukaisian Building.[36] By 1952, however, “store design [had] gone through a complete overhaul,” which included an open storefront that operated as a “silent salesman” operating 24 hours a day.[37] Materials and color abound in modern commercial architecture, as they did in residential architecture of the period.[38] The exterior of a commercial building often would be painted to attract patrons. Portions of the building acted as billboards, featuring large signage. The interior of a building’s color scheme was used to emphasize merchandise.[39]

Mid-Century Modern architecture denotes a post-World War II regional trend in modernism that responded to the International Style’s sterile qualities by organically incorporating a variety of materials, color, and shapes.[40] The term “Mid-Century Modern” is commonly used in Southern California to describe a regional post-World War II architectural vernacular that, perhaps because of its location, loosens the dogma, rules, and orthodoxy of East Coast and European International Style modernism. It does so through a more casual and variegated use of materials, massing, textures, compositions, and other formal elements.

Angeles, 2017), 30, accessed 5/23/2018, http://preservation.lacity.org/sites/default/files/NeighborhoodCommercialDevelopment_1880-1980.pdf

[34] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 239.

[35] Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 239.

[36] Richard Longstreath, *The Buildings of Main Street: A Guide to American Commercial Architecture, updated edition* (Walnut Creek, Lanham, New York, and Oxford: Alta Mira Press, 2000), 68–69.

[37] Caleb Hornbostel, “Store Design” *Architectural Record* (July 1952), republished in *Design for Modern Merchandising: Stores, Shopping Centers, Showrooms* (New York: F.W. Dodge Corporation, 1954), 1-2; Richard Longstreth, *The Buildings of Main Street: A Guide to American Commercial Architecture, updated edition* (Walnut Creek, Lanham, New York, and Oxford: Alta Mira Press, 2000), 65.

[38] Caleb Hornbostel, “Store Design” *Architectural Record* (July 1952), republished in *Design for Modern Merchandising: Stores, Shopping Centers, Showrooms* (New York: F.W. Dodge Corporation, 1954), 1; 22.

[39] Caleb Hornbostel, “Store Design” *Architectural Record* (July 1952), republished in *Design for Modern Merchandising: Stores, Shopping Centers, Showrooms* (New York: F.W. Dodge Corporation, 1954), 1–2, 22–23; Herbert Gottfried and Jan Jennings, *American Vernacular: Buildings and Interiors, 1870-1960* (New York and London: W.W. Norton & Company, Inc., 2009), 233.

[40] Historic Resources Group and Pasadena Heritage, “Mid-Century Modern,” *Cultural Resources of the Recent Past* (Pasadena, CA: City of Pasadena, 2007), 67.

In contrast to the International Style, Mid-Century Modern architectural design included more solid walls and the use of stucco, wood, rock, and brick cladding for construction materials, as evident in the Sukaisian Building.[41] In particular, the use of stacked brick features in many commercial and educational buildings.[42] Additional materials found in Mid-Century architecture are concrete block, terrazzo, and ceramic tile.[43] Although the variety of materials lends a multitude of color, stucco and wood could also be painted colorfully.[44] Exposed rafters often support low-pitched gable or shed roofs with moderate to deep eaves, but roofs were also flat with no overhang. Aside from the basic characteristics of Mid-Century Modern buildings, the style often featured recessed entrances, which could include an atrium or courtyard entry; built-in planters; screen walls, often of perforated concrete block or solid concrete block with two-dimensionally projecting geometric elements; and canted walls.[45] As with the International Style, Mid-Century Modern buildings were often asymmetrical.

The Sukaisian Building, originally built as a store, contains elements of both an enframed storefront type, popular through the 1940s, and Mid-Century Modern architecture. It also incorporated elements of the modern storefront: the distillation of elements and the emphasis on new materials evidenced through the stonework, and use of straight lines evidenced by the narrow cantilevered overhang above the fenestration. Furthermore, the building features elements of the Mid-Century Modern style through its use of multiple cladding materials, the recessed entrances, and canted walls. However, a significant example would include deep as opposed to shallow cantilevered overhang, an atrium or courtyard, built-in planters of stone or brick, and screen walls.

The Workshop Building has an asymmetrical primary elevation, but this is the only element of the building that evidences a modern architectural style. Used at least in part as a storage facility, the building is a stucco-clad box and lacks distinctive features.

<u>Evaluation</u>

NRHP, CRHR, and LAHCM Criteria A/1

Constructed circa 1960, the Workshop Building at 2510 Whittier Boulevard does not correspond to significant commercial development along Whittier Boulevard. The period of significance for commercial development along Whittier Boulevard is 1914 to 1934, evidenced by a significant number of buildings constructed in the 1920s located nearby. The 1920 buildings were constructed as modest masonry buildings, of one or two stories with mixed use for commercial and residential purposes. For example, permit and directory research establish that multiple buildings from 2457 to 2517 Whittier Boulevard contained both commercial and residential uses, with either an apartment on the second floor or a dwelling to the rear. Not only was the Workshop Building constructed outside the period of significance, but it was constructed for use by the City of Los Angeles Department of Recreation and Parks. By

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[41] Christopher A. Joseph & Associates, "Mid-Century Modern," *City of Riverside Modernism Context Statement* (Riverside, CA: City of Riverside, 2009), 16.
[42] *Riverside Modernism Context*, 16.
[43] *Riverside Modernism Context*, 16; Mary Brown, "Midcentury Modern (1945-1965)," *San Francisco Modern Architecture and Landscape Design 1935-1970: Historic Context Statement* (San Francisco, CA: City of San Francisco, 2010), 115.
[44] *San Francisco Modern*, 115.
[45] *San Francisco Modern*, 115–116.

1974 the building was identified as a "Shop," likely as a workshop and storage space for the park.[46] Therefore, the Workshop Building located at 2510 Whittier Boulevard is not eligible for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or as a City of Los Angeles Historic-Cultural Monument (LAHCM) under Criteria A/1.

NRHP, CRHR, and LAHCM Criteria B/2

As the building was constructed for use by the City of Los Angeles Department of Recreation and Parks, original building permits are not available in the Los Angeles Department of Building and Safety (LADBS) database. *Los Angeles Times* research did not yield any persons associated with the construction or maintenance of the park. Because no persons are associated with the building, the Workshop Building located at 2510 Whittier Boulevard does not appear eligible for the NRHP, CRHR, or as an LAHCM under Criteria B/2.

NRHP, CRHR, and LAHCM Criteria C/3

Because the original building permits are not available in the LADBS database, information regarding the architect, engineer, or builder was not discovered. *Los Angeles Times* research also did not yield any information regarding the construction of the building or anyone involved in the process. Due to the vernacular design of the building, likely as a workshop and storage space, the building does not appear to be the work of a master architect, engineer, or building. Moreover, the building's vernacular design is not sufficient to warrant eligibility for significant architectural design. Therefore, the Workshop Building located at 2510 Whittier Boulevard does not appear eligible for the NRHP, CRHR, or as an LAHCM under Criteria C/3.

NRHP and CRHR Criteria D/4

The Workshop Building is located in an urban setting and constructed of common methods and materials. As such, the property is unlikely to yield information significant to our history regarding construction or engineering technology, methods, or materials. Therefore, the Workshop Building located at 2510 Whittier Boulevard is not eligible for the NRHP or CRHR under Criterion D/4.

Los Angeles HPOZ

The Workshop Building is not located in the boundary of a designated Los Angeles Historic Preservation Overlay Zone (HPOZ) or identified by the *Intensive Historic Resources Survey Adelante Eastside Redevelopment Area, Los Angeles, California* report to be within the boundary of a potential HPOZ. Due to the lack of integrity of all buildings located in the immediate vicinity, the Workshop Building is not eligible for designation as a contributor or a non-contributor to an HPOZ. Originally, the brick construction of the buildings located along the north side of Whittier Boulevard, opposite the Workshop Building, was visible and included some decorative elements such as the addition of string courses, shaped parapets, or terra cotta elements. However, all but one exposed brick building has been re-clad with stucco. The buildings' alterations are substantial and include not only non-original cladding materials, but the resizing and replacement of fenestration. Additionally, the buildings together do not appear to represent a significant aspect of commercial development and architecture in Boyle Heights; are not associated with the productive lives of any persons significant to Los Angeles history; are not the work of master architects,

[46] 1974LA96924.

builders, or engineers; and do not reflect significant architecture in Los Angeles. Therefore, the buildings within the immediate area of the Workshop Building, including the Workshop Building, are not eligible for designation as an HPOZ.

Integrity

The Workshop Building has not been moved from its original location and, therefore, retains integrity of location. Alterations to the primary and east elevations affect the building's integrity of design, materials, and workmanship. Because the building displays minimal character-defining features, the alterations have a significant impact on the building's integrity. For example, the likely infill of a primary pedestrian entrance along Whittier Boulevard significantly changes the building's design and function in relation to the streetscape. Instead, the three roll-up doors along the east elevation provide the only access to the building. However, with this configuration of entrances, the building feels like a workshop or storage facility. Nonetheless, the building does not convey an association to either the Whittier Boulevard streetscape or to the City of Los Angeles Department of Recreation and Parks. It lacks any association to the commercial district and bears no signage that could connect the building to the City department or the Boyle Heights Sports Center Park. Therefore, although the building retains integrity of feeling, it lacks integrity of association.

B12. References, continued:

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Appendix C

Archaeological and Paleontological Resources Assessment

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cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT FOR THE BOYLE HEIGHTS SPORTS CENTER GYM, LOS ANGELES, CALIFORNIA

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April 2019

Cogstone Project Number: 2177-08
Type of Study: Cultural and Paleontological Resources Assessment
Cultural Sites: None
Paleontological Localities: None
USGS Quadrangle: Los Angeles 7.5'
Project Size: 0.96 Acres
Key Words: Gabrielino, Tongva, late Pleistocene older alluvial fan

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TABLE 5. ADDITIONAL SOURCES CONSULTED 25

SUMMARY OF FINDINGS

The purpose of this study is to determine the potential effects to archaeological and paleontological resources resulting from construction of the proposed Boyle Heights Sports Center Gym Project (Project), located in the community of Boyle Heights, City of Los Angeles, California. The built environment is being evaluated by others. The City of Los Angeles Bureau of Engineering and the Recreation and Parks Department propose to construct a new gym on the northwest side of the existing Boyle Heights Sports Center. The Project will involve construction of a new 10,000 square foot multi-use gym, including a full-sized basketball court, staff offices for Recreation and Parks Department, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking.

The Project is mapped as late Pleistocene younger alluvial fans, between 11,700 to 126,000 years old. A paleontological record search by the Natural History Museum of Los Angeles County revealed that no fossil localities within the Project Area. Three fossil localities are known within 3 miles.

A California Historical Resources Information System (CHRIS) records search was conducted at the South Central Coastal Information Center (SSCIC) on May 9, 2018. The results of the records search indicate that there are no previously recorded cultural resources present in the Project Area. Within a 1-mile radius of the Project, 131 previously recorded cultural resources are known. The Native American Heritage Commission (NAHC) was contacted on April 27, 2018 to perform a Sacred Lands File (SLF) search. The NAHC responded on April 30, 2018 stating that the search yielded negative results for sacred lands within a 1-mile radius of the Project Area. The NAHC also provided a list of 5 Native American tribal organizations to be contacted for further information on the potential for tribal resources in the Project Area. This list was supplemented by the City of Los Angeles (City) which provided contact information for 5 additional tribes who have requested consultations in the past. Letters were sent to all 10 tribes on May 18, 2018 in accordance with the requirement of Assembly Bill 52 (AB52). Three responses were received.

Cogstone archaeologist and cross-trained paleontologist, Edgar Alvarez, conducted an intensive pedestrian survey of the entire Project Area on May 18, 2018. As the Project Area was completely hardscaped, there zero ground visibility. No archaeological or paleontological resources of any kind were observed.

Planned cut depths are currently unknown but utilities are typically six to eight feet deep. Sensitivity for paleontological and archaeological resources is considered low since none were located during previous work in the Project Area. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find. In the event of an unanticipated archaeological discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist can evaluate it.

INTRODUCTION

PURPOSE OF STUDY

The purpose of this study is to determine the potential effects to archaeological and paleontological resources resulting from construction of the proposed Boyle Heights Sports Center Gym Project (Project), located in the community of Boyle Heights, City of Los Angeles, Los Angeles County, California (Figure 1).

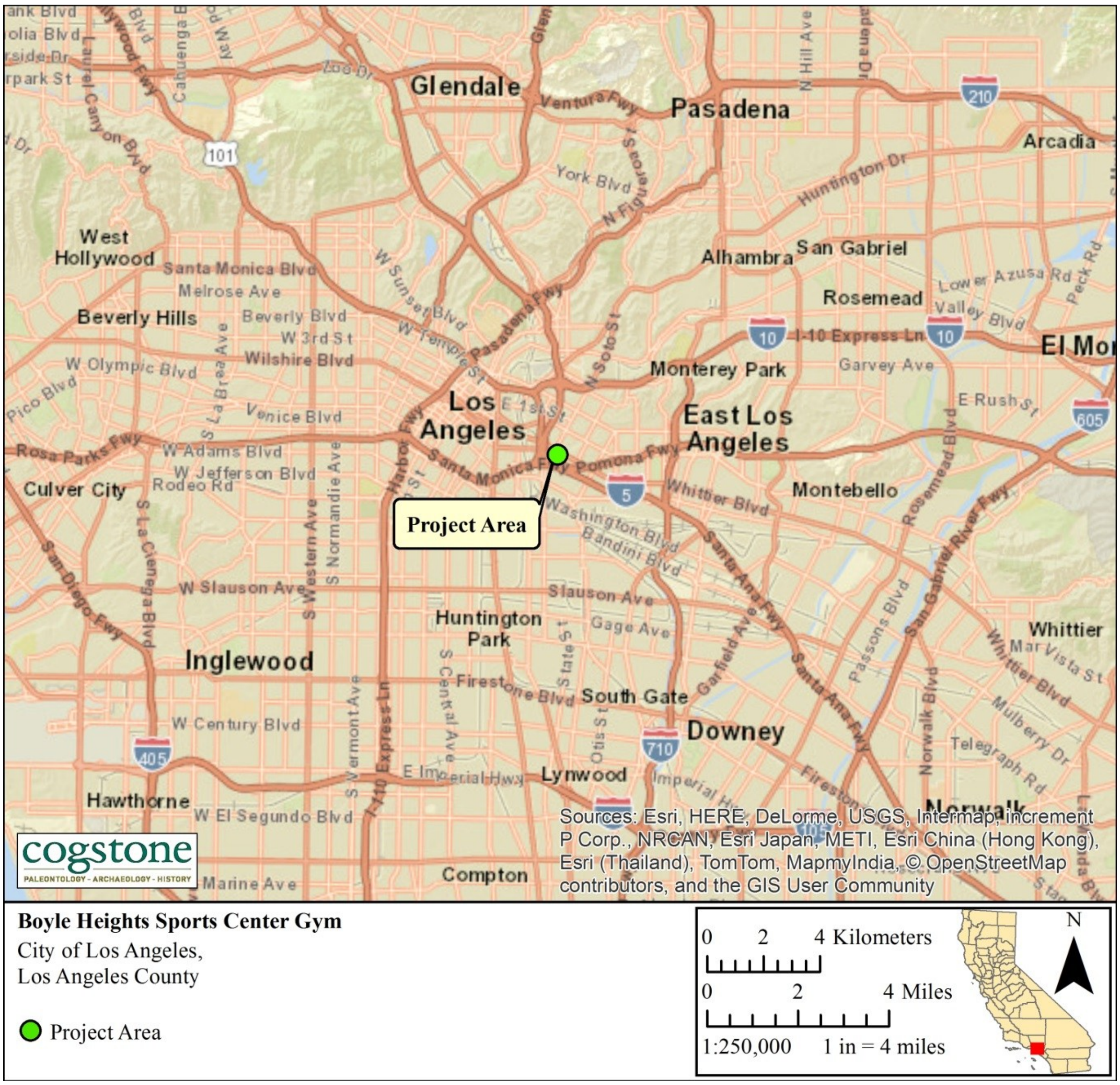

Figure 1. Project vicinity map

PROJECT LOCATION AND DESCRIPTION

The City of Los Angeles Bureau of Engineering and the Recreation and Parks Department propose to construct a new gym on the northwest side of the Boyle Heights Sports Center, located at 933 South Mott Street within the neighborhood of Boyle Heights in the City of Los Angeles. The Project Area encompasses 0.94 acres bordered by Whittier Boulevard to the north, South Matthews Street the west, 7th Street to the south, and South Mott Street to the east. The Project contains four Assessor's Parcel Numbers (APNs) 5189-010-911, 5189-010-920, 5189-010-922, and 5189-010-924. This property can be found on the U.S. Geological Survey (USGS) Los Angeles 7.5-minute topographic quadrangle, Section 35, Township 1 South, Range 13 West of the Mount Diablo Base and Meridian (Figure 2).

The Project proposes to construct a new 10,000-square-foot gym at the Boyle Heights Sports Center. The new gym will offer multi-use space for the Boyle Heights community. It will include a full-sized basketball court, staff offices for Recreation and Parks Department, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Incorporating sustainable design principles and drought-resistant landscaping, the new facility will be certified as a LEED-Net Zero (producing as much or more energy than it consumes) facility and will be a valued asset for youth and families in Boyle Heights.

The Project Area is currently hardscaped with concrete and contains two vacant, dilapidated buildings which will be demolished as part of the Project (Figure 3). Additionally, the street trees lining Whittier Boulevard and the streets between the existing soccer fields and the proposed new facility will be removed. A separate assessment of built environment resources within the Project Area is being prepared. At the time of writing this assessment the depth of anticipated ground-disturbance for utility installation and the construction of foundations is yet to be determined.

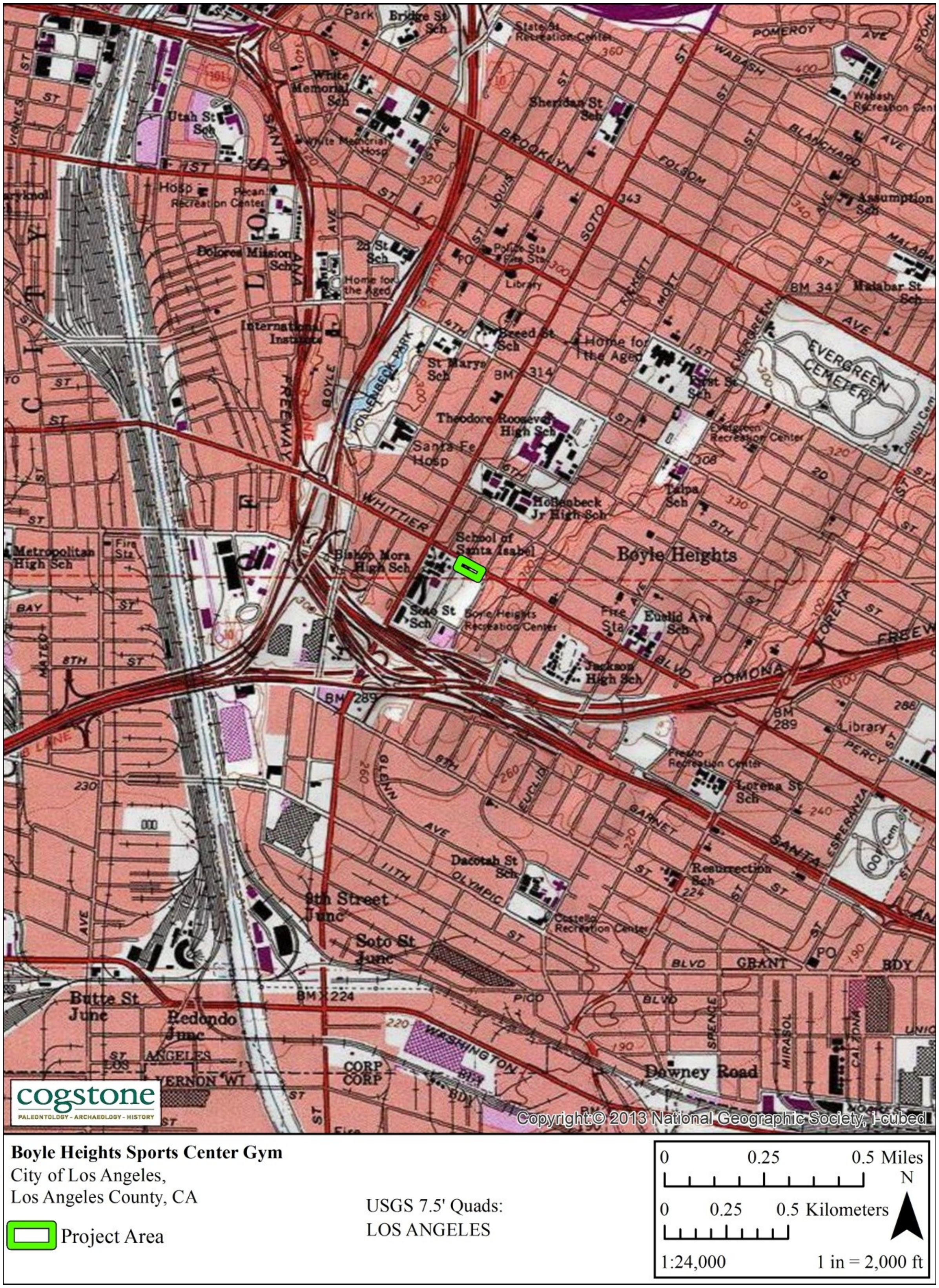

Figure 2. Project location

Figure 3. Project aerial map

PROJECT PERSONNEL

Tim Spillane served as Project Manager and Principal Investigator for Archaeology and contributed to the report. Spillane is a Registered Professional Archaeologist (RPA) and holds a M.A. in Text and Material Culture from Roehampton University, London and has over 9 years of experience in California archaeology.

Sherri Gust wrote the prehistory portion of this report and provide quality control. Gust has an M.S. in Anatomy (Evolutionary Morphology) from the University of Southern California, a RPA, and has over 30 years of experience in California archaeology and paleontology.

Kim Scott served as the Principal Investigator for Paleontology and wrote the geological, paleontological, and environmental sections of this report. Scott has a M.S. in Biology with paleontology emphasis from California State University, San Bernardino, a B.S. in Geology with paleontology emphasis from the University of California, Los Angeles, and over 23 years of experience in California paleontology and geology.

Holly Duke drafted much of the cultural portions of this report. Duke has a B.A. in Archaeology and History from Simon Fraser University, British Columbia, Canada and over 5 years of experience in California archaeology.

Shannon Lopez conducted the records search for the Project. Lopez has a M.A. in Architectural History from California State University, Fullerton and over one year of experience in California history.

Megan Wilson prepared the maps. Wilson has a M.A. in Anthropology from California State University, Fullerton and has over 7 years of experience in southern California archaeology.

Edgar Alvarez conducted the intensive pedestrian survey of the Project. Alvarez has a B.A. in Anthropology from California State University, Northridge, has over 2 years of experience in California archaeology, and is cross-trained in paleontology. Additional information on the experience and qualifications of Cogstone personnel are provided in Appendix A.

REGULATORY ENVIRONMENT

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA states that: It is the policy of the state that public agencies should not approve Projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such Projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed Project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private Projects financed or approved by the state are subject to environmental review by the state. All such Projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. In the event that a Project is determined to have a potential significant environmental effect, the act requires consideration of mitigation measures and alternatives to avoid or substantially lessen the significant effect. If cultural or paleontological resources are identified as being within the proposed Project Area, the sponsoring agency must take those resources into consideration when evaluating Project effects. The level of consideration may vary with the importance of the resource.

Tribal Cultural Resources

As of 2015, CEQA established that "[a] Project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a Project that may have a significant effect on the environment" (Pub. Resources Code, § 21084.2). In order to be considered a "tribal cultural resource," a resource must be either:

1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a Project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed Project. If a lead agency determines that a Project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code §20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

Section 5097.5: No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

CALIFORNIA PENAL CODE

California Penal Code section 622: Establishes as a misdemeanor the willful injury, disfiguration, defacement, or destruction of any object or thing of archaeological or historical interest or value, whether situated on private or public lands.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmark Nos. 770 and above. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic registers or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the California Register, is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state or national level under one or more of the following four criteria:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2) It is associated with the lives of persons important to local, California, or national history;
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below:

> In the event that human remains are encountered during Project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

This section states that "No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value."

BACKGROUND

GEOLOGIC SETTING

The Project is situated in the eastern portion of the Los Angeles Basin. The marine Los Angeles Basin began to develop in the early Miocene, about 23 million years ago. Through time the basin transitioned to terrestrial deposition by the middle Pleistocene, about 1 million years ago. This basin is bounded to the north by the Santa Monica and San Gabriel Mountains, to the east by the Santa Ana Mountains and associated hills (Puente/Chino, San Jose, and Repetto), to the south by the San Joaquin Hills, and to the west by the Pacific Ocean. This area is part of the northernmost Peninsular Ranges, California geomorphic province. The Peninsular Ranges are a series of ranges separated by northwest trending valleys, subparallel to faults branching from the San Andreas Fault which for the most part lies to the east of this geomorphic province.

STRATIGRAPHY

The Project is mapped as late Pleistocene older alluvial fans (unit 2) which was deposited between 11,700 to 126,000 years old. These sediments consist of gravel, sand, and silt emplaced below the mouths of canyons by flooding streams and debris flows. The unit consists of slightly to moderately indurated sediments with moderately to well-developed pedogenic soils. These sediments have been uplifted causing the surfaces to be dissected (Campbell et al. 2014).

ENVIRONMENTAL SETTING

Prior to development, the native vegetation of the Project Area consisted of California coastal sage scrub mixed with the riparian species of the Los Angeles River. Characteristic species of the California coastal sage scrub include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis* var. *consanguinea*), California buckwheat (*Eriogonum fasciculatum*), lemonade berry (*Rhus integrifolia*), poison oak (*Toxicodendron diversiloba*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*; Ornduff et al. 2003). Additional common species include brittlebush (*Encelia californica*), chamise (Adenostoma fasciculatum), white sage (*Salvia apiana*), Our Lord's candle (*Hesperoyucca whipplei*), and prickly pear cactus (*Opuntia*; Hall 2007). With more water available, riparian zone plants are characterized by more trees than the more arid coastal sage scrub. Trees include willows (*Salix lasiolepis, Salix lucida*), Fremont's cottonwood (*Populus fremontii*), Western sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia*), big-leaf maple (*Acer macrophyllum*), coast live oak (Quercus agrifolia), and California bay laurel (*Umbellularia californica*). Ground cover includes sedges (*Carex* spp.), rushes (*Juncus* spp.), bunchgrasses (*Festuca californica, Melica californica*), berries (*Rubus* spp.), and monkeyflowers (*Mimulus* spp.; Ornduff et al. 2003).

Large native land mammals of the region included mule deer (*Odocoileus hemionus*), bighorn sheep ([1]‡*Ovis canadensis*), tule elk (‡*Cervus canadensis nannodes*), pronghorn (‡*Antilocapra americana*), bison (‡*Bison bison*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*), jaguar (‡*Panthera onca*), coyote (*Canis latrans*), grey wolf (‡*Canis lupus*), black and grizzly bears (*Ursus americana,* ‡*Ursus arctos*; California Department of Fish and Game 2016).

Today, after approximately a century of urban and suburban development and the channelization of the Los Angeles River, the vegetation of the area is instead typified by imported species. Grasses such as slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and giant reed (*Arundo donax*); shrubs and trees including blackwood acacia (*Acacia melanoxylon*), saltcedar (*Tamarix ramosissima*), eucalyptus (*Eucalyptus* spp.), and Brazilian pepper (*Schinus terebinthifolius*) are common (Cal-IPC 2006). In recent history, urban development has driven most animals from the area, although mule deer, bobcat, mountain lion, coyote, and black bears still occur in the surrounding hills.

PREHISTORIC SETTING

Review of archaeological data has resulted in a revised synthesis of cultural change as evidenced by material culture and archaeologically visible cultural practices. A large part of what was previously referred to as the Millingstone Period is now called the Topanga pattern of the Encinitas Tradition (Sutton and Gardner 2010; Table 1). This pattern is replaced in the Project Area by the Angeles pattern of the Del Rey Tradition later in time (Sutton 2010; Table 1).

Topanga Pattern groups were relatively small and highly mobile. Sites tend to be along the coast in wetlands, bays, coastal plains, near-coastal valleys, marine terraces and mountains. The Topanga toolkit is dominated by manos and metates with projectile points scarce (Sutton and Gardner 2010:9).

[1] ‡ - indicates that the species has been extirpated from Southern California.

Table 1. Cultural Patterns and Phases

Pattern	Phase	Material Traits	Other Traits
Encinitas	Topanga I	Abundant manos and metates, many core tools and scraper s, few but large points, charmstones, cogged stones, early discoidals, bone gorge fishhooks, faunal remains rare; Olivella spire/end lopped beads appear	Estuary/lagoon shellfish and sharks/rays common, hunting important, secondary burials under metate cairns (some with long bones only), some extended inhumations, no cremations
	Topanga II	Abundant but decreasing manos and metates, adoption of mortars and pestles, smaller points, cogged stones, late discoidals, fewer scraper planes and core tools, some stone balls and charmstones; inhumations common; Olivella Grooved Rectangular beads introduced	Estuary/lagoon shellfish and sharks/rays common,, addition of acorns, reburial of long bones only, addition of flexed inhumations (some beneath metate cairns), cremations rare
Angeles	Angeles I	Appearance of Elko dart points and an increase in the overall number of projectile points from Encinitas components; beginning of large-scale trade in small steatite artifacts (effigies, pipes, and beads) and *Olivella* shell beads; appearance of single-piece shell fishhooks and bone harpoon points; Coso obsidian becomes important; appearance of donut stones; appearance of Mytilus beads	apparent population increase; fewer and larger sites along the coast; collector strategy; less overall dependence on shellfish but fishing and terrestrial hunting more important; appearance of flexed and extended inhumations without cairns, cremations uncommon
	Angeles II	Continuation of basic Angeles I material culture with the addition of mortuary features containing broken tools and fragmented cremated human bone; fishhooks become more common	Shellfish change to mudflat species, more emphasis on fish, birds and mammals, continuation of basic Angeles I settlement and subsistence systems; appearance of a new funerary complex
	Angeles III	Appearance of bow and arrow technology (e.g., Marymount or Rose Spring points); changes in *Olivella* beads; asphaltum becomes important; reduction in obsidian use; Obsidian Butte obsidian largely replaces Coso	larger seasonal villages; flexed primary inhumations but no extended inhumations and an increase in cremations; appearance of obsidian grave goods
	Angeles IV	Cottonwood points appear; some imported pottery appears; birdstone effigies at the beginning of the phase and "spike" effigies dropped by the end of the phase; possible appearance of ceramic pipes, *Mytilus* shell disks	change in settlement pattern to fewer but larger permanent villages; flexed primary inhumations continue, cremations uncommon
	Angeles V	Trade of steatite artifacts from the southern Channel Islands becomes more intensive and extensive, with the addition or increase in more and larger artifacts, such as vessels and comals; larger and more elaborate effigies; portable mortars and pestles	strengthening of ties, especially trade, with southern Channel Islands; expansion into the northern Santa Ana Mountains and San Joaquin Hills
	Angeles VI	Addition of Euroamerican material culture (e.g., glass beads and metal tools), locally made pottery, metal needle-drilled *Olivella* beads	change of settlement pattern, movement close to missions and ranches; use of domesticated species obtained from Euroamericans; flexed primary inhumations continue; apparent adoption of Chingichngish religion

In Topanga Phase I other typical characteristics were a few mortars and pestles, abundant core tools (scraper planes, choppers and hammerstones), relatively few large, leaf-shaped projectile points, cogged stones, and early discoidals (Table 1). Secondary inhumation under cairns was the common mortuary practice. In Orange County as many as 600 flexed burials were present at one site and dated 6, 435 calibrated radiocarbon years before present (Sutton and Gardner 2010:9, 13).

In Topanga Phase II, flexed burials and secondary burial under cairns continued. Adoption of the mortar and pestle is a marker of this phase. Other typical artifacts include manos, mutates, scrapers, core tools, discoidals, charmstones, cogged stones and an increase in the number of projectile points. In Orange County stabilization of sea level during this time period resulted in increased use of estuary, near shore and local terrestrial food sources (Sutton and Gardner 2010:14-16).

The Angeles pattern generally is restricted to the mainland and appears to have been less technologically conservative and more ecologically diverse, with a largely terrestrial focus and greater emphases on hunting and nearshore fishing. In Angeles Phase I Elko points for atlatls or darts appear, small steatite objects such as pipes and effigies are found, shell beads and ornaments increase, fishing technologies increase including bone harpoons/fishhooks and shell fishhooks, donut stones appear, and hafted micro blades for cutting/graving wood or stone appear.

In addition, several Encinitas traits, such as discoidals, cogged stones, plummet-like charm stones and cairn burials virtually disappear from the record. Mortuary practices changed to consist of primarily flexed primary inhumations, with extended inhumations becoming less common. Settlement patterns made a shift from general use sites being common to habitation areas separate from functional work areas. Subsistence shifted from mostly collecting to increased hunting and fishing (Sutton 2010).

Angeles Phase I is identified primarily by the appearance of Elko darts and a dramatic increase in the number of projectile points. Trade of steatite artifacts and Olive shell beads becomes common. Mussel beads first appear and obsidian from Coso becomes important.

Angeles Phase II is identified primarily by the appearance of a new funerary complex, with other characteristics similar to Angeles I. The complex features killed (broken) artifacts plus highly fragmented cremated human bones and a variety of faunal remains. In addition to the cremains, the other material also often burned. None of the burning was performed in the burial feature (Sutton 2010).

Angeles III Phase is the beginning of what has been known as the Late Period and is marked by several changes from Angeles I and II. These include the appearance of small projectile points, steatite shaft straighteners and increased use of asphaltum all reflecting adoption of bow and arrow technology, obsidian sources changed from mostly Coso to Obsidian Butte and shell beads from Gulf of California species began to appear. Subsistence practices continued as before and the geographic extent of the Angeles Pattern increased (Sutton 2010).

Angeles Phase IV is marked by new material items including Cottonwood points for arrows, *Olivella* cupped beads and *Mytilus* shell disks, birdstones (zoomorphic effigies with magico-religious properties) and trade items from the Southwest including pottery. It appears that populations increased and that there was a change in the settlement pattern to fewer but larger permanent villages. Presence and utility of steatite vessels may have impeded the diffusion of pottery into the Los Angeles Basin. The settlement pattern altered to one of fewer and larger permanent villages. Smaller special-purpose sites continued to be used (Sutton 2010).

Angeles V components contain more and larger steatite artifacts, including larger vessels, more elaborate effigies and comals. Settlement locations shifted from woodland to open grasslands. The exploitation of marine resources seems to have declined and use of small seeds increased. Inhumations contained grave goods while cremations did not (Sutton 2010).

The Angeles VI phase reflects the post-contact (i.e., post-A.D. 1542) period. One of the first changes after contact was undoubtedly population loss due to disease, coupled with resulting social and political disruption. Angeles VI material culture is essentially Angeles V augmented by a number of Euroamerican tools and materials, including glass beads and metal tools such as knives and needles (used in bead manufacture). The frequency of Euroamerican material culture increased through time until it constituted the vast majority of materials used. Locally produced brownware pottery appears along with metal needle-drilled *Olivella* disk beads (Sutton 2010).

The subsistence system was based primarily on terrestrial hunting and gathering, although nearshore fish and shellfish played important roles. Sea mammals, especially whales (likely from beached carcasses), were prized. In addition, a number of European plant and animal domesticates were obtained and exploited (Sutton 2010).

ETHNOGRAPHY

The project area is part of the traditional territory of the Tongva (later called Gabrielino). Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast, and the southern Channel Islands, in all an area of more than 2,500 square miles (Figure 4, Bean and Smith 1978, McCawley 1996). The Tongva speak a language that is part of the Takic language family. At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

Their territory encompassed a number of ecological zones (Interior Mountains and Foothills; Prairie, Exposed Coast, Sheltered Coast, and the Southern Channel Islands) which affected their subsistence and settlement patterns (McCawley 1996). The Tongva would supplement the resources gathered near them with resources from other ecological zones by obtaining them either directly or through trade (Bean and Smith 1978).

Tongva life centered on the village; composed of paternally related extended families, lineages, and/or clans, typically numbering 50-100 people. Houses, called *kiiy* in Tongva, were domed and circular with frames made from willow posts (or whale rib bones on the islands and along the coastline) covered with tule reed mats. Coastal *kiiys* had entryways that opened towards the sea with mats covering them. A large *kiiy* could hold up to three or four families and was perhaps 60 feet in diameter. Smaller homes were as little as 12 feet in diameter. Wind screens were usually adjacent to the *kiiy* and were used as open-air kitchens during fair weather. Large acorn granary baskets, sometimes coated with asphaltum and seated upon posted platforms, were also placed near the *kiiys*.

Additional village structures included sweathouses, which were small semi-circular, semi-subterranean earth-covered buildings located near water to provide access for bathing. Menstrual huts were constructed for women but it is not clear if a menstrual hut was also used for birthing (Heizer 1978:29). Ceremonial open-aired enclosures, *yoyovars*, were located near chiefs' houses and near the center of villages.

In addition to the permanent villages, the Tongva occupied temporary seasonal campsites that were used for a variety of activities such as hunting, fishing, and gathering plant resources (McCawley 1996:25). Hunting was primarily for rabbit and deer, while plant collection included acorns, buckwheat, chia, berries, and fruits. Coastal seasonal camps and camps near bays and estuaries were used to gather shellfish and hunt waterfowl.

Tongva life was also organized around the celebration and observance of various rituals and ceremonies. These included rites of passage, village rites, seasonal ceremonies, and participation in the widespread *Chinigchinich* religion (various spellings; Kroeber 1925; McCawley 1996). According to Boscana (1978:32, 33), in versions of the coastal creation story documented from the Juañeno but also applicable to the Tongva, two influential deities, *Ouiot*, the monster-chief, and *Chinigchinich,* the supreme-creator god, emerged, at different times, at the village of *Puvungna* with Ouiot being burned there and *Chinigchinich* dying there (1978:119). *Puvungna* was located on Rancho Los Alamitos where the U.S. Veterans Hospital and California State University, Long Beach exist today. Milliken and Hildebrandt (1997:15) summarize of the roles of Ouiot and Chinigchinich in the origin stories among the Juaneño, Luiseño, and Gabrielino.

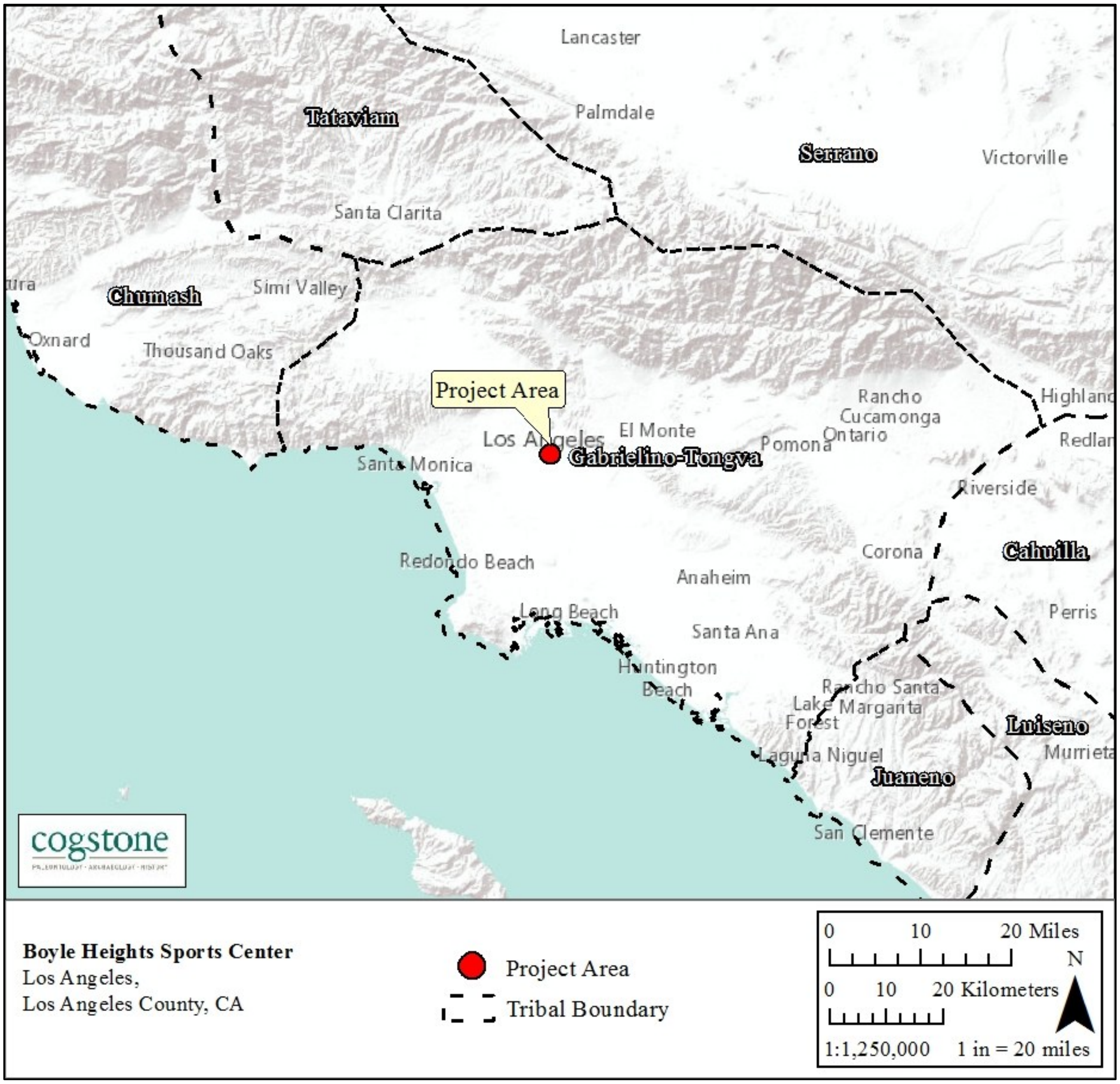

Figure 4. Native American tribal territories

Tongva concept of afterlife and burial practices came from Chingichnich's instructions to the Tongva. Upon death, community mourned for three days and the body was wrapped in a hide blanket or mat made of seagrass. After the mourning period, the body was carried to the village burial area. The hands were placed across the breast, and the entire body was bound and burned.

The remains were either interred or disposed of to the east of the village. Grave offerings included seeds, otter skins, baskets, soapstone pots, bone and shell implements, and shell beads. The amount of grave goods reflected the person's status. If the person held a leadership position, an item designating their office might also be placed with their body. Some internments featured dog burials placed above the corpse. The Tongva saw the worlds of the living and the dead to be parallel places; therefore, the items buried or burned with the deceased were intended to accompany that person to the afterworld where their statuses would be recognized by the items that accompanied them. Graves were marked by baskets or stone slabs. The living mourned for a year; the mourning period ended at the annual mourning ceremony conducted for all of those who had died in the past year (Bean and Smith 1978:545–546, Heizer 1978:29–31, McCawley 1998:155–158.)

The Tongva played an important role in the various trade routes that extended throughout the western United States. In the seminal study *Persistence and Power*, Bean and Brakke Vane (1978) discussed the Pacific Ocean-Great Plains trade system and demonstrated that the Tongva, Cahuilla, Panya (Halchidoma), and Northern Pima were trade partners. Gates and Thomas (2013) describes the Pacific to Rio Grande Trails Landscape that includes three major travel corridors emanating from the Southern California Coast.

Even with the devastating effects of disease, colonization, forced labor, and other genocidal activities perpetrated against them, 2,493 people in California (2,903 nationwide) identified themselves as Tongva or Gabrielino on the 2010 United States Census; a testament to their survival (USACB, 2013a, 2013b). There are currently seven different Gabrielino bands or organizations that some Tongva community members belong to: the Ti'at Society/Traditional Council of Pimu, the Gabrielino/Tongva San Gabriel Band of Mission Indians, the Gabrielino/Tongva Nation, the Gabrielino-Tongva Indians of California , the Gabrielino Tongva Ancestral Territorial Tribal Nation, the Kizh Nation (aka Gabrieleno Band of Mission Indians), and the Gabrielino-Tongva Tribe; however, some Gabrielino people choose not to belong to any group. None of the groups are recognized by the United States federal government; however, five groups have filed letters of intent to petition for federal recognition with the Office of Federal Acknowledgement (Office of Federal Acknowledgement 2013). In 1994, the California State Assembly and Senate jointly recognized the San Gabriel Band of Mission Indians; however, this recognition did not establish or affirm any rights or privileges to the tribe (Resolution Chapter 146, Statutes of 1994 Assembly Joint Resolution 96).

Tongva community members continue to fight against the misconception that they are extinct or "delusional" Mexicans attempting to gain money and services to which they are not entitled

(Martinez et al. 2014; Teeter and Martinez 2009). To combat these uninformed notions, community members work with various public entities and private philanthropic groups to educate the public about the deep history of the Tongva within the Los Angeles area and their continued existence within a thriving metropolis. Additionally, community members are working with linguist to revitalize the Tongva language (Marquez 2014).

HISTORIC SETTING

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. In 1769 Gaspar de Portola explored the present-day Los Angeles area in order to open up a land route to the port of Monterey. He established the first Spanish settlement in the area, which they named after the local river Rio de Nuestra Senora la Reina de los Angeles de Porciuncula (River of Our Lady Queen of the Angels of Porciuncula). By 1771, Father Junipero Serra established the Mission San Gabriel Arcángel, which was later moved to the present-day city of San Gabriel (Discover LA 2017).

The City of Los Angeles was founded on September 4, 1781 by Felipe de Neve, the Governor of Spanish California, along with 44 settlers from 11 families along the Los Angeles River. The settlement was named El Pueblo Sobre el Rio de Nuestra Señora la Reina de los Angeles del Río de Porciúncula, which was shortened soon after (Discover LA 2017).

In 1821 Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, giving the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands, in the form of grants, to private owners. By 1841 the population of Los Angeles is 141. In 1842, the first discovery of gold in California was made at Placerita Canyon near Mission San Fernando, which resulted in Los Angeles' first population boom (Discover LA 2017).

Ranchos in California numbered over 500 by 1846, all but approximately 30 of which resulted from land grants (Bean and Rawls 1993). Following the decisive Battle of Rio San Gabriel, the United States took control of Los Angeles and by 1848 the Treaty of Guadalupe Hidalgo was signed and Mexico formally ceded California to the United States. The area surrounding the Los Angeles settlement was never part of a Ranchero, and the land was officially granted to the Mayor and City of Los Angeles in 1866.

Boyle Heights was known as Paredon Blanco (White Bluff) when California was still part of Mexico. It was renamed to Boyle Heights after Andrew Boyle, who purchased 22 acres of the bluffs after fighting in the Mexican-American War. In 1899, the Los Angeles City Council named the Ninth Ward after Boyle Heights, which included Boyle Heights, Brooklyn Heights, and Euclid Heights (Los Angeles Herald 1899). This ward system was no longer used following the municipal election in December 1906. By the 1940s Boyle Heights was known as the "Ellis Island of the West Coast" and had a diverse multicultural population (NBC LA 2016).

PROJECT AREA HISTORY

The earliest USGS topographic map available for the Project Area is the 1894 Los Angeles 30-minute quadrangle (USGS1894), which depicts the area as completely undeveloped. The parcel remained completely undeveloped until the 1928, when the USGS Los Angles 30-minute quadrangle shows two structures were mapped at the eastern boundary of the Project Area (USGS 1928). The structures were demolished by 1940 as the USGS Los Angles 30-minute quadrangle of that year shows, and the Project Area remained vacant until 1966 when two structures appeared in the northwest corner (USGS 1940, 1966). These structures are the two vacant buildings that currently occupy the Project Area.

The earliest historic aerial for the Project Area dates to 1948 and shows that the parcel is vacant but has historic residences directly to the south (NETRonline 2018). The 1952 aerial shows a structure in the northeast corner of the Project in what appears to be a residential area. In the 1964 aerial, the residences to the south were completely demolished and two structures are present in the northwest corner of the Project. These structures are the two vacant buildings that currently occupy the Project Area. By 1972 a soccer field appeared directly south of the Project Area, which remained until the most recent aerial in 2014.

RECORDS SEARCHES

PALEONTOLOGICAL RECORD SEARCH

A record search of the Project was obtained from the Natural History Museum of Los Angeles County (McLeod 2018; Appendix B). Additional records from the University of California Museum of Paleontology database (UCMP 2018), the PaleoBiology Database (PBDB 2018), and print sources were searched for fossil records.

No recorded paleontological localities producing vertebrate fossils were found within 1-mile of the Project Area. Three localities are known from Pleistocene deposits between 2 and 3 miles from the Project Area in the fashion district and Lincoln Park areas. Extinct megafauna includes Harlan's ground sloth (†*Paramylodon harlani*), saber-toothed cat (†*Smilodon fatalis*), American mastodon (†*Mammut americanum*), mammoth (†*Mammuthus* sp.), horse (†*Equus* sp.), camel (†*Camelops* sp.), and California turkey (†*Melagris californica*; Table 2).

Table 2. Known Pleistocene Fossils in the Vicinity of the Project Area
† indicates that the species is extinct

Common Name	Taxon	Depth below original surface	Age; Formation	Locality	Location (Los Angeles)	Reference
horse	†*Equus sp.*	43 feet	Pleistocene; Quaternary deposits	LACM 1755	near the intersection of Hill St and 12th St, Los Angeles (Fashion District)	McLeod 2018
western pond turtle	*Actinemys marmorata*	20-35 feet	Pleistocene; older alluvial fan (Qof4)	LACM 2032	near the intersection of Mission Rd and Daly St, Lincoln Park	McLeod 2018
Harlan's ground sloth	†*Paramylodon harlani*					
American mastodon	†*Mammut americanum*					
mammoth	†*Mammuthus* sp.					
horse	†*Equus sp.*					
camel	†*Camelops* sp.					
California turkey	†*Melagris californica*	unknown	Pleistocene; older alluvial fan (Qof4)	LACM 1023	near the intersection of Workman St and Alhambra Ave, Lincoln Park	McLeod 2018
saber-toothed cat	†*Smilodon fatalis*					
horse	†*Equus sp.*					
deer	*Odocoileus* sp.					

CULTURAL RECORDS SEARCH

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

Shannon Lopez, a Cogstone staff architectural historian, performed a California Historical Resources Information System (CHRIS) records search for cultural resources on May 9, 2018 at the South Central Coastal Information Center (SCCIC) on the campus of the California State University, Fullerton. The record search covered a 1-mile radius around the Project Area. The results of the records search indicated that no prior cultural resources studies have been conducted within the Project Area, while 21 cultural resources investigations have been completed previously within a 1-mile radius of the Project Area (Table 3). Previous studies within the 1-mile radius included one completed within a 0.25-mile radius of the Project Area; 18 completed between 0.25 and 0.5 miles; and two between the 0.5 and 0.75 miles.

Table 3. Previous Studies within a 1-mile Radius of the Project Area

Report No. (LA-)	Author(s)	Title	Year	USGS topo map	Distance from Project Area
00151	Bissell, Ronald M. and Rodney E. Raschke	Cultural Resources Reconnaissance of the Los Angeles County Reception Center Site and Six Small off Site Areas, Los Angeles County, California.	1988	Los Angeles	0.25-0.5
02788	Brown, Joan C.	Archaeological Literature and Records Review, and Impact Analysis for the Eastside Corridor Alternatives Los Angeles, California.	1992	Los Angeles	0.5-0.75
04082	Romani, John F.	Archaeological Survey Report for the I-5 Transit Way.	1982	Los Angeles	0.25-0.5
04211	Brechbiel, Brant A.	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: La 058-03 in the City of Los Angeles, California.	1998	Los Angeles	0.25-0.5
04448	Richard Starzak	Section 106 Documentation for the Metro Rail Red Line East Extension in the City and County of Los Angeles, California.	1994	Los Angeles	0.5-0.75
04636	Duke, Curt	Cultural Resource Assessment for the AT&T Wireless Services Facility Number C136, County of Los Angeles, California.	1999	Los Angeles	0.25-0.5
04883	Storey, Noelle	Negative Archaeological Survey Report - Highway Project Description.	2000	Los Angeles	0.25-0.5
05417	Sirro, Adam	Negative Archaeological Survey Report:07-la-5-25.9/27.0-07-173-053511.	2000	Los Angeles	0.25-0.5
05435	Sirro, Adam	Negative Archaeological Survey Report:07-la-60-1.61/3.86-07-173-496101, Route 60 From Euclid Ave. to Rowan Ave.	2000	Los Angeles	0.25-0.5
05440	Sylvia, Barbara	Negative Archaeological Survey Report:07-la-5-25.9/27.0-07-174-053511, Sound Wall Construction Along Route 5 Southbound.	2001	Los Angeles	0.25-0.5
07425	McMorris, Christopher	City of Los Angeles Monumental Bridges 1900-1950: Historic Context and Evaluation Guidelines.	2004	Los Angeles	0.25-0.5
07427	McMorris, Christopher	Caltrans Historic Bridge Inventory Update: Metal Truss, Movable, and Steel Arch Bridges.	2004	Los Angeles	0.25-0.5
07548	Billat, Scott	Albertine/CA-8284b Telecommunications Facility 2810 Whittier Blvd., Los Angeles, CA, County of Los Angeles.	2004	Los Angeles	0.25-0.5

Report No. (LA-)	Author(s)	Title	Year	USGS topo map	Distance from Project Area
08252	Snyder, John W., Mikesell, Stephen, and Pierzinski	Request for Determination of Eligibility for Inclusion in the National Register of Historic Places/Historic Bridges in California: Concrete Arch, Suspension, Steel Girder and Steel Arch.	1986	Los Angeles	0.25-0.5
09093	Bonner, Wayne H.	Cultural Resources Records Search Results and Site Visit for T-mobile Telecommunications Facility Candidate La03034a (Santa Cruz Lutheran Church) 753 Camulos Street, Los Angeles, Los Angeles County, California.	2006	Los Angeles	0-0.25
10451	Chasteen, Carrie	Finding of Effect - 6th Street Viaduct Seismic Improvement Project.	2008	Los Angeles	0.25-0.5
10452	Smith, Francesca	Historical Resources Evaluation Report - 6th Street Viaduct Seismic Improvement Project.	2007	Los Angeles	0.25-0.5
10697	Bonner, Wayne	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate SV12221-A (EC-RMC Building Rooftop), 560 South Saint Louis Street, Los Angeles, California.	2010	Los Angeles	0.25-0.5
12586	Glenn, Brian and Maxon, Patrick	Archaeological Survey Report for the 6th Street Viaduct Improvement Project City of Los Angeles, Los Angeles County, California.	2008	Los Angeles	0.25-0.5
12966	Fulton, Phil, Elisa Betchel, and Casey Tibbet	Cultural Resource Assessment Class III Inventory, Verizon Wireless Services, Lorena Facility, City of Los Angeles, County of Los Angeles, California.	2015	Los Angeles	0.25-0.5
13239	Gust, Sherri	Extent of Zanja Madre.	2017	Los Angeles	0.25-0.5

The results of these studies indicated that no cultural resources have been previously recorded within the Project Area, though 131 cultural resources have been identified within the 1-mile search radius. Of these, 7 have been previously documented within a 0.25-mile radius of the Project Area; 15 between 0.25 and 0.5 miles; and 109 cultural resources between 0.5 and 0.75 miles (Table 4). Seven of the resources are archaeological sites, including historical refuse scatters and structural remnants, and 124 are built environment resources, including single family properties, bridges, industrial buildings, schools, and cemeteries.

Table 4. Previously Recorded Cultural Resources within 1-Mile of the Project Area

Primary No. (P-19-)	Trinomial/ HRI	Resource Description	Date Recorded	Distance From Project Area
003683	NA	Historic refuse scatter	2003	0.5-0.75
003753	CA-LAN-003753H	Foundations/structure pads and historic refuse scatter	2007	0.5-0.75
003777	CA-LAN-003777H	Foundations/structure pads, historic refuse scatter, and roads/trails/railroad grades	2011	0.5-0.75
004172	CA-LAN-004172H	Foundations/structure pads, and historic refuse scatter	2009	0.5-0.75
004178	CA-LAN-004178H	Historic refuse scatter	2009	0.5-0.75
004192	CA-LAN-004192H	Historic refuse scatter	2010	0.5-0.75
004193	CA-LAN-004193H	Foundations/structure pads and roads/trails/railroad grades,	2010	0.5-0.75
100132		Lithic scatter	1988	0.5-0.75
150194	CA-LAN-00161916, 114992	Bridge	2011	0.5-0.75
167297	CA-LAN-0021259	Public utility building	1978	0.5-0.75
171729	CA-LAN-0025740	Single family property	1981	0.25-0.5
171730	CA-LAN-0025741	Single family property	1981	0.25-0.5
171732	CA-LAN-0025743	Single family property	1981	0.5-0.75
171733	CA-LAN-0025744	Single family property	1981	0.5-0.75
171734	CA-LAN-0025745	Single family property	1981	0.5-0.75
171735	CA-LAN-0025746	Single family property	1981	0.5-0.75
171736	CA-LAN-0025747	Single family property	1981	0.5-0.75
171737	CA-LAN-0025748	1-3 story commercial building	1981	0.5-0.75
171738	CA-LAN-0025749	Bridge	1981	0.5-0.75
171739	CA-LAN-0025750	1-3 story commercial building	ND	0.5-0.75
171740	CA-LAN-0025751	Single family property	ND	0.5-0.75
171741	CA-LAN-0025752	Single family property	ND	0.25-0.5
171742	CA-LAN-0025753	Single family property	ND	0.25-0.5
171743	CA-LAN-0025754	Single family property	ND	0.5-0.75
171744	CA-LAN-0025755	Single family property	ND	0.5-0.75
171745	CA-LAN-0025756	Single family property	ND	0.5-0.75
171746	CA-LAN-0025757	Single family property	ND	0.5-0.75
171748	CA-LAN-0025759	Single family property	ND	0.5-0.75
171749	CA-LAN-0025760	Single family property	ND	0.5-0.75
171768	CA-LAN-0025740	Single family property	1981	0.5-0.75
171847	CA-LAN-0025858	Single family property	ND	0.5-0.75
171888	CA-LAN-0025899	Single family property	1981	0-0.25
171889	CA-LAN-0025900	Theater	1981	0-0.25
171890	CA-LAN-0025901	1-3 story commercial building	2003	0-0.25
171891	CA-LAN-0025902	1-3 story commercial building	2003	0.25-0.5
171893	CA-LAN-025904	1-3 story commercial building	2003	0.25-0.5
171894	CA-LAN-0025905	1-3 story commercial building	2003	0.25-0.5
171895	CA-LAN-0025906	1-3 story commercial building	1981	0.25-0.5
171896	CA-LAN-0025907	Multiple family property	1981	0.25-0.5
171897	CA-LAN-0025908	Single family property	2003	0.25-0.5

Primary No. (P-19-)	Trinomial/ HRI	Resource Description	Date Recorded	Distance From Project Area
171906	CA-LAN-0025917	Religious building	2003	0-0.25
171913	CA-LAN-0025924	Single family property	ND	0.5-0.75
172755	CA-LAN-00161920	Cemetery	2007	0.5-0.75
173558	CA-LAN-0066048	Industrial building	1989	0.5-0.75
174031	CA-LAN-0072830	Unknown	2003	0-0.25
174941	CA-LAN-0091406	Multiple family property	1994	0.5-0.75
174944	CA-LAN-0091410	Single family property	1994	0.5-0.75
174949	CA-LAN-0091415	Multiple family property	1994	0.5-0.75
174989	CA-LAN-092297	Industrial building and railroad depot	1994	0.5-0.75
175249	CA-LAN-097758	Educational building	1994	0-0.25
175278	CA-LAN-0097792	Educational building	1995	0.5-0.75
175303	CA-LAN-0097820	Educational building	1995	0-0.25
176001	CA-LAN-0100390	Educational building	1996	0.5-0.75
180788	NA	1-3 story commercial building	1988	0.5-0.75
180789	NA	1-3 story commercial building	1988	0.5-0.75
180790	NA	1-3 story commercial building	1988	0.5-0.75
180791	NA	1-3 story commercial building	1988	0.5-0.75
180792	NA	1-3 story commercial building	1988	0.5-0.75
180793	NA	1-3 story commercial building	1988	0.5-0.75
180794	NA	1-3 story commercial building	1988	0.5-0.75
180795	NA	1-3 story commercial building	1988	0.5-0.75
180796	NA	1-3 story commercial building	1988	0.5-0.75
180797	NA	1-3 story commercial building	1988	0.5-0.75
180798	NA	1-3 story commercial building and industrial building	1999	0.5-0.75
180799	NA	1-3 story commercial building	1988	0.5-0.75
180800	NA	1-3 story commercial building	1988	0.5-0.75
180801	NA	1-3 story commercial building	1988	0.5-0.75
180802	NA	1-3 story commercial building	1988	0.5-0.75
180803	NA	1-3 story commercial building	1988	0.5-0.75
180804	NA	1-3 story commercial building	1988	0.5-0.75
180805	NA	1-3 story commercial building	1988	0.5-0.75
180806	NA	1-3 story commercial building	1988	0.5-0.75
180807	NA	1-3 story commercial building	1988	0.5-0.75
180808	NA	1-3 story commercial building	1989	0.5-0.75
180809	NA	1-3 story commercial building	1988	0.5-0.75
180810	NA	1-3 story commercial building	1988	0.5-0.75
180811	NA	1-3 story commercial building	1988	0.5-0.75
180812	NA	1-3 story commercial building	1988	0.5-0.75
180813	NA	1-3 story commercial building and industrial building	1999	0.5-0.75
180814	NA	1-3 story commercial building	1988	0.5-0.75
180815	NA	1-3 story commercial building	1988	0.5-0.75
180816	NA	1-3 story commercial building	1989	0.5-0.75
180817	NA	1-3 story commercial building	1989	0.5-0.75
180818	NA	1-3 story commercial building	1989	0.5-0.75
180819	NA	1-3 story commercial building	1988	0.5-0.75
180820	NA	1-3 story commercial building	1989	0.5-0.75
180824	NA	1-3 story commercial building	1988	0.5-0.75

Primary No. (P-19-)	Trinomial/ HRI	Resource Description	Date Recorded	Distance From Project Area
180825	NA	1-3 story commercial building	1988	0.5-0.75
180826	NA	1-3 story commercial building	1988	0.5-0.75
180827	NA	Bridge	1988	0.5-0.75
180828	NA	Engineering structure	1988	0.5-0.75
180829	NA	1-3 story commercial building	1988	0.5-0.75
186110	30-176630	Engineering structure, railroad depot, and other	2007	0.5-0.75
186112	NA	Roads/trails/railroad grades, engineering structure, and Other-railroad	2009	0.5-0.75
186804	30-176664	Engineering structure, bridge, highway/trail, and other- Railroad	2011	0.5-0.75
187042	CA-LAN-0114118	Multiple family property	1997	0.25-0.5
187637	NA	Hospital	2005	0.25-0.5
187638	NA	3+ story commercial building	2005	0.5-0.75
187754	CA-LAN-0148581	Community center/social hall	2003	0.5-0.75
188156	NA	Industrial building	2008	0.5-0.75
188524	CA-LAN-0112990	Engineering structure and bridge	2011	0.25-0.5
188525	NA	Industrial building and unreinforced masonry building	2007	0.5-0.75
188526	NA	Industrial building	2007	0.5-0.75
188527	NA	Industrial building	2007	0.5-0.75
188528	NA	Industrial building	2007	0.5-0.75
188529	NA	Industrial building and unreinforced masonry building	2007	0.5-0.75
188530	NA	Industrial building	2007	0.5-0.75
188531	NA	Industrial building	2007	0.5-0.75
188532	NA	Industrial building and unreinforced masonry building	2007	0.5-0.75
188533	NA	Industrial building and unreinforced masonry building	2007	0.5-0.75
188534	NA	Industrial building	2007	0.5-0.75
188535	NA	Industrial building and unreinforced masonry building	2007	0.5-0.75
188536	NA	Industrial building	2007	0.5-0.75
188537	NA	1-3 story commercial building	2007	0.5-0.75
188538	NA	Industrial building	2007	0.5-0.75
188539	NA	Industrial building	2007	0.5-0.75
188542	NA	Industrial building	2007	0.25-0.5
188985	NA	Public utility building	1999	0.5-0.75
188986	NA	Industrial building	1999	0.5-0.75
188987	NA	Industrial building	1999	0.5-0.75
188991	NA	Industrial building	2001	0.5-0.75
189094	NA	Industrial building	1999	0.5-0.75
189095	NA	Industrial building	1999	0.5-0.75
189096	NA	Industrial building	1999	0.5-0.75
189098	NA	Industrial building	2001	0.5-0.75
189099	NA	Industrial building	1999	0.5-0.75
189100	NA	Industrial building	1999	0.5-0.75

Primary No. (P-19-)	Trinomial/ HRI	Resource Description	Date Recorded	Distance From Project Area
189956	NA	1-3 story commercial building	2011	0.5-0.75
190086	NA	Multiple family property	2012	0.5-0.75
190286	NA	1-3 story commercial building	2012	0.5-0.75
192224	NA	Community center/social hall	2015	0.25-0.5

OTHER SOURCES

In addition to the records search conducted at the SCCIC, Megan Wilson, a Cogstone staff archaeologist, consulted a variety of sources in May 2018 to obtain further information regarding the cultural context of the Project Area (Table 5). Sources included the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the Project Area from historic maps and aerial photographs was reviewed (Table 5).

Table 5. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP; 1979-2002 & supplements)	Negative
Historic USGS Topographic Maps	The 1984 Los Angeles 15' topo map is the earliest USGS topographic available for the Project Area and shows an unnamed creek passing through the Project Area at a northeast to southwest orientation in an undeveloped area of the Boyle Heights neighborhood. Seventh St. is the closest marked development and this pattern is reflected until the 1904 Los Angeles 15' USGS topo map. The 1928 Los Angeles 7.5' USGS topo map shows Whittier Blvd. to the north, Mott St. to the east, Matthew St. to the west, and 7th St. to the south. Structures are present along the street frontages. The 1953 Los Angeles 7.5' USGS topo map depicts US Highway 101 to the south. The 1968 Los Angeles 7.5' USGS topo map shows substantial additions to the US 101 freeway and its associated interchanges. It also depicts the Soto Steet School and shows the two buildings within the Project Area in their current locations.

Source	Results
Historic US Department of Agriculture Aerial Photographs	The 1948 historic aerial is the earliest available for the Project Area and shows the Project Area located in what appears to be a residential area, surrounded by the current configuration of streets. The area of the Project Area appears to be undeveloped. The 1952 aerial shows a structure in the northeast corner of the Project Area in what appears to be a residential area. The 1964 shows the two building in their current location. The former neighborhood had been demolished and replaced with the Soto Street School.
California Register of Historical Resources (CRHR; 1992-2014)	Negative
California Historical Resources Inventory (CHRI; 1976-2014)	Negative
California Historical Landmarks (CHL; 1995 & supplements to 2014)	Negative
Local Historic Inventories, San Fernando Valley Historical Society	Negative
California Points of Historical Interest (CPHI; 1992 to 2014)	Negative
Bureau of Land Management (BLM) General Land Office Records, accessed May 21, 2018	Positive: 1866 and 1975, Mayor and City of Los Angeles, Spanish/ Mexican Grant

NATIVE AMERICAN CONSULTATIONS

The Native American Heritage Commission (NAHC) was contacted on April 27, 2018 to perform a search of the Sacred Lands File. The NAHC responded on April 30, 2018 stating that a search of the Sacred Land File yielded negative results for the presence of Native American cultural resources and sacred lands within a 1-mile radius of the Project. The NAHC also provided a list of 5 Native American tribal organizations to be contacted for further information on the potential for tribal resources in the Project Area. This list was supplemented by the City of Los Angeles (City) which provided contact information for 5 additional tribes who have requested consultation in the past (Appendix C).

ASSEMBLY BILL 52 CONSULTATIONS

As the lead CEQA agency, the City conducted consultations in accordance with the requirements of AB52. Cogstone assisted the City by drafting and mailing consultation letters via certified mail on May 18, 2018 to 10 tribal organizations who have previously requested consultation.

These organizations include the 5 tribes on the NAHC list. Cogstone then made 2 additional attempts to contact the tribes via email on June 4th and 20th, 2018 (Appendix C). Three responses were received and are summarized below and in Appendix C.

1) Mr. John Valenzulea of the of the San Fernando Band of Mission Indians passed away November 16, 2017. Ms. Donna Yocum has taken over the position of Chairperson for the tribe. In a phone conversation on June 7, 2018 she indicated that she defers to the local Gabrielino tribes for projects within downtown LA and indicated her tribe comments on projects in the San Fernando Valley and in western San Bernardino County area.

2) Mr. John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation indicated via email on June 7, 2018 that he will respond to the City of Los Angeles on a future date. The City confirmed on March 22, 2019 that they received no further responses.

3) Mr. Robert F. Dorame of the Gabrielino Tongva Indians of California Tribal Council, requested in a phone conversation on June 21, 2018 that his tribal organization be notified in the event that human remains or cultural resources are observed during construction activities. Additionally, Mr. Dorame requested to be notified when the Project is completed regardless if cultural resources are observed. He suggested that an archaeologist be present in some capacity during construction.

SURVEY

Cogstone archaeologist and cross-trained paleontologist Edgar Alvarez completed the intensive pedestrian survey of the entire of the 0.96-acre Project Area on May 18, 2018. As the entire Project Area was hardscaped with no view of the ground surfaces present, the survey was reconnaissance only. Two structures (Figure 5) and 2 small sheds (Figure 6) were present. A separate assessment is being prepared for built environment resources. No paleontological or archaeological resources were observed during the survey.

Figure 5. Overview of Project Area, view north

Figure 6. Two sheds on the eastern edge of the Project Area, view east

STUDY FINDINGS AND CONCLUSIONS

PALEONTOLOGICAL RESOURCES

Fossils are known in the vicinity but are relatively sparse and mostly at depths that will not be impacted by the Project. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

CULTURAL RESOURCES

No archaeological resources are known in the vicinity.
In the event of an unanticipated cultural resource discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during Project development, all work must cease near the find immediately. In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the NAHC by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a MLD with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the area of the find until all requirements of the health and safety code have been met.

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APPENDIX A. QUALIFICATIONS

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

TIM SPILLANE
Principal Investigator for Archaeology

EDUCATION

2010 Master of Arts in Text and Material Culture (Archaeological Approaches), Roehampton University, London

2008 Dual Bachelor of Arts in Anthropology (Archaeology Emphasis) & English Literature San Francisco State University.

SUMMARY QUALIFICATIONS

Tim Spillane is a Registered Professional Archaeologist with more than eight years of experience. He has expertise in the historic and prehistoric archaeology of the San Francisco Bay Area and larger Northern CA region, and has a strong background in Section 106/110, NEPA, and CEQA compliance. He serves as Project manager and field director, regularly coauthoring compliance reports, leading field studies, identifying and documenting archaeological resources, supervising excavation of artifacts and features, and producing predicative models of site locations in GIS. Spillane meets the Secretary of Interior Standards for archaeology. He has carried out a wide range of management work for the Golden Gate National Recreation Area, the San Francisco Planning Department, the Golden Gate National Parks Conservancy, the California State Parks, PG&E and numerous other agencies.

SELECTED PROJECTS

Presidio Parkway Project, Flatiron/Caltrans District 4, San Francisco, CA. Project Manager/Archaeologist. Currently managing monitoring of all ground disturbance in native sediments. In addition, has prepared and implemented archaeological testing plans; manages artifact collections; completes comprehensive monitoring logs, biannual reports, and other compliance documents; and coordinate with cultural resource managers at Caltrans, the Presidio Trust, and NPS. 2014-present

Fisher House and Golf Course, Veterans Affairs Long Beach Healthcare System, Long Beach, Los Angeles County, CA. Historic Resources Analyst. Conducted analysis of historical archaeological features and artifacts dating late 19th to mid20th century uncovered during the Golf Course Project. Also conducted analysis of prehistoric artifacts recovered. Contributed to the report and evaluated features against National Register criteria. 2016-2017

Purple Line Extension Project, Metro/FTA, Los Angeles, CA. Archaeologist. Conducted analysis of historical archaeological features and artifacts dating late 19th to mid20th century. Prepared artifact analysis section of Metro Division 20, Building 61S report and evaluated features under National Register criteria. 2016-2017

Midpeninsula Open Space District Survey Project, San Mateo County, California. Archaeologist. Exhaustive archival and historical research along with a CHRIS records search at the Northwest Information Center was conducted to facilitate the archaeological survey of the Driscoll Ranch within the La Honda Creek Open Space Preserve in San Mateo County. A summary of research findings along with detailed maps of known and suspected resources and archaeologically sensitive areas was produced. 2016-2017

Phase I Archaeological Testing of the Building 83 Garden Site, Alcatraz Island, San Francisco County, California. Project Manager/Principal Investigator I. Assisted National Park Service Archaeologists in Phase I testing of the Building 83 Garden Site, a historic deposit of refuse associated with the Occupation of Alcatraz by American Indians of All Tribes between 1969 and 1971. Spillane carried out site reconnaissance and surface collection of artifacts, assisted in site mapping, placed a series of test excavation units, screened and collected diagnostic resources, and contributed to site documentation. 2016

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SHERRI GUST
Program Manager

EDUCATION

1994 M. S., Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles

1979 B. S., Anthropology (Physical), University of California, Davis

SUMMARY QUALIFICATIONS

Ms. Gust is an Orange County Certified Professional Paleontologist and Archaeologist and a Registered Professional Archaeologist with more than 38 years of experience in cultural resources management. She is accepted as a principal investigator for both prehistoric and historical archaeology by the State Office of Historic Preservation's Information Centers and exceeds the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*.

SELECTED PROJECTS

SR-138 Palmdale Boulevard Improvements (Sierra Highway), Caltrans District 7 Palmdale, Los Angeles County, CA. Project Manager/QA&QC. The Project involves widening and modifying three southbound lanes on Sierra Highway to Avenue R at the railroad crossing. Managed a cultural resources assessment to support the Project environmental documents (IS/MND) in compliance with NEPA and CEQA. Services for this Local Assistance Project, on behalf of the City of Palmdale, included records search, Sacred Lands File search, Tribal consultation, intensive-level field survey, finalization of the APE map in concurrence with Caltrans District 7, and preparation of an ASR technical report. Sub to Parsons. 2015-2016

High Desert Corridor, Caltrans Districts 7 & 8, Los Angeles and San Bernardino Counties, CA. Project Manager and Principal Archaeologist/Paleontologist. The Project was a proposed new 63-mile long freeway and rail line from SR 14 in Palmdale to SR 18 in Apple Valley. The documents produced were Historical Properties Survey Report, Archaeological Survey Report, Historical Resources Evaluation Report, Extended Phase I Testing Report for three sites, Extended Phase I and Archaeological Evaluation Report for 20 Phased Sites and one District, Supplemental Historic Properties Survey Report and Archaeological Survey Report, Finding of Effect, Programmatic Agreement, Historic Properties Treatment Plan and combined Paleontological Identification and Evaluation Report. Sub to Parsons Transportation. 2013-2015

Purple Line Extension (Westside Subway), Metro/FTA, Los Angeles. Project Manager & Principal Archaeologist/Paleontologist. The Project involves extension of the subway from Wilshire/Western to the VA Facility in Westwood for 9 miles. Cogstone prepared the supplemental Archaeology and Architectural History Reports and the cultural and paleontological sections of the FEIS/FEIR. Cogstone subsequently prepared the cultural and paleontological mitigation and monitoring plans for the entire Project. Currently providing monitoring and all other cultural and paleontological services for Section One of the Project. Sub to WEST. 2011-present

Historical Sites Preservation, Veterans Affairs Long Beach Healthcare System, Long Beach, Los Angeles County, CA. Project Manager and Principal Archaeologist. The undertaking involved eleven Projects, divided into two construction phases for improvements to the campus. Cogstone conducted evaluation of all buildings on campus and determined recommended none were eligible for the National Register and SHPO concurred. One National Register-listed prehistoric archaeological site, the Puvungna Indian Village, is known on the campus. Documents prepared were Evaluation Report, POA, MOA, HPTP with monitoring. Prime. 2014-2015

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KIM SCOTT
Principal Investigator for Paleontology

EDUCATION

2013 M.S., Biology with a paleontology emphasis, California State University, San Bernardino
2000 B.S., Geology with paleontology emphasis, University of California, Los Angeles

SUMMARY QUALIFICATIONS

Ms. Scott has more than 20 years of experience in California paleontology. She is a sedimentary geologist and qualified paleontologist with extensive experience. She is a skilled professional who is well-versed in the compliance procedures of CEQA, NEPA, and the Paleontological Resources Preservation Act (PRPA). Ms. Scott regularly prepares reports for paleontological assessments, mitigation and monitoring plans and measures, and monitoring reports for a variety of federal, state, and local agencies throughout California. In addition, she has prepared paleontological resources reports for CEQA/ EIR compliance documents for Project-level and program-level Specific Plans, General Plans, Master Plans, and Zoning Amendments for mixed-use, residential, commercial and industrial developments. Scott serves as company safety officer.

SELECTED PROJECTS

Purple Line Extension (Westside Subway), Metro/FTA, Los Angeles, CA. Paleontological Field and Lab Director, Report Co-author. The Project involves extension of the subway from Wilshire/Western to the VA Facility in Westwood for 9 miles. Cogstone prepared the supplemental Archaeology and Architectural History Reports and the cultural and paleontological sections of the FEIS/FEIR. Cogstone subsequently prepared the cultural and paleontological mitigation and monitoring plans for the entire Project. Currently providing monitoring and all other cultural and paleontological services for Section One of the Project. 2011-present

Barren Ridge Transmission Line, Los Angeles Department of Water and Power (LADWP), Saugus to Mojave, Los Angeles and Kern Counties, CA. Principal Paleontologist. Over 75 miles of LADWP electrical lines were installed Angeles National Forest, BLM and private lands. Supervised paleontological monitoring and lab work and prepared a Paleontological Monitoring Report to CEQA, BLM, and PRPA standards. Sub to Aspen Environmental Group. 2015-present.

City of La Verne General Plan, Los Angeles County, CA. Principal Paleontologist. The Project was for an update to the City's General Plan, a 5,446-acre area. Provided a Paleontological and Cultural Assessment Report for the City. Sub to De Novo Planning Group. 2018.

Interstate 405 Paleontological Resources Mitigation Plan, Los Angeles and Orange Counties, CA. Principal Paleontologist. Improvements to a 6-miles of Interstate 405 (I-405) between State Route 73 and Interstate 605. Provided a Paleontological Mitigation and Monitoring Plan. Sub to OC 405 Partners. 2018.

PATH Metro Villas, 320-340 Madison Ave., Los Angeles, CA. Principal Paleontologist. The Project was to construct 190 permanent supportive/affordable housing units in three housing development complexes on 1.9 acres. Provided a Paleontological Monitoring Report. Prime to Affirmed Housing Group, Inc. 2017.

Little Tujunga Canyon Bridge, Angeles National Forest, Los Angeles County, CA. Principal Paleontologist. The Project was to replace the Little Tujunga Canyon Road Bridge along Little Tujunga Canyon Road. Provided a Paleontological Assessment Report. Sub to Michael Baker International. 2017.

Park Place Extension Project, City of El Segundo, Los Angeles County, CA. Principal Paleontologist. The City proposes to extend Park Place from Allied Way to Nash Street with a railroad grade separation to implement a critical Project improving traffic and circulation in the Project Area. Provided a combined Paleontological Identification and Evaluation Report (PIR/PER). Sub to Michael Baker International. 2017.

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SHANNON LOPEZ
Architectural Historian

EDUCATION

2018 M.Sc., Architectural History, California State University, Fullerton
2012 B.A., History, Minor in Asian-Pacific Studies, California State University, Dominguez Hills

SUMMARY QUALIFICATIONS

Ms. Lopez has one year of experience assisting historical field survey, photo documentation and recording of historical features. She has also contributed to the preparation of historic contexts, DPR forms as well as experience conducting archival research of historic resources.

Relevant Experience

Bolsa Row Specific Plan, City of Westminster, California. Historical Technician. The Project consisted of the proposed construction of a mixed-use community that included a hotel, banquet facility, apartments, restaurants, and retail space. Cogstone conducted a cultural resources records search, survey and completed the assessment report. Conducted historic research of the area and contributed to the report. 2017

Poinsettia Station Improvement Project located in the City of Carlsbad, California. Historical Technician. The Project consists of the construction of an inter-track fence and grade separated pedestrian undercrossing at the station. Cogstone conducted a cultural resources records search, archaeological and historical resources pedestrian survey, presence absence testing for archaeological resources, and evaluation of the San Diego Northern Railroad. A Historic Resources Evaluation Letter Report and Archaeological Testing Letter Report were prepared for SHPO concurrence. 2017

Los Angeles Convention Center Redevelopment Project, City of Los Angeles, California. Historical Technician. The Los Angeles Public Works-Bureau of Engineering (LABOE) and the Los Angeles Department of Convention and Tourism Development (LADCTD) proposed to modernize and expand the existing LACC. Cogstone conducted a cultural resources records search as well as the archaeology and paleontology pedestrian survey. Prepared historical resources records search for report. 2016

Fire Camp 8 Helispot Improvement Project, Angeles National Forest, California. Historical Technician. Proposed Project includes the installation of 1,807-foot long water pipe to supply water to three fire hydrants. The proposed route runs through the historic age Nike Missile site – LA-78. Cogstone conducted historical research, an architectural and archaeological survey, prepared updated DPR forms and prepared a letter report. Conducted historic research and contributed to the DPR forms. 2017

W. 6th Street Vintage Lofts, Tustin, California. Historical Technician. The proposed Project involved construction of new residential buildings and the demolition of all existing buildings on the 6.79-acre property. Cogstone conducted a records search, historical research, an architectural and archaeological survey, prepared updated DPR forms and prepared a letter report. Conducted historic research and contributed to the DPR forms. 2016

Cypress Affordable Housing, San Diego, California. Historical Technician. Cogstone provided Cultural and Native American monitoring during construction as required by the Project's mitigation measures. Recorded, conducted historical research on, and evaluated a historic refuse deposit and a remnant of the Imperial Line of the San Diego Electric Railway (SDERy) identified during construction. Conducted historic research, contributed to the DPR forms and final report. 2016

HOLLY DUKE
Archaeologist

EDUCATION

2009 B.A., Archaeology/History, Simon Fraser University, Canada

SUMMARY QUALIFICATIONS

Ms. Duke is a qualified archaeologist and cross-trained paleontologist with over five years of experience in pedestrian survey, monitoring, excavation and burial recovery, as well as the identification of human and faunal skeletal remains. She is proficient in the preparation of cultural resources assessment reports for a variety of state and local agencies throughout California. Duke is responsible for the organization of field data, lab supervision and organization, as well as identifying and cataloging prehistoric and historic artifacts. She also has experience with preparing artifact collections for curation at a variety of different repositories as well as fossil preparation and stabilization.

SELECTED PROJECTS

TetraGro Lancaster Project, City of Lancaster, Los Angeles County, California. Task Manager. The Project consisted of a cultural resources assessment for the construction of a 22,000 square foot medical cannabis cultivation center with a clean anodized aluminum façade. Provided task management and supervised all work for the Project which included a records search and an intensive pedestrian survey. Authored the Cultural Resources Assessment Report. 2018

West Bastanchury Residential Subdivision Project, City of Yorba Linda, Orange County, California. Task Manager. The Project consisted of a cultural and paleontological resources assessment for the creation of a tentative tract map to subdivide a 13-acre City-owned lot into 23 residential lots. Provided task management and supervised all work for the Project which included a records search and an intensive pedestrian survey. Authored the Cultural Resources Assessment Report. 2017

Upper Berryessa Flood Channel Improvements Project, City of Milpitas, Santa Clara County, California. Archaeologist. The Project consisted of numerous flood channel improvements along Berryessa Creek within an approximately 2.1-mile alignment on behalf of the U.S. Army Corps of Engineers in association with the Santa Clara Valley Water District. Conducted burial recovery for a total of nine in-situ burials and conducted archaeological monitoring of ground disturbing activities within the site. Responsible for the completion of all paperwork and drafted portions of the Burial Recovery and Archaeological Monitoring Compliance Report. 2017

Longboat Solar Photovoltaic, EDF Renewable Energy, Cities of Barstow and Lenwood, San Bernardino County, California. Archaeologist/Lab and Data Manager. The Project involved construction of a solar energy facility within an approximately 234-acre property. Cogstone conducted cultural resources Phase I and Extended Phase I studies. Tasks included archaeological and paleontological resources records search, Sacred Lands search, Native American consultation. Identified and cataloged all artifacts recovered, delivered artifacts to tribes for repatriation. Sub to Environmental Intelligence. 2015-2017

Crowder Canyon, Caltrans District 8, San Bernardino County, California. Archaeologist. The Project consisted of the realignment of SR-138. Participated in the archaeological testing and data recovery of two archaeological sites near Hesperia. Conducted excavation and data recovery of more than six prehistoric features. Sub to Applied Earthworks. 2016

Cold Canyon Landfill Expansion, South Berm Soil Removal Module 11, Arroyo Grande, San Luis Obispo County, California. Archaeologist. Conducted archaeological testing of the historic Patchett-Weir family site (CA-SLO-2559H) to assess its eligibility for listing on the National Register of Historic Places. The site would be impacted by landfill expansion and Army Corps of Engineers wetland restoration. Supervised the excavation of mechanically excavated trenches and hand excavated a unit within the site. Cataloged 20 historic-age artifacts recovered during excavation. 2016

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MEGAN PATRICIA WILSON
Archaeologist/GIS Specialist

EDUCATION

2014 M.A. Anthropology, California State University, Fullerton *cum laude*
2013 GIS Certificate, California State University, Fullerton
2006 B.A., Anthropology, University of California, Los Angeles *cum laude*

SUMMARY QUALIFICATIONS

Ms. Wilson is a Registered Professional Archaeologist (RPA) with experience in survey, excavation, laboratory preparation/curation analysis, historic archaeology and historic architecture. Ms. Wilson regularly conducts records searches, tribal consultations, completes DPR site records, and gathers historic building information from local municipalities, and assists in drafting archaeological assessment reports for state, federal, and private development projects. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is GIS proficient and assists with the digitizing and mapping of spatial data for all projects as well as analyzing historic maps. Ms. Wilson has six years of experience in southern California archaeology.

SELECTED PROJECTS

Park Place Extension and Grade Separation EIR EA, Caltrans District 7, El Segundo, Los Angeles County, CA. Conducted a pedestrian survey to record and evaluate cultural resources within the archaeological and architectural APEs for a ~0.5-mile project along NBSF and UPRR rail lines and spur tracks on behalf of the City of El Segundo. Cogstone's services included records search, NAHC consultation, HPSR/ASR/HRER and paleontological reports. Seven built-environment resources were identified, evaluated, and DPR 523 forms were prepared. Sub to Michael Baker. Archaeologist. 2017

Whittier Boulevard / I-605 Arterial Hot Spot Improvements, Environmental Clearance and Preliminary Engineering for Three Intersection Improvements, Whittier, Los Angeles County, CA. Conducted an intensive-level cultural resources survey to support cultural and paleontological resources technical studies for improvements proposed for three intersections in a disturbed urban environment. Conducted mapping, records search, Sacred Lands search, and NAHC consultation for intersections at Colima Road, Santa Fe Springs Road and Painter Avenue. Sub to Michael Baker. Archaeologist. 2016

McBean Park Drive Bridge Replacement, Caltrans District 3, Lincoln, Placer County, CA. Conducted NAHC consultation. Cogstone's work also involved records search, Sacred Lands search, and GIS mapping. To support HPSR/ASR/HRER set of reports and combined Paleontological Evaluation Report/ Paleontological Identification Report (PER/PIR) for NEPA and NHPA Sec 106 compliance. Archaeologist. 2015

Sheldon Road/Waterman Road Intersection Improvements, Caltrans District 3, Elk Grove, Sacramento County, CA. The project involves evaluating two alternatives (roundabout and standard signalized intersection) for this rural intersection. Conducted records search, sacred lands search and NAHC consultation. Cogstone also conducted an intensive-level pedestrian survey to support a technical report on behalf of the City. Archaeologist. 2014

Folsom Streetscape, Caltrans District 3, City of Rancho Cordova, Sacramento County, CA. Conducted records search, sacred lands search and NAHC consultation per Caltrans District standards. The project involves Phase IV of the Folsom Boulevard Streetscape Enhancement Project to widen Folsom Boulevard between Horn Road and Rod Beaudry Drive, enhance pedestrian safety and promote redevelopment opportunities. Archaeologist. 2014

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

EDGAR ALVAREZ
Archaeologist/Cross-trained Paleontologist

EDUCATION

2016 B.A. Anthropology, Minor Geographical Information Systems, California State University, Northridge

SUMMARY QUALIFICATIONS

Mr. Alvarez is an archaeologist with two years of experience in surveys, excavation and makes maps in Geographic Information Systems (GIS) and specializes in ESRI's ArcGIS software. He is also a member of both the Society for California Archaeology and the Society for American Archaeology. Mr. Alvarez has participated in eight hours of paleontology training.

SELECTED PROJECTS

Wildlife Reintroduction, Utah Division of Wildlife Resources, Tooele County, UT. The project involved archaeological surveying and coordination with BLM to cover 17,000 acres of prescribed burns for the reintroduction of wildlife. Identified and recorded various prehistoric and historic sites and artifacts throughout the aforementioned acreage. Archaeologist. 2017

California Lady's Slipper Conservation Project, Quincy, Plumas County, CA. The project implemented long-term solutions to preserve and conserve a perennial herb known as Cypripedium californicum (California Lady's Slipper). Mitigation measures include riparian conservation methods, creation of a new pond, and environmental studies to prepare a MND under CEQA. Conducted pedestrian surveys to support the cultural resources assessment report. Archaeologist. 2016

Storrie Fire Surveying Project, Storrie, Plumas County, CA. Conducted intensive pedestrian surveys, archaeological resource inventories and NRHP site evaluations within the Plumas and Lassen National Forests to support a technical report of the Storrie Fire in compliance with Section 106 and CEQA. Archaeologist. 2016

Moonlight Fire Archaeology and Restoration Project, Greensville, Plumas County, CA. Conducted an intensive pedestrian survey, archaeological resource inventory and NRHP site evaluations within the Plumas National Forest to support a technical report of the 64,997-acre Moonlight Fire. Archaeologist. 2016

Chips Fire Restoration Project, Belden, Plumas County, CA. Conducted intensive pedestrian surveys, archaeological resource inventories and NRHP site evaluations within the Plumas National Forest to support a technical report of the 75,000 acre Chips Fire. Archaeologist. 2016

Mt. Hough Plumas Lightning Complex Restoration Project, Taylorsville, Plumas County, CA. The Plumas Lightning Complex burned in August 2013 in the Keddie Ridge/North Arm areas of Indian Valley near Taylorsville. The fires threatened 90 residential structures and various outbuildings in Taylorsville. Conducted pedestrian surveys to assess the potential impacts to cultural resources caused by the 513 acre Mt. Hough Plumas fire within the Plumas National Forest. Archaeologist. 2016

APPENDIX B. PALEONTOLOGICAL RECORDS SEARCH

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

11 May 2018

Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865-4157

Attn: Megan Wilson, Archaeologist & GIS Technician

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed Boyle Heights Sports Center Gym Project, Cogstone Project # 2177-08, in the City of Los Angeles, Los Angeles County, project area

Dear Megan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Boyle Heights Sports Center Gym Project, Cogstone Project # 2177-08, in the City of Los Angeles, Los Angeles County, project area as outlined on the portion of the Los Angeles USGS topographic quadrangle map that you sent to me via e-mail on 27 April 2018. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby from the same sedimentary deposits that occur within the proposed project area, either at the surface or at depth.

The western one half of the proposed project area has surficial deposits composed of older Quaternary Alluvium, probably derived as fluvial deposits from the flood plain of the Los Angeles River that currently flows in a concrete channel just to the west. The eastern one half of the proposed project area has surficial deposits that consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the drainage from the slightly more elevated surrounding terrain. These younger Quaternary deposits usually do not contain significant fossil vertebrates, at least in the uppermost layers, but the underlying older Quaternary deposits found at varying depths may well contain significant vertebrate fossils.

Our closest vertebrate fossil locality from the older Quaternary deposits is LACM 1755, just north of due west of the proposed project area near the intersection of Hill Street and 12th Street, that produced a fossil specimen of horse, *Equus*, at a depth of 43 feet below the street. Our next closest vertebrate fossil locality from older Quaternary deposits beneath the younger Quaternary Alluvium is LACM 2032, almost due north of the proposed project area near the intersection of Mission Road and Daly Street around the Golden State Freeway (I-5), that produced fossil specimens of pond turtle, *Clemmys mamorata*, ground sloth, *Paramylodon harlani*, mastodon, *Mammut americanum*, mammoth, *Mammuthus imperator*, horse, *Equus*, and camel, *Camelops*, at a depth of 20-35 feet below the surface. The pond turtle specimens from locality LACM 2032 were figured in the scientific literature by B.H. Brattstrom and A. Sturn (1959. A new species of fossil turtle from the Pliocene of Oregon, with notes on other fossil *Clemmys* from western North America. Bulletin of the Southern California Academy of Sciences, 58(2):65-71). At our locality LACM 1023, just north of locality LACM 2032 near the intersection of Workman Street and Alhambra Avenue, excavations for a storm drain recovered fossil specimens of turkey, *Meleagris californicus,* sabre-toothed cat, *Smilodon fatalis*, horse, *Equus*, and deer, *Odocoileus*, at unstated depth. A specimen of the turkey, *Meleagris*, from this locality was published in the scientific literatus by D. W. Steadman (1980. A Review of the Osteology and Paleontology of Turkeys (Aves: Meleagridinae). Contributions in Science, Natural History Museum of Los Angeles County, 330:131-207).

Shallow excavations in the younger Quaternary Alluvium exposed in the eastern portion of the proposed project area are unlikely to uncover significant fossil vertebrate remains. Deeper excavations in those deposits that that extend down into older Quaternary sediments, and any excavations in the older Quaternary Alluvium exposed in the wester portion of the proposed project area, however, may well encounter significant vertebrate fossils. Any substantial excavations in the proposed project area, therefore, should be closely monitored to quickly and professionally recover any potential vertebrate fossils without impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX C. NATIVE AMERICAN CONSULTATIONS

Local Government Tribal Consultation List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested: **AB 52 and SB 18**

☒ **CEQA Tribal Consultation List (AB 52)** ***– Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

Required Information

Project Title: Boyle Heights Sports Center Gym

Local Government/Lead Agency: City of Los Angeles, Department of Public Works

Contact Person: Chris Adams

Street Address: 1149 S. Broadway, Suite 600

City: Los Angeles **Zip:** 90015

Phone: (213) 485-5910

Email: christopher.adams@lacity.org

Specific Area Subject to Proposed Action

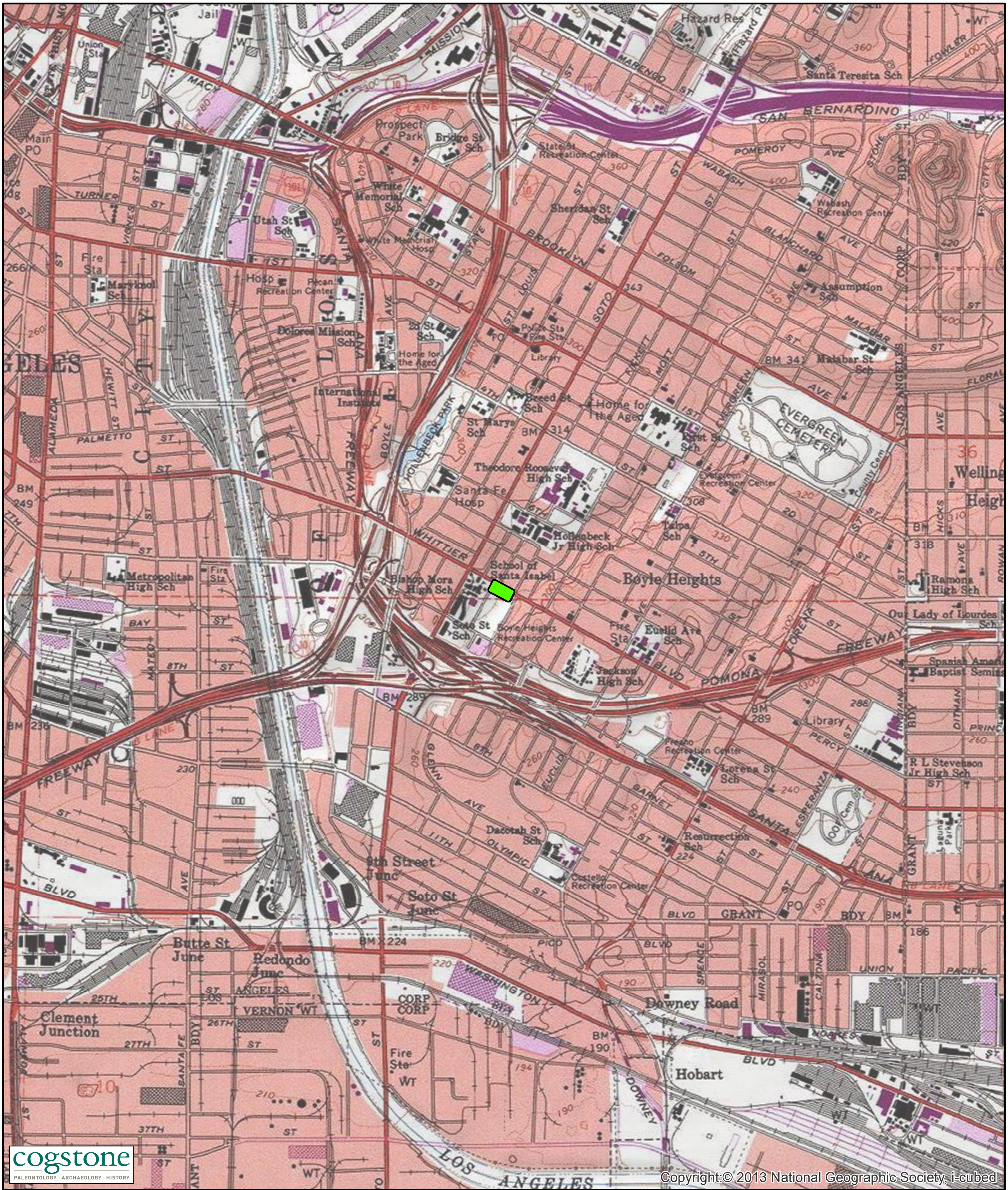
County: Los Angeles **City/Community:** Los Angeles/Boyle Heights

Project Description: The City of Los Angeles Bureau of Engineering and the Recreation & Parks Department (RAP) are planning to build a new 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street.

Additional Request

☒ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Los Angeles
T: 1S; **R**; 13W; **Section** 35



Boyle Heights Sports Center Gym

City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

N

1:24,000

1 in = 2,000 ft

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

April 30, 2018

Chris Adams
City of Los Angeles, Department of Public Works

Sent by E-mail: Christopher.adams@lacity.org

RE: Proposed Boyle Heights Sports Center Gym Project, City of Los Angeles, Community of Boyle Heights; Los Angeles USGS Quadrangle, Los Angeles County, California

Dear Mr. Adams:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the reference codes below is to avoid or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 **require public agencies** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> **Within 14 days** of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - If the probability is low, moderate, or high that cultural resources are located in the APE.
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the project with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

Gabrieleno Band of Mission Indians - Kizh Nation Andrew Salas, Chairperson P.O. Box 393 Covina, CA, 91723 Phone: (626) 926 - 4131 admin@gabrielenoindians.org	Gabrieleno
Gabrieleno/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson P.O. Box 693 San Gabriel, CA, 91778 Phone: (626) 483 - 3564 Fax: (626) 286-1262 GTTribalcouncil@aol.com	Gabrieleno
Gabrielino /Tongva Nation Sandonne Goad, Chairperson 106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012 Phone: (951) 807 - 0479 sgoad@gabrielino-tongva.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council Robert Dorame, Chairperson P.O. Box 490 Bellflower, CA, 90707 Phone: (562) 761 - 6417 Fax: (562) 761-6417 gtongva@gmail.com	Gabrielino
Gabrielino-Tongva Tribe Charles Alvarez, 23454 Vanowen Street West Hills, CA, 91307 Phone: (310) 403 - 6048 roadkingcharles@aol.com	Gabrielino

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 6097.98 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Boyle Heights Sports Center Gym Project, Los Angeles County.

The following list provided by the City of Los Angeles contains some dated contact information

TRIBAL CONTACTS – 2017 (AB-52) (SEE SOURCES BELOW) **ADDRESS IN LA COUNTY OR LA ORIENTED (GABRIELINO/TONGVA/FERNANDENO/ETC.)**	
ORGANIZATION, CONTACT NAME, ADDRESS, EMAIL, PHONE, FAX, TRIBE AFFILIATION	**ORGANIZATION, CONTACT NAME, ADDRESS, EMAIL, PHONE, FAX, TRIBE AFFILIATION**
California Native American Heritage Commission 915 Capitol Mall, Room 364 Sacramento, CA 95814 (916) 653-4082 nahc@pacbell.net	California Native American Heritage Commission 1550 Harbor Blvd., Room 100 West Sacramento, CA 95691 (916) 373-3710 (916) 373-5471 (FAX)
LA City/County Native American Indian Commission Gloria J. Cuevas, Interim Director 3175 W 6th St., Room 403 Los Angeles, CA 90020 randrade@css.lacounty.gov (213) 351-5324 (213) 386-3995 (FAX)	
Ti'At Society/Inter Tribal Council of Pimu Cindi M Alvitre, Chairwoman-Manisar 3094 Mace Ave, Apt B Costa Mesa, CA 92626 Calvitre@yahoo.com (714) 504-2468 Gabrielino	Tongva Ancestral Territorial Tribal Nation John Tommy Rosas, Tribal Admin Address – N/A Private tattnlaw@gmail.com (310-570-6567 Gabrielino/Tongva
Gabrielino/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson PO Box 693 San Gabriel, CA 91778 GTTribalcouncil@aol.com (626) 286-1631 (626) 286-1758 (home) (626) 286-1262 (fax) Gabrielino/Tongva	Gabrielino/Tongva Nation Sam Dunlap, Cultural Resource Director PO Box 86908 Los Angeles, CA 90086 samdunlap@earthlink.net (909) 262-9351 (cell) Gabrielino/Tongva
Gabrielino Tongva Indians of California Tribal Council Robert F Dorame, Tribal Chair/Cultural Resources PO Box 490 Bellflower, CA 90707 gtonva@verizon.net (562)-761-6417 (562)-761-6417 (fax) Gabrielino/Tongva	Gabrielino-Tongva Tribe Bernie Acuna, Chairperson 1875 Century Park East, #1500 Los Angeles, CA 90067 Bacuna1@gabrieinotribe.org (619) 294-6660 (work) (310) 428-5690 (cell) (310) 587-0170 (fax) Gabrielino

The following list provided by the City of Los Angeles contains some dated contact information

TRIBAL CONTACTS – 2017 (AB-52) (SEE SOURCES BELOW) ADDRESS IN LA COUNTY OR LA ORIENTED (GABRIELINO/TONGVA/FERNANDENO/ETC.)	
ORGANIZATION, CONTACT NAME, ADDRESS, EMAIL, PHONE, FAX, TRIBE AFFILIATION	**ORGANIZATION, CONTACT NAME, ADDRESS, EMAIL, PHONE, FAX, TRIBE AFFILIATION**
Gabrielino-Tongva Tribe Linda Candelaria, Co-Chairperson 1999 Avenue of the Stars, Suite 1100 Los Angeles, CA 90067-4618 (310) 587-2203 (310)587-2281 (fax) Palmsprings9@yahoo.com (626) 676-1184 (cell) Gabrielino	Gabrielino Band of Mission Indians – Kizh Nation Andrew Salas, Chairperson PO Box 393 Covina, CA 91723 gabrielenoindians@yahoo.com andysalas07@yahoo.com (626) 926-4131 Gabrielino
Gabrielino-Tongva Tribe Conrad Acuna 1875 Century Park East, #1500 Los Angeles, CA 90067 (310) 587-2203 (fax) Gabrielino OR P.O. Box 180 Bonsall, CA 92003 Gabrielino/Tongva Tribe	Gabrielino/Tongva Nation Sandonne Goad, Chairperson 106 1/2 Judge John Aiso St., #231 Los Angeles, CA 90012 Gabrielino
Fernandeno/Tataviam Band of Mission Indians Rudy Ortega, Tribal President Caitlyn Gully, Cultural/Environmental Dept Kimia Fatehi, Director of Public Resources 1019 2nd Street San Fernando, CA 91340 (818) 837-0794 (818) 837-0796 (fax) info@tatviam.org Gabrielino, Chumash, Tataviam, Yaqui, etc.	Soboba Band, Luiseno Indians Joseph Ontiveros, Cultural Resource Director PO Box 487 San Jacinto, CA 92581 (951) 654-5544 x 4137 (951) 663-2579 Jontiveros@soboba-nsn.gov Soboba
San Fernando Band of Mission Indians John Valenzuela, Chairperson PO Box 221838 Newhall, CA 91322 Fernandeno	
Sources: 1. Listing from Native American Heritage Commission for LA Area - Oct 3, 2012 2. Listing from various Cultural Surveys 3. CAL FIRE July 1, 2016, Native American Contact List 4. List from City Planning Department, November 14, 2016.	

Tribal Organization	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Contact Attempt	Date(s) and Method of Third Contact Attempt	Dates of Responses	Comments
LA City/County Native American Indian Commission, Gloria J. Cuevas	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.
Ti'At Society/Inter Tribal Council of Pimu, Cindi Alvitre	5/17/2018, certified mail	6/4/2018, email	-	-	On June 20, 218 it was learned that Ms. Cindi Alvitre is no longer responsible for Native American consultations for the Ti'At Society/Inter Tribal Council of Pimu
Gabrielino/Tongva San Gabriel Band of Mission Indians, Anthony Morales	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.
Gabrielino Tongva Indians of California Tribal Council, Robert F Dorame	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	6/21/2018	On June 21, 2018 via phone conversation, Mr. Dorame of the Gabrielino Tongva Indians of California Tribal Council, indicated that in the event human remains or cultural resources are observed during construction activities, that his Tribal organization be notified. Additionally, Mr. Dorame requested to be notified when the project is completed regardless if cultural resources are observed. He suggested that an archaeologist be present in some capacity during construction.
Gabrielino/Tongva Nation, Sandonne Goad	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.
Gabrielino-Tongva Tribe, Charles Alvarez	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.
Fernandeno/Tataviam Band of Mission Indians, Rudy Ortega	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.

Tribal Organization	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Contact Attempt	Date(s) and Method of Third Contact Attempt	Dates of Responses	Comments
Gabrielino Band of Mission Indians – Kizh Nation, Andrew Salas	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	**Email has been updated to admin@gabrielenoindians.org
Gabrielino/Tongva Nation, Sam Dunlap	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.
Soboba Band, Luiseno Indians, Joseph Ontiveros	5/17/2018, certified mail	6/4/2018, email	6/20/2018, email	N/A	No response.
Donna Yocum San Fernando Band of Mission Indians	5/17/2018, certified mail	6/4/2018, email	6/7/218, phone conversation	6/7/2018	Mr. John Valenzulea passed away November 16, 217. Ms. Donna Yocum has taken over the position of Chairperson for the Tribe. In a phone conversation on June 7, 2018 she indicated that she defers to the local Gabrielino tribes for Project located in downtown LA and indicated her Tribe comments on projects In the San Fernando Valley and in western San Bernardino County area.
Tongva Ancestral Territorial Tribal Nation John Tommy Rosas, Tribal Admin	5/17/2018, certified mail	6/4/2018 , email	6/7/2018, email	6/7/2018	On June 7, 2018 Mr. John Tommy Rosas indicated via that he will respond to the City of Los Angeles on a later date. No further responses were received by the City.

CITY OF LOS ANGELES

CALIFORNIA

ERIC GARCETTI
MAYOR

DEPARTMENT OF
PUBLIC WORKS

BUREAU OF
ENGINEERING

GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

1149 S. BROADWAY, SUITE 700
LOS ANGELES, CA 90015-2213

http://eng.lacity.org

May18, 2018

Gloria J. Cuevas
LA City/County Native American Indian Commission
3175 W 6th St., Room 403
Los Angeles, CA 90020

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Interim Director Gloria J. Cuevas:

The City of Los Angeles' Bureau of Engineers (LABOE) and the Recreation & Parks (RAP) Department proposes the Boyle Heights Sports Center Gym Environmental Documentation Project (Project). The Project proposes to develop a 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street located in the City of Los Angeles (Figure 1). The gym will include a full-sized basketball court, staff offices for RAP, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Two existing dilapidated buildings currently occupy the proposed site and will be demolished as part of the Project. The Project is located in the northwest corner of the Boyle Heights in a high density area with many schools and residential homes nearby (Figures 2 and 3). This Project will comply with the California Environmental Quality Act (CEQA) regulations and the City is the CEQA lead.

We are contacting you because the LA City/County Native American Indian Commission requested to be notified and provided information, under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, regarding projects with the City of Los Angeles' jurisdiction and within the traditional territory of the LA City/County Native American Indian Commission. Please consider this letter and preliminary Project information as the formal notification of the proposed Project. The City of Los Angeles is requesting to consult with the LA City/County Native American Indian Commission in order to identify tribal cultural resources that may be impacted by the proposed Project. The point of contact for the City of Los Angeles is provided on the following page.

City of Los Angeles Point of Contact Information	
Name	Christopher Adams
Title	City of Los Angeles Department of Public Works
Address:	1149 S. Broadway, Suite 600
City:	Los Angeles
Tel:	(213) 485-5910
E-Mail:	christopher.adams@lacity.org

The Native American Heritage Commission (NAHC) was contacted on March 27, 2018 to perform a search of the Sacred Lands File (SLF). The NAHC responded on April 30, 2018 that there are no recorded Native American sacred sites or heritage resources located within the Project area. The NAHC also provided a list of Native American tribal contacts that may have knowledge of cultural resources within the Project area and recommended that we contact you, among others.

A cultural resources records search was performed at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton for the proposed Project area and a one-mile search radius on May 9, 2018. The results of the records search indicate that no cultural resources have been recorded within the Project area; however, 131 cultural resources have been previously recorded within the one mile search radius. These resources include one prehistoric isolate (a unifacial granitic mano), seven historic archaeological sites, and 123 historic built environment resources. A pedestrian survey of the Project area will be scheduled later this month and you will updated regarding the results.

The City of Los Angeles would appreciate receiving any comments, issues and/or concerns relating to cultural resources, sacred lands, and tribal cultural resources that you may have within the Project area. All information provided will be kept confidential.

Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this Project**.** If you have any questions or concerns with the Project, please do not hesitant to contact Christopher Adams at the address above or via email christopher.adams@lacity.org or by phone (213) 485-5910. Thank you for your attention to this matter.

Sincerely,

Christopher Adams

Attachments: Project vicinity map
Project location map
Project aerial

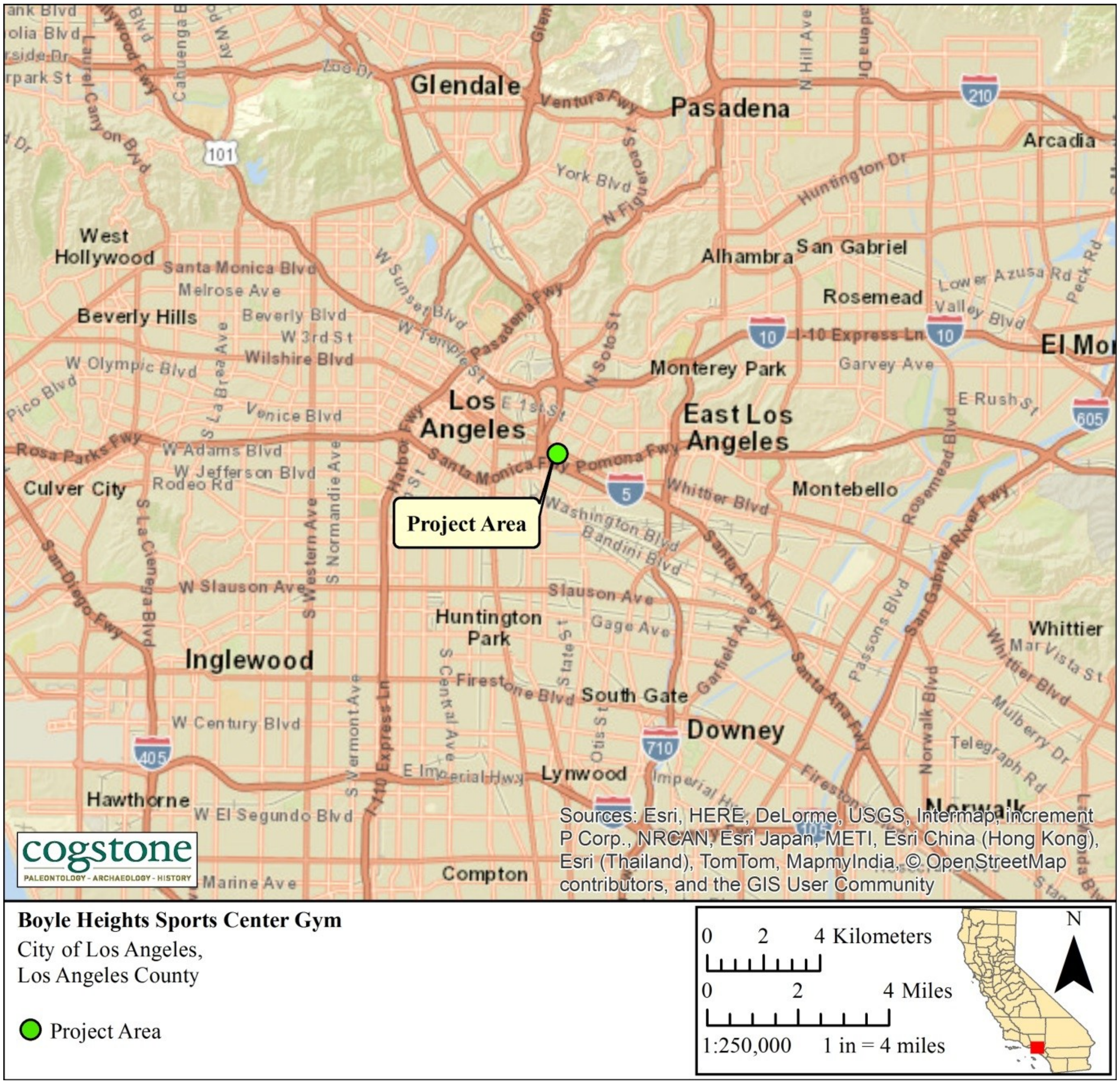
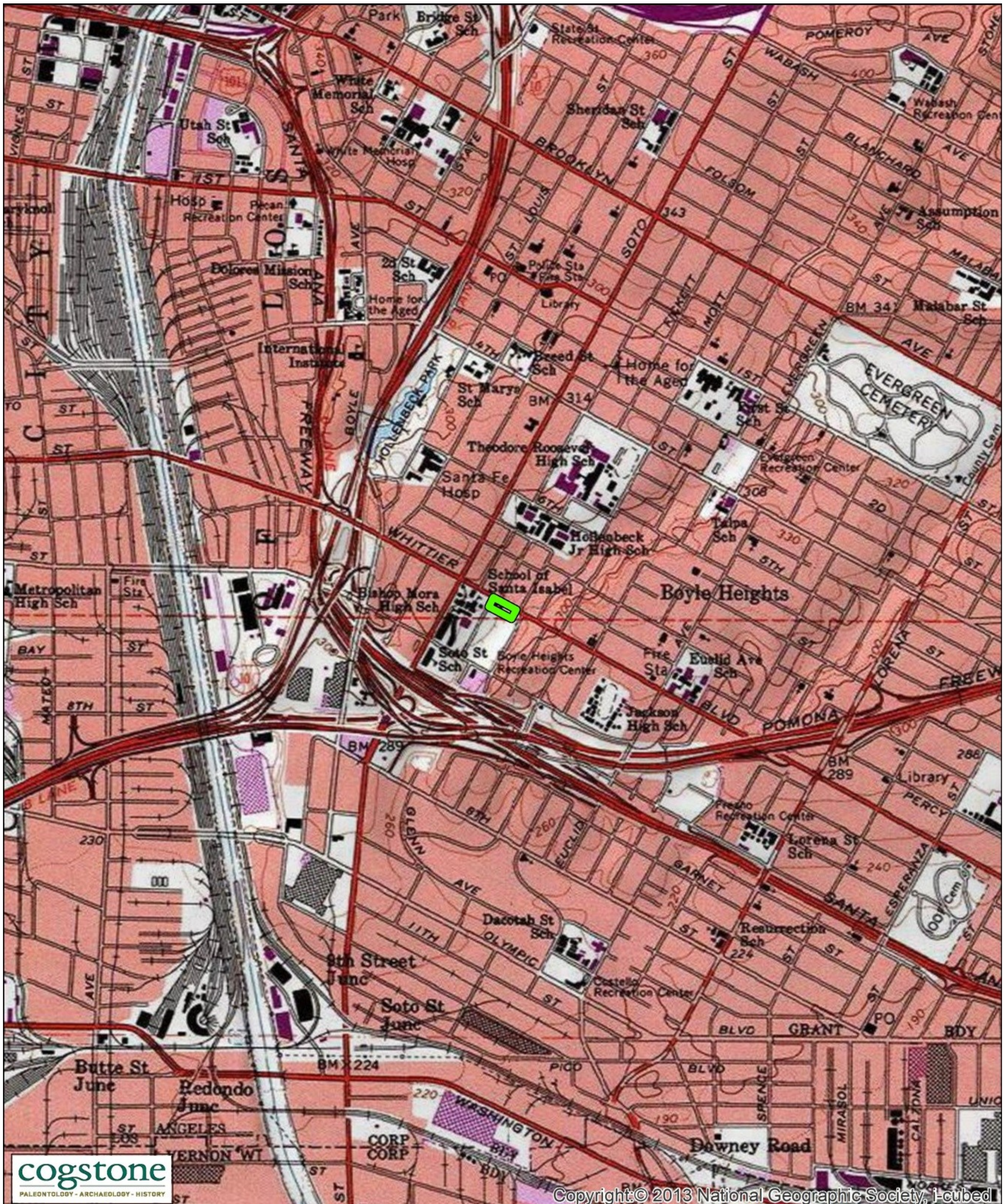


Figure 1. Project vicinity



Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 0.25 0.5 Miles
N
0 0.25 0.5 Kilometers
1:24,000 1 in = 2,000 ft

Figure 2. Project location

Figure 3. Project aerial

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LOS ANGELES, CA 90015-2213

http://eng.lacity.org

May18, 2018

Cindi M Alvitre
Ti'At Society/Inter Tribal Council of Pimu
3094 Mace Ave, Apt B
Costa Mesa, CA 92626

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Chairwoman-Manisar Cindi M Alvitre:

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We are contacting you because the Ti'At Society/Inter Tribal Council of Pimu requested to be notified and provided information, under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, regarding projects with the City of Los Angeles' jurisdiction and within the traditional territory of the Ti'At Society/Inter Tribal Council of Pimu. Please consider this letter and preliminary Project information as the formal notification of the proposed Project. The City of Los Angeles is requesting to consult with the Ti'At Society/Inter Tribal Council of Pimu in order to identify tribal cultural resources that may be impacted by the proposed Project. The point of contact for the City of Los Angeles is provided on the following page.

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Title	City of Los Angeles Department of Public Works
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City:	Los Angeles
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E-Mail:	christopher.adams@lacity.org

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Sincerely,

Christopher Adams

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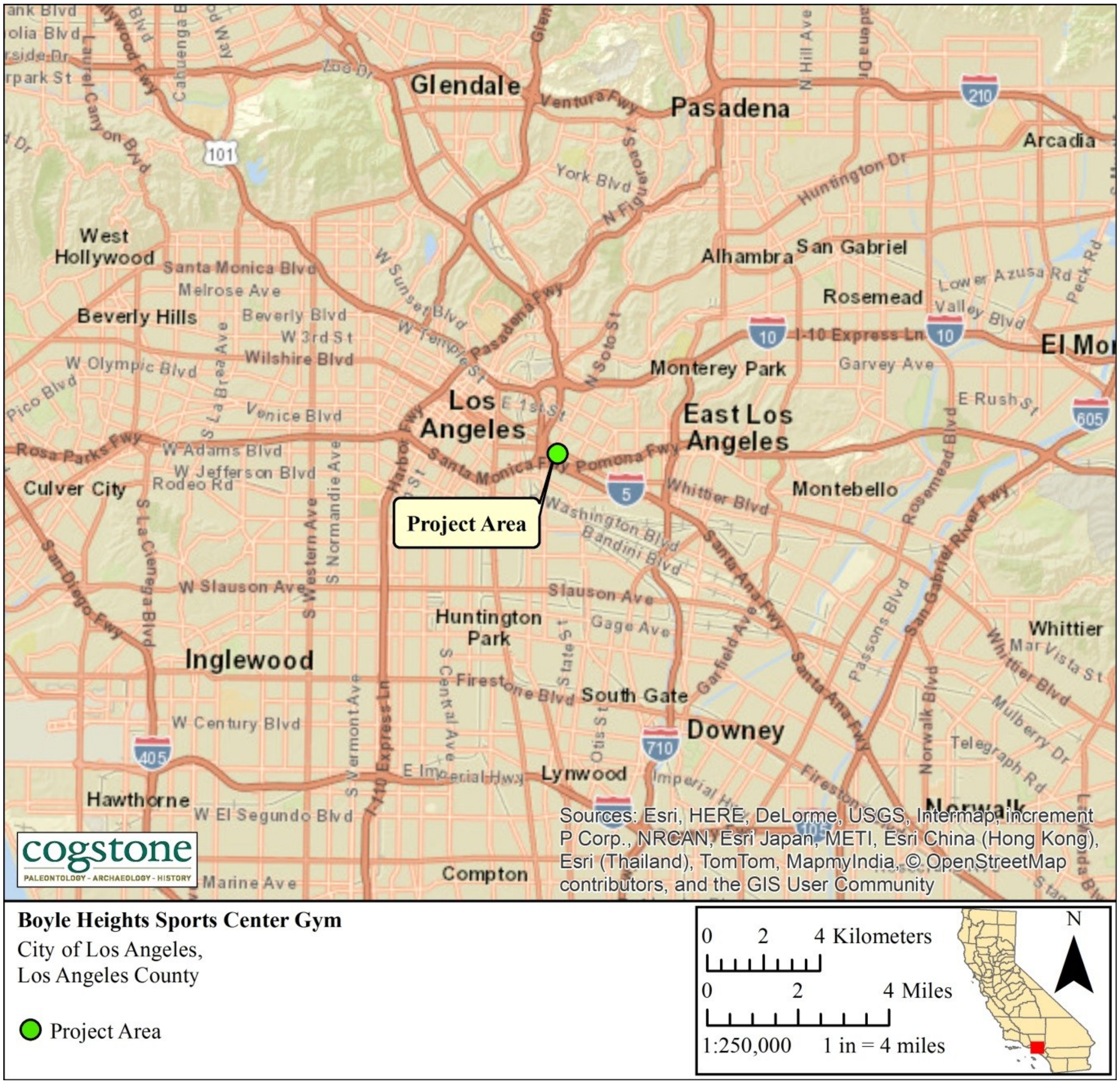
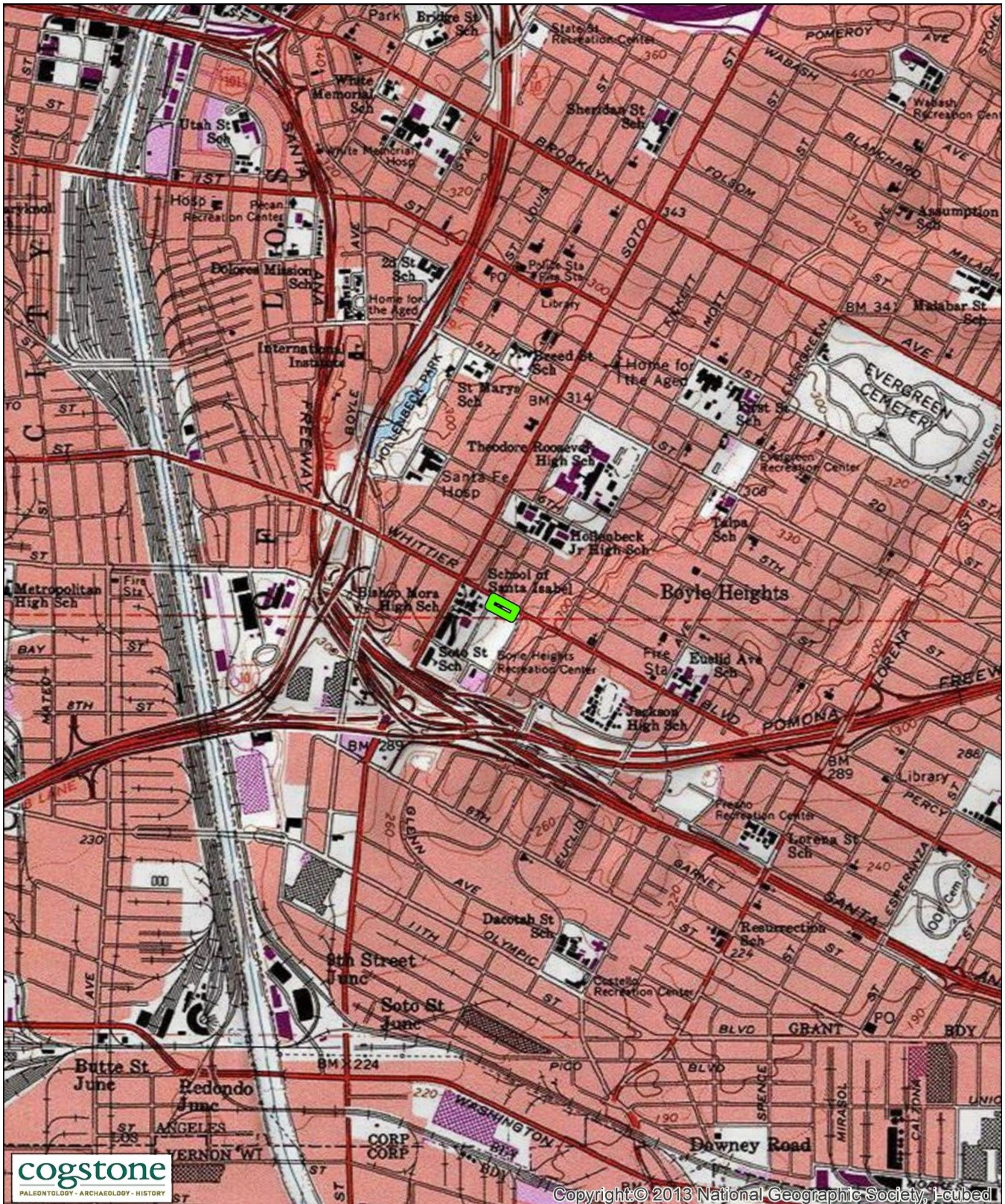


Figure 1. Project vicinity



Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

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0 0.25 0.5 Kilometers
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1:24,000 1 in = 2,000 ft

Figure 2. Project location

Figure 3. Project aerial

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GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

1149 S. BROADWAY, SUITE 700
LOS ANGELES, CA 90015-2213

http://eng.lacity.org

May18, 2018

Anthony Morales
Gabrielino/Tongva San Gabriel Band of Mission Indians
PO Box 693
San Gabriel, CA 91778

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Chairperson Anthony Morales:

The City of Los Angeles' Bureau of Engineers (LABOE) and the Recreation & Parks (RAP) Department proposes the Boyle Heights Sports Center Gym Environmental Documentation Project (Project). The Project proposes to develop a 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street located in the City of Los Angeles (Figure 1). The gym will include a full-sized basketball court, staff offices for RAP, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Two existing dilapidated buildings currently occupy the proposed site and will be demolished as part of the Project. The Project is located in the northwest corner of the Boyle Heights in a high density area with many schools and residential homes nearby (Figures 2 and 3). This Project will comply with the California Environmental Quality Act (CEQA) regulations and the City is the CEQA lead.

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City of Los Angeles Point of Contact Information	
Name	Christopher Adams
Title	City of Los Angeles Department of Public Works
Address:	1149 S. Broadway, Suite 600
City:	Los Angeles
Tel:	(213) 485-5910
E-Mail:	christopher.adams@lacity.org

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Sincerely,

Christopher Adams

Attachments: Project vicinity map
Project location map
Project aerial

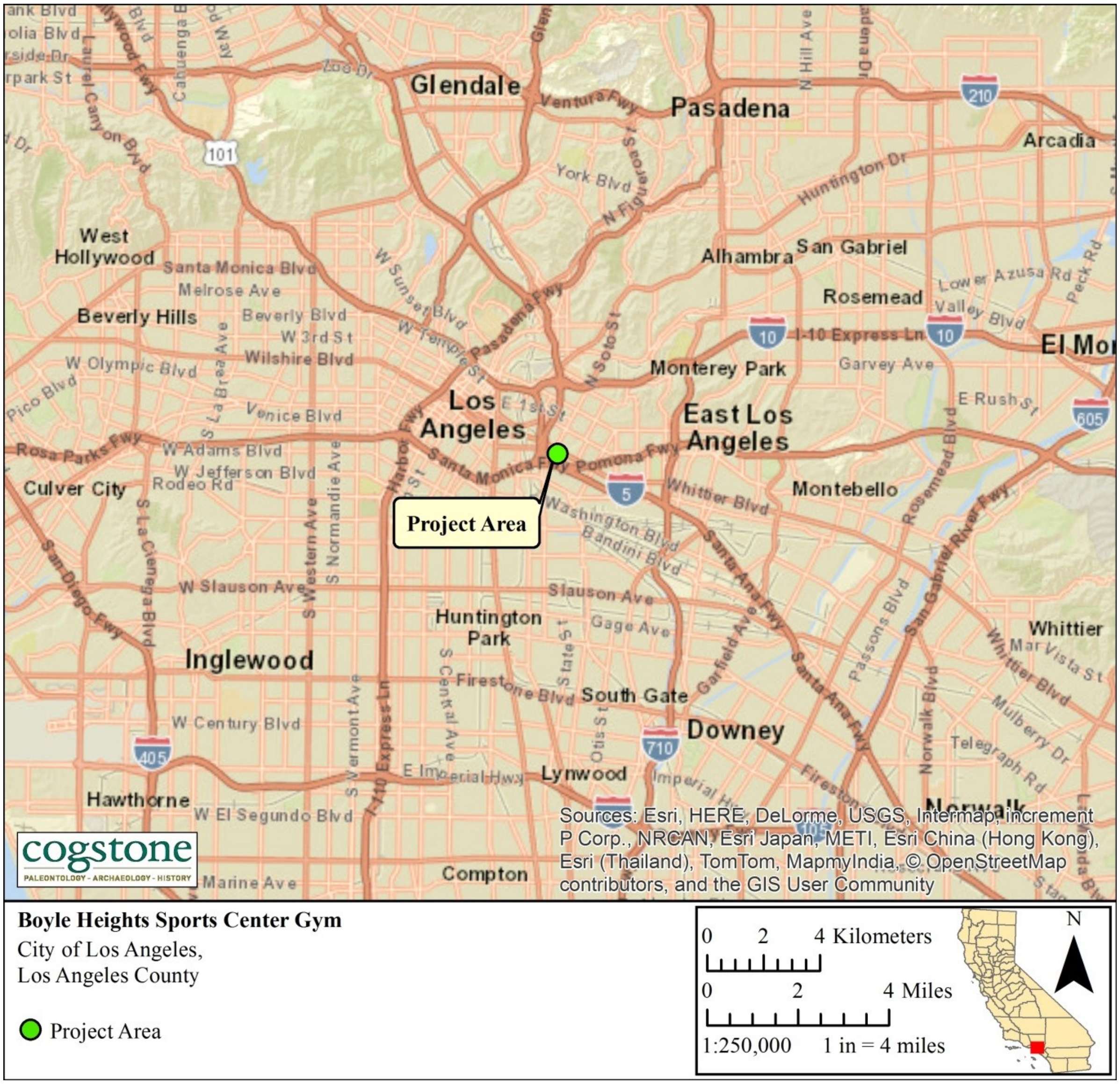

Figure 1. Project vicinity

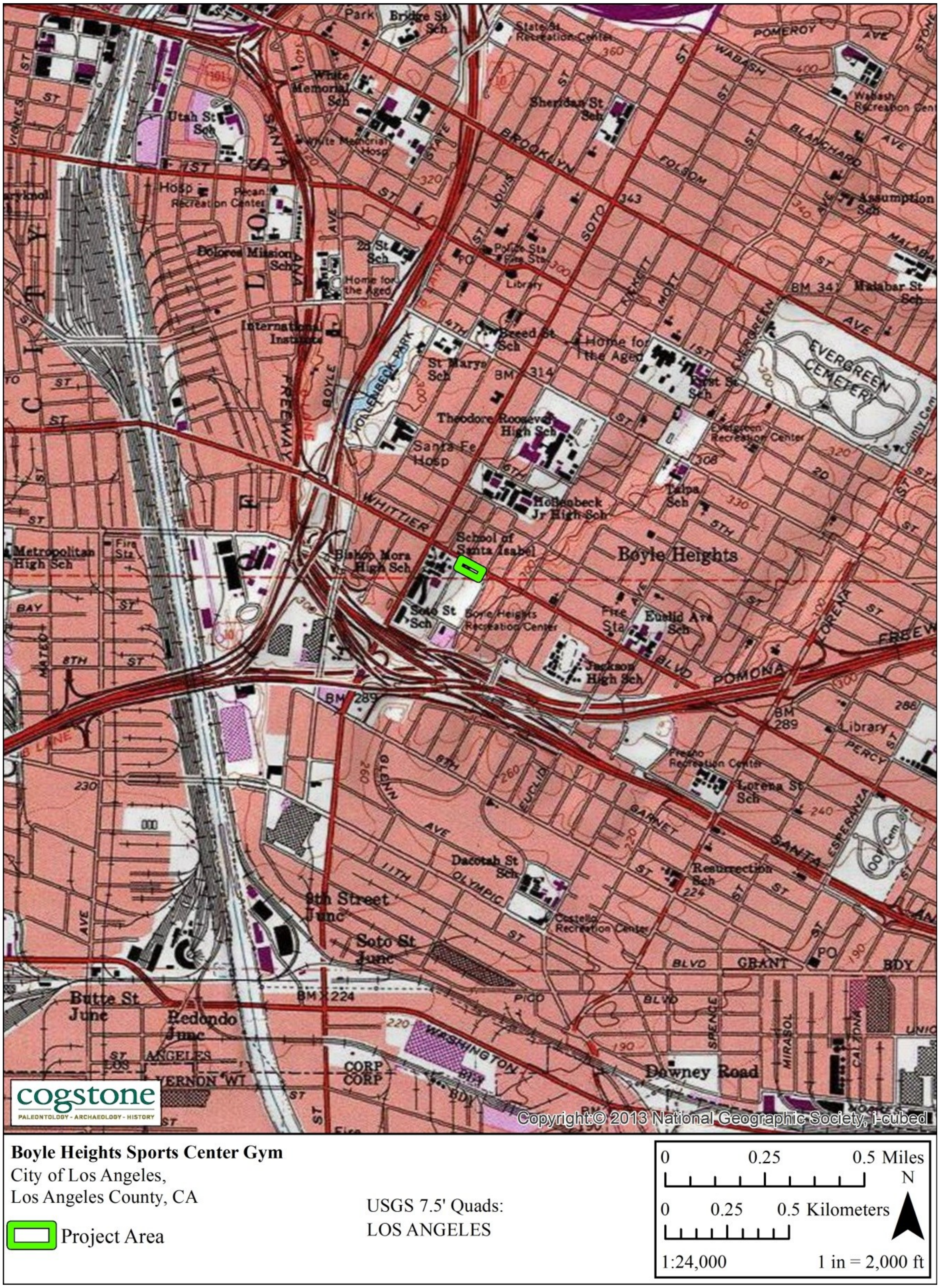

Figure 2. Project location

Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 50 100 Feet
0 15 30 Meters
1:1,200 1 in = 100 ft
N

Figure 3. Project aerial

CITY OF LOS ANGELES

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DEPARTMENT OF
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LOS ANGELES, CA 90015-2213

http://eng.lacity.org

May18, 2018

Robert F Dorame
Gabrielino Tongva Indians of California Tribal Council
PO Box 490
Bellflower, CA 90707

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Tribal Chair/Cultural Robert F Dorame:

The City of Los Angeles' Bureau of Engineers (LABOE) and the Recreation & Parks (RAP) Department proposes the Boyle Heights Sports Center Gym Environmental Documentation Project (Project). The Project proposes to develop a 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street located in the City of Los Angeles (Figure 1). The gym will include a full-sized basketball court, staff offices for RAP, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Two existing dilapidated buildings currently occupy the proposed site and will be demolished as part of the Project. The Project is located in the northwest corner of the Boyle Heights in a high density area with many schools and residential homes nearby (Figures 2 and 3). This Project will comply with the California Environmental Quality Act (CEQA) regulations and the City is the CEQA lead.

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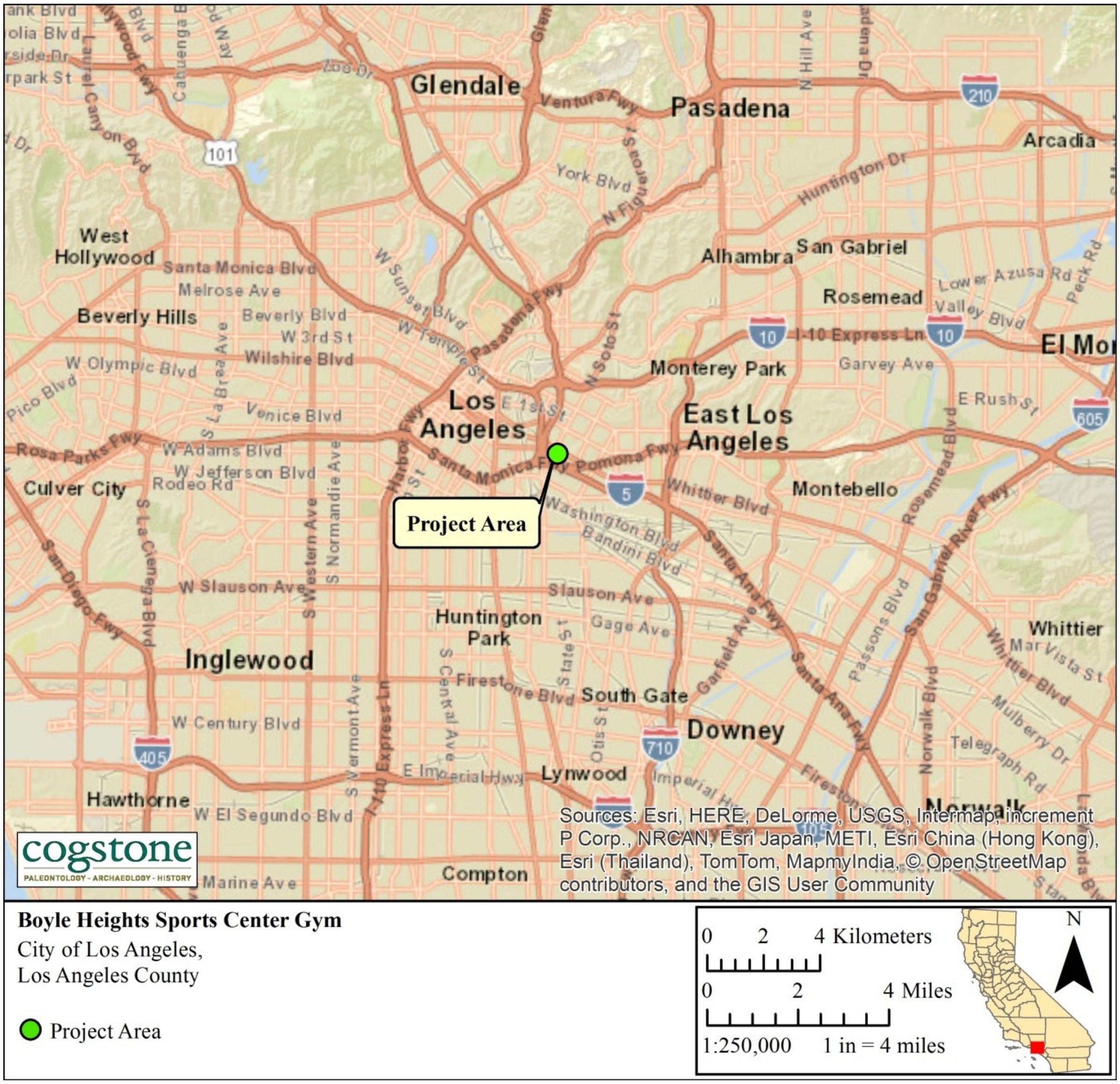

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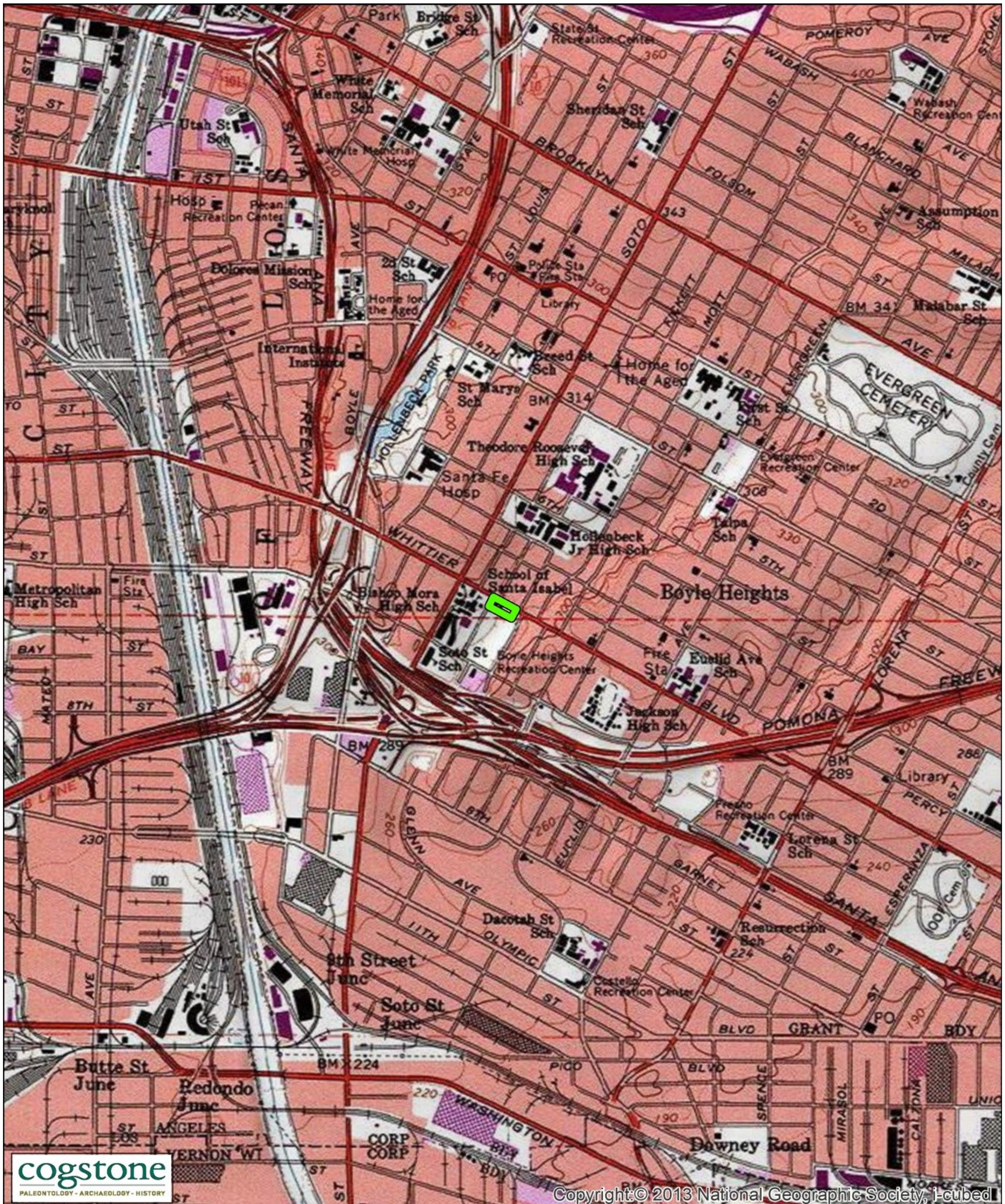

Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

N

1:24,000 1 in = 2,000 ft

Figure 2. Project location

Figure 3. Project aerial

CITY OF LOS ANGELES

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LOS ANGELES, CA 90015-2213

http://eng.lacity.org

May18, 2018

Sam Dunlap
Gabrielino/Tongva Nation
PO Box 86908
Los Angeles, CA 90086

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Cultural Resource Director Sam Dunlap:

The City of Los Angeles' Bureau of Engineers (LABOE) and the Recreation & Parks (RAP) Department proposes the Boyle Heights Sports Center Gym Environmental Documentation Project (Project). The Project proposes to develop a 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street located in the City of Los Angeles (Figure 1). The gym will include a full-sized basketball court, staff offices for RAP, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Two existing dilapidated buildings currently occupy the proposed site and will be demolished as part of the Project. The Project is located in the northwest corner of the Boyle Heights in a high density area with many schools and residential homes nearby (Figures 2 and 3). This Project will comply with the California Environmental Quality Act (CEQA) regulations and the City is the CEQA lead.

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Sincerely,

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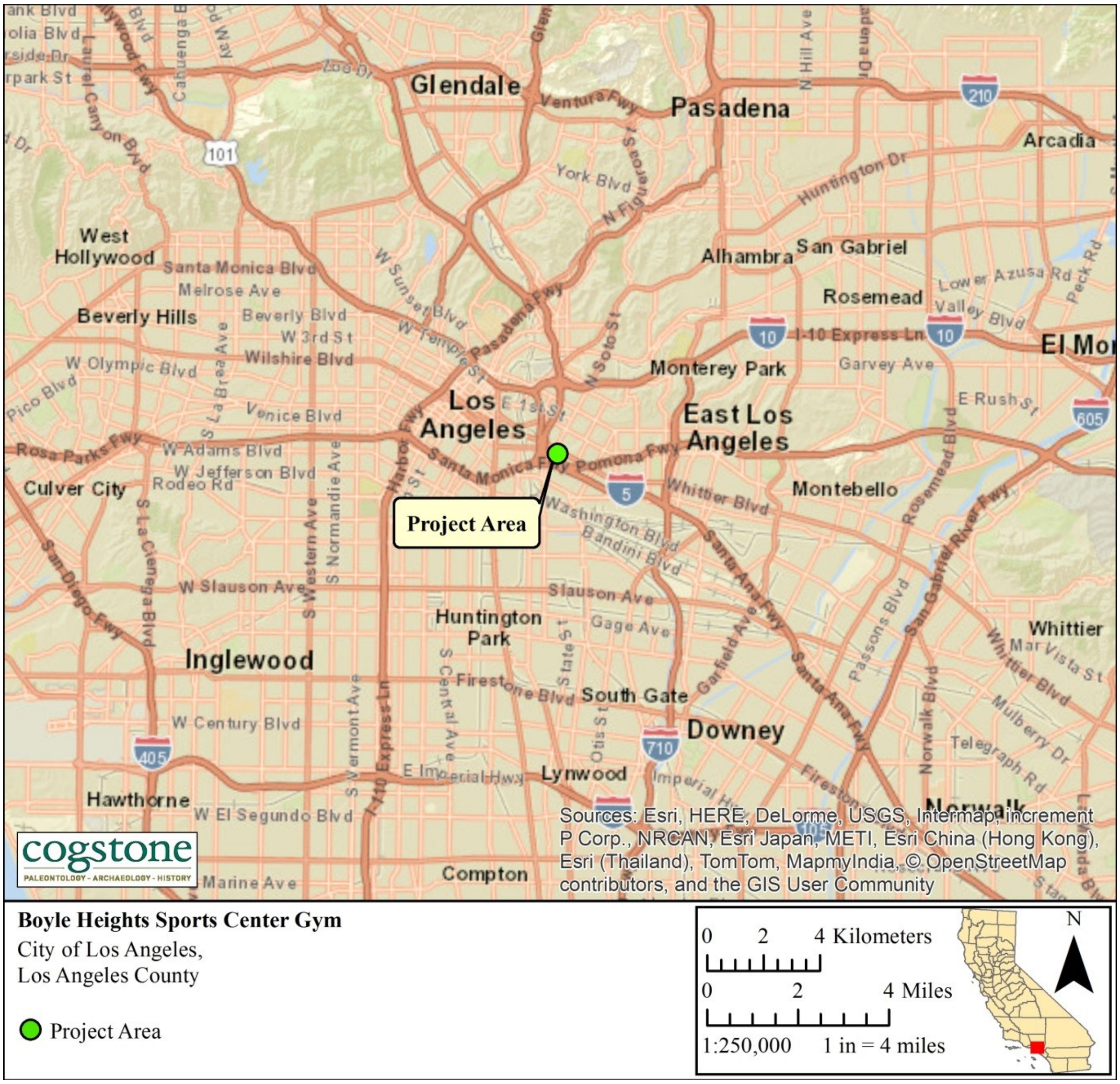

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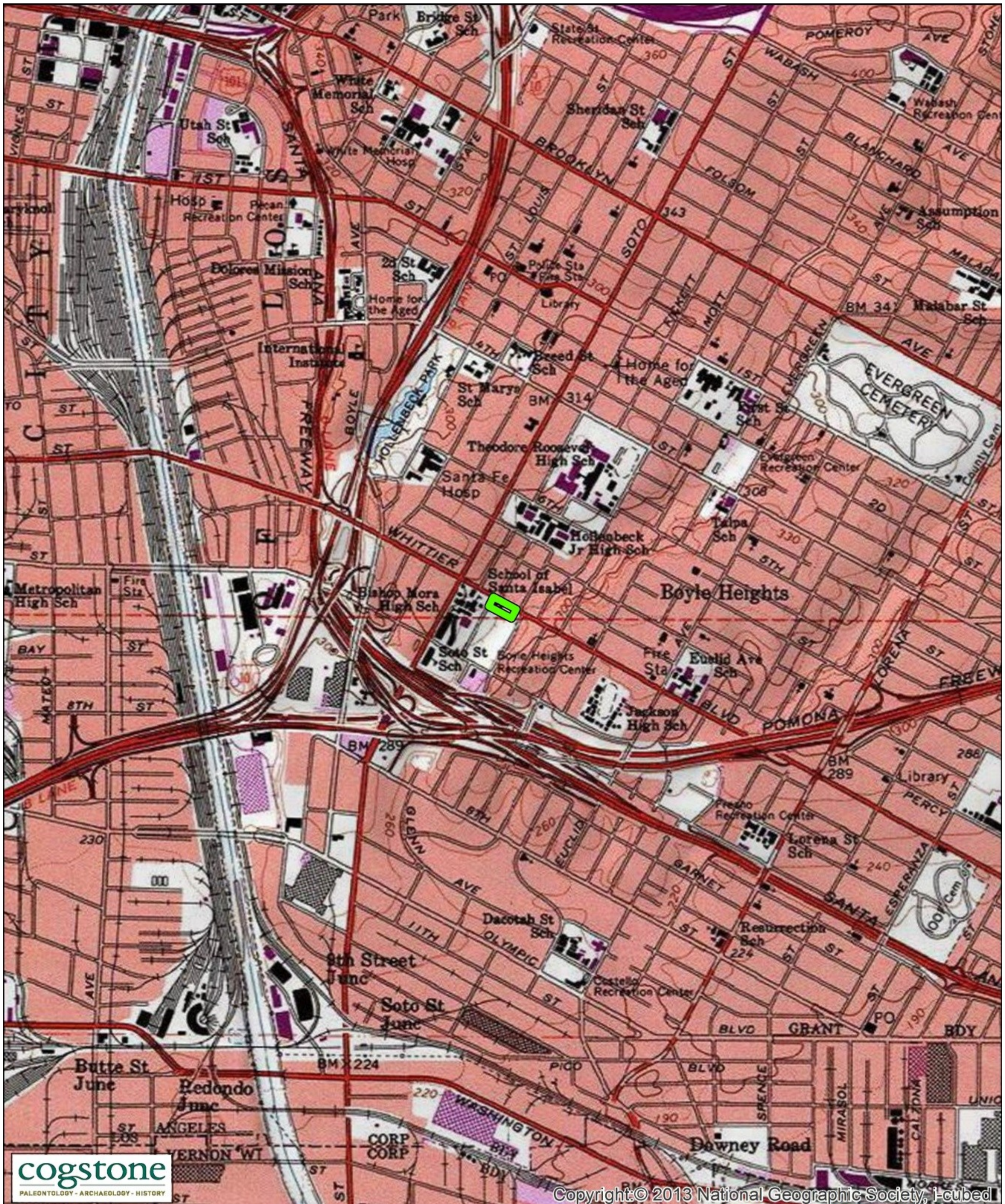

Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

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1:24,000 1 in = 2,000 ft

Figure 2. Project location

Figure 3. Project aerial

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May18, 2018

Charles Alvarez
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA, 91307

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Representative Charles Alvarez:

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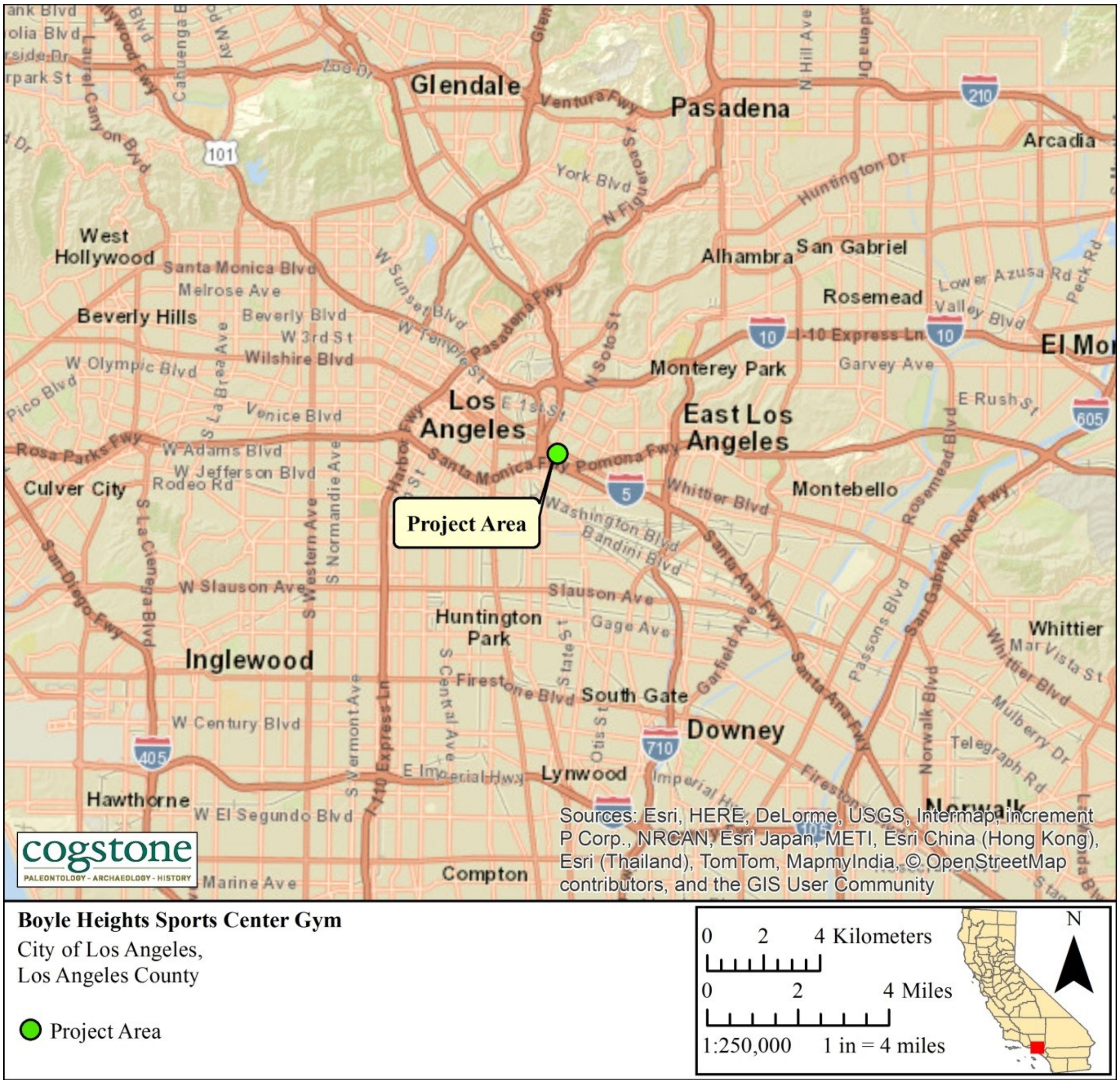

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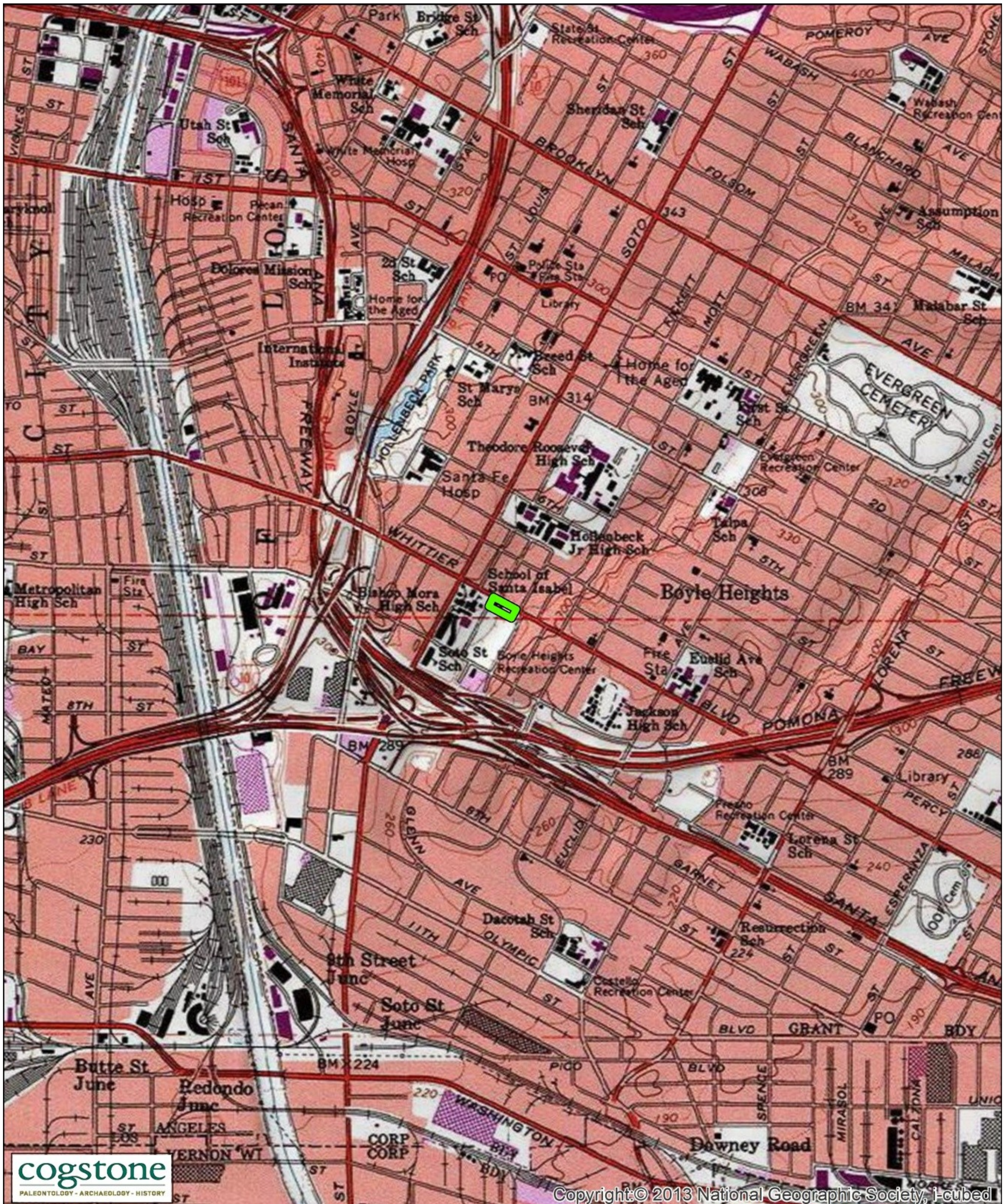

Boyle Heights Sports Center Gym
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Figure 2. Project location

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CITY OF LOS ANGELES

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May18, 2018

Rudy Ortega
Fernandeno/Tataviam Band of Mission Indians
1019 2nd Street
San Fernando, CA 91340

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Tibal President Rudy Ortega:

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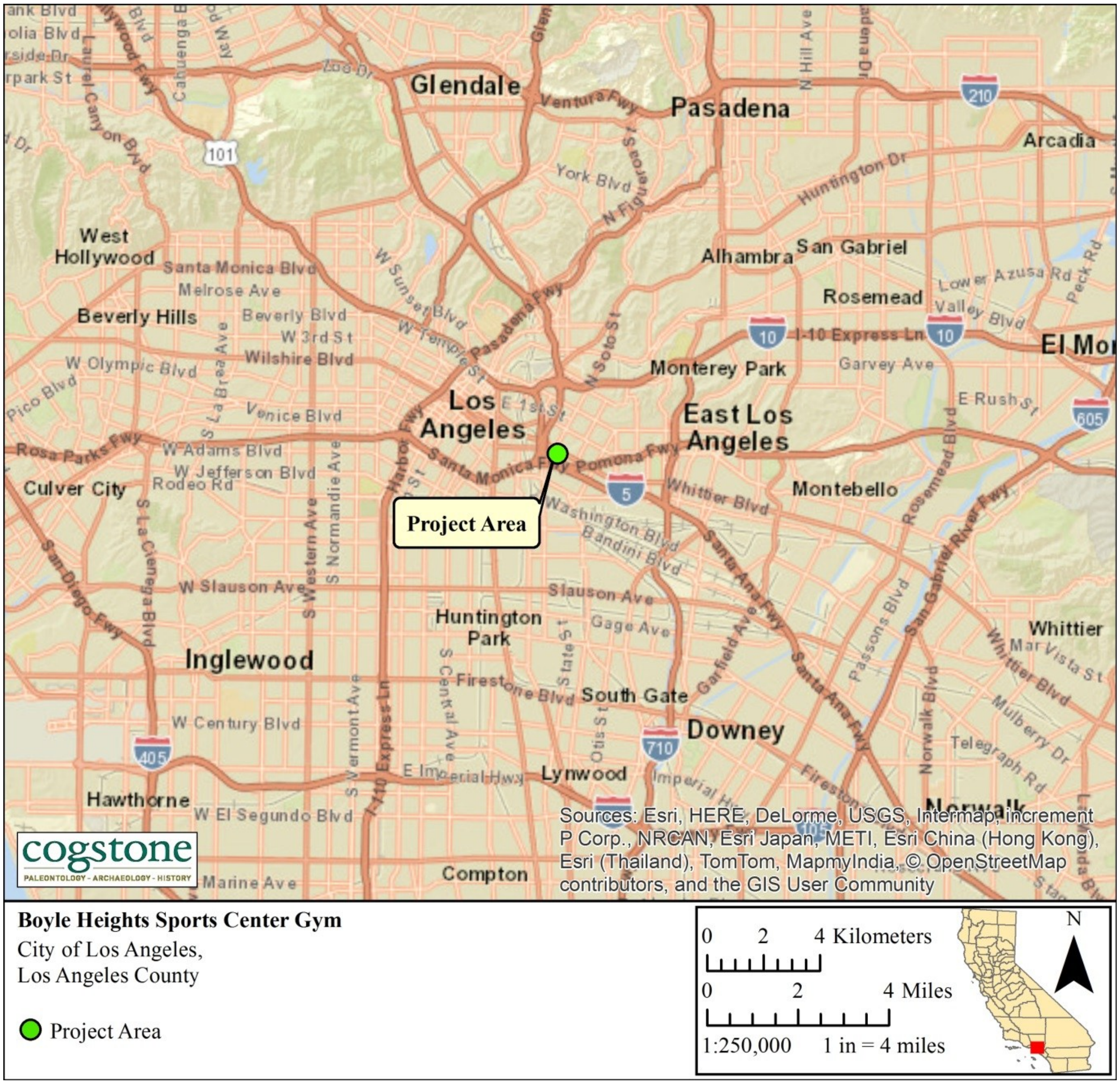

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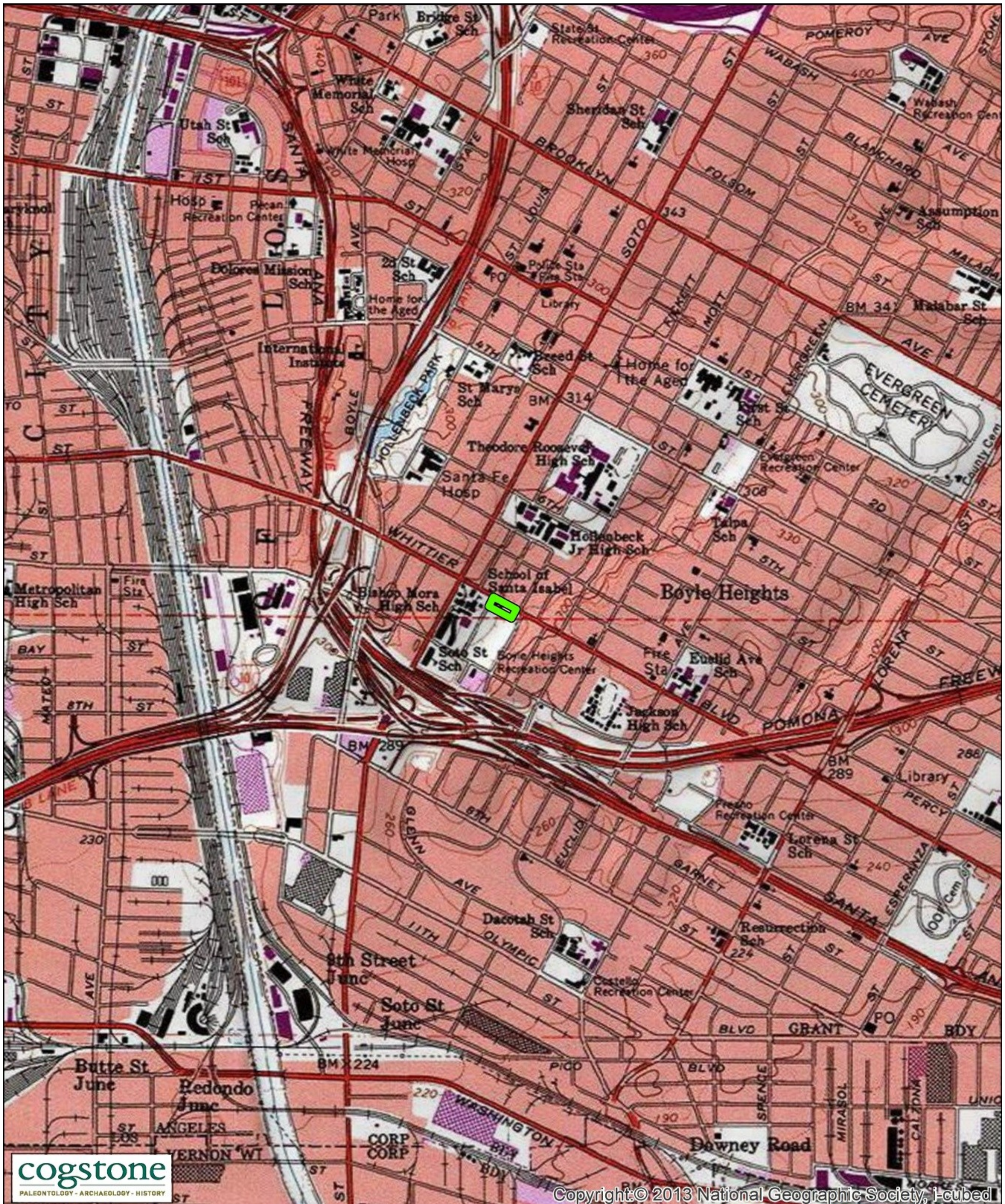

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City of Los Angeles,
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CITY OF LOS ANGELES

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May18, 2018

Andrew Salas
Gabrielino Band of Mission Indians – Kizh Nation
PO Box 393
Covina, CA 91723

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Chairperson Andrew Salas:

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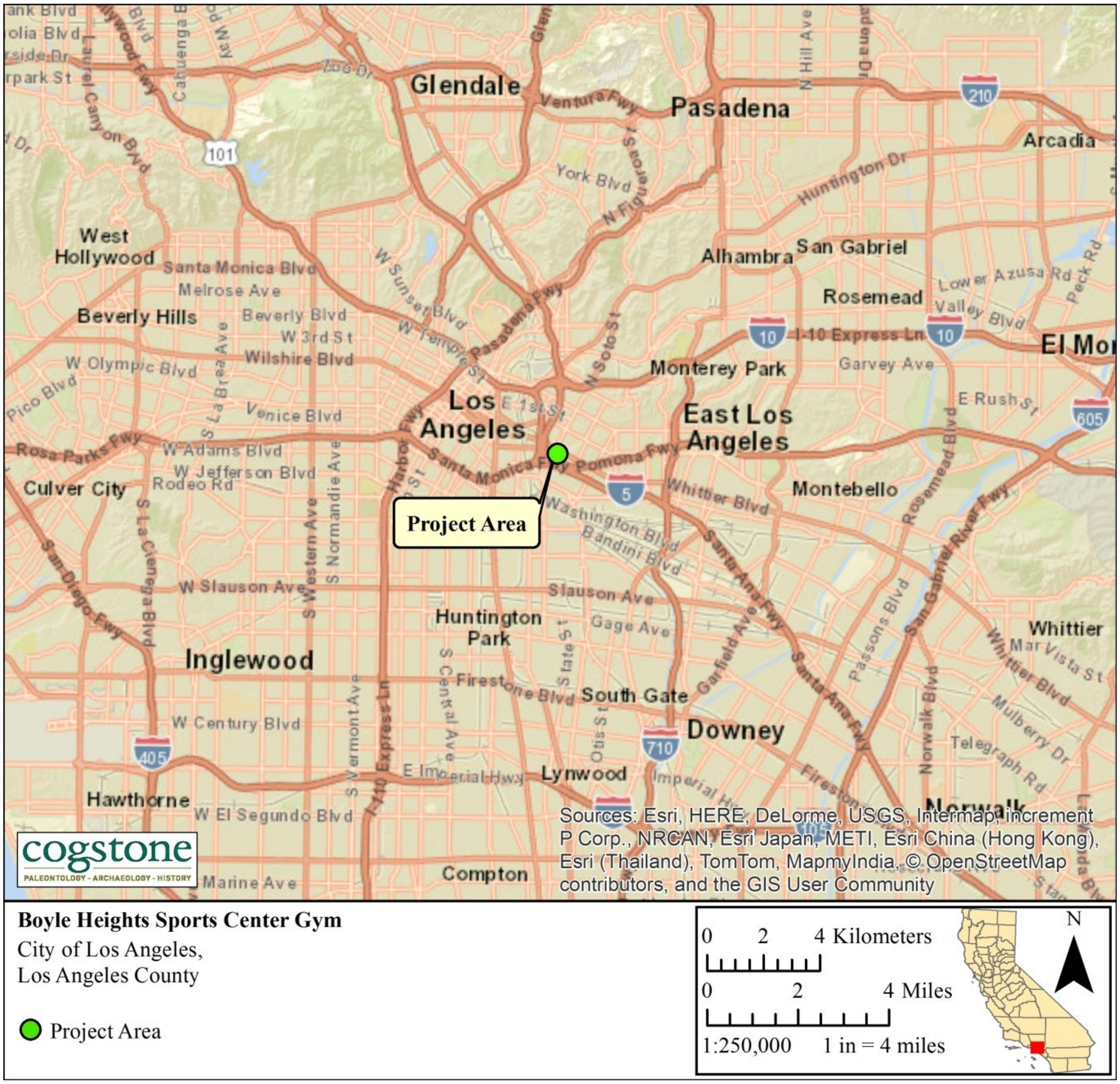

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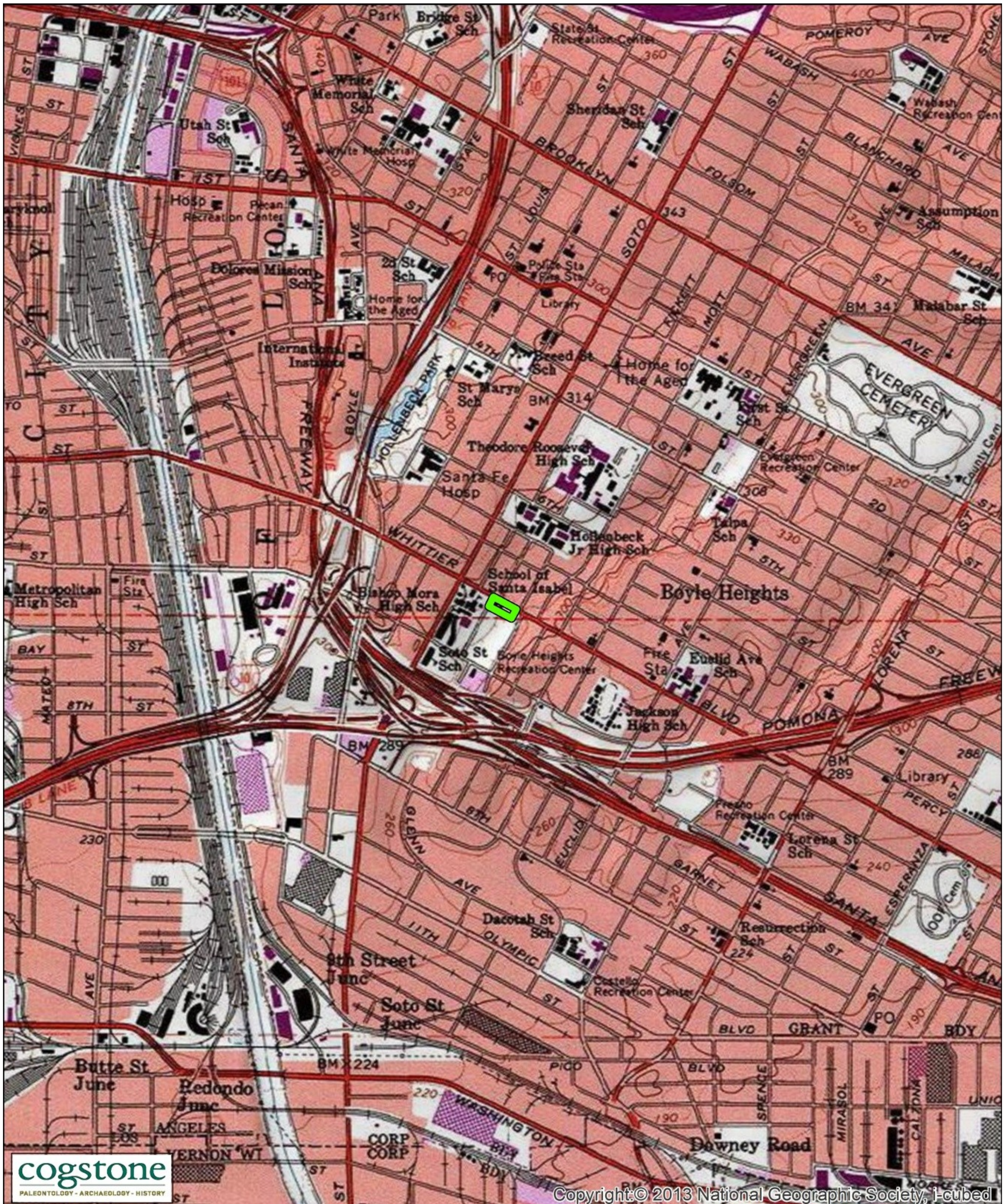

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May18, 2018

Sandonne Goad
Gabrielino/Tongva Nation
106 1/2 Judge John Aiso St., #231
Los Angeles, CA 90012

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Chairperson Sandonne Goad:

The City of Los Angeles' Bureau of Engineers (LABOE) and the Recreation & Parks (RAP) Department proposes the Boyle Heights Sports Center Gym Environmental Documentation Project (Project). The Project proposes to develop a 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street located in the City of Los Angeles (Figure 1). The gym will include a full-sized basketball court, staff offices for RAP, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Two existing dilapidated buildings currently occupy the proposed site and will be demolished as part of the Project. The Project is located in the northwest corner of the Boyle Heights in a high density area with many schools and residential homes nearby (Figures 2 and 3). This Project will comply with the California Environmental Quality Act (CEQA) regulations and the City is the CEQA lead.

We are contacting you because the Gabrielino/Tongva Nation requested to be notified and provided information, under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, regarding projects with the City of Los Angeles' jurisdiction and within the traditional territory of the Gabrielino/Tongva Nation. Please consider this letter and preliminary Project information as the formal notification of the proposed Project. The City of Los Angeles is requesting to consult with the Gabrielino/Tongva Nation in order to identify tribal cultural resources that may be impacted by the proposed Project. The point of contact for the City of Los Angeles is provided on the following page.

City of Los Angeles Point of Contact Information	
Name	Christopher Adams
Title	City of Los Angeles Department of Public Works
Address:	1149 S. Broadway, Suite 600
City:	Los Angeles
Tel:	(213) 485-5910
E-Mail:	christopher.adams@lacity.org

The Native American Heritage Commission (NAHC) was contacted on March 27, 2018 to perform a search of the Sacred Lands File (SLF). The NAHC responded on April 30, 2018 that there are no recorded Native American sacred sites or heritage resources located within the Project area. The NAHC also provided a list of Native American tribal contacts that may have knowledge of cultural resources within the Project area and recommended that we contact you, among others.

A cultural resources records search was performed at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton for the proposed Project area and a one-mile search radius on May 9, 2018. The results of the records search indicate that no cultural resources have been recorded within the Project area; however, 131 cultural resources have been previously recorded within the one mile search radius. These resources include one prehistoric isolate (a unifacial granitic mano), seven historic archaeological sites, and 123 historic built environment resources. A pedestrian survey of the Project area will be scheduled later this month and you will updated regarding the results.

The City of Los Angeles would appreciate receiving any comments, issues and/or concerns relating to cultural resources, sacred lands, and tribal cultural resources that you may have within the Project area. All information provided will be kept confidential.

Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this Project**.** If you have any questions or concerns with the Project, please do not hesitant to contact Christopher Adams at the address above or via email christopher.adams@lacity.org or by phone (213) 485-5910. Thank you for your attention to this matter.

Sincerely,

Christopher Adams

Attachments: Project vicinity map
Project location map
Project aerial

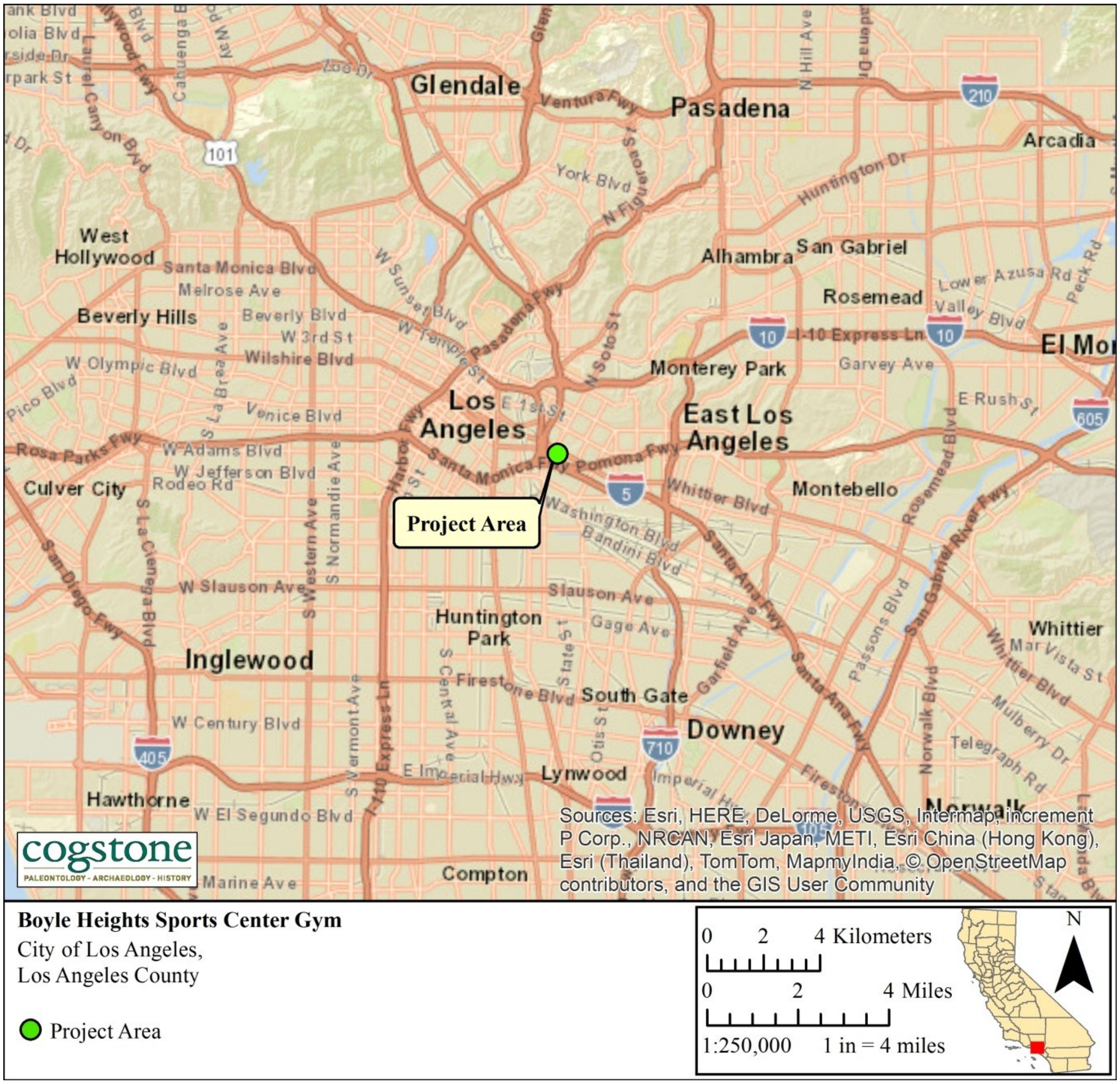
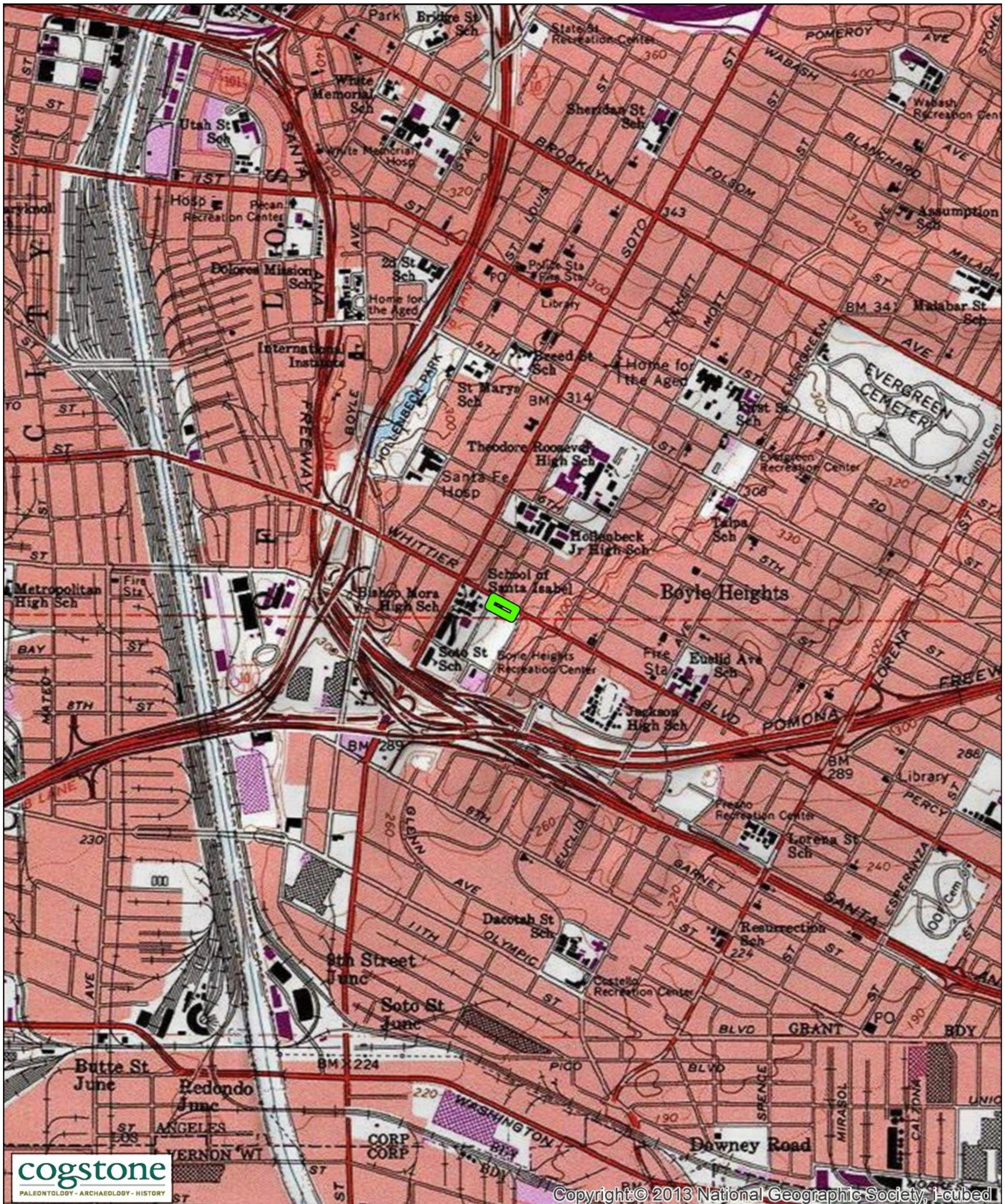


Figure 1. Project vicinity



Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

N

1:24,000 1 in = 2,000 ft

Figure 2. Project location

Figure 3. Project aerial

CITY OF LOS ANGELES

CALIFORNIA

ERIC GARCETTI
MAYOR

DEPARTMENT OF
PUBLIC WORKS

BUREAU OF
ENGINEERING

GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

1149 S. BROADWAY, SUITE 700
LOS ANGELES, CA 90015-2213

http://eng.lacity.org

May18, 2018

Joseph Ontiveros
Soboba Band, Luiseno Indians
PO Box 487
San Jacinto, CA 92581

RE: AB-52 Consultation Request for the Boyle Heights Sports Center Gym, City of Los Angeles, Los Angeles County, California.

Cultural Resource Director Joseph Ontiveros:

The City of Los Angeles' Bureau of Engineers (LABOE) and the Recreation & Parks (RAP) Department proposes the Boyle Heights Sports Center Gym Environmental Documentation Project (Project). The Project proposes to develop a 10,000 square foot gym at the Boyle Heights Sports Center located at 933 S. Mott Street located in the City of Los Angeles (Figure 1). The gym will include a full-sized basketball court, staff offices for RAP, equipment storage rooms, restrooms, a plaza for special gatherings, green space, pedestrian paths, and additional parking. Two existing dilapidated buildings currently occupy the proposed site and will be demolished as part of the Project. The Project is located in the northwest corner of the Boyle Heights in a high density area with many schools and residential homes nearby (Figures 2 and 3). This Project will comply with the California Environmental Quality Act (CEQA) regulations and the City is the CEQA lead.

We are contacting you because the Soboba Band, Luiseno Indians requested to be notified and provided information, under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, regarding projects with the City of Los Angeles' jurisdiction and within the traditional territory of the Soboba Band, Luiseno Indians. Please consider this letter and preliminary Project information as the formal notification of the proposed Project. The City of Los Angeles is requesting to consult with the Soboba Band, Luiseno Indians in order to identify tribal cultural resources that may be impacted by the proposed Project. The point of contact for the City of Los Angeles is provided on the following page.

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Title	City of Los Angeles Department of Public Works
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City:	Los Angeles
Tel:	(213) 485-5910
E-Mail:	christopher.adams@lacity.org

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Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this Project**.** If you have any questions or concerns with the Project, please do not hesitant to contact Christopher Adams at the address above or via email christopher.adams@lacity.org or by phone (213) 485-5910. Thank you for your attention to this matter.

Sincerely,

Christopher Adams

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Project location map
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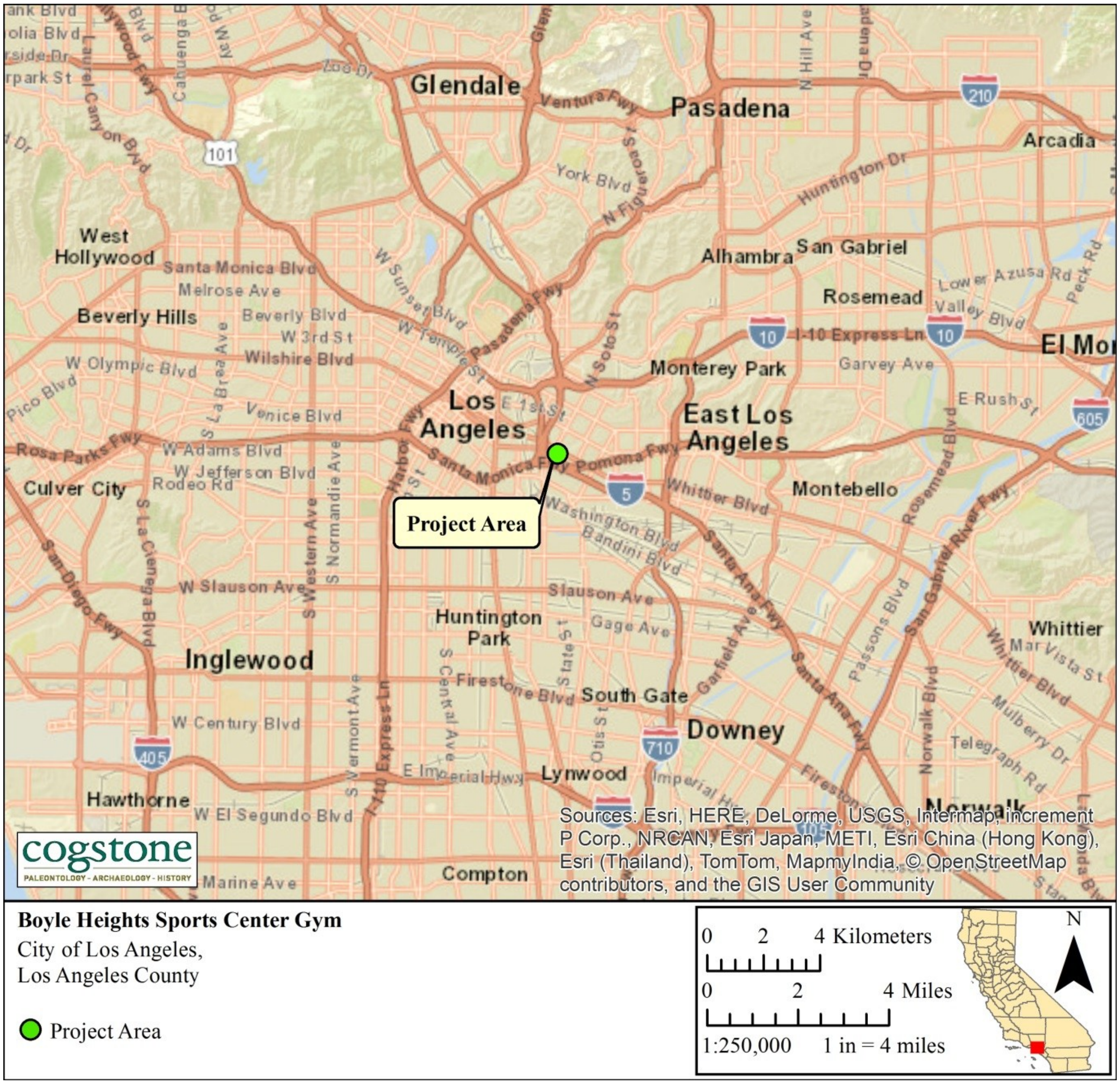
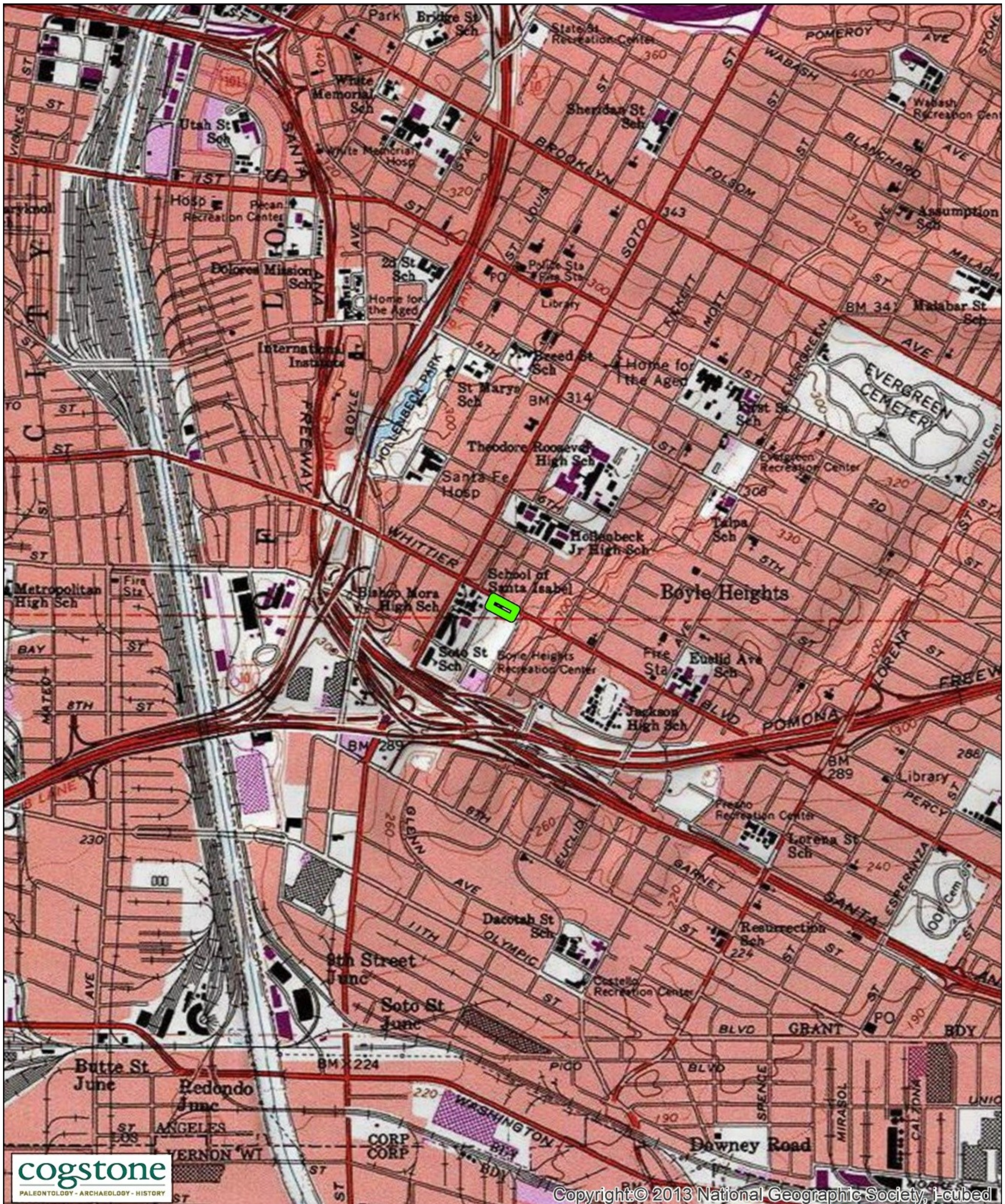


Figure 1. Project vicinity



Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 0.25 0.5 Miles
0 0.25 0.5 Kilometers
N
1:24,000 1 in = 2,000 ft

Figure 2. Project location

Boyle Heights Sports Center Gym
City of Los Angeles,
Los Angeles County, CA

Project Area

USGS 7.5' Quads:
LOS ANGELES

0 50 100 Feet
0 15 30 Meters
1:1,200 1 in = 100 ft
N

Figure 3. Project aerial

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Gloria Cuevas
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City, State, ZIP+4®: Los Angeles, CA 90086

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BELLFLOWER, CA 90707

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APPENDIX D: PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA

PFYC Description (BLM 2008)	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous or metamorphic and Precambrian or older rocks. Assessment or mitigation of paleontological resources is usually unnecessary.	1
Low. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils. Includes rock units too young to produce fossils, sediments with significant physical and chemical changes (e.g., diagenetic alteration) and having few to no fossils known. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Potentially Moderate but Undemonstrated Potential. Units exhibit geologic features and preservational conditions that suggest fossils could be present, but no vertebrate fossils or only common types of plant and invertebrate fossils are known. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3b
Moderate Potential. Units are known to contain vertebrate fossils or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and of low abundance. Common invertebrate or plant fossils may be found. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3a
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. If impacts to significant fossils can be anticipated, on-the-ground surveys prior to authorizing the surface disturbing action will usually be necessary. On-site monitoring or spot-checking may be necessary during construction activities.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. On-the-ground surveys prior to authorizing any surface disturbing activities will usually be necessary. On-site monitoring may be necessary during construction activities.	5

Appendix D
Geotechnical Investigation Report

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CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
Bureau of Engineering
GEOTECHNICAL ENGINEERING DIVISION

October 20, 2017

ENGINEER OF RECORD – BOYLE HEIGHTS SPORTS CENTER PROJECT
933 S MOTT STREET AND 2510 E WHITTIER BLVD, LOS ANGELES
TRACT: M.L. WICKS' STEPHENSON AVENUE TRACT NO. 2, BLOCK: --, LOT: 12 &
TRACT: TR 5299, BLOCK: --, LOT: 21
W.O. E170192B **GED FILE NO. 17-086**

Reference: Willdan Geotechnical "Geotechnical Investigation Report, Proposed Boyle Heights Sports Center Project, 933 South Mott Street, Los Angeles, California" dated October 17, 2017.

The Los Angeles Department of Public Works, Bureau of Engineering, Geotechnical Engineering Division has reviewed the referenced geotechnical investigation report by Willdan Geotechnical. We concur with the information presented in it and take full responsibility for the use of its contents. We also accept the role of Geotechnical Engineer of Record for the project.

Supplemental Recommendations

The supplemental recommendations provided in this Engineer of Record report supercede those in the referenced report. All other recommendations, except those specifically modified herein, remain applicable.

Section 8.2.1 Site Preparation

The existing soil beneath structural footings, including building and retaining walls, shall be removed to a depth of at least 3 feet beneath the bottom of footing. The compacted fill thickness, including the subgrade preparation, shall result in 42 inches of compacted fill beneath the footings. The lateral over-excavation shall extend 5 feet beyond the edges of the perimeter footings.

The over-excavation and replacement beneath new pavement areas shall result in at least 12 inches of non-expansive import fill material beneath the baserock.

Section 8.2.2 Fill Materials

The existing clayey soil is suitable for reuse provided the expansion index of the blended stockpile material does not exceed 50. This material shall not be used within the upper 12 inches of subgrade beneath interior slabs and pavement sections. This material shall be compacted to within 1 and 4 percent above the optimum moisture content.

Section 8.2.4 Temporary Excavation

Excavations up to 10 feet high may be sloped back at a maximum inclination of 1:1. Excavation greater than 10 feet and up to 15 feet high shall be sloped back no steeper than 1.5:1.

Section 8.2.5 Shoring Design

Cantilever or braced shoring may be considered at this site as an alternative to temporary excavations. Cantilever shoring shall only be utilized if some deflection is acceptable; therefore, it is not recommended adjacent to existing structures or utilities that cannot tolerate at least ½-inch of lateral and/or vertical movement. Sheet piles, box shoring, and/or trench shields (i.e. speed shores) are not acceptable.

Settlement of structures founded adjacent to the shoring will occur in proportion to both the distance between the shoring and the structure, and the amount of horizontal deflection of the shoring system. The vertical settlement will be a maximum at the shoring face and decrease as the horizontal distance from the shoring increases. Beyond a distance from the shoring equal to the height of the shoring, the settlement is expected to be negligible. The maximum vertical settlement is expected to be about 75 percent of the horizontal deflection of the shoring system.

Cantilever or braced shoring shall be designed for the lateral earth pressures shown on Figure 1. These values are based on the assumption that (1) the shored soil material is level at ground surface, (2) the exposed height of the shoring is no greater than 15 feet, and (3) the shoring is temporary, and will not be required to support the soil longer than about six months. Surcharge coefficients of 0.30 and 0.50 may be used with uniform vertical surcharges for cantilever and braced shoring lateral earth pressures, respectively. These surcharge pressures should be added to the lateral earth pressures.

Section 8.5 Cast-in-Drilled-Hole (CIDH) Pile

Security lights taller than 30 feet and shade structures, if proposed, may be supported on CIDH piles with a minimum diameter of 24 inches.

Axial Capacity in Compression

Axial compression capacities are presented on Figure 2 for 24-inch, 30-inch, and 36-inch diameter CIDH piles. The minimum pile embedment depth shall be 10 feet below the lowest adjacent grade. The actual depths may be deeper and will likely depend on the required lateral and tensile loads. We anticipate the piles will be isolated (i.e. spaced at least 3 pile diameters on center), and therefore, group effects are not anticipated.

The axial compression capacities presented on Figure 2 assume the CIDH piles develop their capacity solely from side resistance (i.e. skin friction).

Axial Capacity in Tension

The allowable axial tensile capacity may be assumed to be ½ the axial capacity in compression for the 24-inch, 30-inch and 36-inch diameter CIDH piles (Figure 2). The weight of the concrete shaft may be added to the tensile capacity.

Lateral Load Behavior

The lateral load behavior of the CIDH piles was evaluated using the LPILE (Ensoft, 2016) software program. LPILE (2016) uses load deflection (p-y) curves to approximate the relationship between soil resistance and pile deflection. The lateral load behavior was evaluated for both a free head deflection of ½-inch and a fixed head deflection of ½-inch. Also, we assumed a perfectly elastic pile and a cracked section. The modulus of elasticity for the cracked section was estimated to be 1802500 pounds per square inch (i.e. FS = 2).

The main inputs in the LPILE software for each soil layer are the unit weight and soil shear strength. The existing native soil was assumed to behave as "sand" with a total unit weight of 105 pcf, effective friction angle of 30 degrees, and no cohesion. The results of the LPILE analyses are attached to this report.

<u>Section 8.6.3 Lateral Earth Pressures</u>

The design lateral earth pressures for permanent retaining structures are presented on Figure 3 in this letter. The design lateral earth pressures for gravel-sand mixtures are presented on Figure 4 in this letter. The lateral earth pressures presented on Figure 4 may only be used instead of those on Figure 3 if the entire theoretical failure wedge is backfilled using select sand-gravel material. The lateral earth pressures shown on Figures 3 and 4 are applicable for backfill inclinations no steeper than 5:1 (horizontal:vertical).

For basement (i.e. restrained) walls, a seismically induced pressure increment of 10 pounds per cubic foot (pcf) may be used instead of 25 pcf. This reduced value of 10 pcf was estimated using the provisional recommendations by Lew et al. (2010) and the Mononobe-Okabe method.

If surcharge loads (live or dead) are applied, they should be added to the active or at-rest earth pressure by applying a uniform (rectangular) pressure. The lateral earth pressure coefficient for a uniform vertical surcharge is 0.33 and 0.50 for an active and at-rest condition, respectively.

<u>Section 8.6.4 Wall Foundation</u>

Retaining wall foundations shall be designed in accordance with the recommendations in Section 8.3. The minimum footing width shall remain as 2 feet. The actual footing dimensions will be based on the lateral load analysis, which shall be performed by the structural engineer.

Section 8.9 On-Site Stormwater Disposal

The infiltration tests were performed in the lower portion of the site, and not in the proposed building / parking area. We expect infiltration pits will be located in close proximity to where our infiltration tests were performed. If infiltration pits are proposed in other areas, additional testing is required. A supplemental report will be prepared following completion of the testing. Infiltration pits shall be set back at least 20 feet from structures and adjacent property boundaries. Furthermore, infiltration pits shall be set back at least 15 feet from the toe of the slope.

Section 8.10 Pavement Design

Table 5 should be replaced as follows:

ASPHALT PAVEMENT SECTION LAYER THICKNESSES (INCHES) – OPTION 1

Layer	Traffic Index ≤ 5.0	Traffic Index = 6.0	Traffic Index = 7.0	Traffic Index = 8.0	Traffic Index = 9.0
Asphalt Concrete Surface	2.0	3.0	3.5	4.0	4.5
CAB / CMB	4.0	4.5	6.0	7.0	8.0

ASPHALT PAVEMENT SECTION LAYER THICKNESSES (INCHES) – OPTION 2

Layer	Traffic Index ≤ 5.0	Traffic Index = 6.0	Traffic Index = 7.0	Traffic Index = 8.0	Traffic Index = 9.0
Asphalt Concrete Surface	2.5	3.0	4.0	4.5	5.0
CAB / CMB	3.0	4.5	4.5	6.0	7.0

CAB, CMB, and asphalt concrete shall conform to Sections 203 and 302 of the latest edition of the Standard Specifications for Public Works Construction ("Greenbook").

Portland cement concrete (PCC) may be used as an alternative to asphalt concrete. For Traffic Indexes between 6 and 7, a section of 6 inches of PCC over 8 inches of CAB/CMB is recommended. For Tis of 8 and 9, the PCC section shall be increased to 7 and 8 inches, respectively. The PCC shall have a minimum modulus of rupture of 650 psi at 28 days.

Non-Structural Foundations

Spread footing foundations are suitable for support of non-structural foundations, including fences, planter walls, and accessory walls less than 8 feet high. The earthwork recommendations presented in Section 8.2.1 remain applicable.

Non-structural footings shall be embedded at least 18 inches below the lowest adjacent grade. Continuous footings shall have a minimum width of 12 inches and isolated footings shall have a minimum width of 24 inches. Footings may be designed for an allowable bearing capacity of 1,500 pounds per square foot (psf). Bearing values indicated above are for total dead-load and frequently applied live-loads. The above vertical bearing may be increased by one-third for short durations of loading which will include the effect of wind or seismic forces.

The recommendations for lateral load resistance provided in Section 8.3.3 of Willdan's report remain applicable.

CLOSURE

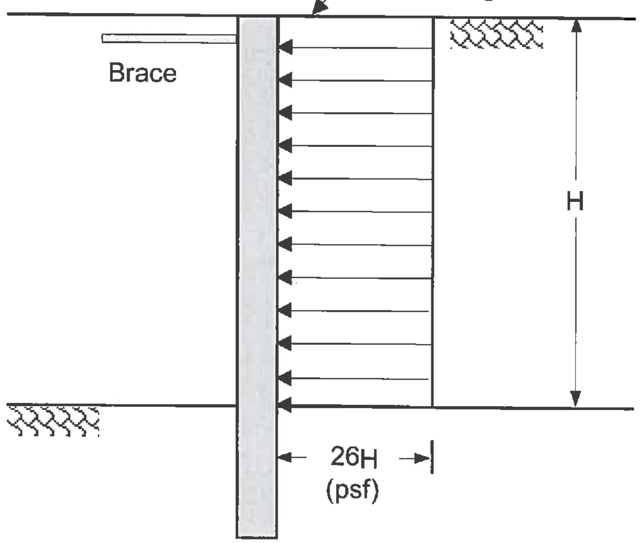
Any questions or clarification of the contents of the report shall be directed to Easton Forcier at (213) 847-0476.

REGISTERED PROFESSIONAL ENGINEER
EASTON RENE FORCIER
No. GE 2948
Exp. 9-30-18
GEOTECHNICAL
STATE OF CALIFORNIA

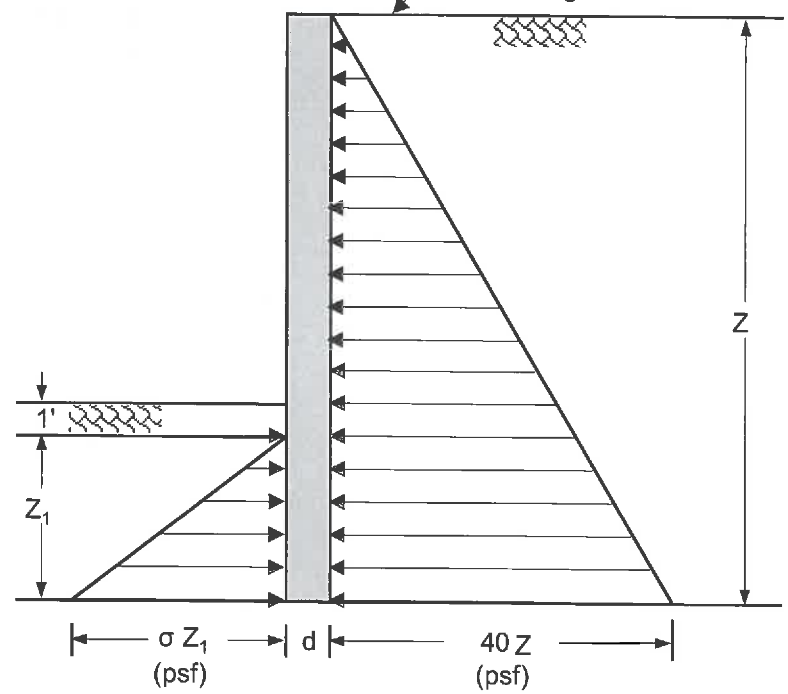
Easton F 10-20-17

Easton R. Forcier, GE 2948
Geotechnical Engineer I

Attachments:
Figure 1 – Lateral Earth Pressures for Temporary Shoring Systems
Figure 2 – Allowable Downward Capacity of CIDH Pile vs. Depth
Figure 3 – Lateral Earth Pressures for Retaining Walls Onsite Soil Backfill
Figure 4 – Lateral Earth Pressures for Retaining Walls Select Sand / Gravel Mix Backfill
LPILE Results for 24-inch, 30-inch, and 36-inch diameter CIDH Piles
Geotechnical Investigation Report by Willdan Geotechnical dated October 17, 2017



BRACED SHORING



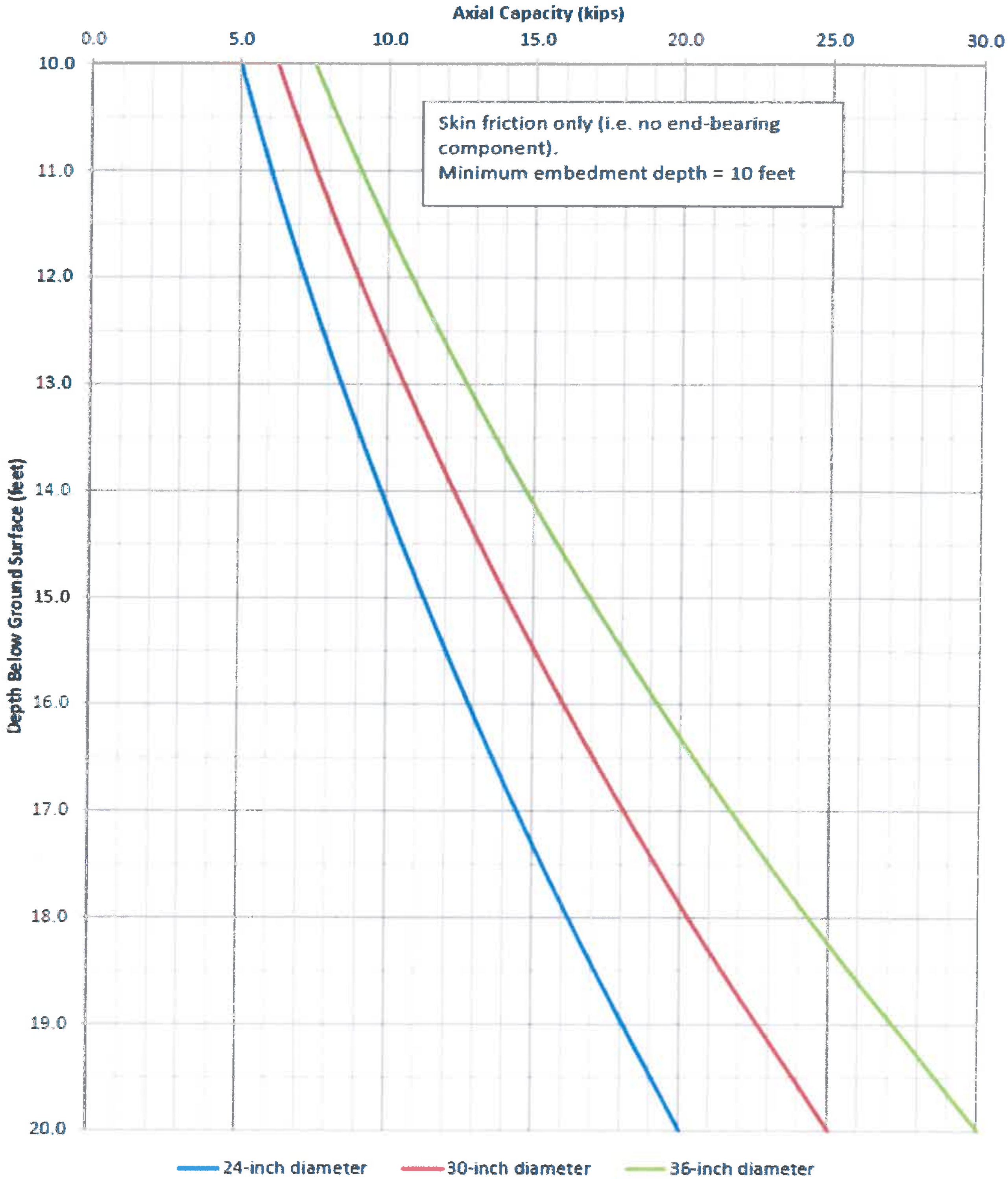
CANTILEVER SHORING

σ = 240 pcf for soldier piles spaced at least 3d apart applied over 2d
σ = 240 pcf for soldier piles spaced less than 3d apart
The maximum passive pressure shall not exceed 2,400 psf.

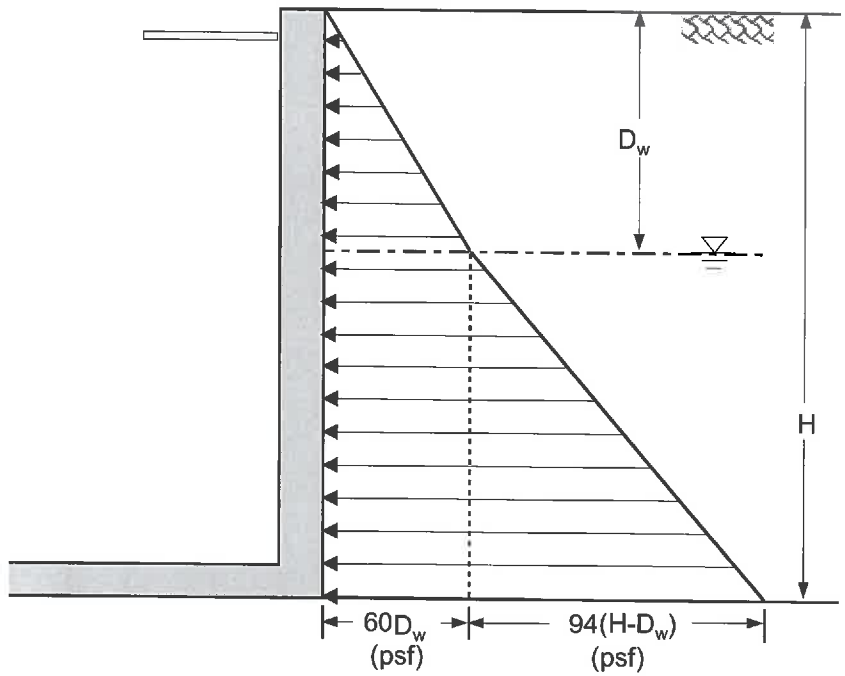
Notes:
1. Not to scale.
2. Dimensions are in feet.
3. Earth pressures shown are based on level backfill conditions behind shoring elements and groundwater below bottom of shoring elements.

LATERAL EARTH PRESSURES FOR TEMPORARY SHORING SYSTEMS Boyle Heights Sports Center 2510 E Whittier Blvd and 933 S Mott Street Los Angeles, California		
By: ERF	Date: 10/17/17	GED File No.: 17-086
City of Los Angeles, DPW, BOE, Geotechnical Engineering Division		Figure **1**

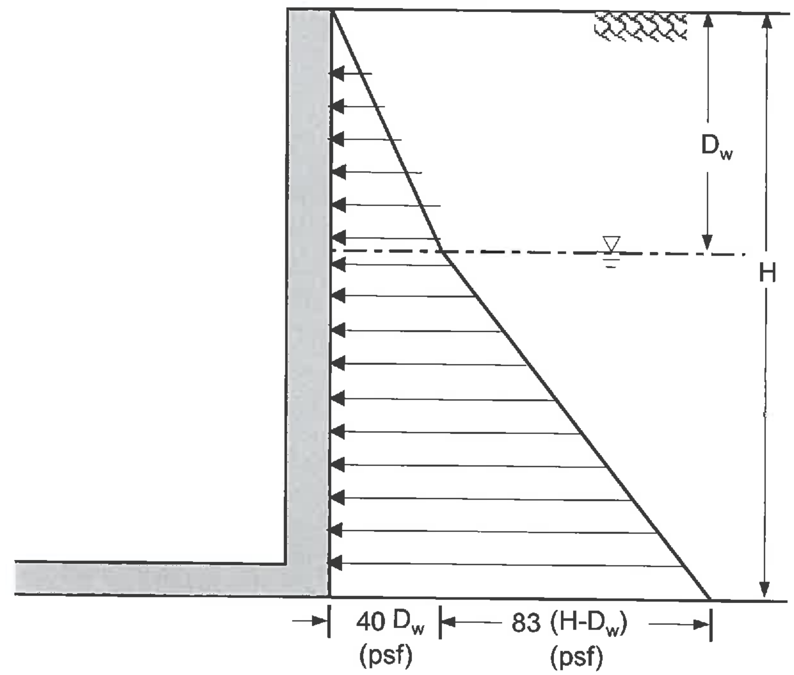
Allowable Downward Capacity of CIDH Pile vs. Depth



BOYLE HEIGHTS SPORTS CENTER **2510 E WHITTIER BLVD** LOS ANGELES, CALIFORNIA	BUREAU OF ENGINEERING GEOTECHNICAL ENGINEERING GROUP (GEO) GEO FILE No.: 17-086 October 2017	Figure No. 2



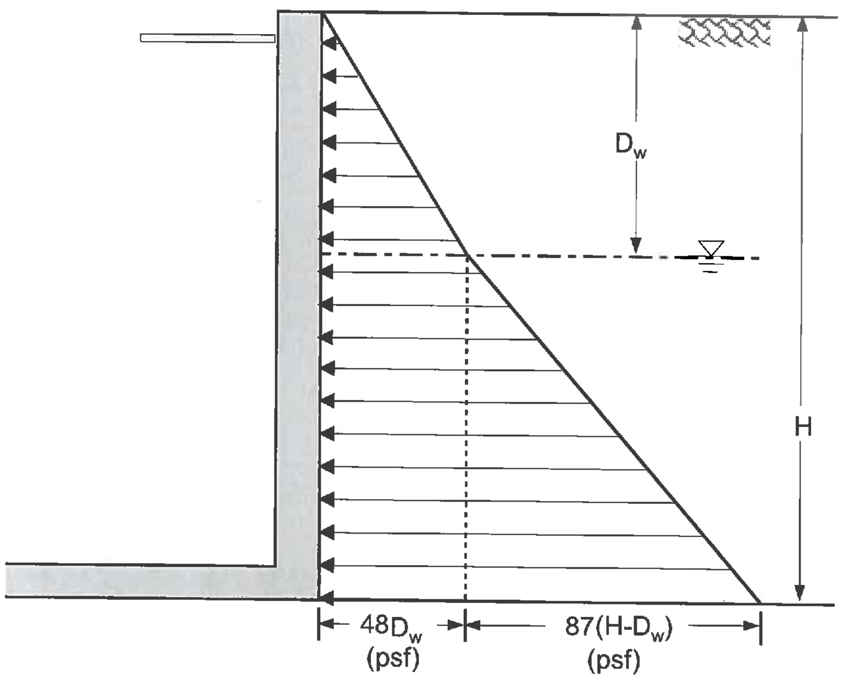
AT REST LATERAL EARTH PRESSURE UNDER STATIC CONDITIONS - RESTRAINED WALL CONDITIONS



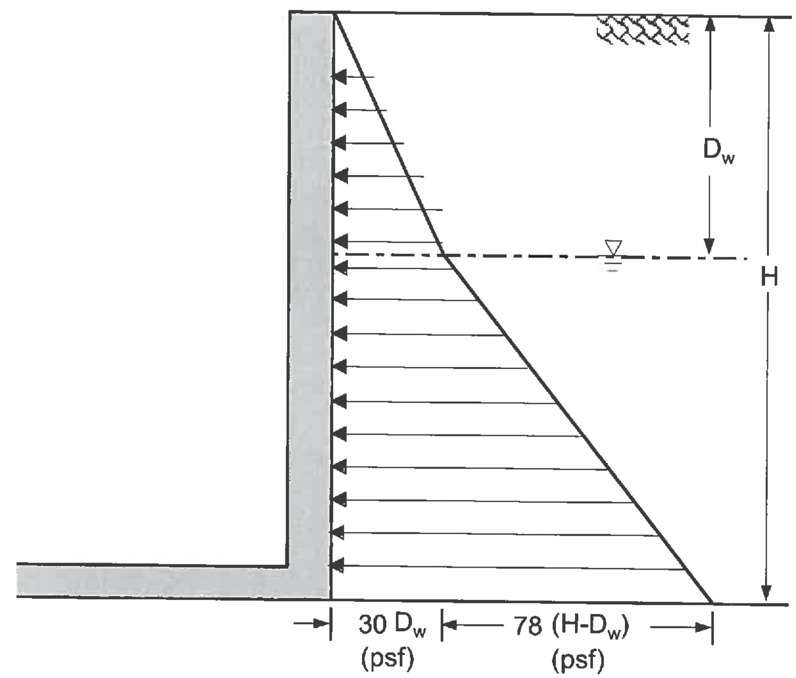
ACTIVE LATERAL EARTH PRESSURE UNDER STATIC CONDITIONS - CANTILEVERED WALL CONDITIONS

Notes:
1. Dimensions are in feet
2. If groundwater is not present, Dw should be taken as the historical high GW depth
3. The earth pressures shown are based on level backfill conditions behind wall

LATERAL EARTH PRESSURE FOR RETAINING WALLS ONSITE SOIL BACKFILL Boyle Heights Sports Center 2510 E Whittier Blvd Los Angeles, California		
By: ERF	Date: 10/17/17	GED File No.: 17-086
The Los Angeles Department of Public Works, Bureau of Engineering, GED		Figure 3



AT REST LATERAL EARTH PRESSURE UNDER STATIC CONDITIONS - RESTRAINED WALL CONDITIONS

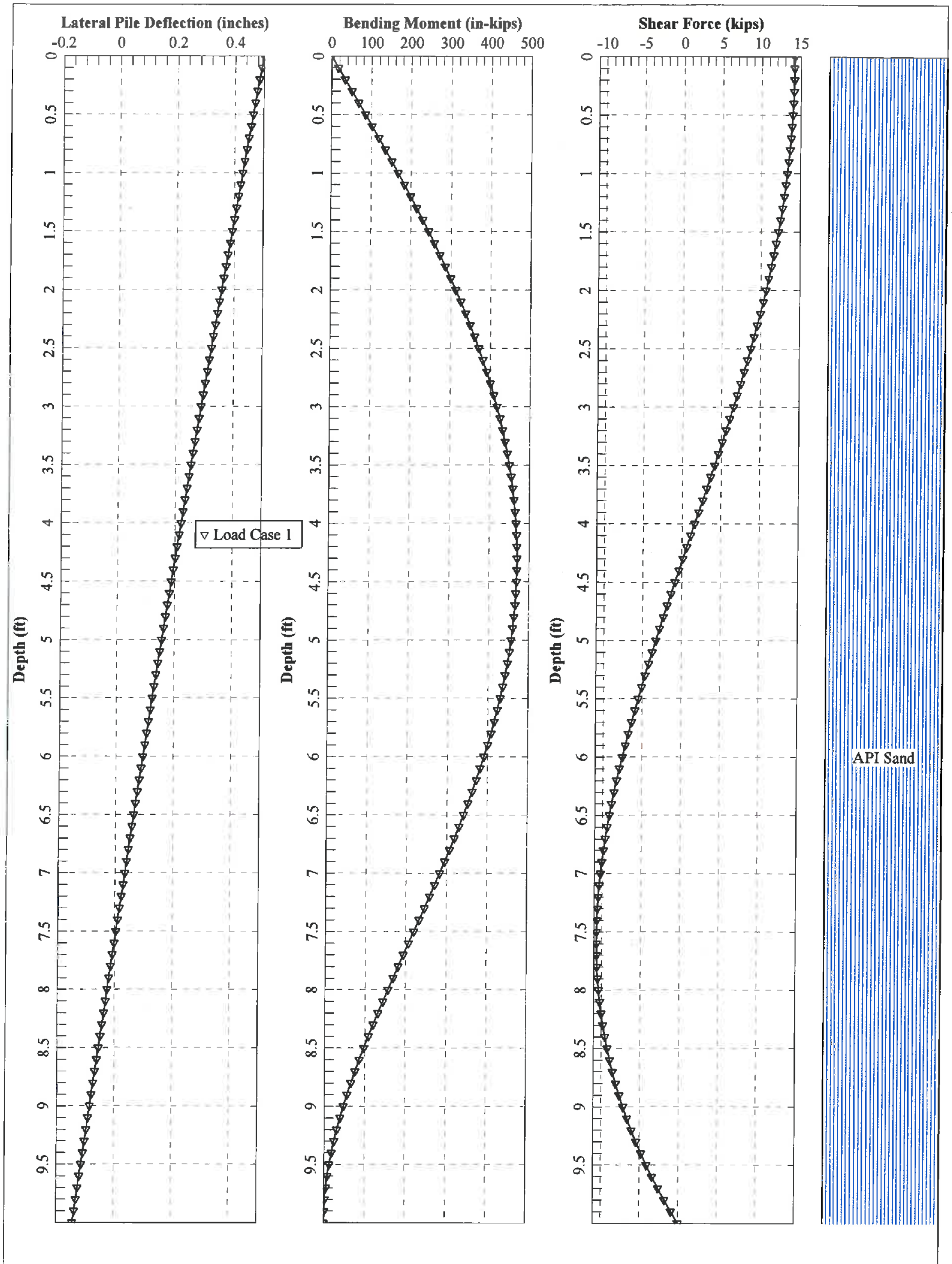


ACTIVE LATERAL EARTH PRESSURE UNDER STATIC CONDITIONS - CANTILEVERED WALL CONDITIONS

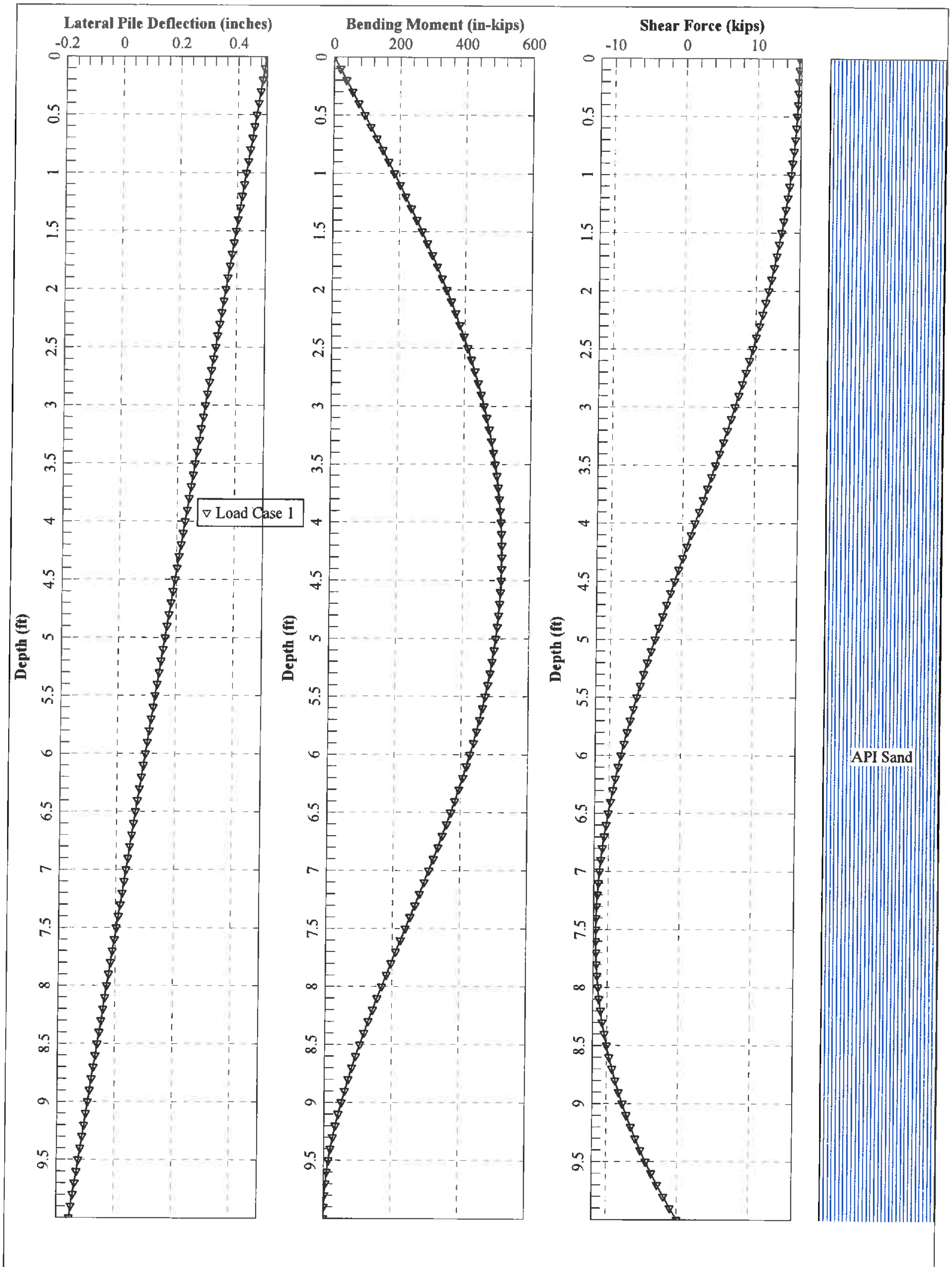
Notes:
1. Dimensions are in feet
2. If groundwater is not present, Dw should be taken as the historical high GW depth.
3. The earth pressures shown are based on level backfill conditions behind wall

LATERAL EARTH PRESSURES FOR RETAINING WALLS
SELECT SAND / GRAVEL MIX BACKFILL
Boyle Heights Sports Center
2510 E Whittier Blvd
Los Angeles, California

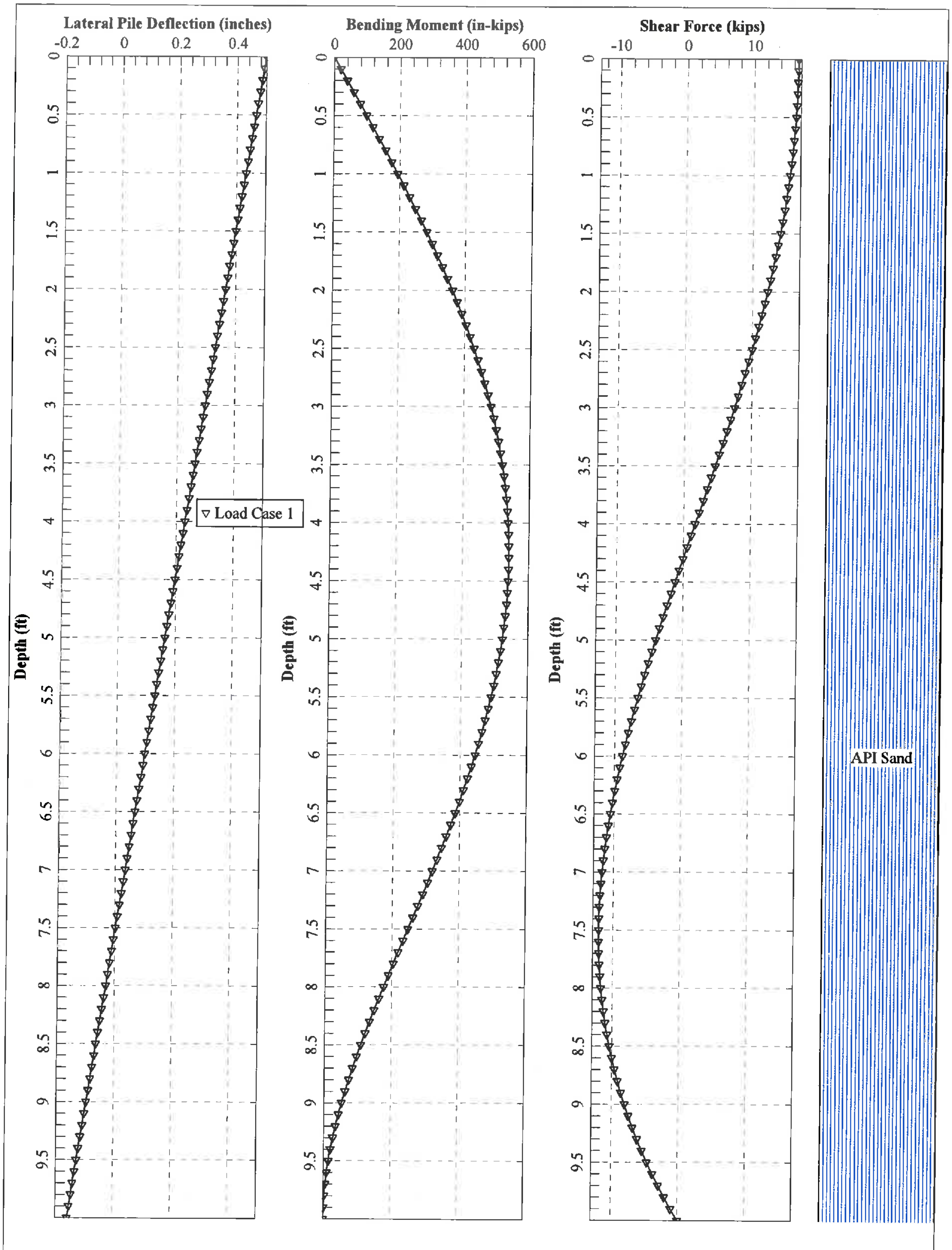
By: ERF	Date: 10/17/17	GED File No.: 17-086
The Los Angeles Department of Public Works, Bureau of Engineering, GED		Figure 4



24-inch diameter CIDH pile



30-inch diameter CIDH pile



36-inch diameter CIDH pile

GEOTECHNICAL INVESTIGATION REPORT
PROPOSED BOYLE HEIGHTS SPORTS CENTER PROJECT
933 SOUTH MOTT STREET
LOS ANGELES, CALIFORNIA

PREPARED FOR

CITY OF LOS ANGELES
GEOTECHNICAL ENGINEERING GROUP
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PREPARED BY

WILLDAN GEOTECHNICAL
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ANAHEIM, CALIFORNIA 92806
WILLDAN GEOTECHNICAL PROJECT NO. 106965-2000

OCTOBER 17, 2017

WILLDAN Geotechnical | extending your reach

October 17, 2017

Mr. Patrick J. Schmidt, PE, GE
City of Los Angeles
Geotechnical Engineering Group
1149 S. Broadway, Suite 120
Los Angeles, CA 90015-2213

Subject: Geotechnical Investigation Report
Proposed Boyle Heights Sports Center Project, Los Angeles, California
Willdan Geotechnical Project No. 106965-2000

Dear Mr. Schmidt,

Willdan Geotechnical is pleased to submit this report for the proposed Boyle Heights Sports Center project located at 933 South Mott Street in the City of Los Angeles, California. This report presents our geotechnical findings, conclusions and recommendations for the design and construction of the proposed developments. Based on the results of our investigation, the proposed development is feasible from a geotechnical standpoint, provided the recommendations in this report are followed.

We appreciate the opportunity to assist you and look forward to future projects. If you have any questions, please contact us.

Respectfully submitted,
WILLDAN GEOTECHNICAL

CERTIFIED ENGINEERING GEOLOGIST * AFSHIN MANTEGH * No. 2661 * STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER * MOHSEN RAHIMIAN * No. 3059 * GEOTECHNICAL * STATE OF CALIFORNIA

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Project Engineering Geologist

Mohsen Rahimian, PE, GE
Principal Engineer

Distribution: Addressee (4 unbound wet signed sets and one PDF copy via e-mail)

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1. INTRODUCTION

This report presents the findings from our geotechnical field exploration, field percolation and laboratory testing performed for the proposed Boyle Heights Sports Center project located at 933 South Mott Street in the City of Los Angeles, California. Our services were performed in general accordance to our Proposals No. 17-049 dated May 25, 2017 and 17-049R dated August 7, 2017.

This report includes the descriptions of scope of our services, drilling, logging and sampling procedures, laboratory testing procedures, field percolation testing procedures and results, as well as our recommendations for the design and construction of the proposed developments from a geotechnical standpoint.

2. SCOPE OF SERVICES

This investigation was conducted to explore and evaluate the site soil engineering conditions to the depths that may be significantly influenced by the proposed developments. Our scope of services included the following:

- A site reconnaissance by a member of our engineering staff to evaluate the surface conditions at the project site.
- Review of selected published geologic maps, reports and literature pertinent to the site and surrounding areas.
- A field exploration consisting of drilling a total of five (5) hollow-stem auger (HSA) borings. The borings were drilled to depths between approximately 26 and 36.5 feet below ground surface (bgs) to evaluate the subsurface soils conditions.
- Performing two (2) field percolation tests in two borings, at depths of approximately 5 and 10 feet bgs.
- Performing laboratory tests on representative soil samples obtained from the borings to evaluate the physical and engineering properties of the subsurface soils.
- Engineering evaluation of the data obtained from field investigation and laboratory testing.
- Preparation of this report summarizing our findings, results of geotechnical laboratory and field testing, and our conclusions and recommendations for the geotechnical aspects of project design and construction.

3. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The project site is located in the north portion of Boyle Heights Park, south of Whittier Boulevard between South Mathews Street and South Mott Street in the City of Los Angeles, California. The latitude and longitude at the approximate center of the project site are 34.0331° N and 118.2138° W, respectively. The project site location is shown on Figure 1, Site Location Map.

The project site comprises two relatively flat areas separated by a sloped area. The higher and lower flat areas are located in the northwest and southeast portions of the project site with approximate average elevations of 282 and 252 feet, respectively. The more detailed project site topography is shown on Figure 2, Boring, Percolation Test and Cross Section Location Plan. Currently, the higher flat area is covered by asphalt concrete (AC) pavement and includes two one-story buildings, and the lower flat area is occupied by an AC paved basketball court and a playground area. The slopes are dirt areas covered by trees and have an approximate average height of 30 feet. There is also a drainage swale that extends from Whittier Boulevard to the playground and a green belt area to the west.

We have been provided with the plans of two preliminary alternatives of the building, which are provided in Appendix G of this report. According to these plans, the project includes construction of a new 10,000 square feet gymnasium building consisting of a high school standard full sized basketball court, offices, storage rooms, restrooms, and a parking lot. The gymnasium building will be located on the higher flat area and may extend beyond the slope area. There will also be some grading work at the slope area for construction of new landscape area and an ADA ramp to allow people to access the existing basketball court and synthetic soccer field. Although, the grading plan is not available at this time, it is anticipated that the cut and fill thicknesses will not exceed 3 feet.

By the time this report was prepared, we had not been provided with the anticipated structural loads applicable on the foundations for the proposed structure. We assume that the imposed column loads will be less than 50 kilo pounds (kips), and imposed continuous footing loads will be less than 5 kips per foot (kpf) for the structure.

4. GEOLOGY

4.1. GEOLOGICAL SETTING

The subject site is located south of the Santa Monica Mountains, east of the Los Angeles River, and in the northeastern portion of the Los Angeles Basin locally known as Boyle Heights. The basin is located within the Peninsular Ranges geomorphic province and bounded on the east and southeast by the Santa Monica Mountains. The Peninsular Ranges are characterized by a series of northwest-southeast oriented fault blocks and sediment-floored valleys Major fault zones within this province include the Newport Inglewood, Elsinore, San Jacinto and San Andreas fault zones.

The site appears to be located within the bottom of an old stream channel, and the surrounding area generally slopes down towards the site. Locally, the site is covered by alluvial deposits. The alluvium underlying the project area ranges from younger, Holocene age alluvium consisting mainly of loose to medium dense sand, silt, and gravel to older Pleistocene age alluvium consisting mainly of dense to very dense sand, silt and gravel.

4.2. REGIONAL AND LOCAL FAULTS

The project site is located in seismically active Southern California. The California Geological Survey defines active and potentially active faults in the Alquist Priolo (AP) Geologic Hazard Zone Act (1994). For the purpose of the Act, active and potentially active faults are defined as those that have ruptured during Holocene (11,000 years ago) and Quaternary (1.5 million years ago) respectively. Maps of Earthquake Fault Zones have been published by the California Geological Survey in accordance with the AP Geologic Hazard Zone Act, 1994, which regulates developments near active faults. Based on our review of these maps, the site does not lie within an AP Zone. However seismic risk is considered high as compared to other areas of California because of the proximity to active faulting. Active and potentially active faults in California have been mapped by Jennings and Bryant (2010). Elysian Park Blind Thrust fault (FPFT) is the closest fault with surface projections of potential rupture area located at distances of approximately 3 miles from the site. Although EPFT might generate strong motion at the site, it is not considered to be capable of generating surface rupture. The closest potentially active/ potentially active fault to the project site is the Raymond Fault a left lateral riverse-oblique fault that has been reported as mostly Holocene and Quaternary in part. This fault is located approximately 5.9 miles north of the site and is capable of producing earthquakes with moment magnitude range of 6.8 to 8.0.

5. GEOTECHNICAL INVESTIGATIONS

5.1. FIELD EXPLORATION

Field exploration for this project consisted of drilling and sampling five (5) HSA borings to depths between approximately 26 and 36.5 feet bgs. Willdan also conducted drilling and sampling two (2) HSA borings, one to 5 feet bgs and the other to 10 feet bgs for the purposes of percolation testing. Approximate locations of borings are shown on Figure 2.

Prior to field exploration, a site visit was performed to mark the boring locations and evaluate access conditions for drilling equipment. Underground Service Alert (USA) of Southern

California was then notified for clearance of underground utilities in the vicinity of the subsurface exploration locations.

Soil borings were advanced using a truck-mounted CME 75 rig equipped with 8-inch diameter hollow-stem augers. Bulk, disturbed and relatively undisturbed soil samples were collected from each soil boring during drilling. Bulk samples were collected from auger cuttings obtained from within the upper 5 feet soils. At selected intervals throughout the boring depths, relatively undisturbed soil samples were collected by driving a 3-inch outside diameter Modified California sampler lined with brass rings, and disturbed samples were collected by driving a 1⅜ inch inside diameter Standard Penetration split-spoon sampler. The samplers were driven into the underlying soil to a depth of 18 inches, or the interval noted on the boring logs, with a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler was recorded for each 6-inch penetration interval and is shown on the boring logs. Soil samples were retained for possible laboratory testing. The number of blows required to drive the sampler the last 12 inches was used to estimate the in-situ relative density of granular soils and to a lesser degree of accuracy, the consistency of cohesive soils. The samples were also screened using a photo-ionization detector (PID) to detect the presence of volatile gases, an indication of potential soil contamination. The PID readings are shown on the boring logs.

Classification of the soils encountered in our exploratory borings was made in general accordance with the Unified Soil Classification System (USCS), using visual-manual procedure (ASTM D2488) and/or based on laboratory testing (ASTM D2487). A key for the classification of the soils (USCS classification) along with the boring logs are provided in Appendix A.

Upon completion of drilling, the borings were backfilled with soil cuttings, tamped, and patched with cold asphalt as appropriate. Soil samples collected from the field were delivered to Willdan Geotechnical's laboratory for testing.

5.2. LABORATORY TESTING

As requested by the Geotechnical Engineering Group (GEO), laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. Laboratory testing included determination of in-situ moisture content and dry density, percent passing #200 sieve, gradation, Atterberg limits, direct shear, consolidation, compaction curve, expansion index (EI), R-value and corrosion potential for soil samples collected from various depths. Laboratory tests were conducted in general accordance with American Society for Testing of Materials (ASTM) Standards or California Test Methods (CTM). The in-situ dry density and moisture content test results are shown on the boring logs. The remaining laboratory test results are provided in Appendix B, Laboratory Test Results. The laboratory test results indicate that:

- The shallow subsurface clayey soils within the proposed building area have an EI of 55 and according to ASTM D4829 are classified as soils with medium expansion potential. As such, the recommendations provided in Section 8.2.2 of this report shall be incorporated in design and construction of the project.

- The soils encountered in the borings have in-situ dry densities ranging from 88 to 126 pounds per cubic foot (pcf) and moisture contents ranging from 2.5% to 11.5%, with an exception for the sample in Boring B-5 at depth of 20 feet that has a moisture content of 28.4%.

- Based on the consolidation test results on a soil sample (B-1@5') and the criteria addressed in the Naval Facilities Engineering Command Design Manual 7.01 (NAVFAC DM 7.01), the existing shallow subsurface soils within the proposed building area have a collapse potential of 7% and considered as Trouble Soils.

- The subsurface soils have peak cohesion ranging from 5 to 390 pounds per square foot (psf), and ultimate cohesion ranging from 5 to 225 psf. The internal friction angle of soils ranges from 28.5 to 32 degrees for peak value, and from 27.5 to 32 degrees for ultimate value. The following shear strength parameters have been used for the subsurface soils at the slope areas.

Table 1. Soils Profile

Layer No.	**Depth (ft)**	**Unit Weight (pcf)**	**Peak**		**Ultimate**	
			Cohesion (psf)	**Friction Angle (degree)**	**Cohesion (psf)**	**Friction Angle (degree)**
1	0 to 10	100	10	30.0	5	30.0
2	Below 10	125	390	28.5	225	27.5

5.3. SUBSURFACE CONDITIONS

Uncertified fill was not encountered in the borings. Based on the results of the field exploration, it can be concluded that the subsurface material within the subject project site predominantly consists of Holocene to older Pleistocene-age alluvium, which mainly includes medium dense to very dense sandy materials to the maximum drilled depth of 36.5 feet bgs. The sandy materials are interbedded with silt and clay layers.

This appears typical of those found in the geologic region of the site. The above is a general description of soil conditions encountered at the site in the borings drilled for this investigation. For a more detailed description of the soil conditions encountered, refer to the boring logs in Appendix A.

5.4. GROUNDWATER

The site is in the southwest portion of the Los Angeles Quadrangle, where the historically highest groundwater has been identified as about 150 to 200 feet (CGS Seismic Hazard Zone Report 029, 1998). The borings conducted for the current investigation were monitored for visible signs of free groundwater during and immediately after completion of the borehole. Groundwater was not encountered during the drilling operations on June 28, 2017.

Depth to groundwater can be expected to fluctuate both seasonally and from year to year. Fluctuations in the groundwater level may occur due to variations in precipitation, irrigation practices at the site and in the surrounding areas, climatic conditions, pumping from wells, and possibly as the result of other factors that were not evident at the time of our investigation. Because of the type of the proposed developments, it is unlikely that groundwater would be encountered during the course of construction for the proposed developments.

5.5. FIELD PERCOLATION TESTING

The average infiltration rate for the on-site shallow subsurface soils was measured by two (2) falling head percolation tests conducted at the locations of Borings TW-1 and TW-2 as shown on Figure 2. The percolation tests were performed in accordance with the boring percolation testing procedures presented in Low Impact Development Best Management Practice, Manual GS200.1, published by County of Los Angeles.

Borings TW-1 and TW-2 were drilled to depths of approximately 5 and 10 feet bgs, respectively. The tests were conducted on June 28, 2017. Perforated PVC pipes, 3 inches in diameter, were placed in the boreholes. The bottom of the test hole and the annular space were filled with free draining gravel. The holes were first pre-saturated by filling with water to the depth of approximately 4 inches and topping off the water when it was necessary. The holes were presoaked 4 hours before conducting the infiltration tests. Then the water level was monitored by measurements taken every 30 minutes based on the permeability of soils within the borehole, until the rate of fall in the water level became steady. The test data and calculations are included in Appendix D, and the test results are summarized in Table 2.

Table 2. Percolation Tests Results

Test Location (See Figure 2)	Boring Depth (ft)	Soil Encountered	Adjusted Infiltration Rate (in/hr)
TW-1	5.0	0’ to 5’: Clayey Sand (SC)	1.88
TW-2	10.0	0’ to 6’: Clayey Sand (SC); 6’ to 10’: Silty Sand (SM)	3.00

6. SEISMIC CONSIDERATIONS

6.1. SITE CLASS

The subsurface soil profile at the site can be classified from a seismic standpoint based on the conditions encountered in our exploratory borings, and anticipated within the upper 100 feet of the site based on geologic mapping, as being a very dense soil and soft rock with undrained shear strength of more than 2,000 pounds per square foot (psf) and SPT N-values of more than 50 blows per foot. Based on the soils encountered in the borings drilled within the subject site and with consideration of the geologic units mapped in the area, it is our opinion that the site soil profile corresponds to Site Class C in accordance with Section 1613.3.2 of the California Building Code (CBC 2016).

6.2. 2017 LABC SEISMIC DESIGN PARAMETERS

The site class per Section 1613.3.2 of the CBC 2016 is based upon the site soil conditions. It is our opinion that Site Class C is most consistent with the subject site soil conditions. For design of the structures based on the seismic provisions of the CBC 2016, we recommend the parameters in the following Table 3.

Table 3. Seismic Design Parameters

Seismic Item	Value	CBC Reference
Site Class	C	Section 1613.3.2
F_a	1.0	Table 1613.3.3(1)
S_s	2.336	Figure 1613.3.1(1)
S_{MS}	2.336	Section 1613.3.3
S_{DS}	1.557	Section 1613.3.4
F_v	1.3	Table 1613.3.3(2)
S_1	0.815	Figure 1613.3.1(2)
S_{M1}	1.059	Section 1613.3.3
S_{D1}	0.706	Section 1613.3.4

Site Coordinates: Latitude: 34.0331° N Longitude: 118.2138° W

6.3. SOIL LIQUEFACTION

Soil liquefaction is a state of temporary soil particle suspension caused by loss of strength due to pore pressure increase resulting from cyclic stress induced by earthquakes, and the resultant drop in effective stress and soil shear strength. Liquefaction normally occurs in saturated granular soils, such as sands, in which the strength is purely frictional. Soils most susceptible to liquefaction are saturated, loose, uniformly graded, fine-grained sand deposits. However, liquefaction has occurred in soils other than clean sands. Silty sands and sandy silts have also been reported to be susceptible to liquefaction or partial liquefaction. The occurrence of liquefaction is generally limited to soils located within about 50 feet of the ground surface. Primary factors affecting the potential for a soil to undergo liquefaction include:

1) Depth to groundwater;
2) Soil type;
3) Relative density of the soil and initial confining (overburden) pressure; and
4) Intensity and duration of ground shaking.

Potential problems associated with soil liquefaction include ground surface settlement, loss of foundation bearing support strength, and lateral spreading. Ground surface settlement due to densification of the liquefied soils can be approximated using procedures developed by Tokimatsu and Seed (1987), Ishihara and Yoshimine (1992), or Idriss and Boulanger (2008). While liquefaction occurs in confined sand layers, a phenomenon referred to as sand boils may occur at the ground surface. Sand boils occur when the sudden compression of groundwater in a layer of saturated clean loose sand builds up sufficient pressure to rupture up through the upper soil mantle to the ground surface. When this occurs, displacement of the liquefied sand results in the sudden loss of support of structures supported by shallow foundations.

The project site has not been mapped as being within a zone susceptible to liquefaction as designated by the State of California (CGS, 1999). The soils underlying the project site consist of very dense soils, and the groundwater table at the project site is expected to be very deep (below 150 feet bgs). Therefore, it is our opinion that liquefaction is not a potential hazard at the project site.

6.4. SEISMICALLY INDUCED SETTLEMENT OF UNSATURATED SANDS

In addition to the settlement of saturated sand deposits due to liquefaction, strong seismic shaking can also cause settlement or densification of sands above the groundwater as well. Seismic-induced settlement of sands above the groundwater can potentially result in settlement of the ground surface. Due to the fact that the project site is underlain by very dense soils, the settlement within the project site is considered very low to nil and within the tolerable limit for the type of proposed structure, and is not expected to pose significant impact to near surface foundation of the structure.

6.5. LATERAL SPREADING

Liquefaction may lead to lateral spreading. Lateral spreading happens when surficial soil moves in a direction parallel to the ground surface due to liquefaction of underlying subsurface soils layers. Lateral spreading generally moves down gentle slopes, usually less than 6%, (Naeim

1989) or slip toward a free face such as an incised river channel. The site is not liquefiable, hence lateral spreading is not likely to occur at the project site.

6.6. GROUND LURCHING

Ground lurching is movement of the ground surface during seismic event, resulting in cracks and ridges developing perpendicular to the slope face. Areas underlain by thick alluvium with loose granular soils or clay soils with high moisture are susceptible to ground lurching. Ground lurching often causes damage to lightly loaded structures such as pavements, walkways, pipelines and other near-surface improvements located within the failure zone. Since the site is mainly underlain by stiff to very stiff sandy clay and/or medium dense to dense clayey sand, it is not subject to earthquake-induced ground lurching.

6.7. LANDSLIDING

The project site has not been mapped as being within a zone susceptible to landsliding as designated by the State of California (CGS, 1999). No evidence for landsliding was observed on or in the immediate vicinity of the site. As such, and due to the lack of significant topographic changes at the project site, landsliding is not a potential hazard on the site.

6.8. TSUNAMI AND SEICHING

The project site is not located near any enclosed bodies of water and therefore, tsunami and seiching are not considered to be potential hazards on the site.

7. SLOPE STABILITY

7.1. GLOBAL SLOPE STABILITY

Stability of the existing southeast and south descending slopes with a maximum relief of approximately 28 feet high and slope ratio ranges of 2.8H:1V to 2.2H:1V has been evaluated in accordance to the guidelines of LADBS Information Bulletin P/BC 2017-049. Selected cross sections A-A’ on southeast and B-B’ on south descending slopes are shown on Figure 2.

Ultimate and peak shear strength parameters, as provided in Table 1, were used to evaluate the existing slopes under static and pseudo-static conditions, respectively. The seismic coefficient, k_{eq}, used in pseudo-static stability analyses were determined in accordance with the guidelines addressed in Section 4.b of LADBS IB P/BC 2017-049, assuming PGA_M of 0.88g, fault distance (r) of 9.22 km, earthquake magnitude (M) of 6.62, and threshold (u) of 15 cm. The r and M values were obtained using the USGS Unified Hazard Tool website.

Our analyses indicate that the existing slopes have a minimum factor of safety of 2.59 and 1.85 under static and pseudo-static conditions, respectively. Based on our field observation and slope stability analyses, the existing slopes are considered stable. Slope stability analyses are provided in Appendix C, and the cross sections are shown on Figure 2.

7.2. SURFICIAL SLOPE STABILITY AND LANDSCAPING

Surficial stability of the existing descending slopes at cross section B-B' with a slope ratio of 2.2H:1V has been evaluated in accordance to the guidelines of LADBS Bulletin P/BC 2017-049 and using a weighted average value of the ultimate shear strength parameters, as provided in Table 1. Our analyses indicate that the existing slopes have a minimum factor of safety of 1.69 for surficial stability under static condition. Based on our field observation and slope stability analyses, the existing slopes are considered surficially stable. Surficial slope stability analyses are provided in Appendix C.

All slopes will be subject to surficial erosion. Therefore, slopes should be protected from surface runoff by means of concrete interceptor drains. All slopes should be landscaped with a suitable plant material requiring irrigation water in order to thrive. Overwatering and subsequent saturation of slope surfaces should be avoided. Slope maintenance is required during and after construction. Maintenance includes corrections of defective drainage terraces on slopes, elimination of burrowing rodents, and corrections of defective irrigation facilities. Irrigation programs for all landscapes slopes should be well controlled and minimized. Seasonal adjustments should be made to prevent excess moisture in the slope soils.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1. GENERAL

Based on our geotechnical investigation, the proposed developments are feasible from a geotechnical point of view, provided the recommendations contained in this report are implemented in the design and construction of the project.

8.2. EARTHWORK

8.2.1. Site Preparation

The proposed new Gymnasium Building will be constructed in place of the existing buildings which will be demolished. After demolishing and prior to construction of the new building, all the demolished material, vegetation, trash, and debris should be cleared and disposed of offsite. During grading, the contractor should take all necessary measures to protect existing utilities within the grading limits. All abandoned utilities encountered should be removed or otherwise drained for all content, if any, and properly capped. Any soils disturbed during site clearing operations in the construction areas should be removed down to the required depth within the suitable undisturbed soils.

Reworking of the earth materials beneath the designated footprint of the proposed developments shall be performed as recommended below:

- **Structural Footings:** As mentioned in Section 5.2, the shallow subsurface soils within the area of the proposed new building are collapsible. As such, we recommend that the entire footprint area of the proposed building be over-excavated and replaced with at least 5 feet of engineered fill below the bottom of footings or engineered fill that extends to a minimum depth of 6.5 feet below the lowest adjacent finished grade, whichever provides the deeper fill. Over-excavation shall laterally extend at least 5 feet from outer faces of the perimeter footings in all directions, where possible.

- **Non-Structural Footings:** The soils below non-structural footings shall be over-excavated and replaced with at least 2 feet of compacted fill below the bottom of footings. Over-excavation shall laterally extend at least 2 feet from outer faces of the footing in all directions, where possible.

- **Interior Concrete Slab-On-Grade:** The interior slab-on-grade for the new building shall be supported on engineered fill as recommended for structural footings.

- **Exterior Concrete Slab-On-Grade:** It is recommended that the upper 12 inches of soils below exterior concrete flatworks or hardscapes located around and within the vicinity of the proposed developments and subject to pedestrian loads only, be over-excavated and replaced with compacted fill. Over-excavation shall laterally extend at least 2 feet beyond the perimeter of the slab, where possible.

- **Pavement:** It is recommended that the upper 12 inches of soils below pavements be over-excavated and replaced with compacted fill. Over-excavation shall laterally extend at least 2 feet beyond the perimeter of the pavement, where possible.

After removal of unsuitable soils and prior to placement of fill, the bottom of removal shall be observed and confirmed to be competent by the Geotechnical Engineer of Record. Following the over-excavation, the areas to receive engineered fill shall be scarified to a minimum depth of 8 inches, moisture-conditioned within 3% above optimum moisture content and compacted to at least 90% relative compaction of the maximum density as determined by the ASTM D1557.

For structural fill, all clayey materials should be placed in loose lifts of 8 inches or less, moisture-conditioned within 3% above optimum moisture content and compacted to at least 90% relative compaction of the maximum density as determined by the ASTM D1557. Granular fill materials with less than 15% finer than 0.005 mm, including over-excavation bottoms, should be compacted to at least 95% relative compaction of the maximum density as determined by the ASTM D1557. For other fills, the fill materials should be placed in loose lifts of 8 inches or less, moisture-conditioned within 3% above optimum moisture content and compacted to at least 90%

relative compaction of the maximum density as determined by the ASTM D1557. Compaction should be verified by observation, probing, and testing by a geotechnical consultant's representative.

Once the subgrade and fill soil have been moisture conditioned and compacted, the soil should not be allowed to dry out prior to additional fill placement or concrete placement at finished grade. If it is dried out prior to compaction of the fill or prior to foundation and slab-on-grade construction, reprocessing of the soil is required to reestablish the recommended soil moisture content.

When the work is interrupted by heavy rains, fill operations shall not be resumed until the Geotechnical Engineer indicates that the moisture content, density and stability of previously placed fill are as specified. All soft or wet subgrade soil encountered during construction should be stabilized prior to the placement of new fill and further construction. Wet to saturated soils may become unstable or "pump" under dynamic loading such as equipment movement during grading and may not respond to densification techniques. Typical remedial measures include discing and aerating the soil during dry weather, mixing the soil with dryer materials, removing and replacing the soil with an approved fill material, or mixing the soil with an approved lime or cement product. Our firm should be consulted prior to implementing remedial measures to observe the unstable subgrade conditions and provide appropriate recommendations.

8.2.2. Fill Materials

The shallow subsurface clayey soils at the project site are classified as soils with medium expansion potential. They are suitable for reuse as backfill material provided they are free of organic materials, debris and cobbles larger than 3 inches, and compacted within 3% to 5% of the optimum moisture content.

Imported granular soils may be used in the required compacted fills within the subject project site. Imported materials should contain sufficient fines (binder material) to be relatively impermeable and result in a stable subgrade when compacted. The imported materials should also be non-expansive, with an EI less than 35 and free of organic materials, debris and cobbles larger than 3 inches, with no more than 25 percent of materials being larger than 2 inches in size and no more than 25 percent passing #200 Sieve. Within the upper 2 feet of fills the materials should be free of particles greater than 2 inches in size. A bulk sample of potential import material, weighing at least 30 pounds, should be submitted to the Geotechnical Consultant at least 48 hours before fill operations. All proposed import materials should be approved by the Geotechnical Consultant prior to being placed at the site.

8.2.3. Utility Trench Bedding and Backfill

Bedding materials consisting of sand, gravel, or crushed aggregate should be used to backfill around utility pipes to approximately one foot above the top of the pipe. Onsite soils which have a Sand Equivalent (SE) of 30 or greater can also be used as bedding material. Prior to placing the pipes, the pipe trench subgrade should be observed by a representative of the project geotechnical engineer. If the exposed subgrade is loose or unstable, the unsuitable subgrade soil must be excavated and replaced with bedding material. Bedding must be placed uniformly on each side of the pipe and mechanically compacted. Flooding or jetting to densify the bedding materials is not allowed. The fill should be placed in loose lifts not to exceed 8 inches, moisture-conditioned within optimum and 3% above optimum moisture content, and mechanically compacted to at least 90% relative compaction in accordance with ASTM D1557. Thinner lifts may be necessary to achieve the recommended level of compaction of the backfill due to equipment limitations.

8.2.4. Temporary Excavation

Temporary excavations must be properly sloped or shored. Based on the earth materials encountered in our borings, excavation of 5 feet or less in depth may be performed with vertical sidewalls. Deeper excavation up to a depth of 15 feet can be accomplished in accordance with the Occupational Safety and Health Administration (OSHA) requirements for Type B soils, and shall be laid back at 1H:1V gradient.

The contractor is responsible for maintaining the stability of the cuts and personnel safety in the field during construction. All excavations shall be performed in accordance with applicable requirements established by the State, County, or local government. The regulatory requirement may supersede the recommendations presented in this section. The Geotechnical Engineer of Record’s representative should be present during all excavations.

8.2.5. Shoring Design

Typical cantilever shoring up to 20 feet should be designed based on an active fluid pressure of 40 pounds per cubic foot (pcf), assuming level ground above the shoring. If excavations are braced at specific design intervals, the active pressure may then be approximated by a uniform soil pressure distribution with the pressure per foot of width equal to 25H, where H is the depth of the excavation. Surcharge loads within a 1H:1V plane extending up from the base of the excavation should be included in the design lateral pressures by taking 35% of the surcharge pressure applied as a uniform load along the shoring system.

For a soldier beam shoring system, the soldier piles should be spaced at a maximum of 8 feet on-center. For design purposes, the lagging should be designed using a uniform pressure of 300 psf. The passive pressure used to design the soldier pile may be taken as 300 psf per foot of depth. The maximum passive pressure should not be taken more than 3,000 psf. The space between the soil and the soldier beam should be backfilled with concrete with a minimum compressive strength of 2,500 pounds per cubic inch (psi).

All shoring should be designed in accordance with the latest edition of the Caltrans Trenching and Shoring Manual. The geotechnical consultant should review the contractor's shoring design. The shoring design must consider support of the proposed adjacent traffic lanes, parking, structures and/or underground utilities. Also, the effects of shoring deflection on supported pipelines and structures should be considered. Prior to excavating, all adjacent existing structures should be photo documented, and any existing cracks or other distress should be noted. Adjacent structure response should be monitored during excavation. A licensed surveyor should be retained to establish monuments on the shoring and the surrounding ground prior to excavation. Such monuments should be monitored for horizontal and vertical movement during construction. Results of the monitoring program should be provided immediately to the project structural/shoring engineer and Willdan Geotechnical for review and evaluation. It is recommended that Willdan Geotechnical review the shoring plans for conformance with our recommendations and that a Willdan Geotechnical representative observe the installation of shoring.

8.3. FOUNDATION DESIGN

8.3.1. General

It is our opinion that the proposed building may be supported on conventional spread and/or strip footings. As mentioned in Section 3, by the time of preparation of this report, we have not been provided with the order of the anticipated structural loads applicable on the foundations for the proposed structures. The following recommendations are based on the assumption that the imposed column loads will be less than 50 kilo pounds (kips), and imposed continuous footing loads will be less than 5 kips per foot (kpf) for the structure.

8.3.2. Bearing Capacity

Column and strip footings should be at least 24 and 18 inches wide, respectively, and embedded at least 18 inches below the lowest adjacent grade. The footings, supported on structural fill prepared as recommended in Section 8.2.1, may be designed to impose a maximum allowable pressure of 2,500 psf due to dead plus live loads. The bearing capacity may be increased by one-third for transient loads such as seismic or wind.

In order to maintain adequate support for the foundations located adjacent to utility trenches, including existing utility trenches or other footings, the footings should be deepened as necessary so that their bearing surfaces are below an imaginary plane having an inclination of 1H:1V, extending upward from the bottom edge of the adjacent trench or footing.

8.3.3. Resistance to Lateral Loads

Lateral soil resistance will be provided by a combination of frictional resistance between the bottom of the footings and the underlying soils and by passive soil resistance acting against side of the footing. For frictional resistance between concrete and soil, a frictional coefficient of 0.35 may be used. For passive resistance, an allowable fluid pressure of 300 pounds per cubic foot (pcf) may be used for a level ground surface condition in front of the footing. When combining both frictional and passive resistance, the passive resistance should be reduced by one-third. The recommended value for passive resistance may be increased by one-third for short-term loading.

8.3.4. Settlements

Based on the results of our investigation, total settlements due to building loads are expected to be less than one (1) inch, and maximum differential settlements are expected to be of the order of ½ inch over a 50-foot span.

8.3.5. Foundation Setback

All the foundations for the proposed buildings located on or near the descending slopes at the north side of the project site should be setback as recommended in LADBS Information Bulletin P/BC 2017-001. Also, all the recommendations and requirements addressed in Section 1808.7 of CBC 2016 shall be implemented in design and construction of the foundations and buildings on or adjacent to the slopes.

8.4. INTERIOR CONCRETE SLAB-ON-GRADE

Interior concrete slab(s)-on-grade shall be supported on compacted fill, as discussed in Section 8.2.1 of this report. The minimum slab thickness, slab reinforcement, concrete mix design, curing, and control joints shall be determined by the structural engineer. The need for waterproofing shall be determined by the architect/designer.

8.5. CAST-IN-DRILLED-HOLE (CIDH) PILE

8.5.1. Axial Capacity

Allowable downward and uplift capacities for piles with different diameters were evaluated using SHAFT 2012 program and the graphs are presented in Appendix E. The presented graphs are provided for 18 and 24-inch diameter piles, and similar graphs for different diameters other than provided ones will be provided upon request. The capacities are based on frictional resistance of the piles. For frictional pile design using the attached graphs, the weight of the shaft can be assumed to be taken by end-bearing resistance of the pile and it is not necessary to add the weight of the shaft to the structural loads. Uplift capacity of the pile may be assumed as half of the downward capacity of the pile. The actual length of the drilled piles shall be calculated by the structural engineer for the project, considering the recommendations provided herein. The provided capacities are based on the strength of the soils, not the pile section, which should be designed and checked by the project structural engineer.

8.5.2. Pile Spacing Group Efficiency

Piles in group should be spaced at least 3 diameters on centers. For this recommended spacing, there is no reduction in axial capacity. If the spacing is smaller than this value, following group efficiency should be incorporated to obtain the group capacity. The axial load capacity of piles group may be calculated as follows:

$$P_{ag} = \eta \, N \, P_{as}$$

where:

P_{ag} = allowable downward or uplift capacity of pile group
η = group efficiency factor
N = number of piles in group
P_{as} = allowable downward or uplift capacity of a single isolated pile

The group efficiency factor may be calculated using the following formula:

$$0.7 \leq \eta = \frac{2s(m+n)+4B}{\pi mnB} \leq 1.0$$

where:

m = number of rows of piles
n = number of piles per row
B = diameter of a single pile
s = center to center spacing of piles

8.5.3. Lateral Resistance

Lateral loads can be resisted by passive pressure developed against the vertical shafts. The lateral capacity of the pile depends on the permissible deflection and the degree of fixity at the top of the pile. For this project, lateral resistance of a free-head and a fixed-head single pile were evaluated using LPILE 2016 program.

A lateral deflection of ½ inch has been applied to the top of the pile, and the lateral capacity graphs of lateral deflection, shear force and bending moment vs. depth for a 30-feet long pile with 50 kips axial load are presented within Appendix E. The provided capacities are based on the strength of the soils, not the pile section, which should be designed and checked by the project structural engineer.

The presented lateral capacities are for a single pile and do not consider a reduction for group action. Lateral load reduction factors shall be applied when the pile spacing is less than 3 times and 8 times of the pile diameter in normal and parallel to loading direction, respectively. The following Table 4 provides the lateral load reduction factors, to be applied for various pile spacing for piles in line with loading direction.

Table 4. Lateral Load Group Reduction Factors

Center to Center Pile Spacing Line Loading	Group Reduction Factor*
3D	0.70
4D	0.75
5D	0.82
6D	0.88
7D	0.94
8D	1.00

*Ratio of lateral resistance of pile in a group to a single pile

8.5.4. Drilled Pile Installation

The borings for the purpose of site exploratory work were drilled using truck mounted hollow stem auger drilling rig, so it is difficult to evaluate the caving potential. Based on our experience and according to the material encountered, as well as existence of very deep groundwater table, the likelihood of caving is considered low. Precautions should be taken during the drilling operation to minimize caving of the drilled holes. To minimize caving potential, it is recommended to keep pile diameter as small as possible. Other means and methods such as using casing may be employed by contractor when necessary. Experienced contractors shall be retained to install drilled pile foundations. It is necessary to perform continuous observation during piling operation by a project geotechnical engineer's representative.

Piles close to each other shall be drilled and filled with concrete alternately and concrete shall be permitted to set at least 8 hours before drilling an adjacent pile. The drilled hole shall be inspected and filled with concrete as soon as possible. The holes should not be left open overnight. The concrete shall be poured using tremie method.

To evaluate the caving potential of the site soils, we recommend excavating one drilled pile hole to the design tip elevation. The diameter of the hole shall be same as the designed pile diameter. The hole shall be excavated under the geotechnical engineer's observation. The hole then should be left open for a sufficient amount of time to evaluate the long-term caving and raveling potential. The holes shall be backfilled as soon as possible, not to leave them open overnight. If the holes are left open, they shall be secured not to create a safety hazard. The hole could be backfilled with the soils or slurry mix.

8.6. RETAINING WALLS

8.6.1. General

Retaining walls may be designed for active or at-rest lateral soil pressures. Active pressure should be used in computations for a retaining wall which is free to rotate at the top. At-rest pressures should be utilized if the wall is restrained from moving at the top, such as below-grade basement walls. The following recommendations should be followed for design and construction of the retaining walls.

8.6.2. Wall Backfill

The backfill behind the walls should be placed and compacted per recommendations provided in Section 8.2.1 of this report. Retaining wall backfill and typical subdrain details for conditions of native soil, imported sand, or crushed rock are provided in Appendix F.

8.6.3. Lateral Earth Pressure

For design of retaining walls where the surface of the backfill is level, it may be assumed that drained on-site soils will exert a pressure equal to that developed by an equivalent fluid pressure with a density of 40 and 60 pounds per cubic foot (pcf) for active and at-rest conditions, respectively. The recommended lateral pressure may be considered as service loads. A drainage system per details provided in Appendix F, or similarly acceptable product, should be provided behind the walls to reduce the potential for development of hydrostatic pressure. If a drainage system is not installed, the walls should be designed to include a hydrostatic pressure and the combined pressure for a level backfill may be assumed to be equal to that developed by an equivalent fluid with a density of 80 and 90 pcf for active and at-rest conditions, respectively, for the full height of the wall.

When imported gravelly or sandy material is used for backfill behind the retaining wall, the density of equivalent fluid for active pressure may be reduced to 30 and 75 pcf for drained and undrained level backfill, respectively. For imported gravelly or sandy material, the density of equivalent fluid for at-rest pressure may be reduced to 50 and 85 pcf for drained and undrained level backfill, respectively.

In addition to static lateral earth pressure, the walls supporting more than 6 feet of backfill height shall be designed for a seismic lateral pressure equal to that developed by an equivalent fluid pressure with a density of 25 pcf. The seismic pressure may be assumed to act as an equivalent fluid pressure on the wall.

Also, the retaining walls should be designed to resist any lateral surcharges due to the traffic, nearby buildings or construction loads. Surcharge loads within a 1H:1V plane extending up from the base of the wall should be included in the design lateral pressures by taking 35% of the surcharge pressure applied as a uniform load along the height of the wall.

8.6.4. Wall Foundation

Bearing Capacity: The walls may be supported on conventional strip footings. The footings should have a minimum embedment of 18 inches below adjacent lowest finished grade and a minimum width of 2 feet. The wall footings, supported on non-structural fill prepared as recommended in Section 8.2.1, may be designed using a maximum allowable bearing pressure of 1,500 psf. The recommended value may be increased by one-third for short-term loading, such as wind and earthquake.

Resistance to Lateral Loads: Lateral soil resistance will be provided by a combination of frictional resistance between the bottom of the footings and the underlying soils and by passive soil resistance acting against side of the footing. For frictional resistance between concrete and soil, a frictional coefficient of 0.35 may be used. For passive resistance, an allowable fluid pressure of 150 pcf may be used for a level ground surface condition in front of the footing. The first 12 inches of the soil should not be considered in passive resistance. The recommended passive resistance may be increased by one-third for short-term loading. The frictional resistance and the passive resistance may be combined provided that the passive resistance is reduced by one-third.

Settlements: Based on the results of our investigation, total settlements due to wall loads are expected to be less than 1.0 inch, and maximum differential settlements are expected to be of the order of ½ inch over a 50-foot span.

8.7. SURFACE DRAINAGE

Inadequate control of run-off water and/or heavy irrigation after construction of the proposed developments may lead to adverse conditions. Maintaining adequate surface drainage, proper disposal of run-off water, and control of irrigation will help reduce the potential for future moisture related problems and differential movements from soil heave/settlement.

Surface drainage should be carefully taken into consideration during grading, landscaping and building construction. Positive surface drainage should be provided to direct surface water away from wall and toward a suitable drainage device.

8.8. SOIL CORROSIVITY AND SULFATE ATTACK POTENTIAL

Two (2) samples obtained from the borings drilled within the subject project site were tested for pH, minimum resistivity, soluble chloride content and soluble sulfate content. The test results indicate that the onsite soils show moderate sulfate exposure. As such, for concrete in contact with onsite soils, Type II or V Portland cement should be used. The measured resistivity and pH indicate that onsite soils are severely corrosive to buried ferrous metals. Further interpretation of the corrosivity test results and providing corrosion design and construction recommendations are referred to corrosion specialists.

8.9. ON-SITE STORMWATER DISPOSAL

We performed two percolation tests at the site and the test results are provided in Section 5.5 of this report. The test results indicate that the on-site soil has adequate permeability to accommodate onsite infiltration. Furthermore, the historical groundwater table at the site is very deep. As such, the stormwater infiltration at the site is feasible from the geotechnical standpoint.

For design purposes, an infiltration rate of 1.5 inch per hour (in/hr) may be used. The infiltration system shall be designed in accordance with the minimum design requirements, as presented in LADBS Information Bulletin P/BC 2017-118 Guidelines for Storm Water Infiltration. It is our opinion that, if the drainage system is designed in accordance with the LADBS' requirements, infiltration will not result in ground settlement that could adversely impact structures, either on or adjacent to the site. Furthermore, infiltration is not expected to result in soil saturation that could adversely impact retaining walls and/or basements.

8.10. PAVEMENT DESIGN

Pavement sections have been designed in accordance with the procedures presented in Caltrans Highway Design Manual (HDM). Laboratory testing of a bulk sample from the shallow subsurface soil of the proposed pavement area indicates a minimum R-value of 52, however, according to the HDM's recommendation an R-value of 50 has been used for design. A flexible section consisting of asphalt concrete (AC) over aggregate base (AB), or a full-depth AC section may be used. The pavement sections listed in Table 5 have been developed for a range of traffic index (TI) values.

Table 5. Flexible Pavement Design

TI	AC/AB (in/in)	Full Depth AC (in)
4	2.5/4.5	3.5
5	3.0/4.5	4.5
6	3.5/4.5	5.5

The pavement section shall be supported on the subgrade prepared per recommendations of Section 13.0 of this report. The base material shall consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB) as specified in the Greenbook, and compacted to a minimum of 95% of maximum dry density.

8.11. REVIEW OF CONSTRUCTION PLANS

Recommendations contained in this report are based on preliminary plans. The geotechnical consultant should review the final construction plans and specifications in order to confirm that the general intent of the recommendations contained in this report have been implemented into the final construction documents. Recommendations contained in this report may require modification or additional recommendations may be necessary based on the final design.

8.12. GEOTECHNICAL OBSERVATION AND TESTING

It is recommended that inspection and testing be performed by the geotechnical consultant during the following stages of construction:

- Grading operations, including over-excavation and placement of compacted fill;
- Observation of foundation excavation;
- Retaining wall footing excavation and subdrain installations;
- Excavations and backfilling for retaining walls and utility trenches; and
- When any unusual subsurface conditions are encountered.

9. CLOSURE

This report is intended for the use by Geotechnical Engineering Group and its consultants for design and construction associated with the proposed Boyle Heights Sports Center project located in Los Angeles, California, as shown on Figure 1, Site Location Map.

The findings and recommendations contained in this report are based on the results of the field investigation, laboratory tests, and engineering analyses, combined with an extrapolation of subsurface conditions between and beyond the boring locations.

Services performed by Willdan Geotechnical have been conducted in accordance with generally accepted professional geotechnical engineering principles and practices at this time. No other representation, express or implied, and no warranty or guarantee is included or intended.

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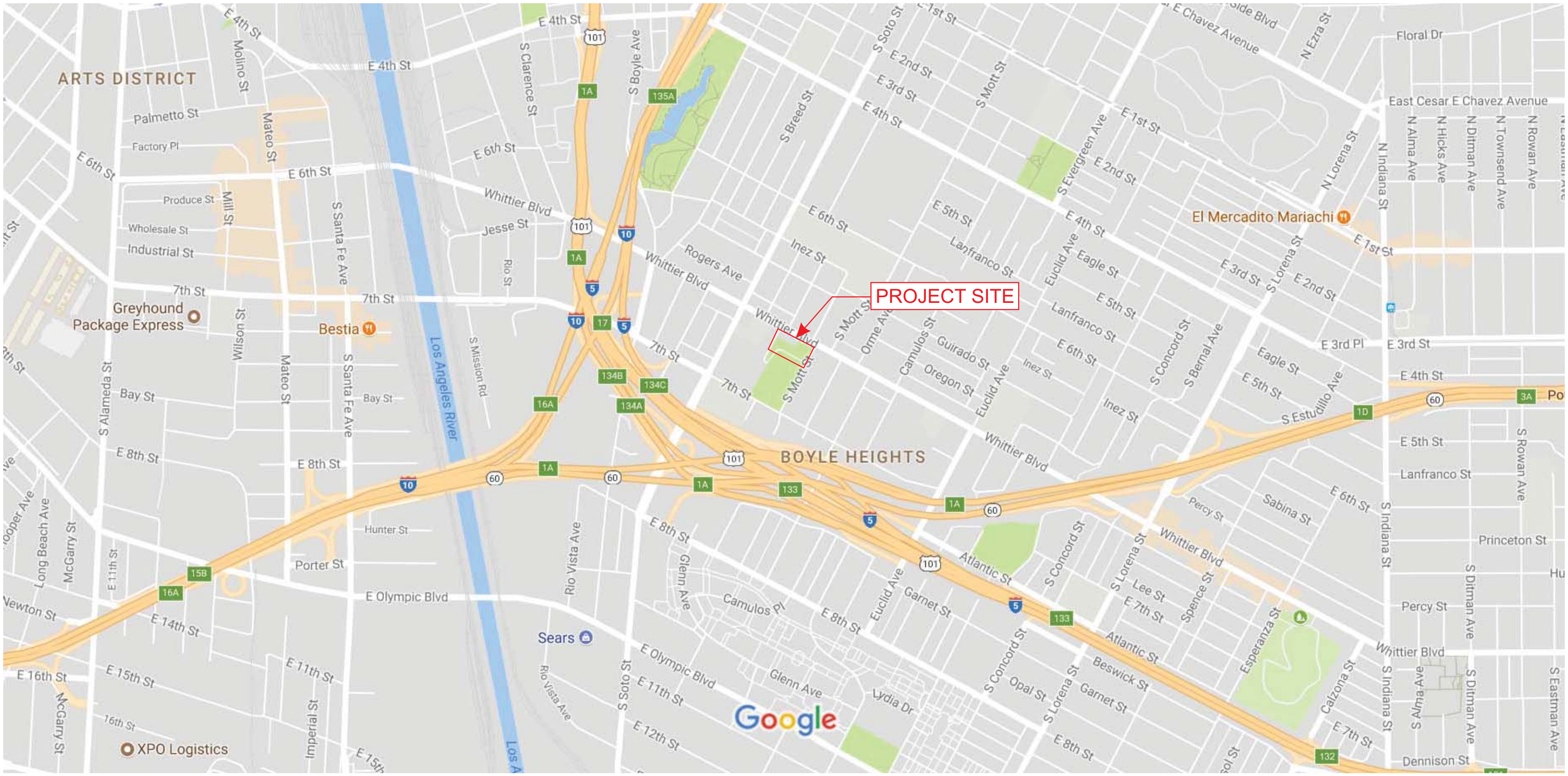
14. USGS Unified Hazard Tool website, https://earthquake.usgs.gov/hazards/interactive.

Google Maps



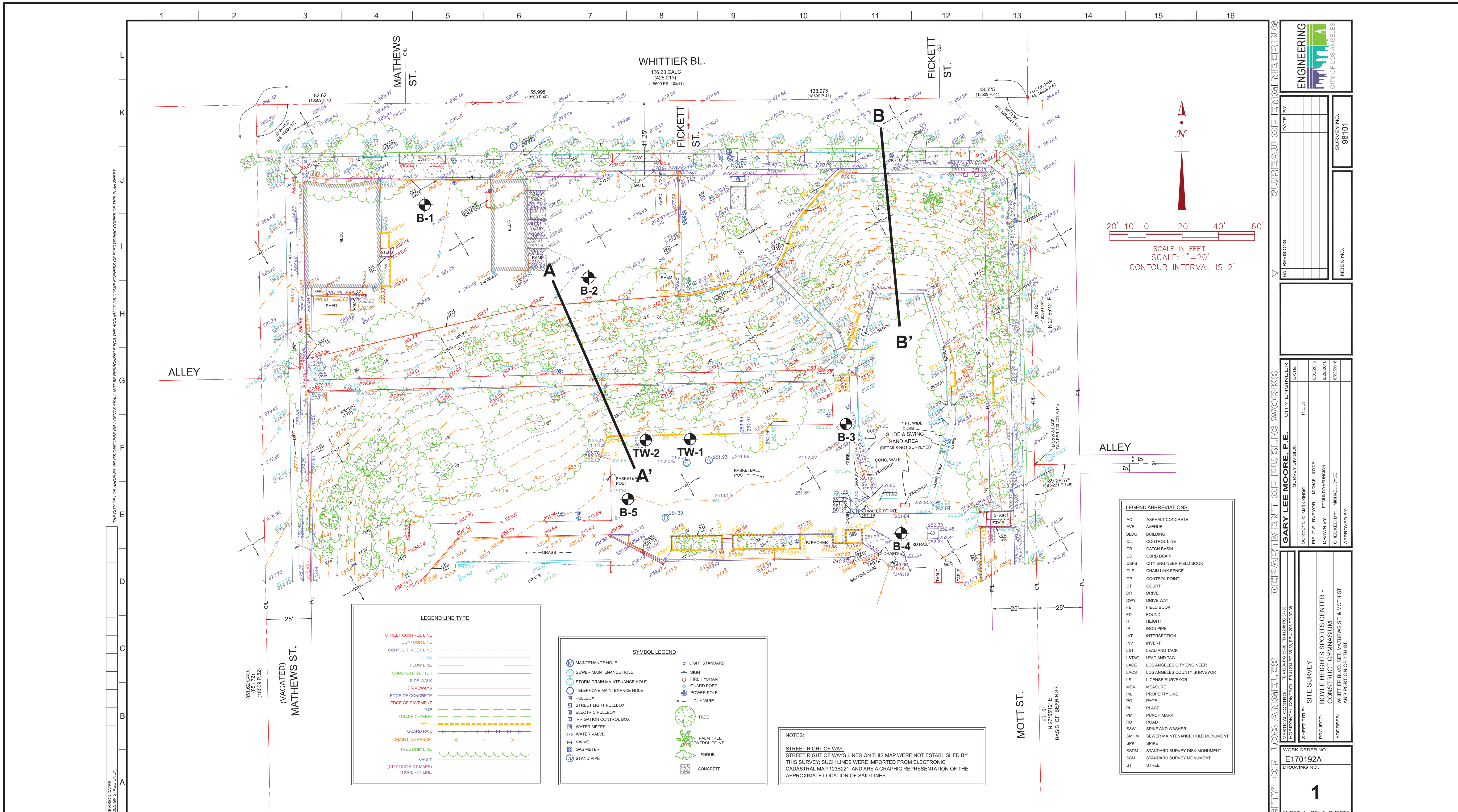
Map data ©2017 Google   United States   1000 ft

FIGURE 1. SITE LOCATION MAP

BOYLE HEIGHTS SPORTS CENTER
LOS ANGELES, CALIFORNIA

WILLDAN Geotechnical | extending your reach

Drawn By: MR	Date: 08-01-2017
Approved By: MR	Project No.: 106965-2000



Approximate Boring Location (B-5)

Approximate Percolation Test Location (TW-2)

Approximate Cross Section Location (B—B')

FIGURE 2. BORING, PERCOLATION TEST & CROSS SECTION LOCATION PLAN

BOYLE HEIGHTS SPORTS CENTER
LOS ANGELES, CALIFORNIA

WILLDAN Geotechnical — extending your reach

Drawn By: MR	Date: 09-28-2017
Approved By: MR	Project No.: 106965-2000

APPENDIX A. BORING LOGS

MAJOR DIVISIONS			SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS Half is larger than no. 200 sieve	GRAVELS More than half coarse fraction is larger than no. 4 sieve	Clean gravels with little or no fines	GW	Well graded gravels, gravel-sand mixtures
			GP	Poorly graded gravels, gravel-sand mixtures
		Gravels with over 12% fines	GM	Silty gravels, poorly graded gravel-sand-silt mixtures
			GC	Clayey gravels, poorly graded gravel-sand-clay mixtures
	SANDS More than half coarse fraction is smaller than no. 4 sieve	Clean sands with little or no fines	SW	Well graded sands, gravelly sands
			SP	Poorly graded sands, gravelly sands
		Sands with over 12% fines	SM	Silty sands, poorly graded sand-silt mixtures
			SC	Clayey sands, poorly graded sand-clay mixtures
FINE GRAINED SOILS Half is smaller than no. 200	SILTS AND CLAYS Liquid limit less than 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic clays and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50		MH	Inorganic silts, micaceous or diatomaceous fine, sandy or silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils

GRANULAR SOILS

RELATIVE DENSITY	BLOWS/FOOT*	
	SPT	CD
VERY LOOSE	0 - 4	0 - 8
LOOSE	5 - 10	9 - 18
MEDIUM DENSE	11 - 30	19 - 54
DENSE	31 - 50	55 - 90
VERY DENSE	OVER 50	OVER 90

FINE-GRAINED SOILS

CONSISTENCY	BLOWS/FOOT*	
	SPT	CD
SOFT	0 - 4	0 - 4
FIRM	5 - 8	5 - 9
STIFF	9 - 15	10- 18
VERY STIFF	16 - 30	19 - 39
HARD	OVER 30	OVER 39

*Conversion between California Drive (CD) and Standard Penetration Test (SPT) blow count has been calculated using "Foundation Engineering Hand Book" by H.Y. Fang.

STANDARD PENETRATION TEST SAMPLE
Split Barrel sampler in accordance with

MODIFIED CALIFORNIA SAMPLE
2.416" inside diameter

SHELBY TUBE SAMPLE

BULK SAMPLE

WATER TABLE

TEST TYPE Results shown in Appendix B	OTHER
Corrosion Analysis	CA
Sieve Analysis	SA
Unconfined Compression	UC
Hydrometer Analysis	HA
Expansion Index	EI
California Bearing Ratio	CBR
% Passing #200 Sieve	W
Pocket Penetrometer	PP
Direct Shear	DS
Direct Shear (Remolded)	DS_R
Atterberg Limits	AL
Consolidation	CN
Consolidation (Remolded)	CN_R
R-Value	R
Undrained-Unconsolidated Shear	UU
Maximum Density Curve	Max

EXPLORATION LOG KEY

BORING LOG B-1

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **2**
Borehole Coordinates: **34.0335N 118.2141W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **36.5 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		2.5" Asphalt							
			Sandy Lean CLAY (CL), stiff, brown, moist							
				PID=2.7 ppm		Bulk 1 S-1	5/5/7			SA, AL, EI, CN_R, DS_R, Max, CA
	5		very stiff	PID=2.5 ppm		R-2	6/9/12	5.2	91	CN, DS
			Clayey SAND/Silty SAND (SC/SM), medium dense, brown, moist	PID=3.0 ppm		S-3	5/5/6			
	10		Silty SAND (SM), dense, brown, moist	PID=5.1 ppm		R-4	20/32/40	6.7	112	DS
			very dense	PID=5.0 ppm		S-5	29/50/(6")			
	15			PID=3.0 ppm		R-6	50/(6")			
				PID=1.4 ppm		S-7	28/50/(5")			
	20			PID=5.0 ppm		R-8	50/(6")			
	25			PID=2.8 ppm		S-9	50/(6")			

BORING LOG B-1

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **2** of **2**
Borehole Coordinates: **34.0335N 118.2141W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **36.5 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	30		Silty SAND (SM), very dense, brown, moist	PID=3.2 ppm		R-10	50/(6")			
	35		Sandy SILT/Sandy CLAY (ML/CL), hard, brown, moist	PID=3.3 ppm		S-11	12/16/24			
			Total Depth 36.5 ft GW Not Encountered. Backfilled with Excavated Spoils and Patched with Cold Asphalt.							
	40									
	45									
	50									
	55									

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Boyle Heights Sports Center Project
Los Angeles, California

Project Number: 106965-2000

FIGURE A-2

TEST BORING LOGS 106965-2000.GPJ ARROYO.GDT 9/28/17

BORING LOG B-2

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **2**
Borehole Coordinates: **34.0332N 118.2139W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **35.5 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		2" Asphalt							
			Clayey SAND (SC), dense, dark brown, moist	PID=1.3 ppm		Bulk 1 R-1	20/27/35	11.5	120	SA, Max, R
			Silty SAND with Gravel (SM), medium dense, brown, moist							
	5			PID=2.0 ppm		S-2	10/12/15			
				PID=1.5 ppm		R-3	13/16/25	4.4	94	DS
	10			PID=1.9 ppm		S-4	5/6/9			
			Silty GRAVEL with Sand (GM), very dense, brown, moist	PID=0.5 ppm		R-5	19/50/(6")	4	105	SA
	15			PID=1.9 ppm		S-6	50/(6")			
			Silty Sand with Gravel (SM), very dense, brown, moist (disturbed sample)	PID=1.7 ppm		R-7	25/50/(6")			
	20			PID=0.2 ppm		S-8	30/50/(5")			
	25		Sandy CLAY/Clayey SAND (CL/SC), hard/dense, brown, moist	PID=0.5 ppm		R-9	10/28/45	8.7	116	DS

BORING LOG B-2

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **2** of **2**
Borehole Coordinates: **34.0332N 118.2139W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **35.5 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	30		SILT (ML), hard, brown, moist	PID=0.8 ppm		S-10	13/17/23			
	35		Sandy SILT/Silty SAND (ML/SM), hard/very dense, brown, moist	PID=3.1 ppm		R-11	50/(6")			
			Total Depth 35.5 ft GW Not Encountered. Backfilled with Excavated Spoils and Patched with Cold Asphalt.							
	40									
	45									
	50									
	55									

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Boyle Heights Sports Center Project
Los Angeles, California

Project Number: **106965-2000**

FIGURE A-3

BORING LOG B-3

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **1**
Borehole Coordinates: **34.0329N 118.2137W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **26.5 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		Clayey SAND (SC), medium dense, light brown, moist							
				PID=2.2 ppm		Bulk 1 S-1	7/5/8			
	5			PID=5.5 ppm		R-2	12/18/30	9.3	88	
				PID=2.9 ppm		S-3	8/9/11			
	10		Silty SAND (SM), very dense, brown, moist	PID=3.0 ppm		R-4	18/38/50(4")	2.5	112	SA
				PID=3.1 ppm		S-5	13/28/50			
	15			PID=3.9 ppm		R-6	43/50(5")	4.6	104	
			dense, light gray	PID=4.4 ppm		S-7	11/15/21			
	20		SILT/Silty SAND (ML/SM), hard/very dense, light gray, moist	PID=4.3 ppm		R-8	29/50(6")	9.5	98	
	25		SILT (ML), hard, light gray, moist	PID=0.3 ppm		S-9	18/26/30			
			Total Depth 26.5 ft GW Not Encountered. Backfilled with Excavated Spoils.							

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Boyle Heights Sports Center Project
Los Angeles, California

Project Number: 106965-2000

FIGURE A-4

BORING LOG B-4

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **1**
Borehole Coordinates: **34.0327N 118.2136W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **26.0 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		5" Asphalt							
			Clayey SAND (SC), medium dense, brown, moist							
			hand augered to 5 feet and no sample was collected at 2.5 feet			Bulk 1				W, AL, Max, CA
	5			PID=2.4 ppm		S-1	4/5/7			
				PID=0.2 ppm		R-2	15/25/28	5.9	114	
	10		dense	PID=1.8 ppm		S-3	15/19/28			
			Silty SAND (SM), very dense, brown, moist	PID=1.2 ppm		R-4	35/50(3")			
	15			PID=3.1 ppm		S-5	37/50(5")			
				PID=4.7 ppm		R-6	50/(3")			
	20			PID=4.7 ppm		S-7	41/50(6")			
	25			PID=4.0 ppm		R-8	38/50(5")			
			Total Depth 26.0 ft GW Not Encountered. Backfilled with Excavated Spoils.							

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Boyle Heights Sports Center Project
Los Angeles, California

Project Number: **106965-2000**

FIGURE A-5

BORING LOG B-5

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **1**
Borehole Coordinates: **34.033N 118.2141W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **26.5 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		Clayey SAND (SC), medium dense, brown, moist							
				PID=20.0 ppm		Bulk 1 S-1	6/7/10			
	5		Silty SAND with Gravel (SM), very dense, brown, moist	PID=1.0 ppm		R-2	27/50/(6")	3.1	114	
				PID=9.0 ppm		S-3	18/30/40			
	10			PID=>200 ppm		R-4	38/50/(5")	8.7	107	
			dense, light gray	PID=6.9 ppm		S-5	13/16/28			
	15		SILT/ Silty SAND (ML/SM), hard/very dense, light gray, moist	PID=4.3 ppm		R-6	27/50/(6")	9	96	
				PID=3.7 ppm		S-7	20/37/41			
	20		SILT (ML), hard, reddish brown, very moist	PID=5.5 ppm		R-8	21/30/35	28.4	95	
	25		gray to reddish brown	PID=3.2 ppm		S-9	13/16/32			
			Total Depth 26.5 ft GW Not Encountered. Backfilled with Excavated Spoils. (City of Los Angeles representative was notified about high VOC concentration at 10 feet)							

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Boyle Heights Sports Center Project
Los Angeles, California

Project Number: **106965-2000**

FIGURE A-6

BORING LOG TW-1

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **1**
Borehole Coordinates: **34.033N 118.2139W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **5.0 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		6" Asphalt over 4.5" Aggregate Base							
			Clayey SAND (SC), dense, brown, moist			Bulk 1				SA, AL
				PID=2.5 ppm		R-1	19/21/36	6.6	126	CN
	5		Total Depth 5.0 ft GW Not Encountered. Backfilled with Excavated Spoils and Patched with Cold Asphalt.							
	10									
	15									
	20									
	25									

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Boyle Heights Sports Center Project
Los Angeles, California

Project Number: **106965-2000**

FIGURE A-7

BORING LOG TW-2

Borehole Location: **See Figure 2**	Approximate Grade Elevation:	Sheet **1** of **1**
Borehole Coordinates: **34.03303N 118.21398W**	Date Started: **06/28/17**	Date Finished: **06/28/17**
Drilling Equipment: **CME 75**	Total Depth: **10.0 ft**	Depth to Groundwater: **GW Not Encountered.**
Drilling Method: **Hollow Stem Auger Boring**	Borehole Diameter: **8"**	
Driller: **Choice Drilling, Inc.**	Logged By: **RC**	Checked By: **AM**
Hammer Information: **140 lb and 30" Drop Height**		

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		6" Asphalt/ 4.5" Aggregate Base							
			Clayey SAND (SC), brown, moist			Bulk 1				
	5									
			Silty SAND (SM), very dense, light brown, moist	PID=0.6 ppm		Bulk 2 R-1	50(6")			
	10		Total Depth 10.0 ft GW Not Encountered. Backfilled with Excavated Spoils and Patched with Cold Asphalt.							
	15									
	20									
	25									

TEST BORING LOGS 106965-2000.GPJ ARROYO.GDT 9/28/17

WILLDAN Geotechnical

Boyle Heights Sports Center Project
Los Angeles, California

Project Number: 106965-2000

FIGURE A-8

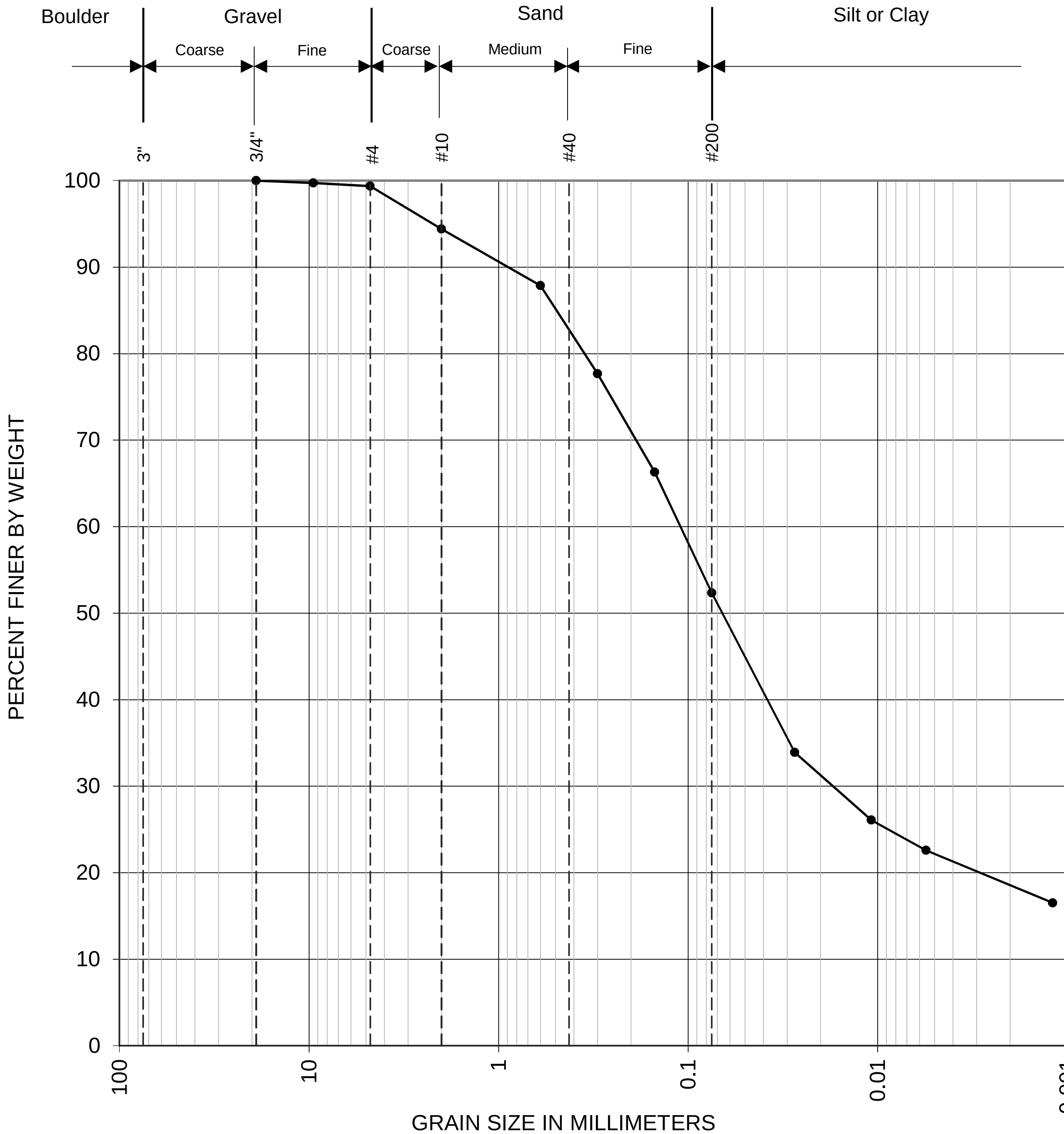
APPENDIX B. LABORATORY TEST RESULTS

TABLE B-1. SUMMARY OF LABORATORY TEST RESULTS

Boyle Heights Sports Center Project, Los Angeles, California

Willdan Geotechnical Project No. 106965-2000

Sample		USCS Soil Description	Gradation (ASTM D422)	Passing #200 (ASTM D1140)	Atterberg Limits (ASTM D4318)		Expansion Index (ASTM D 4829)	R-Value (CTM 301)	Direct Shear (ASTM D3080)				Consolidation (ASTM D2435)			Compaction (ASTM D2435)		Corrosivity (CTM 422, 417, 643)			
									Peak		Ultimate										
Boring No.	Depth (ft)		(% G : S : F)	(% F)	Liquid Limit	Plasticity Index			c (psf)	ϕ (^{o})	c (psf)	ϕ (^{o})	P_C (ksf)	C_C	C_S	Max Dry Density (pcf)	Opt. Moisture (%)	pH	Soluble Sulfate (ppm)	Soluble Chloride (ppm)	Minimum Resistivity (ohm-cm)
B-1	1.0 - 5.0	Sandy Lean CLAY (CL)	1 : 47 : 52		32	19	55		Remolded to 90% RC 125	29.0	125	29.0	Remolded to 90% RC 3.10	0.135	0.010	124.9	9.9	8.02	150	180	1776
	5.0	Sandy Lean CLAY (CL)							5	29.5	5	29.0	1.60	0.095	0.021						
	10.0	Silty SAND (SM)							145	32.0	5	32.0									
B-2	1.0 - 5.0	Clayey SAND (SC)	5 : 61 : 34					52								131.1	9.7				
	7.5	Silty SAND with Gravel (SM)							10	30.5	5	30.0									
	12.5	Silty GRAVEL with Sand (GM)	37 : 32 : 31																		
	25.0	Sandy CLAY/Clayey SAND (CL/SC)							390	28.5	225	27.5									
B-3	12.5	Silty SAND (SM)	5 : 82 : 13																		
B-4	1.0 - 5.0	Clayey SAND (SC)		37	24	9										131.5	8.0	7.39	330	240	1523
TW-1	1.0 - 5.0	Clayey SAND (SC)	8 : 60 : 32		25	9															
	3.5	Clayey SAND (SC)											1.60	0.083	0.016						



Boring No.	Sample No.	Depth	USCS Symbol	Classification	Natural W %	LL	PL	PI
B-1		1.0' - 5.0'	CL	Sandy Lean CLAY				

% +3"	% Gravel	% Sand	% Fines
0	1	47	52

C_u	C_c

Project Name: Boyle Heights Sports Center

Project No.: 106965-2000

PARTICLE SIZE CURVE

(ASTM D422)

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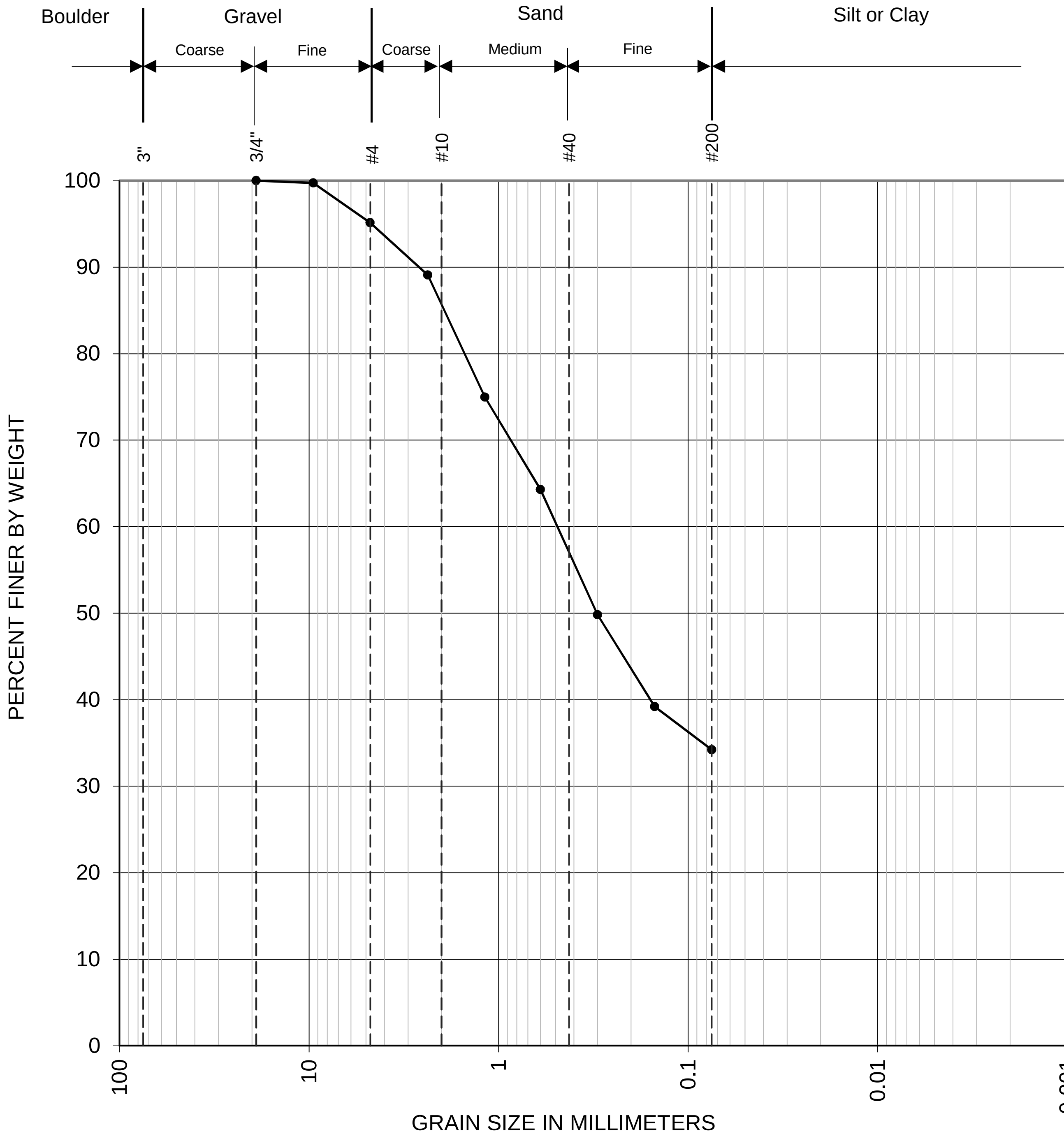

Boring No.	Sample No.	Depth	USCS Symbol	Classification	Natural W %	LL	PL	PI
B-2		1.0' - 5.0'	SC	Clayey SAND				

% +3"	% Gravel	% Sand	% Fines
0	5	61	34

C_u	C_c

Project Name: Boyle Heights Sports Center

Project No.: 106965-2000

PARTICLE SIZE CURVE

(ASTM D422)

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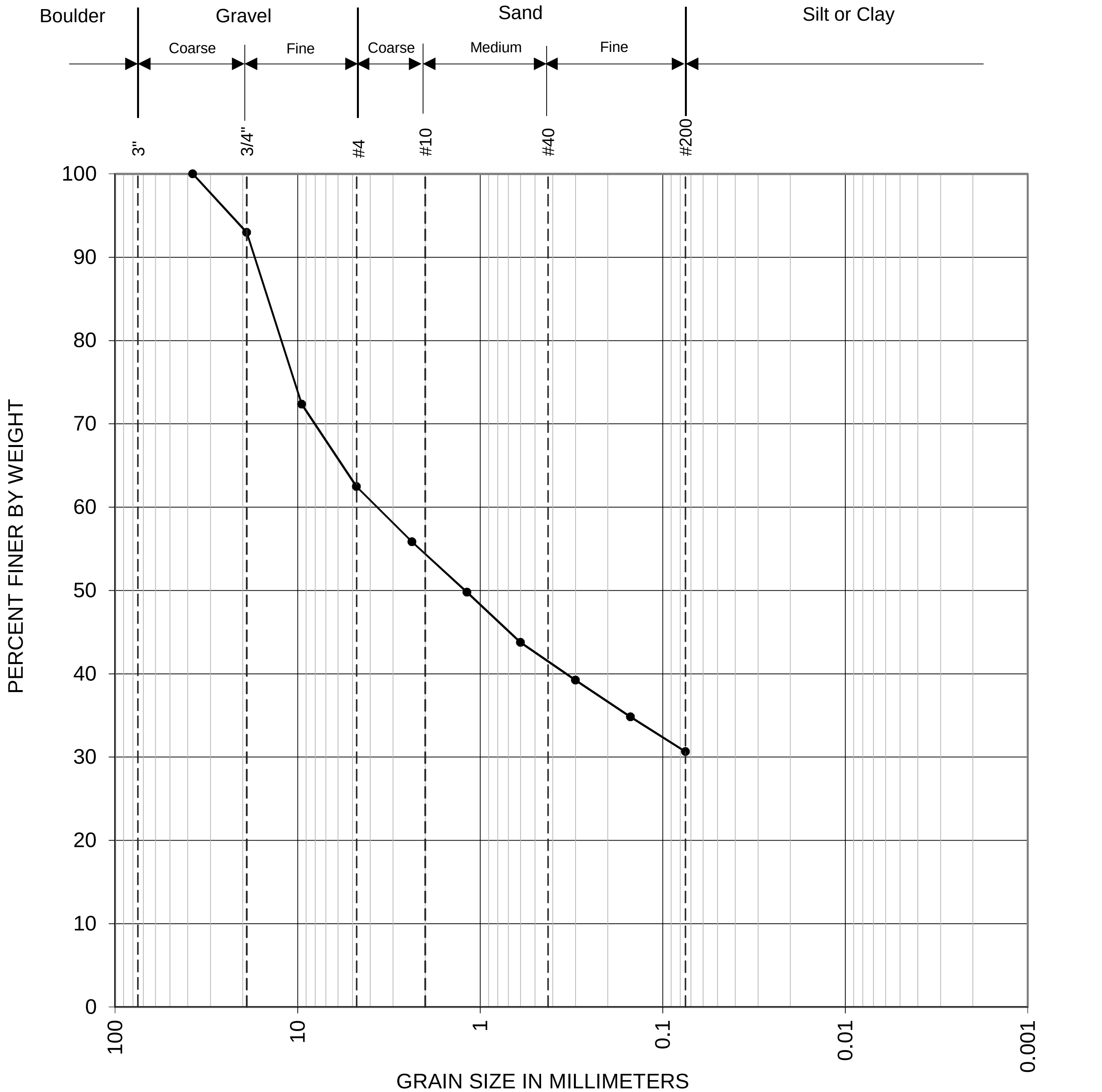


Boring No.	Sample No.	Depth	USCS Symbol	Classification	Natural W %	LL	PL	PI
B-2		12.5'	GM	Silty GRAVEL with Sand				

% +3"	% Gravel	% Sand	% Fines
0	37	32	31

C_u	C_c

Project Name: Boyle Heights Sports Center

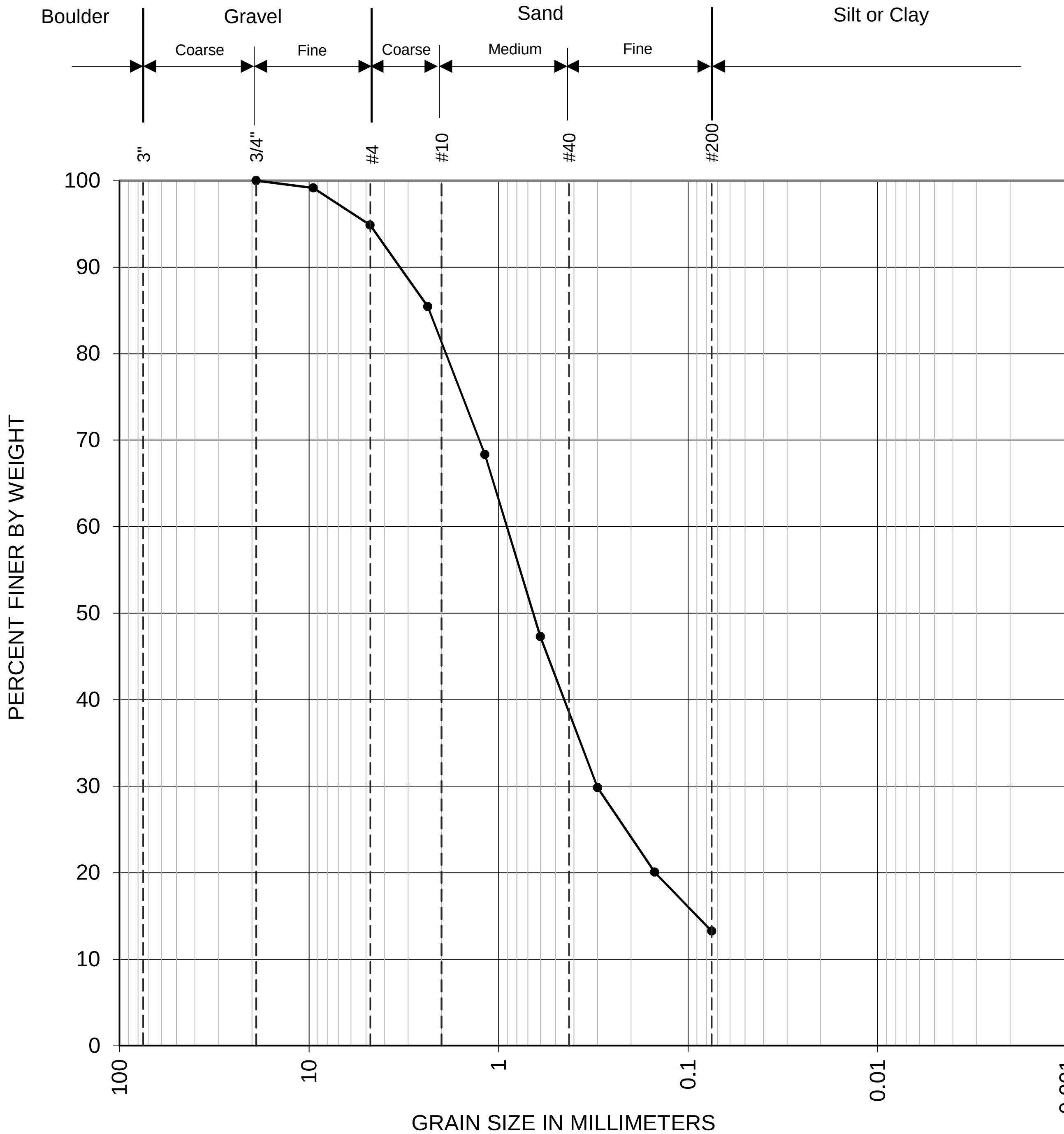
Project No.: 106965-2000

PARTICLE SIZE CURVE

(ASTM D422)

WILLDAN Geotechnical

extending your reach



Boring No.	Sample No.	Depth	USCS Symbol	Classification	Natural W %	LL	PL	PI
B-3		12.5'	SM	Silty SAND				

% +3"	% Gravel	% Sand	% Fines
0	5	82	13

C_u	C_c

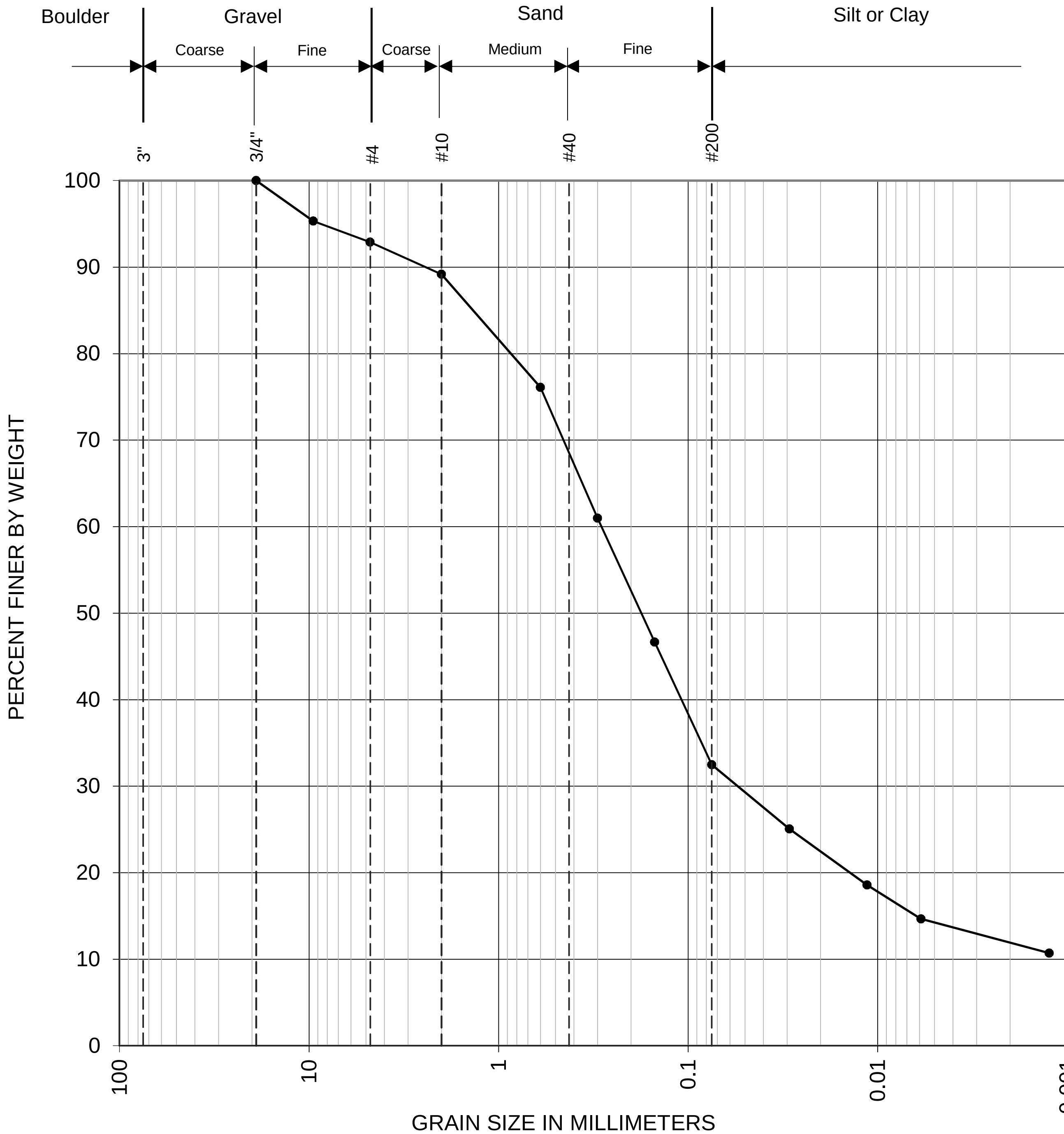
Project Name: Boyle Heights Sports Center

Project No.: 106965-2000

PARTICLE SIZE CURVE

(ASTM D422)

WILLDAN Geotechnical | extending your reach



Boring No.	Sample No.	Depth	USCS Symbol	Classification	Natural W %	LL	PL	PI
TW-1		1.0' - 5.0'	SC	Clayey SAND				

% +3"	% Gravel	% Sand	% Fines
0	8	60	32

C_u	C_c

Project Name: Boyle Heights Sports Center

Project No.: 106965-2000

PARTICLE SIZE CURVE

(ASTM D422)

WILLDAN Geotechnical | extending your reach

Project Name :	Boyle Heights Sports Center	Project No.:	106965-2000		
Sample Location / Source :	B-1	Tested by :	RMC	Date:	7/26/2017
Sample Depth / No. :	1' - 5'	Sampled by:		Date:	
Sample Description / Classification :	Sandy Lean CLAY (CL)				

PLASTIC LIMIT

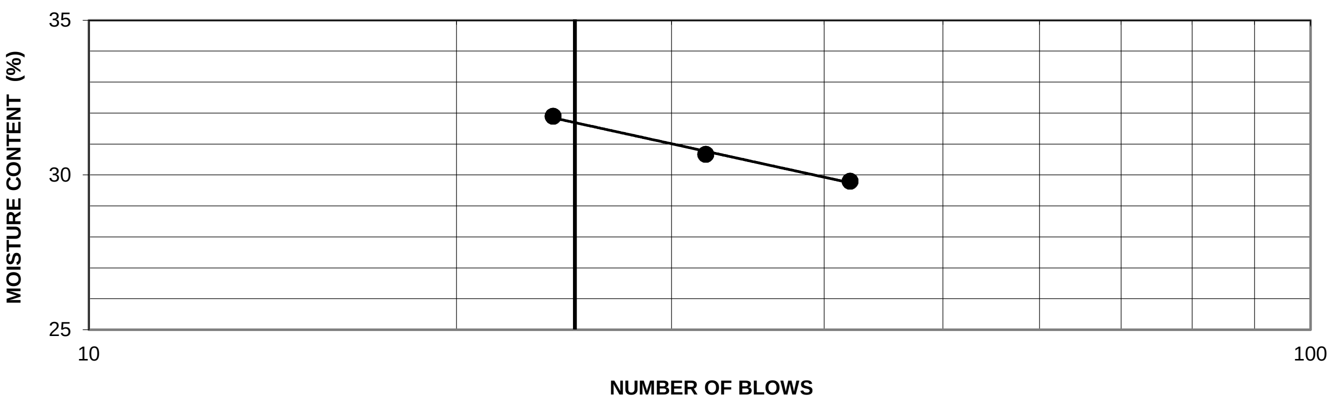
DETERMINATION NO.		1	
DISH NO.		7	
MASS, DISH + WET SOIL	(g)	39.85	
MASS, DISH + DRY SOIL	(g)	38.32	
MASS OF WATER	(g)	1.53	
MASS OF DISH	(g)	26.3	
MASS OF DRY SOIL	(g)	12.02	
MOISTURE CONTENT	(%)	12.7	

LIQUID LIMIT

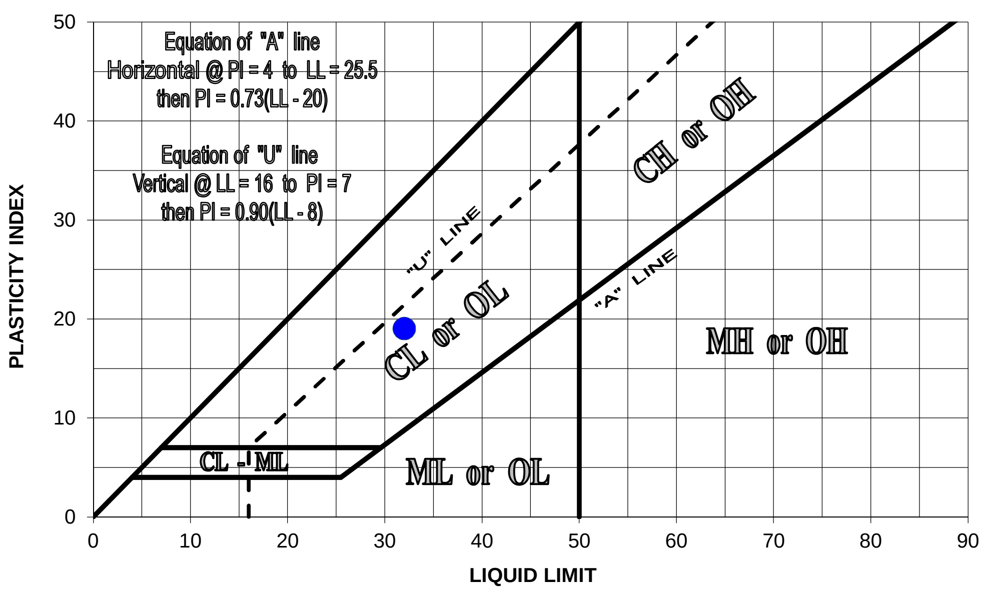
DETERMINATION NO.		1	2	3
DISH NO.		23	9	22
MASS, DISH + WET SOIL	(g)	37.78	34.50	39.75
MASS, DISH + DRY SOIL	(g)	34.38	31.36	36.38
MASS OF WATER	(g)	3.40	3.14	3.37
MASS OF DISH	(g)	23.72	21.12	25.07
MOISTURE CONTENT	(%)	31.9	30.7	29.8
NUMBER OF BLOWS		24	32	42

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	
LIQUID LIMIT (LL)	32
PLASTIC LIMIT (PL)	13
PLASTICITY INDEX (PI)	19
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

ATTERBERG LIMITS

(ASTM D4318)

WILLDAN Geotechnical | extending your reach

Project Name :	Boyle Heights Sports Center	Project No.:	106965-2000		
Sample Location / Source :	B-4	Tested by :	RMC	Date:	7/26/2017
Sample Depth / No. :	1' - 5'	Sampled by:		Date:	
Sample Description / Classification :	Clayey SAND (SC)				

PLASTIC LIMIT

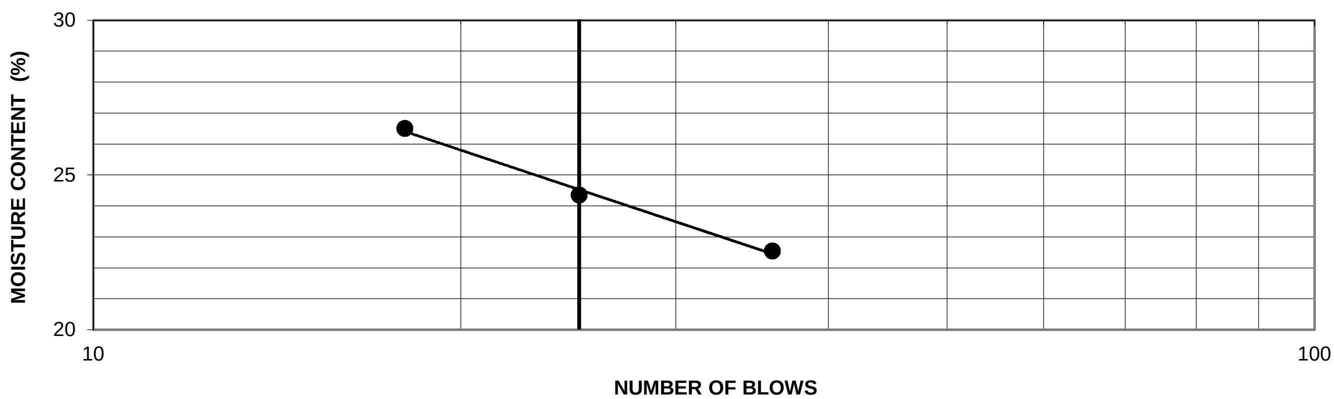
DETERMINATION NO.		1	
DISH NO.		21	
MASS, DISH + WET SOIL	(g)	37.28	
MASS, DISH + DRY SOIL	(g)	35.54	
MASS OF WATER	(g)	1.74	
MASS OF DISH	(g)	23.66	
MASS OF DRY SOIL	(g)	11.88	
MOISTURE CONTENT	(%)	14.6	

LIQUID LIMIT

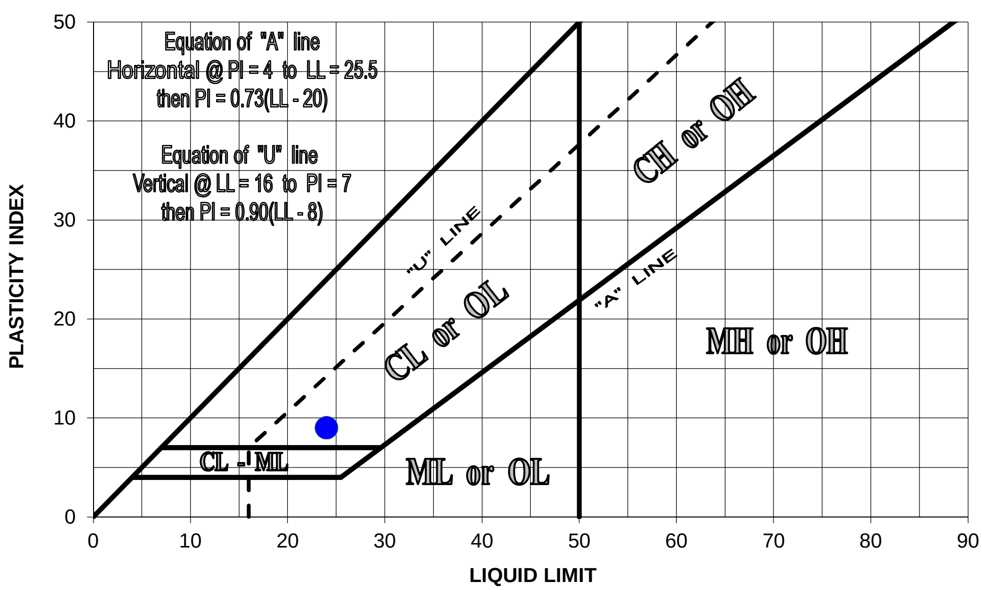
DETERMINATION NO.		1	2	3
DISH NO.		22	9	19
MASS, DISH + WET SOIL	(g)	38.53	37.25	39.06
MASS, DISH + DRY SOIL	(g)	35.22	34.09	36.52
MASS OF WATER	(g)	3.31	3.16	2.54
MASS OF DISH	(g)	22.73	21.11	25.25
MOISTURE CONTENT	(%)	26.5	24.3	22.5
NUMBER OF BLOWS		18	25	36

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	
LIQUID LIMIT (LL)	24
PLASTIC LIMIT (PL)	15
PLASTICITY INDEX (PI)	9
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

ATTERBERG LIMITS

(ASTM D4318)

WILLDAN Geotechnical | extending your reach

Project Name :	Boyle Heights Sports Center	Project No.:	106965-2000		
Sample Location / Source :	TW-1	Tested by :	RMC	Date:	7/26/2017
Sample Depth / No. :	1' - 5'	Sampled by:		Date:	
Sample Description / Classification :	Clayey SAND (SC)				

PLASTIC LIMIT

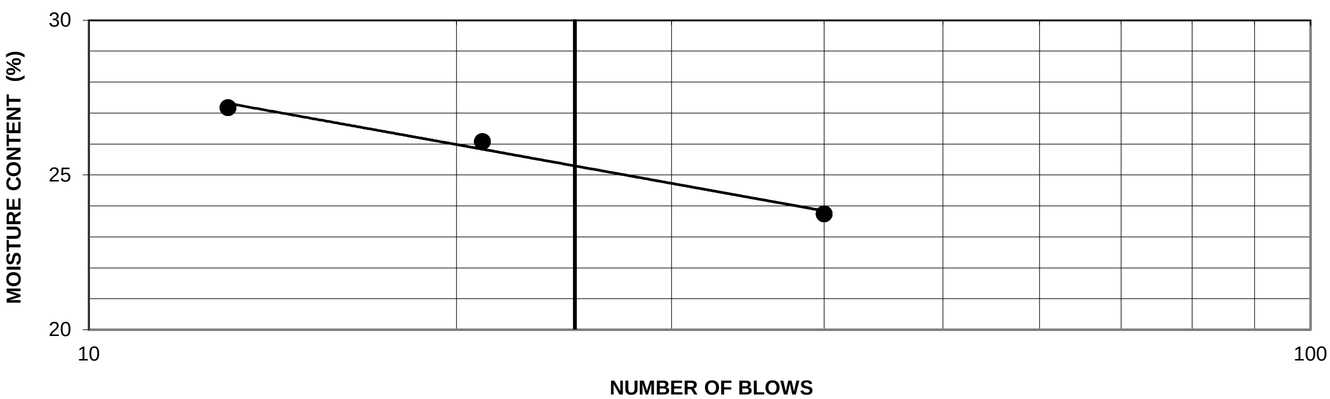
DETERMINATION NO.		1	
DISH NO.		4	
MASS, DISH + WET SOIL	(g)	36.39	
MASS, DISH + DRY SOIL	(g)	34.42	
MASS OF WATER	(g)	1.97	
MASS OF DISH	(g)	22.23	
MASS OF DRY SOIL	(g)	12.19	
MOISTURE CONTENT	(%)	16.2	

LIQUID LIMIT

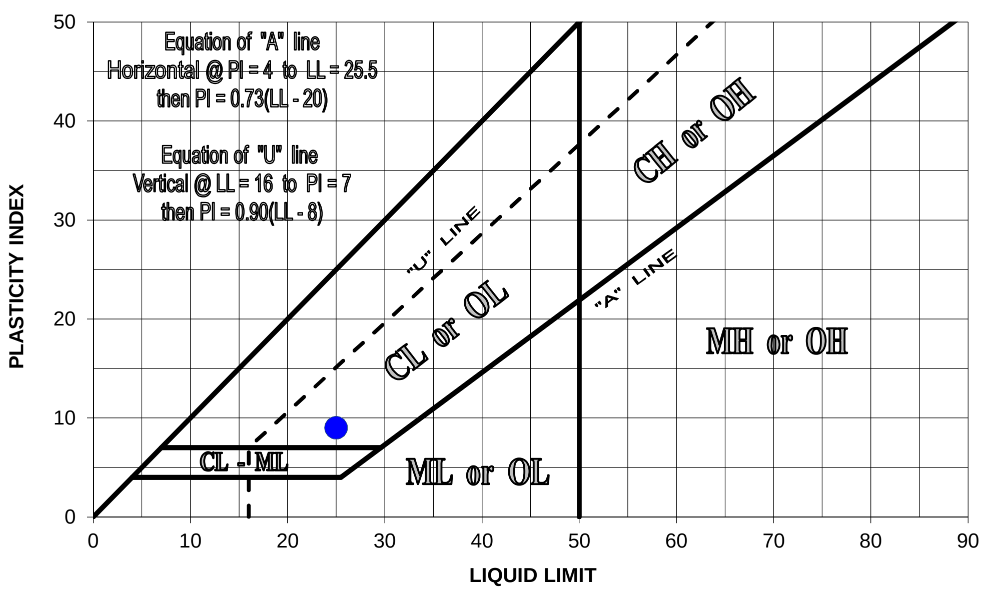
DETERMINATION NO.		1	2	3
DISH NO.		19	9	6
MASS, DISH + WET SOIL	(g)	32.78	34.03	39.44
MASS, DISH + DRY SOIL	(g)	31.09	31.36	36.16
MASS OF WATER	(g)	1.69	2.67	3.28
MASS OF DISH	(g)	23.97	21.12	24.09
MOISTURE CONTENT	(%)	23.7	26.1	27.2
NUMBER OF BLOWS		40	21	13

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	
LIQUID LIMIT (LL)	25
PLASTIC LIMIT (PL)	16
PLASTICITY INDEX (PI)	9
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

ATTERBERG LIMITS

(ASTM D4318)

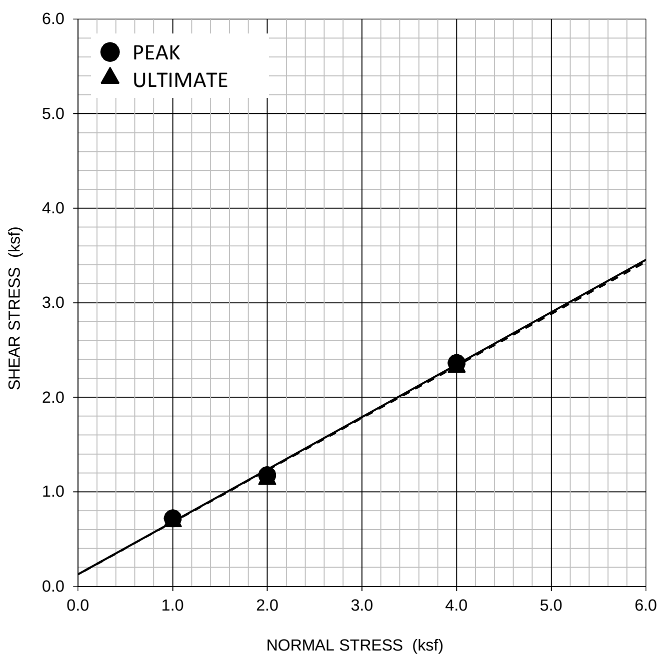
WILLDAN Geotechnical | extending your reach

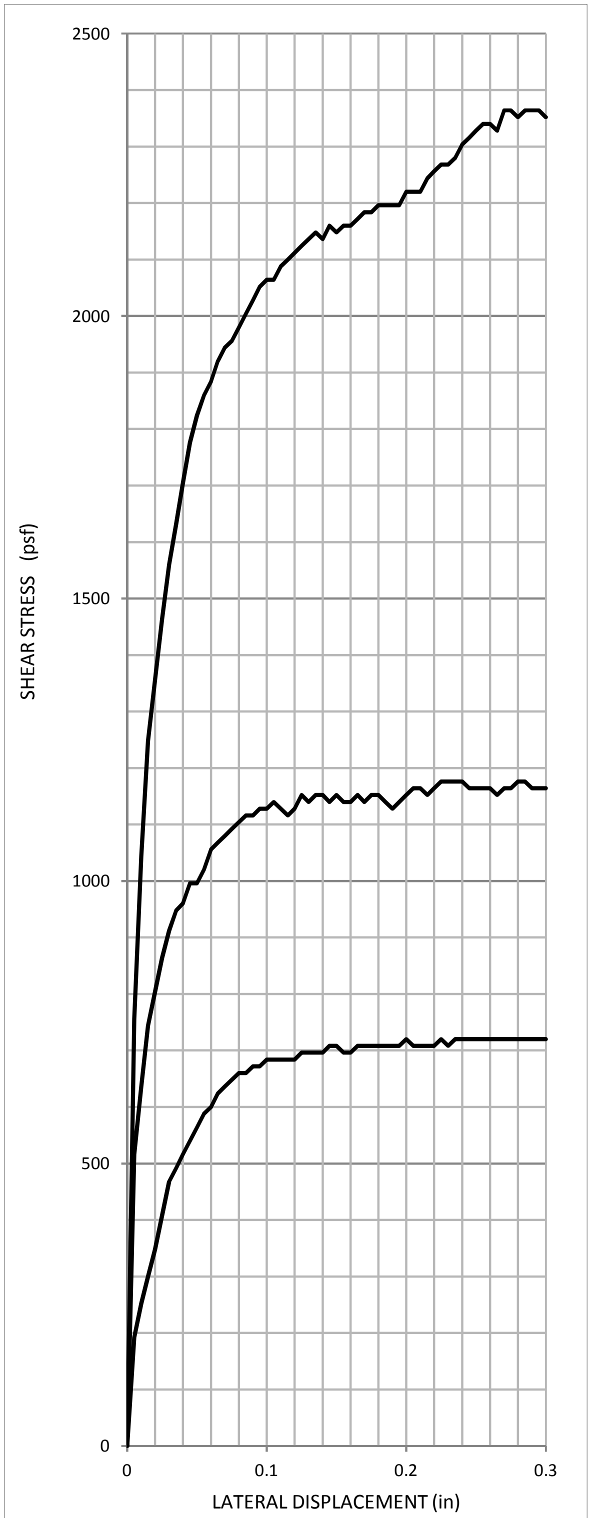
Project Name :	Boyle Heights Sports Center	Project No. :	106965-2000
Boring / Sample No :	B-1 Depth : 1' - 5'	Tested By :	RMC Date: 17-Jul-17
Sample Descriptions / Classification :	Sandy Lean CLAY (CL)	Sampled By :	Date:

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,Peak (ksf)	0.720		1.176		2.364	
Shear Stress,Ultimate(ksf)	0.720		1.164		2.352	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring (g)	194.58	204.8	190.7	200.9	190.2	200.8
Dry Wt. of Soil + Ring (g)		181.2		177.2		176.8
Weight of Water (g)	13.4	23.7	13.5	23.7	13.4	24.0
Weight of Ring (g)		45.7		41.3		41.8
Weight of Dry Soil (g)		135.5		135.9		135.0
Moisture Content (%)	9.9	17.5	9.9	17.4	9.9	17.8
Wet Density (pcf)	123.6	132.2	124.0	132.5	123.1	131.9
Dry Density (pcf)		112.5		112.8		112.0
Specific Gravity (Assumed)	2.68					
Specimen Thickness (in)	1.00					
Specimen Diameter (in)	2.416					
Degree of Saturation (%)	54.5	96.2	55.0	96.8	53.9	96.6
Void Ratio		0.486		0.483		0.493

Lateral Displacement, d_h (in)		0.3
Displacement Rate, d_r (in/min)		0.03
Elapsed Time of Test, t_e (min)		10.00
Specimen	Undisturbed	-
	Remolded	90% RC
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion, c (psf)	125	125
Friction Angle, ϕ (degree)	29.0	29.0





Remarks : ______________________

DIRECT SHEAR TEST
(ASTM D3080)

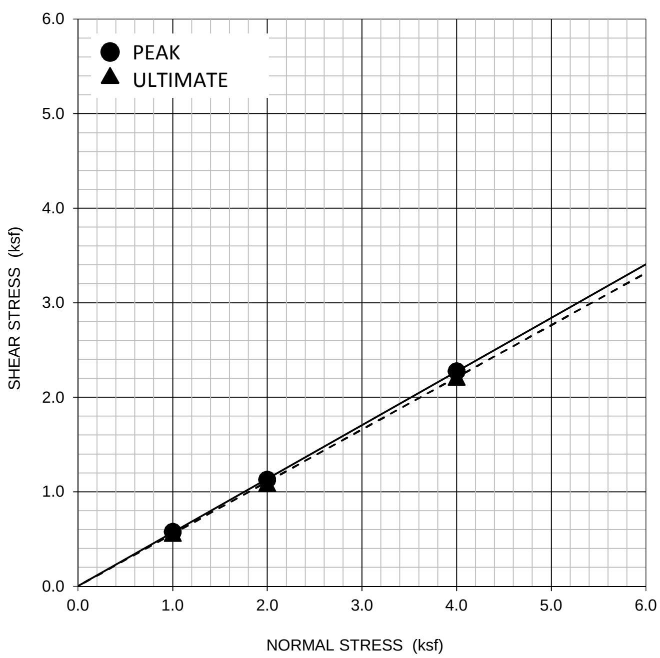
WILLDAN Geotechnical | extending your reach

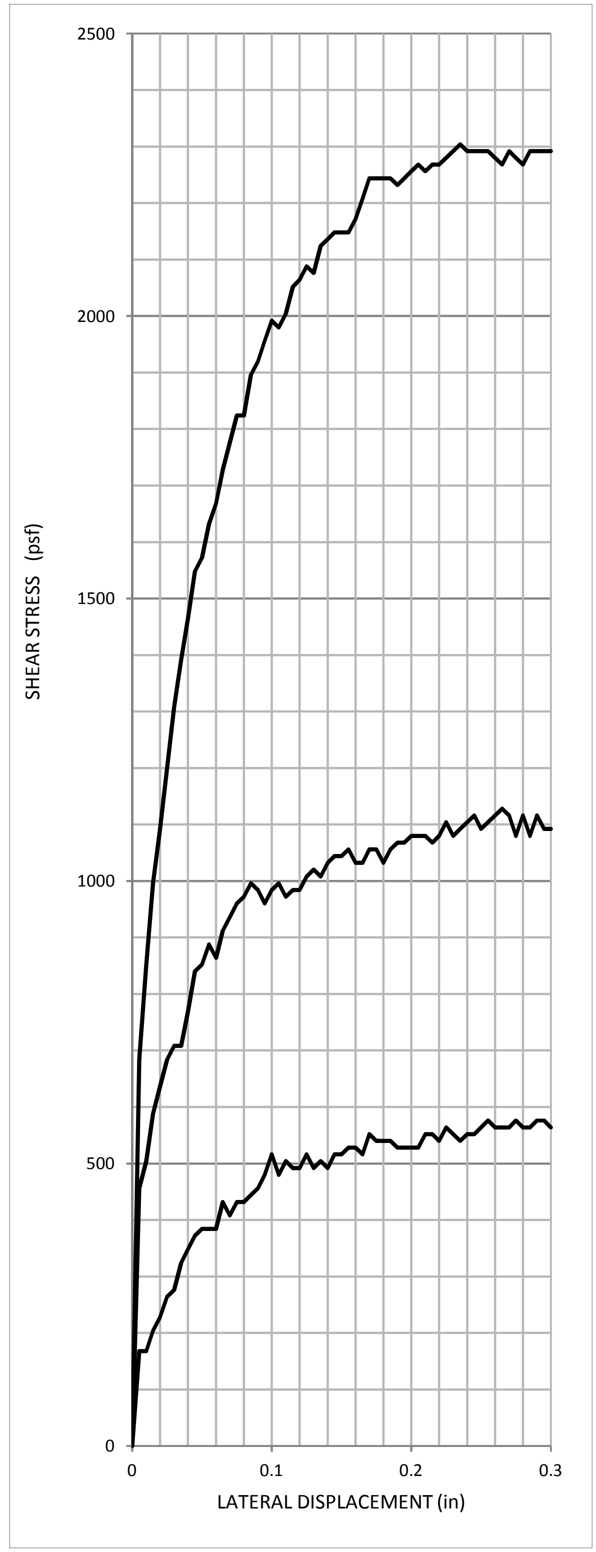
Project Name :	Boyle Heights Sports Center	Project No. :	106965-2000
Boring / Sample No :	B-1 Depth : 5.0'	Tested By :	RMC Date: 17-Jul-17
Sample Descriptions / Classification :	Sandy Lean CLAY (CL)	Sampled By :	Date:

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,Peak (ksf)	0.576		1.128		2.275	
Shear Stress,Ultimate(ksf)	0.564		1.092		2.215	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring (g)	161.01	185.7	160.2	184.9	161.5	187.9
Dry Wt. of Soil + Ring (g)		155.2		154.5		155.7
Weight of Water (g)	5.8	30.5	5.8	30.5	5.8	32.1
Weight of Ring (g)		43.7		43.8		44.3
Weight of Dry Soil (g)		111.6		110.7		111.4
Moisture Content (%)	5.2	27.3	5.2	27.5	5.2	28.9
Wet Density (pcf)	97.4	117.9	96.6	117.2	97.3	119.2
Dry Density (pcf)		92.6		91.9		92.5
Specific Gravity (Assumed)	2.68					
Specimen Thickness (in)	1.00					
Specimen Diameter (in)	2.416					
Degree of Saturation (%)	17.3	90.9	17.0	90.0	17.3	95.7
Void Ratio		0.806		0.820		0.808

Lateral Displacement, d_h (in)		0.3
Displacement Rate, d_r (in/min)		0.03
Elapsed Time of Test, t_e (min)		10.00
Specimen	Undisturbed	X
	Remolded	-
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion, c (psf)	5	5
Friction Angle, ϕ (degree)	29.5	29.0





Remarks :

DIRECT SHEAR TEST
(ASTM D3080)

WILLDAN Geotechnical | extending your reach

Project Name : Boyle Heights Sports Center

Project No. : 106965-2000

Boring / Sample No : B-1 Depth : 10.0'

Tested By : RMC Date: 17-Jul-17

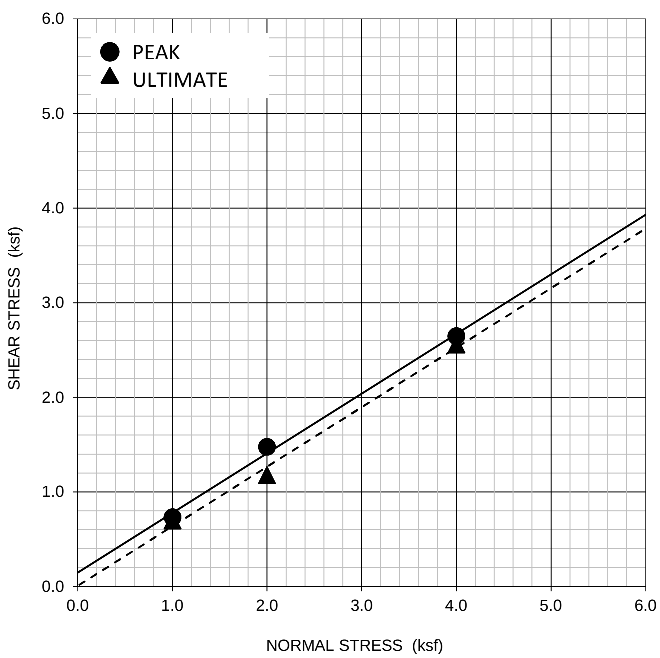
Sample Descriptions / Classification : Silty SAND (SM)

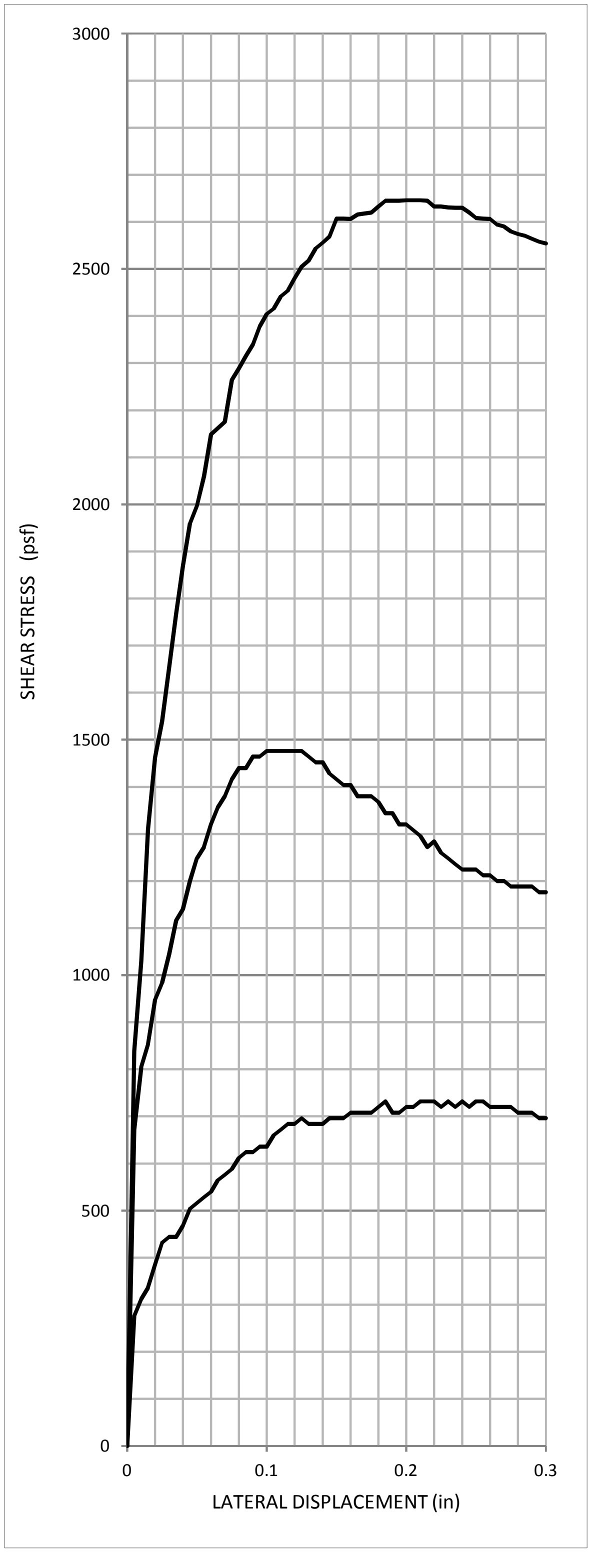
Sampled By : Date:

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,Peak (ksf)	0.732		1.476		2.646	
Shear Stress,Ultimate(ksf)	0.696		1.176		2.554	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring (g)	187.12	200.9	193.6	206.5	188.6	202.8
Dry Wt. of Soil + Ring (g)		178.0		184.3		179.5
Weight of Water (g)	9.1	22.9	9.3	22.2	9.1	23.3
Weight of Ring (g)		42.0		45.4		43.4
Weight of Dry Soil (g)		136.0		138.9		136.1
Moisture Content (%)	6.7	16.8	6.7	16.0	6.7	17.1
Wet Density (pcf)	120.5	131.9	123.1	133.8	120.6	132.3
Dry Density (pcf)		112.9		115.3		113.0
Specific Gravity (Assumed)	2.68					
Specimen Thickness (in)	1.00					
Specimen Diameter (in)	2.416					
Degree of Saturation (%)	37.3	93.6	39.9	95.2	37.4	95.6
Void Ratio		0.481		0.450		0.480

Lateral Displacement, d_h (in)		0.3
Displacement Rate, d_r (in/min)		0.05
Elapsed Time of Test, t_e (min)		6.00
Specimen	Undisturbed	X
	Remolded	-
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion, c (psf)	145	5
Friction Angle, ϕ (degree)	32.0	32.0





Remarks :

DIRECT SHEAR TEST

(ASTM D3080)

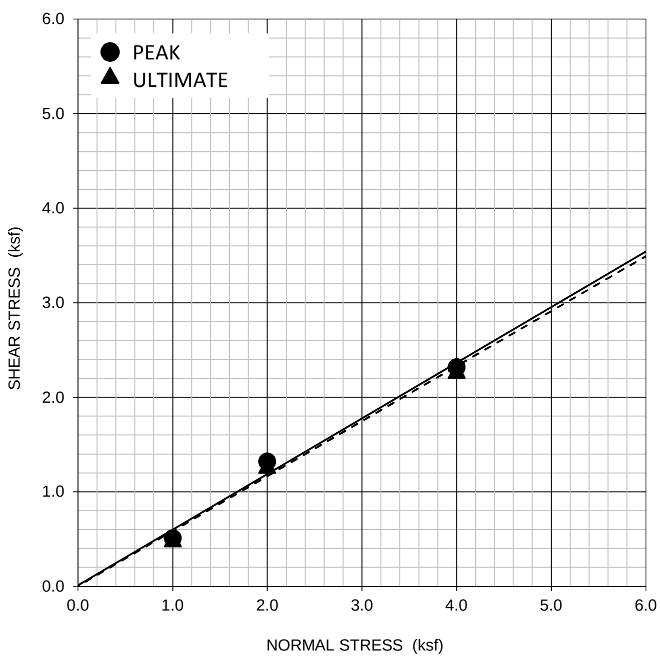
WILLDAN Geotechnical | extending your reach

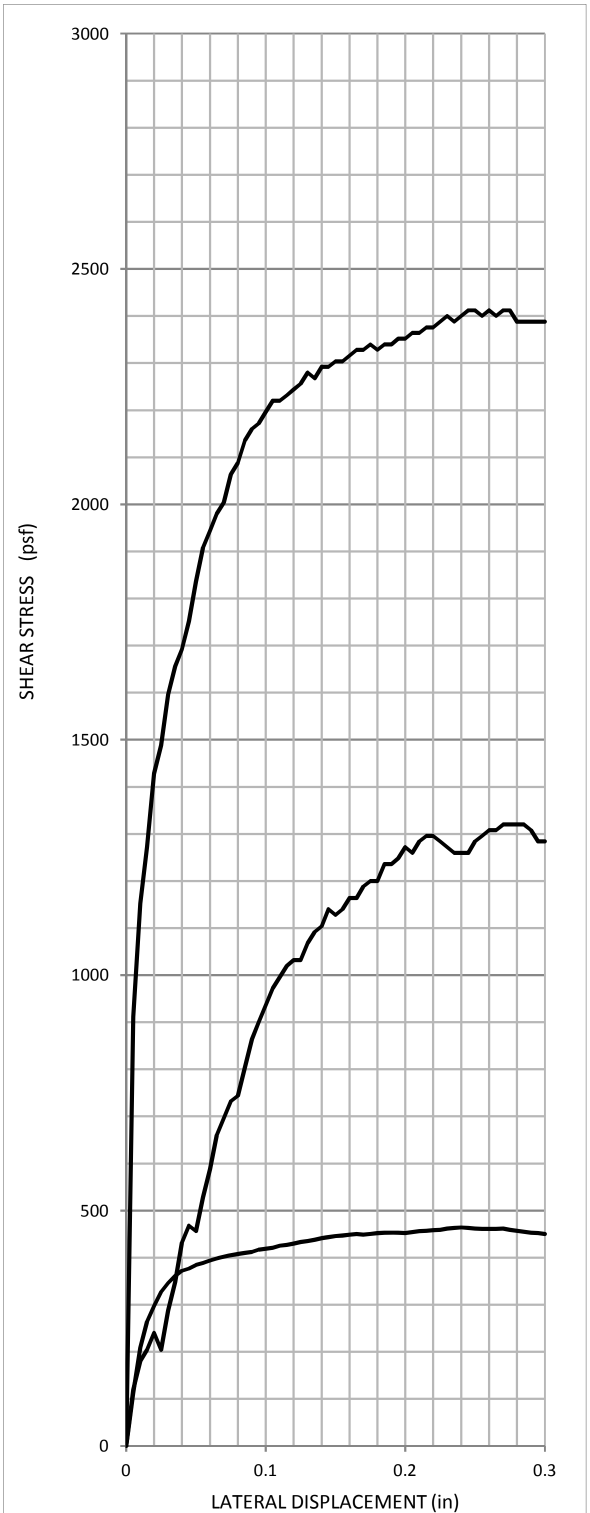
Project Name :	Boyle Heights Sports Center	Project No. :	106965-2000
Boring / Sample No :	B-2 Depth : 7.5'	Tested By :	RMC Date: 17-Jul-17
Sample Descriptions / Classification :	Silty SAND with Gravel (SM)	Sampled By :	Date:

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,Peak (ksf)	0.510		1.320		2.320	
Shear Stress,Ultimate(ksf)	0.505		1.284		2.289	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring (g)	161.11	186.9	162.3	187.9	162.6	188.3
Dry Wt. of Soil + Ring (g)		156.2		157.2		157.6
Weight of Water (g)	5.0	30.7	5.0	30.6	5.0	30.7
Weight of Ring (g)		43.7		43.6		44.3
Weight of Dry Soil (g)		112.5		113.6		113.3
Moisture Content (%)	4.4	27.3	4.4	26.9	4.4	27.1
Wet Density (pcf)	97.5	118.9	98.5	119.8	98.2	119.6
Dry Density (pcf)		93.4		94.4		94.1
Specific Gravity (Assumed)	2.68					
Specimen Thickness (in)	1.00					
Specimen Diameter (in)	2.416					
Degree of Saturation (%)	14.9	92.6	15.3	93.5	15.2	93.3
Void Ratio		0.790		0.772		0.777

Lateral Displacement, d_h (in)		0.3
Displacement Rate, d_r (in/min)		0.03
Elapsed Time of Test, t_e (min)		10.00
Specimen	Undisturbed	X
	Remolded	-
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion, c (psf)	10	5
Friction Angle, ϕ (degree)	30.5	30.0





Remarks :

DIRECT SHEAR TEST

(ASTM D3080)

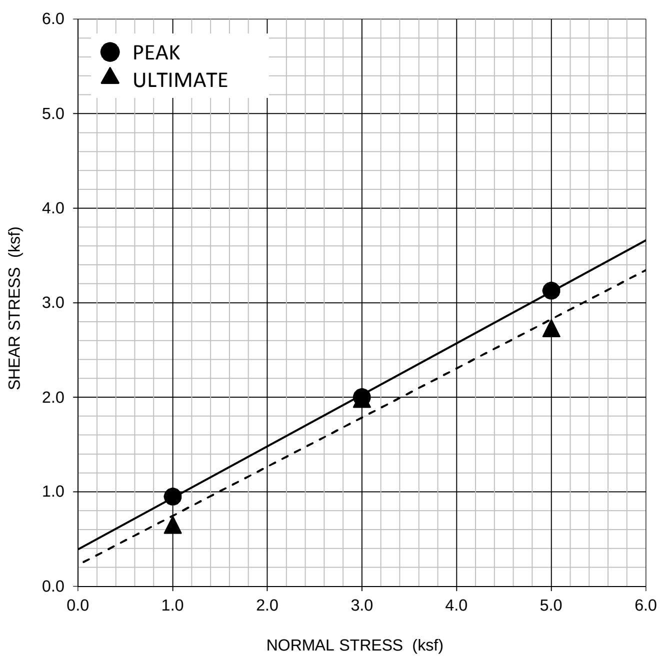
WILLDAN Geotechnical | extending your reach

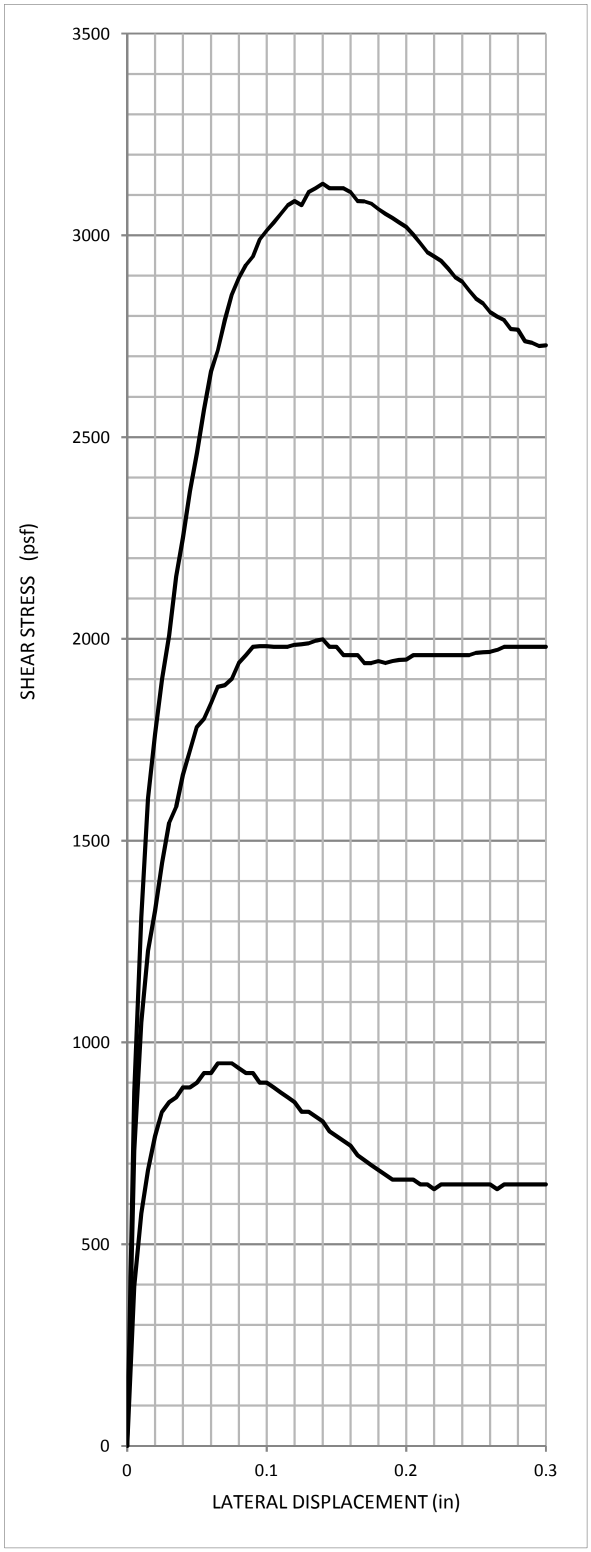
Project Name :	Boyle Heights Sports Center	Project No. :	106965-2000
Boring / Sample No :	B-2 Depth : 25.0'	Tested By :	RMC Date: 25-Jul-17
Sample Descriptions / Classification :	Sandy CLAY/Clayey SAND (CL/SC)	Sampled By :	Date:

Applied Normal Load (ksf)	1.0		3.0		5.0	
Shear Stress,Peak (ksf)	0.948		1.999		3.128	
Shear Stress,Ultimate(ksf)	0.648		1.980		2.727	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring (g)	196.16	206.2	196.3	207.2	200.2	209.8
Dry Wt. of Soil + Ring (g)		183.9		184.2		187.8
Weight of Water (g)	12.3	22.3	12.1	23.0	12.3	21.9
Weight of Ring (g)		42.8		45.0		46.4
Weight of Dry Soil (g)		141.1		139.2		141.5
Moisture Content (%)	8.7	15.8	8.7	16.5	8.7	15.5
Wet Density (pcf)	127.3	135.6	125.6	134.7	127.7	135.7
Dry Density (pcf)		117.1		115.6		117.5
Specific Gravity (Assumed)	2.68					
Specimen Thickness (in)	1.00					
Specimen Diameter (in)	2.416					
Degree of Saturation (%)	54.5	98.9	52.2	99.0	55.0	98.1
Void Ratio		0.428		0.447		0.424

Lateral Displacement, d_h (in)		0.3
Displacement Rate, d_r (in/min)		0.03
Elapsed Time of Test, t_e (min)		10.00
Specimen	Undisturbed	X
	Remolded	-
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion, c (psf)	390	225
Friction Angle, ϕ (degree)	28.5	27.5



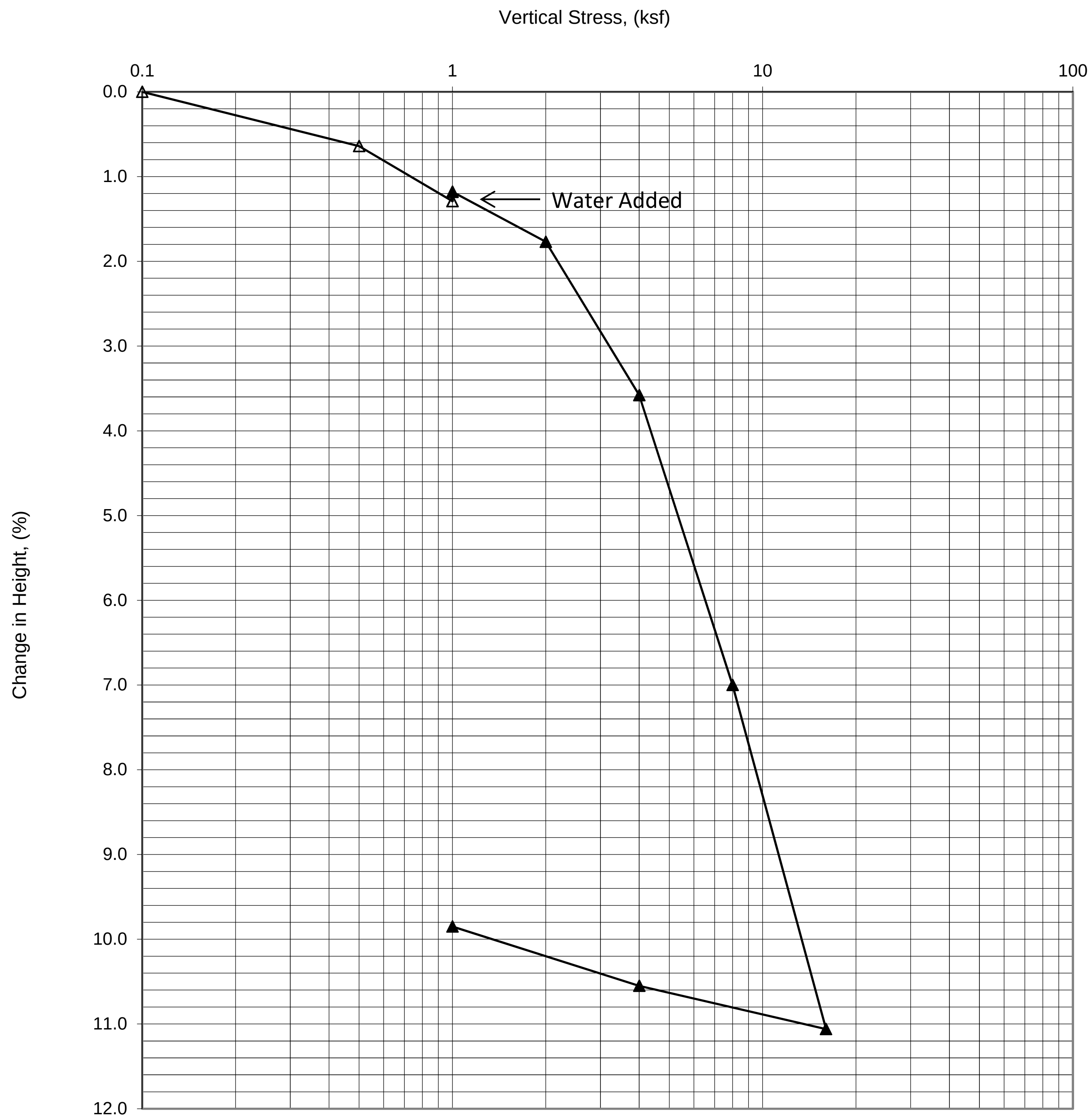


Remarks :

DIRECT SHEAR TEST

(ASTM D3080)

WILLDAN Geotechnical | extending your reach



Boring No. : B-1 Depth,(ft) : 1' - 5' Pre-Consolidation Pressure (P_c), ksf : 3.10

Sample Descriptions / Classification: Sandy Lean CLAY (CL) (Remolded to 90% RC) Overburden Pressure (P_o), ksf : 0.34

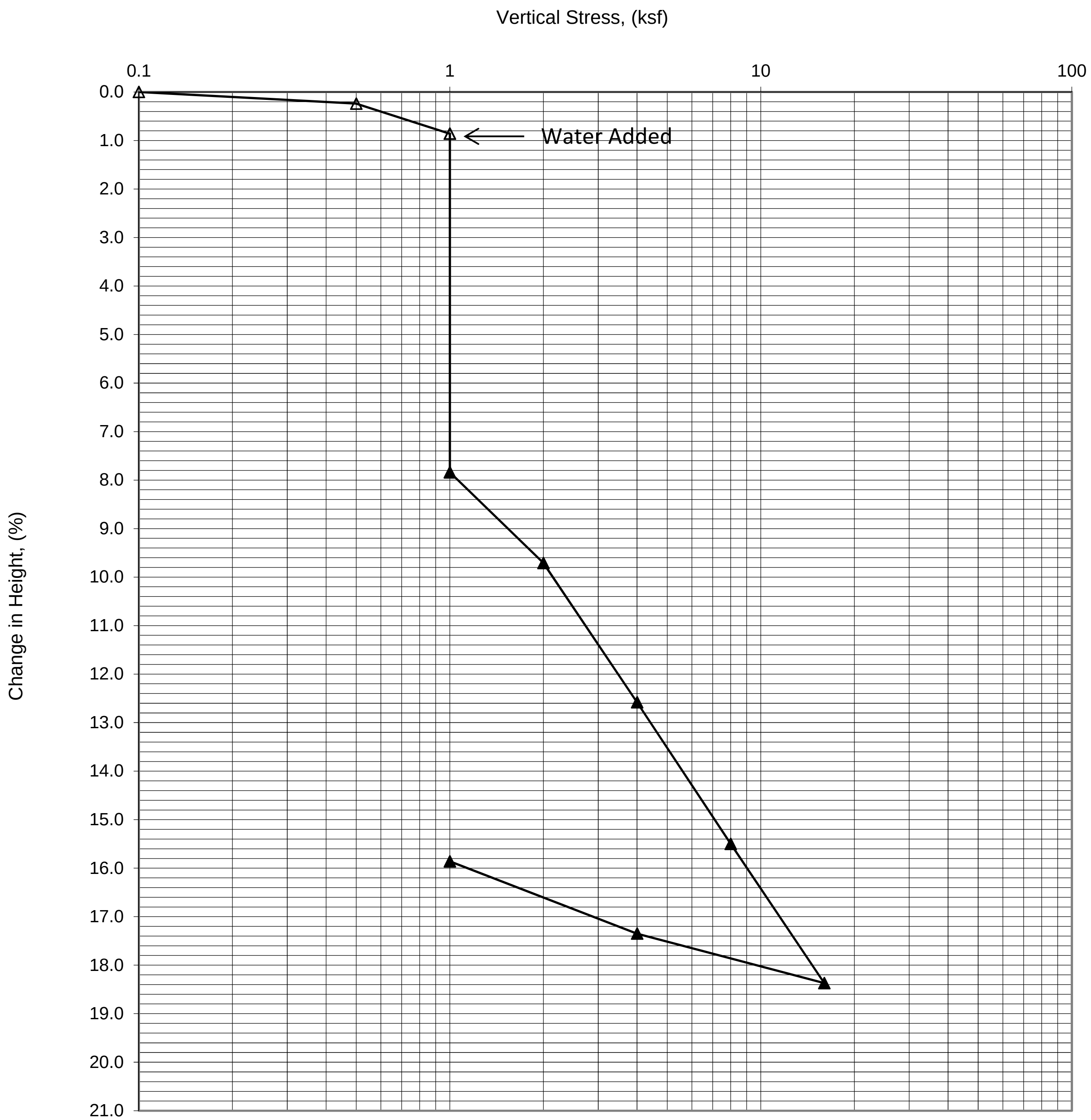
Sp. Gravity : 2.68 (Assumed) Compression Index, C_c : 0.135 Swell Index, C_s : 0.010

	Specimen Height (inches)	Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	9.9	112.0	53.9	0.494
Final	0.9015	12.8	124.2	99.0	0.347

Consolidation Test
(ASTM D2435)

WILLDAN Geotechnical extending your reach

Boyle Heights Sports Center | **Project No. 106965-2000** | **27-Jul-17**



Boring No. : B-1 Depth,(ft) : 5 Pre-Consolidation Pressure (P_c), ksf : 1.60

Sample Descriptions / Classification : Sandy Lean CLAY (CL) Overburden Pressure (P_o), ksf : 0.48

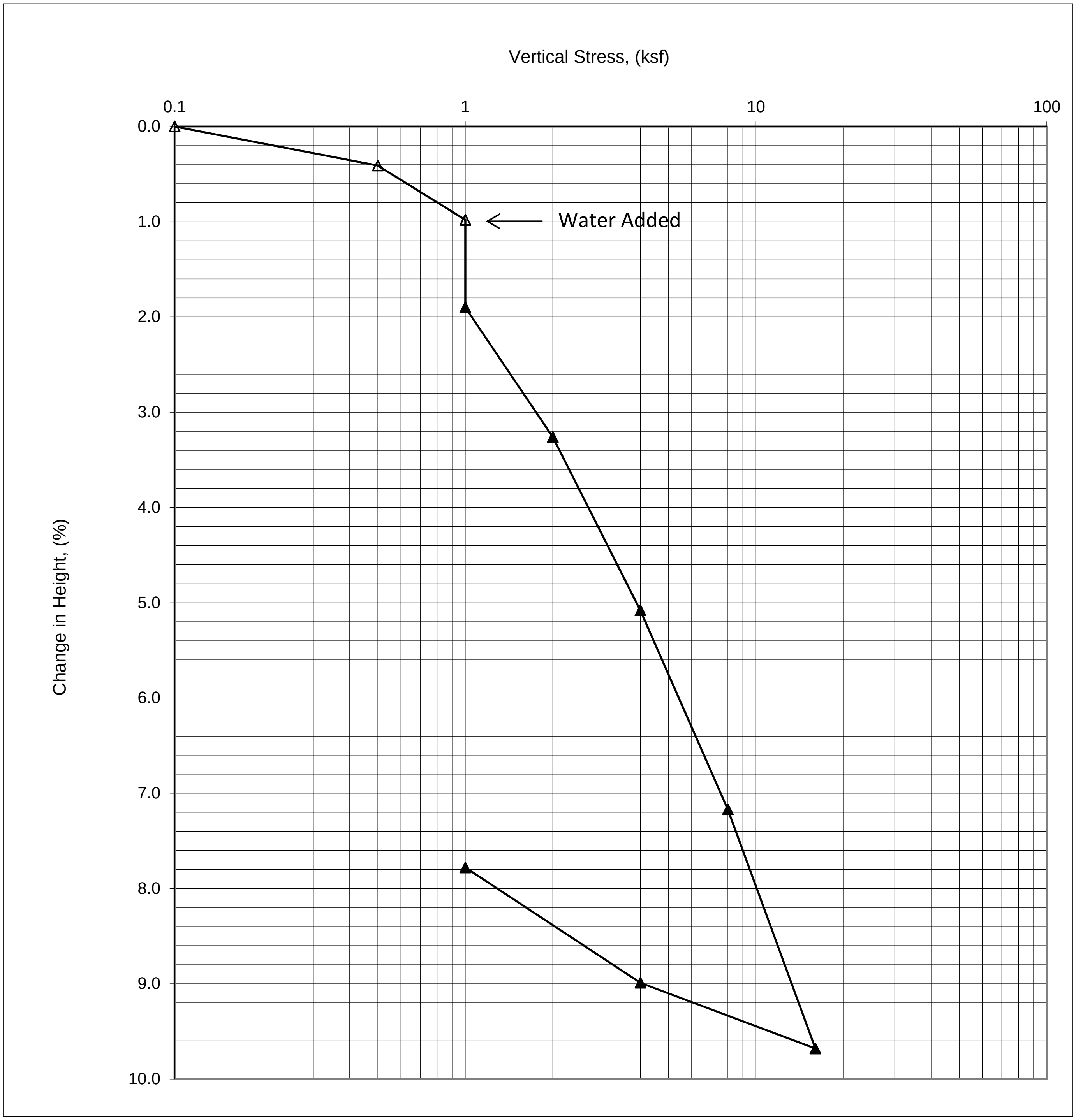
Sp. Gravity : 2.68 (Assumed) Compression Index, C_c : 0.095 Swell Index, C_s : 0.021

Specimen Height (inches)		Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	7.7	91.6	24.9	0.826
Final	0.8414	19.7	108.8	98.2	0.537

Consolidation Test
(ASTM D2435)

WILLDAN Geotechnical extending your reach

Boyle Heights Sports Center | **Project No. 106965-2000** | **27-Jul-17**



Boring No. : TW-1 Depth,(ft) : 3.5 Pre-Consolidation Pressure (P_c), ksf : 1.60

Sample Descriptions / Classification : Clayey SAND (SC) Overburden Pressure (P_o), ksf : 0.47

Sp. Gravity : 2.68 (Assumed) Compression Index, C_c : 0.083 Swell Index, C_s : 0.016

Specimen Height (inches)		Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	6.6	123.7	50.5	0.352
Final	0.9222	9.1	134.1	99.1	0.247

Consolidation Test
(ASTM D2435)

WILLDAN Geotechnical extending your reach

Boyle Heights Sports Center | **Project No. 106965-2000** | **27-Jul-17**

JOB NAME :	Boyle Heights Sports Center	JOB NUMBER:	106965-2000
SAMPLE NUMBER :		TESTED BY :	RMC
SAMPLE LOCATION :	B-1 @ 1' - 5'	DATE :	13-Jul-17
SAMPLE DESCRIPTIONS / CLASSIFICATION :	Sandy Lean CLAY (CL)		

TEST STANDARD:	ASTM D1557 - 12	METHOD:	A

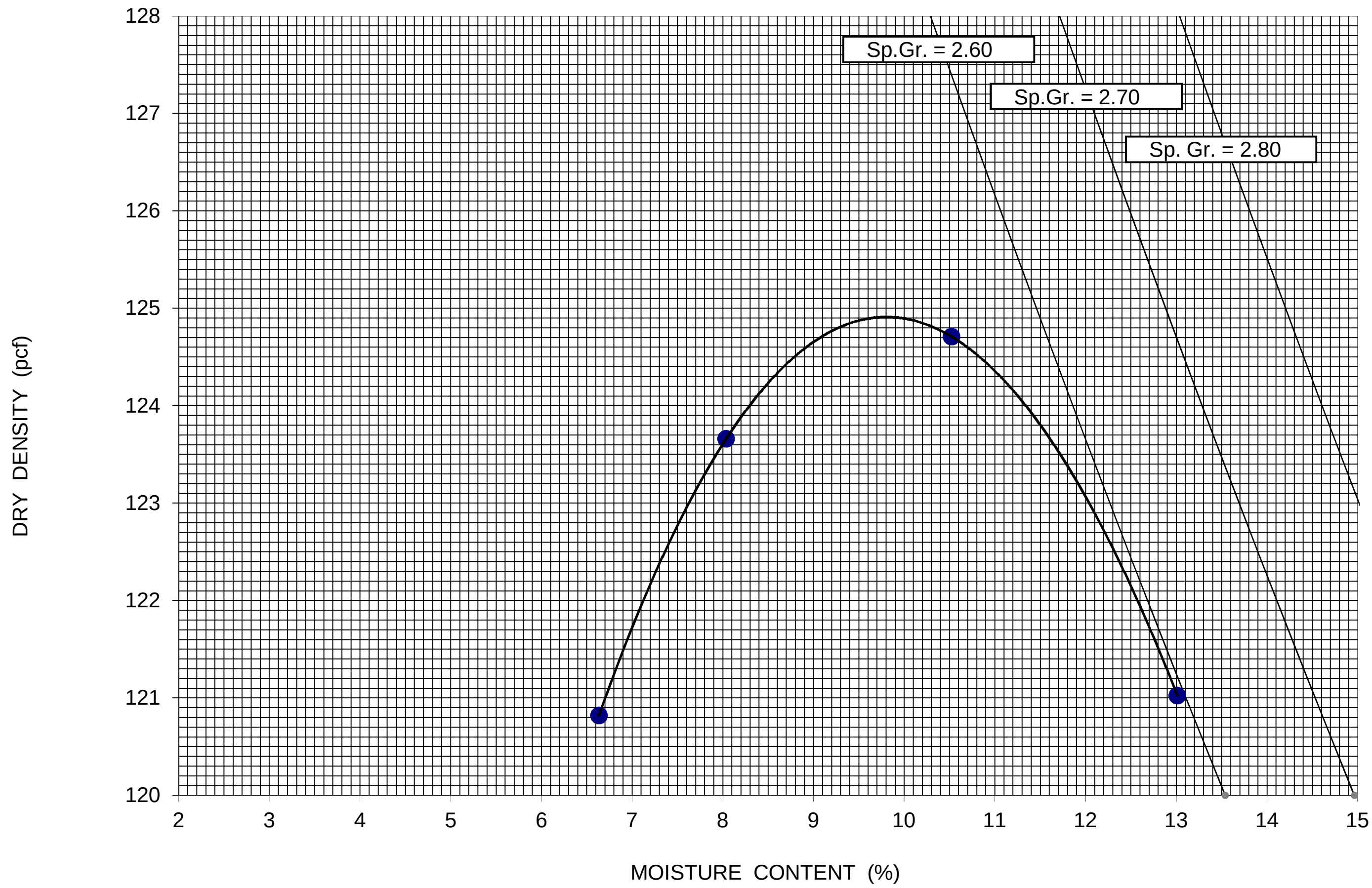
TRIAL NUMBER	1	2	3	4	5
WATER ADDED, (ml)	80	160	240	-	
WT. OF SOIL + MOLD, (g)	4070	4134	4118	3998	
WT.OF MOLD, (g)	2050	2050	2050	2050	
WT. OF WET SOIL, (g)	2020	2084	2068	1948	
WET DENSITY, (pcf)	133.6	137.8	136.8	128.8	
CAN NUMBER	B9	B6	B3	B4	
WET SOIL + TARE, (g)	640.90	673.50	652.60	615.60	
DRY SOIL + TARE, (g)	599.80	617.40	587.20	582.50	
TARE, (g)	88.40	84.20	84.60	83.60	
DRY SOIL, (g)	511.40	533.20	502.60	498.90	
WATER, (g)	41.10	56.10	65.40	33.10	
MOISTURE CONTENT, (%)	8.0	10.5	13.0	6.6	
DRY DENSITY, (pcf)	123.7	124.7	121.0	120.8	

DIAMETER OF MOLD :	4	in.
VOLUME OF MOLD :	0.0333	$ft.^3$
SCALPED ON SIEVE SIZE / NO. :	#4	
PERCENT RETAINED, (%) :	-	
MAXIMUM DRY DENSITY :	**124.9**	pcf.
OPT. MOISTURE CONTENT :	**9.9**	%

FOR OVERSIZE CORRECTION (ASTM D4718-07)

%,Finer Fraction,(P_f) =	-	% Moisture =	-
%,Oversize Fraction,(P_c) =	-	Assumed S.G. =	-
Corrected MDD of Total Materials, (pcf) =	-		
Corrected OMC of Total Materials, (%) =	-		

Remarks :



COMPACTION TEST

WILLDAN Geotechnical | extending your reach

JOB NAME :	Boyle Heights Sports Center	JOB NUMBER:	106965-2000
SAMPLE NUMBER :		TESTED BY :	RMC
SAMPLE LOCATION :	B-2 @ 1' - 5'	DATE :	17-Jul-17
SAMPLE DESCRIPTIONS / CLASSIFICATION :	Clayey SAND (SC)		
TEST STANDARD:	ASTM D1557 - 12	METHOD:	A

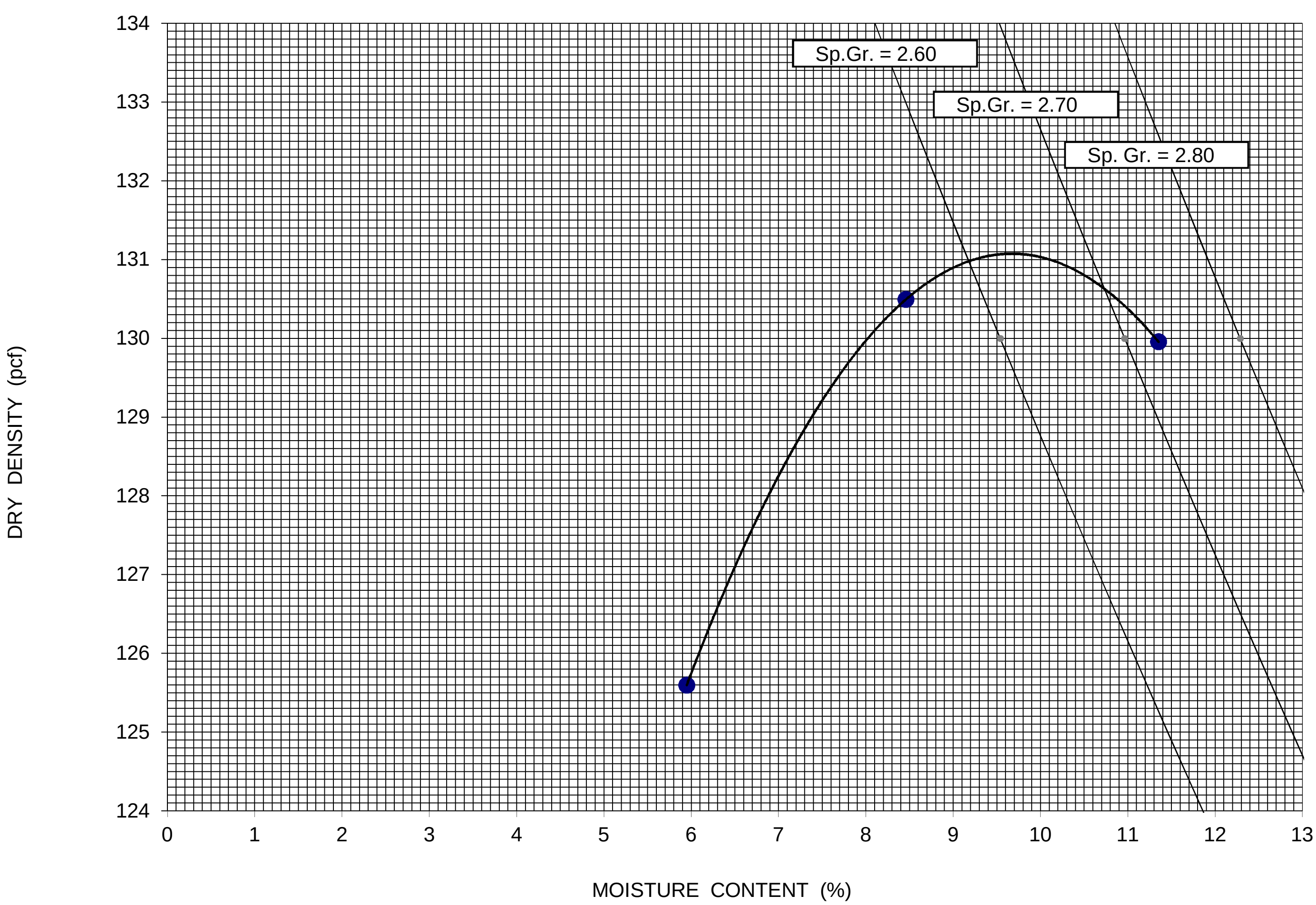
TRIAL NUMBER	1	2	3	4	5
WATER ADDED, (ml)	-	100	150		
WT. OF SOIL + MOLD, (g)	4062	4190	4238		
WT.OF MOLD, (g)	2050	2050	2050		
WT. OF WET SOIL, (g)	2012	2140	2188		
WET DENSITY, (pcf)	133.1	141.5	144.7		
CAN NUMBER	B5	B14	B2		
WET SOIL + TARE, (g)	543.22	542.10	565.45		
DRY SOIL + TARE, (g)	517.66	506.24	516.77		
TARE, (g)	88.02	82.37	87.95		
DRY SOIL, (g)	429.64	423.87	428.82		
WATER, (g)	25.56	35.86	48.68		
MOISTURE CONTENT, (%)	5.9	8.5	11.4		
DRY DENSITY, (pcf)	125.6	130.5	130.0		

DIAMETER OF MOLD :	4	in.
VOLUME OF MOLD :	0.0333	$ft.^3$
SCALPED ON SIEVE SIZE / NO. :	3/8"	
PERCENT RETAINED, (%) :	11.7	
MAXIMUM DRY DENSITY :	**131.1**	pcf.
OPT. MOISTURE CONTENT :	**9.7**	%

FOR OVERSIZE CORRECTION (ASTM D4718-07)

%,Finer Fraction,(P_f) =	88.3	% Moisture =	8.5
%,Oversize Fraction,(P_c) =	11.7	Assumed S.G. =	2.64
Corrected MDD of Total Materials, (pcf) =	134.3		
Corrected OMC of Total Materials, (%) =	8.6		

Remarks :



COMPACTION TEST

WILLDAN Geotechnical | extending your reach

JOB NAME :	Boyle Heights Sports Center	JOB NUMBER:	106965-2000
SAMPLE NUMBER :		TESTED BY :	RMC
SAMPLE LOCATION :	B-4 @ 1' - 5'	DATE :	17-Jul-17
SAMPLE DESCRIPTIONS / CLASSIFICATION :	Clayey SAND (SC)		

TEST STANDARD:	ASTM D1557 - 12	METHOD:	A

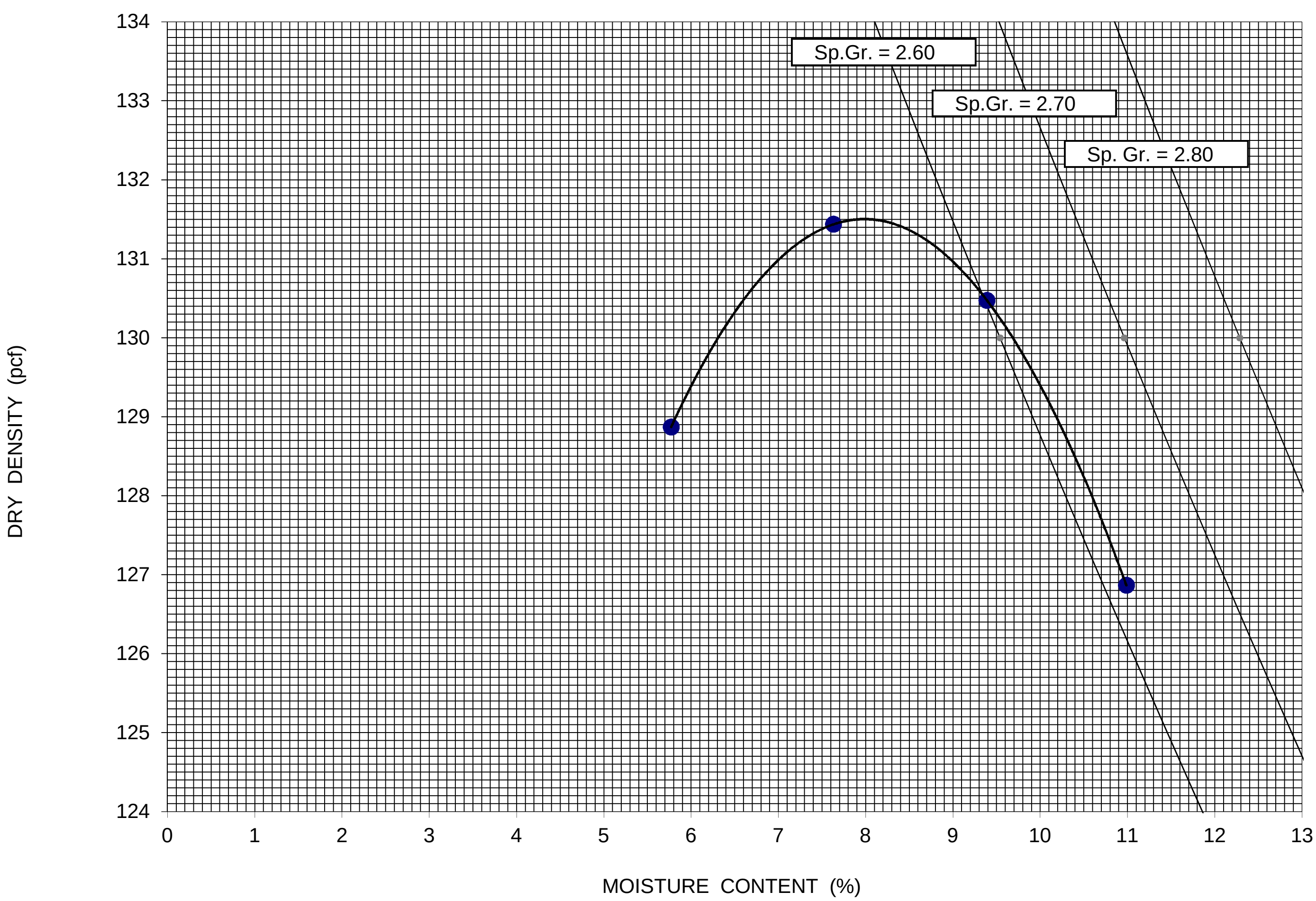
TRIAL NUMBER	1	2	3	4	5
WATER ADDED, (ml)	-	100	150		
WT. OF SOIL + MOLD, (g)	4111	4189	4208	4179	
WT.OF MOLD, (g)	2050	2050	2050	2050	
WT. OF WET SOIL, (g)	2061	2139	2158	2129	
WET DENSITY, (pcf)	136.3	141.5	142.7	140.8	
CAN NUMBER	B12	B7	B2	B8	
WET SOIL + TARE, (g)	566.45	513.32	581.41	535.35	
DRY SOIL + TARE, (g)	540.15	481.38	538.64	490.56	
TARE, (g)	84.54	62.92	83.14	82.92	
DRY SOIL, (g)	455.61	418.46	455.50	407.64	
WATER, (g)	26.30	31.94	42.77	44.79	
MOISTURE CONTENT, (%)	5.8	7.6	9.4	11.0	
DRY DENSITY, (pcf)	128.9	131.4	130.5	126.9	

DIAMETER OF MOLD :	4	in.
VOLUME OF MOLD :	0.0333	$ft.^3$
SCALPED ON SIEVE SIZE / NO. :	3/8"	
PERCENT RETAINED, (%) :	3.2	
MAXIMUM DRY DENSITY :	**131.5**	pcf.
OPT. MOISTURE CONTENT :	**8.0**	%

FOR OVERSIZE CORRECTION (ASTM D4718-07)

%,Finer Fraction,(P_f) =	96.8	% Moisture =	8.5
%,Oversize Fraction,(P_c) =	3.2	Assumed S.G. =	2.64
Corrected MDD of Total Materials, (pcf) =	132.3		
Corrected OMC of Total Materials, (%) =	7.7		

Remarks :



COMPACTION TEST

WILLDAN Geotechnical | extending your reach

Project Name :	Boyle Heights Sports Center	Project No.:	106965-2000
Sample Location / Source :	B-1	Tested by :	RMC	Date: 9/22/2017
Sample Depth / No. :	1.0' - 5.0'	Sampled by:		Date:
Sample Description / Classification :	Sandy Lean CLAY (CL)		

TRIAL NUMBER	1	2	3
WET WT. OF SOIL + RING (g)	610.92		
WEIGHT OF RING (g)	200.46		
WET WEIGHT OF SOIL (g)	410.46		
FACTOR	0.303		
INITIAL WET UNIT WEIGHT (pcf)	124.4		
DRY DENSITY (pcf)	113.9		
% SATURATION (Assumed Sp.Gr. = 2.70)	51.8		
MOISTURE DETERMINATION			
WET WEIGHT OF SOIL (g)	131.13		
DRY WEIGHT OF SOIL (g)	120.09		
MOISTURE CONTENT (%)	9.2		

RACK NO. : 1

SURCHARGE : 144 psf

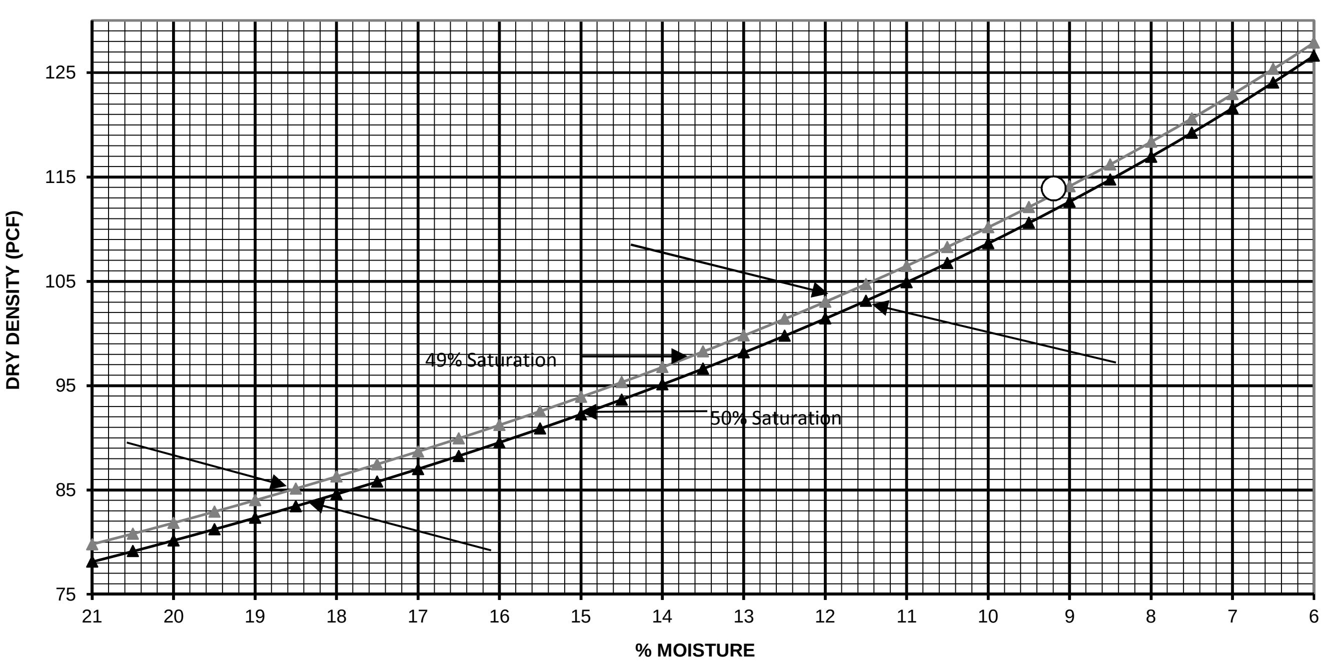
DATE	TIME	DIAL READINGS (In.)
22-Sep	10:50	0.642
	11:40	0.667
25-Sep	7:20	0.697
% RETAINED ON #4 SIEVE		< 5

EXPANSION INDEX : 55

REMARKS :

SOLUBLE SULFATE (SO_4) : - ppm

SATURATION CURVE



EXPANSION INDEX OF SOILS

(ASTM D4829)

WILLDAN Geotechnical

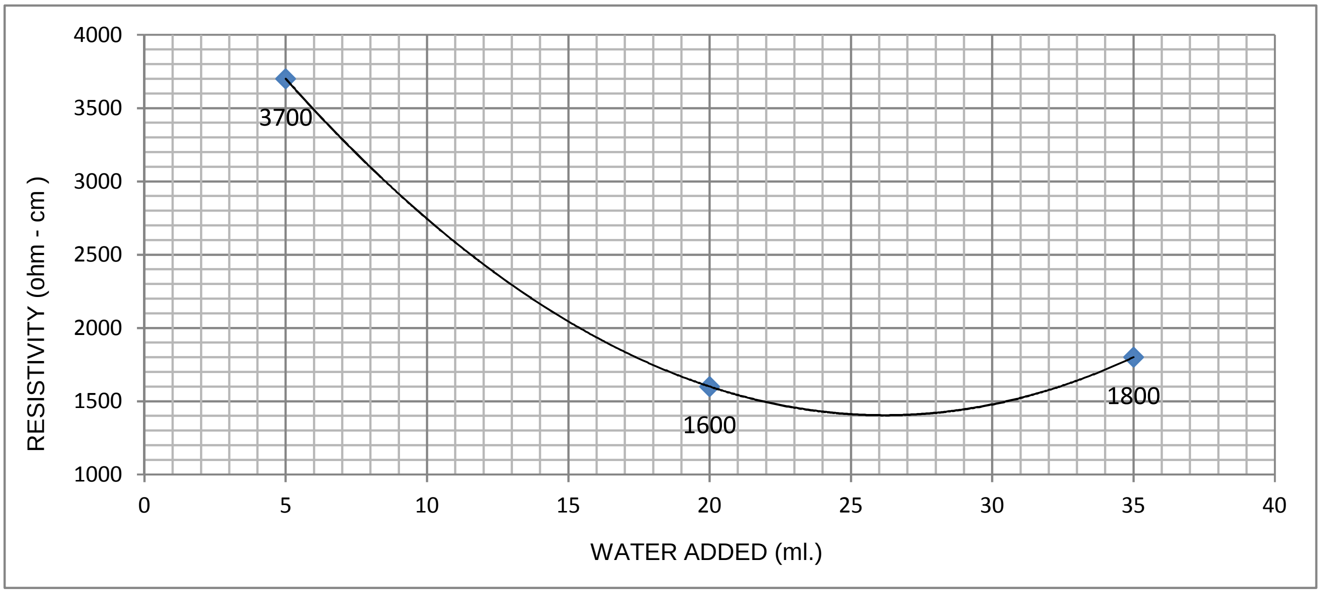
extending your reach

PROJECT NAME : Boyle Heights Sports Center	PROJECT NUMBER : 106965-2000		
LOCATION : B-1 @ 1' - 5'	TESTED BY : RMC	DATE : 25-Jul-17	
SAMPLE ID / DEPTH:	SAMPLED BY:	DATE :	

SOIL DESCRIPTIONS : Sandy Lean CLAY (CL)

A. MINIMUM RESISTIVITY CTM 643

WATER ADDED, (ml)	5	20	35	
RESISTIVITY MEASURED, (ohm-cm)	3700	1600	1800	
TEMPERATURE MEASURED, (^{0}C)	24.3			
MINIMUM RESISTIVITY (ohm-cm)	1400			
MIN. RESISTIVITY CORRECTED , $R_{min\ -15.5}$ (ohm-cm)	1776			



B. SULFATE CONTENT OF SOILS CTM 417

SOIL - WATER RATIO	100 : 300
SO_4 DILUTION (ALIQUOT : DISTILLED H2O)	5 : 20
FACTOR	15
SULFATE READING (ppm)	10
WATER SOLUBLE SULFATES, (ppm)	150

C. CHLORIDE CONTENT OF SOILS CTM 422 (SILVER NITRATE METHOD)

CHLORIDE DILUTION (ALIQUOT : DISTILLED H2O)	50 : 50
NUMBER OF DIGITS REQUIRED	60
WATER SOLUBLE CHLORIDES, (ppm)	180

D. pH OF SOILS CTM 643

pH VALUE	8.02

REMARKS :

CORROSION TESTS

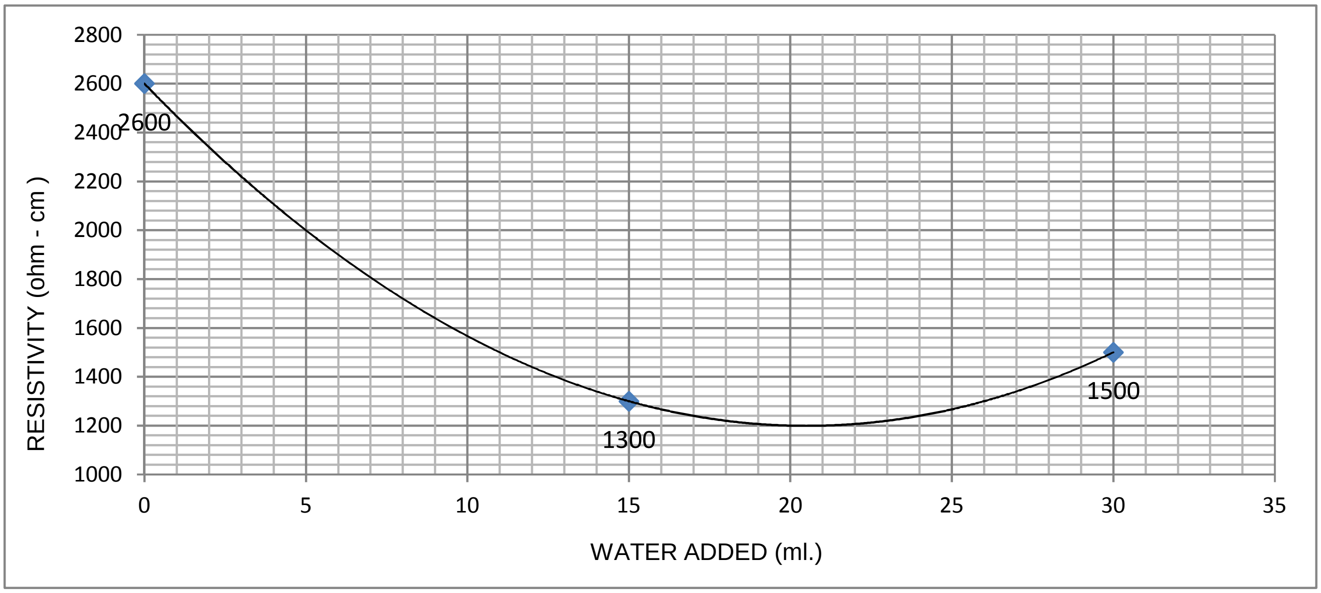
WILLDAN Geotechnical | extending your reach

PROJECT NAME : Boyle Heights Sports Center	PROJECT NUMBER : 106965-2000		
LOCATION : B-4 @ 1' - 5'	TESTED BY : RMC	DATE : 25-Jul-17	
SAMPLE ID / DEPTH:	SAMPLED BY:	DATE :	

SOIL DESCRIPTIONS : Clayey SAND (SC)

A. MINIMUM RESISTIVITY CTM 643

WATER ADDED, (ml)	0	15	30	
RESISTIVITY MEASURED, (ohm-cm)	2600	1300	1500	
TEMPERATURE MEASURED, (^{0}C)	24.3			
MINIMUM RESISTIVITY (ohm-cm)	1200			
MIN. RESISTIVITY CORRECTED , $R_{min\ -15.5}$ (ohm-cm)	1523			



B. SULFATE CONTENT OF SOILS CTM 417

SOIL - WATER RATIO	100 : 300
SO_4 DILUTION (ALIQUOT : DISTILLED H2O)	5 : 20
FACTOR	15
SULFATE READING (ppm)	22
WATER SOLUBLE SULFATES, (ppm)	330

C. CHLORIDE CONTENT OF SOILS CTM 422 (SILVER NITRATE METHOD)

CHLORIDE DILUTION (ALIQUOT : DISTILLED H2O)	50 : 50
NUMBER OF DIGITS REQUIRED	80
WATER SOLUBLE CHLORIDES, (ppm)	240

D. pH OF SOILS CTM 643

pH VALUE	7.39

REMARKS :

CORROSION TESTS

WILLDAN Geotechnical | extending your reach

Project Name: Boyle Heights Sports Center | Willdan Project No.: 106965-2000

'R' VALUE CA 301

Client: Willdan Geotechnical | Date: 9/25/17 | By: LD

Client's Job No.: 106965-2000 | Sample No.: B-2 @ 1' - 5'

GLA Reference: 2005-224 | Soil Type: Clayey SAND (SC)

TEST SPECIMEN		A	B	C	D
Compactor Air Pressure	psi	**350**	**130**	**250**	
Initial Moisture Content	%	**6.7**	**6.7**	**6.7**	
Water Added	ml	**50**	**70**	**60**	
Moisture at Compaction	%	11.1	12.9	12.0	
Sample & Mold Weight	gms	**3205**	**3214**	**3203**	
Mold Weight	gms	**2103**	**2098**	**2103**	
Net Sample Weight	gms	1102	1116	1100	
Sample Height	in.	**2.45**	**2.509**	**2.448**	
Dry Density	pcf	122.6	119.4	121.5	
Pressure	lbs	**7475**	**3310**	**4980**	
Exudation Pressure	psi	595	264	396	
Expansion Dial	x 0.0001	**50**	**10**	**26**	
Expansion Pressure	psf	217	43	113	
Ph at 1000lbs	psi	**21**	**28**	**24**	
Ph at 2000lbs	psi	**40**	**58**	**49**	
Displacement	turns	**3.57**	**4.45**	**4.08**	
R' Value		68	50	58	
Corrected 'R' Value		**68**	**50**	**58**	

FINAL 'R' VALUE	
By Exudation Pressure (@ 300 psi):	**52**
By Epansion Pressure :	**53**
TI = 5	

Geo-Logic ASSOCIATES

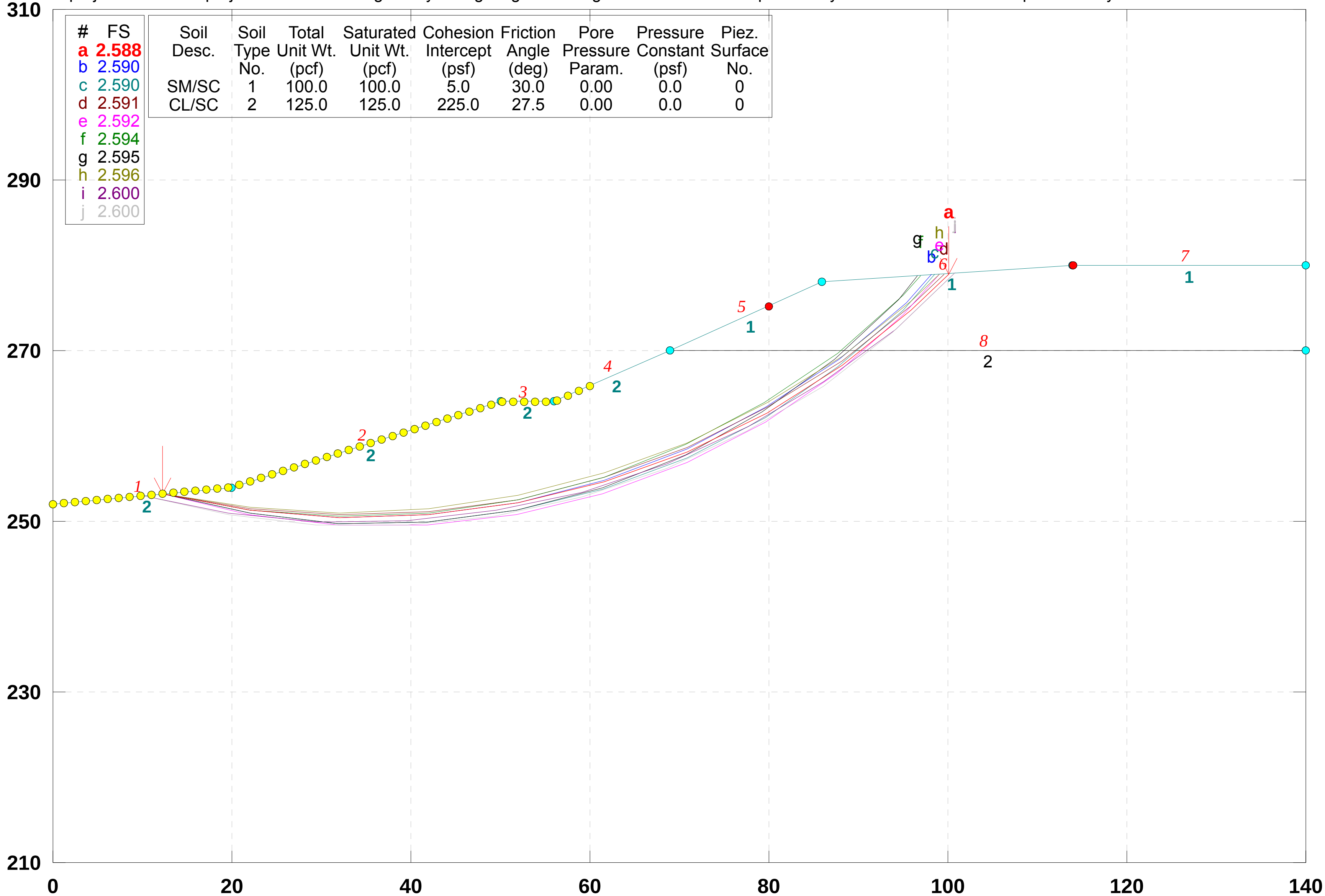
R-VALUE TEST
(CTM 301)

WILLDAN Geotechnical | extending your reach

APPENDIX C. SLOPE STABILTY ANALYSES

Cross Section A-A' Static Condition

q:\all projects\active projects\17 active projects\106965-2000 geo boyle heights geo investigation\calculations\slope stability\cross section a-a' static.pl2 Run By: Username 10/4/2017 12:20PM



#	FS
a	2.588
b	2.590
c	2.590
d	2.591
e	2.592
f	2.594
g	2.595
h	2.596
i	2.600
j	2.600

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
SM/SC	1	100.0	100.0	5.0	30.0	0.00	0.0	0
CL/SC	2	125.0	125.0	225.0	27.5	0.00	0.0	0

GSTABL7 v.2 FSmin=2.588

Safety Factors Are Calculated By The Modified Bishop Method

***** GSTABL7 *****

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **
** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

****

SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

```
   Analysis Run Date:        10/4/2017
   Time of Run:              12:20PM
   Run By:                   Username
   Input Data Filename:      Q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\cross section a-a' static-modifi
   Output Filename:          Q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\cross section a-a' static-modifi
   Unit System:              English
   Plotted Output Filename:  Q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\cross section a-a' static-modifi
   PROBLEM DESCRIPTION:  Cross Section A-A'
                         Static Condition
   BOUNDARY COORDINATES
       7 Top   Boundaries
       8 Total Boundaries
```

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	252.00	20.00	254.00	2
2	20.00	254.00	50.00	264.00	2
3	50.00	264.00	56.00	264.00	2
4	56.00	264.00	69.00	270.00	2
5	69.00	270.00	86.00	278.00	1
6	86.00	278.00	114.00	280.00	1
7	114.00	280.00	140.00	280.00	1
8	69.00	270.00	140.00	270.00	2

```
   User Specified Y-Origin =      210.00(ft)
   Default X-Plus Value = 0.00(ft)
   Default Y-Plus Value = 0.00(ft)
  ISOTROPIC SOIL PARAMETERS
    2 Type(s) of Soil
```

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	100.0	100.0	5.0	30.0	0.00	0.0	0
2	125.0	125.0	225.0	27.5	0.00	0.0	0

```
   A Critical Failure Surface Searching Method, Using A Random
   Technique For Generating Circular Surfaces, Has Been Specified.
  25000 Trial Surfaces Have Been Generated.
    500 Surface(s) Initiate(s) From Each Of    50 Points Equally Spaced
   Along The Ground Surface Between  X =   0.00(ft)
                               and  X =  60.00(ft)
   Each Surface Terminates Between   X =  80.00(ft)
                              and   X = 114.00(ft)
   Unless Further Limitations Were Imposed, The Minimum Elevation
   At Which A Surface Extends Is  Y =    220.00(ft)
   10.00(ft) Line Segments Define Each Trial Failure Surface.
   Following Are Displayed The Ten Most Critical Of The Trial
         Failure Surfaces Evaluated. They Are
         Ordered - Most Critical First.
         * * Safety Factors Are Calculated By The Modified Bishop Method * *
         Total Number of Trial Surfaces Attempted =     0
         Number of Trial Surfaces With Valid FS =    0
         Statistical Data On All Valid FS Values:
            FS Max =   0.000   FS Min = 500.000   FS Ave =  NaN
            Standard Deviation =    0.000   Coefficient of Variation =  NaN    %
         Failure Surface Specified By 11 Coordinate Points
           Point      X-Surf      Y-Surf
```

No.	(ft)	(ft)
1	12.245	253.224
2	22.059	251.304
3	32.025	250.483
4	42.021	250.771
5	51.923	252.165
6	61.610	254.649
7	70.962	258.190
8	79.864	262.746
9	88.206	268.261
10	95.885	274.666
11	100.045	279.003

Circle Center At X = 34.429 ; Y = 340.542 ; and Radius = 90.092

Factor of Safety

*** 2.588 ***

Individual data on the 16 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	7.8	1111.5	0.0	0.0	0.	0.	0.0	0.0	0.0
2	2.1	730.3	0.0	0.0	0.	0.	0.0	0.0	0.0
3	10.0	6794.6	0.0	0.0	0.	0.	0.0	0.0	0.0
4	10.0	11304.7	0.0	0.0	0.	0.	0.0	0.0	0.0
5	8.0	11307.9	0.0	0.0	0.	0.	0.0	0.0	0.0
6	1.9	2877.4	0.0	0.0	0.	0.	0.0	0.0	0.0
7	4.1	5764.8	0.0	0.0	0.	0.	0.0	0.0	0.0
8	5.6	7969.5	0.0	0.0	0.	0.	0.0	0.0	0.0
9	7.4	11313.1	0.0	0.0	0.	0.	0.0	0.0	0.0
10	2.0	3077.6	0.0	0.0	0.	0.	0.0	0.0	0.0
11	8.9	13292.6	0.0	0.0	0.	0.	0.0	0.0	0.0
12	6.1	8031.4	0.0	0.0	0.	0.	0.0	0.0	0.0
13	2.2	2462.2	0.0	0.0	0.	0.	0.0	0.0	0.0
14	2.1	1943.2	0.0	0.0	0.	0.	0.0	0.0	0.0
15	5.6	3453.5	0.0	0.0	0.	0.	0.0	0.0	0.0
16	4.2	840.4	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	22.050	251.261
3	32.016	250.439
4	42.011	250.771
5	51.901	252.250
6	61.555	254.858
7	70.844	258.560
8	79.646	263.307
9	87.843	269.035
10	95.325	275.669
11	98.191	278.871

Circle Center At X = 34.147 ; Y = 337.138 ; and Radius = 86.725

Factor of Safety

*** 2.590 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	21.974	250.911
3	31.912	249.799
4	41.911	249.906
5	51.823	251.229
6	61.500	253.750
7	70.798	257.431
8	79.578	262.217
9	87.711	268.036
10	95.073	274.803
11	98.560	278.897

Circle Center At X = 36.038 ; Y = 331.652 ; and Radius = 81.957

Factor of Safety

*** 2.590 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	22.084	251.440
3	32.060	250.737
4	42.052	251.124
5	51.943	252.597
6	61.615	255.138
7	70.953	258.716
8	79.845	263.290
9	88.187	268.805
10	95.879	275.195
11	99.525	278.966

Circle Center At X = 33.510 ; Y = 342.446 ; and Radius = 91.720

Factor of Safety

*** 2.591 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	21.942	250.782
3	31.867	249.556
4	41.867	249.564
5	51.789	250.806
6	61.483	253.263
7	70.799	256.898
8	79.595	261.654
9	87.736	267.461
10	95.099	274.227
11	99.096	278.935

Circle Center At X = 36.804 ; Y = 330.269 ; and Radius = 80.865

Factor of Safety

*** 2.592 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	22.059	251.307
3	32.030	250.545
4	42.022	250.950
5	51.899	252.515
6	61.526	255.219
7	70.773	259.025
8	79.515	263.883
9	87.631	269.725
10	95.011	276.472
11	97.015	278.787

Circle Center At X = 33.565 ; Y = 336.278 ; and Radius = 85.746

Factor of Safety

*** 2.594 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	21.964	250.870
3	31.902	249.762
4	41.901	249.920
5	51.800	251.341
6	61.439	254.001
7	70.665	257.858
8	79.330	262.851
9	87.294	268.899
10	94.429	275.905
11	96.684	278.763

Circle Center At X = 35.658 ; Y = 328.625 ; and Radius = 78.952

Factor of Safety

*** 2.595 ***

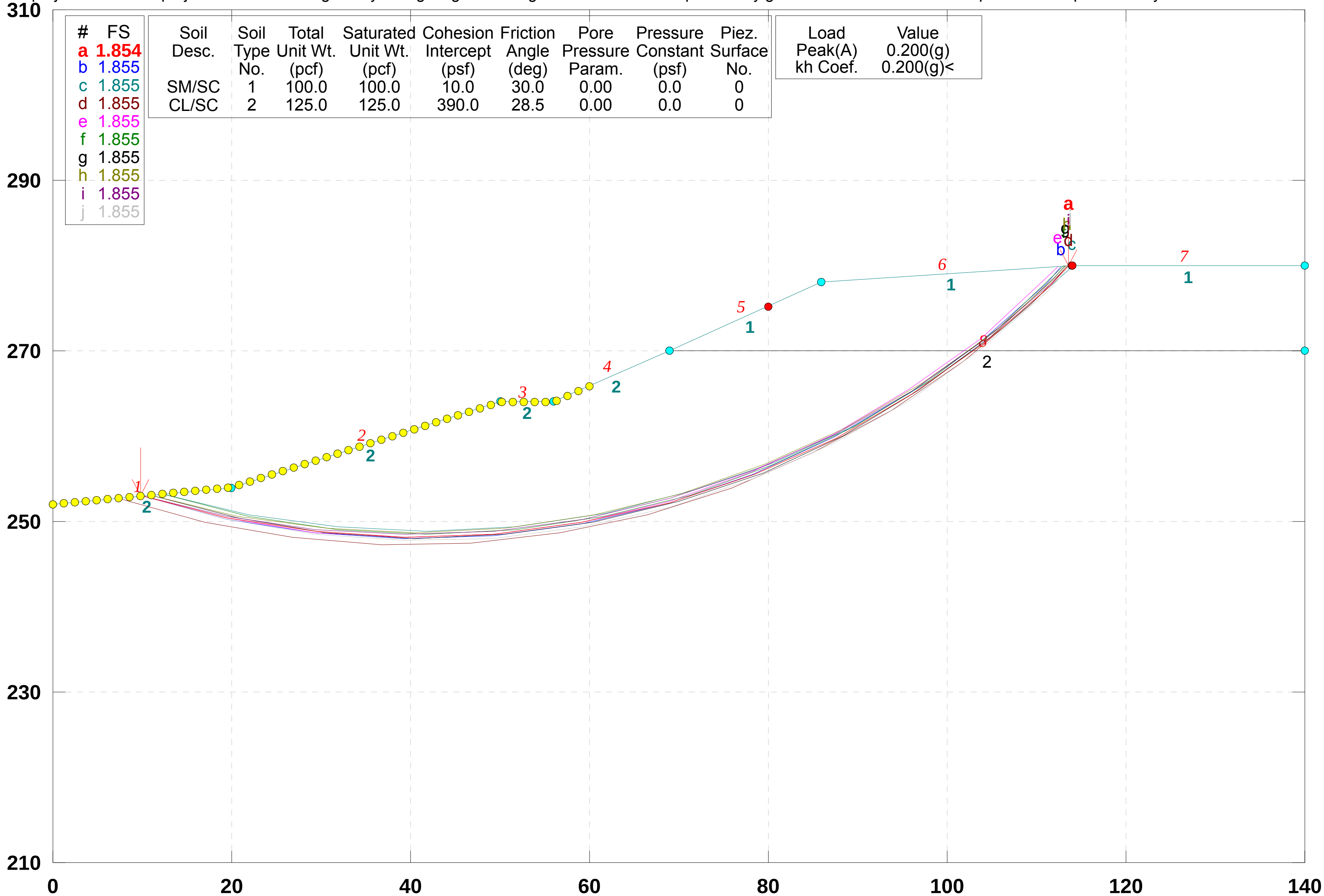
Failure Surface Specified By 11 Coordinate Points

Point X-Surf Y-Surf

```
   No.        (ft)        (ft)
    1         12.245      253.224
    2         22.108      251.578
    3         32.091      250.994
    4         42.080      251.480
    5         51.959      253.030
    6         61.616      255.627
    7         70.940      259.241
    8         79.825      263.830
    9         88.169      269.341
   10         95.876      275.713
   11         99.013      278.930
Circle Center At X =    32.548 ; Y =   344.469 ; and Radius =    93.476
       Factor of Safety
      ***    2.596   ***
Failure Surface Specified By 11 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1          9.796      252.980
    2         19.583      250.925
    3         29.534      249.943
    4         39.534      250.045
    5         49.463      251.231
    6         59.206      253.485
    7         68.647      256.782
    8         77.674      261.083
    9         86.183      266.337
   10         94.072      272.482
   11        100.851      279.061
Circle Center At X =    33.593 ; Y =   341.988 ; and Radius =    92.135
       Factor of Safety
      ***    2.600   ***
Failure Surface Specified By 11 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1          9.796      252.980
    2         19.534      250.707
    3         29.467      249.549
    4         39.467      249.521
    5         49.406      250.623
    6         59.157      252.842
    7         68.595      256.148
    8         77.598      260.499
    9         86.052      265.840
   10         93.849      272.102
   11        100.737      279.053
Circle Center At X =    34.713 ; Y =   337.744 ; and Radius =    88.351
       Factor of Safety
      ***    2.600   ***
          **** END OF GSTABL7 OUTPUT ****
```

Cross Section A-A' Pseudo Static Condition

q:\all projects\active projects\17 active projects\106965-2000 geo boyle heights geo investigation\calculations\slope stability\gstabl files\cross section a-a' pseudostatic.pl2   Run By: Username   10/4/2017   01:



#	FS
a	1.854
b	1.855
c	1.855
d	1.855
e	1.855
f	1.855
g	1.855
h	1.855
i	1.855
j	1.855

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
SM/SC	1	100.0	100.0	10.0	30.0	0.00	0.0	0
CL/SC	2	125.0	125.0	390.0	28.5	0.00	0.0	0

Load	Value
Peak(A)	0.200(g)
kh Coef.	0.200(g)<

GSTABL7 v.2 FSmin=1.854

Safety Factors Are Calculated By The Modified Bishop Method

***** GSTABL7 *****

```
          ** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **
    ** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **
              (All Rights Reserved-Unauthorized Use Prohibited)
  *********************************************************************************
                     SLOPE STABILITY ANALYSIS SYSTEM
       Modified Bishop, Simplified Janbu, or GLE Method of Slices.
       (Includes Spencer & Morgenstern-Price Type Analysis)
       Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
       Nonlinear Undrained Shear Strength, Curved Phi Envelope,
       Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
       Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.
  *********************************************************************************
  Analysis Run Date:        10/4/2017
  Time of Run:              01:36PM
  Run By:                   Username
  Input Data Filename:      q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\GSTABL Files\cross section a-a'
  Output Filename:          q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\GSTABL Files\cross section a-a'
  Unit System:              English
  Plotted Output Filename:  q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\GSTABL Files\cross section a-a'
  PROBLEM DESCRIPTION:  Cross Section A-A'
                         Pseudo Static Condition
  BOUNDARY COORDINATES
      7 Top   Boundaries
      8 Total Boundaries
  Boundary     X-Left     Y-Left    X-Right    Y-Right    Soil Type
     No.        (ft)       (ft)       (ft)       (ft)     Below Bnd
      1          0.00     252.00      20.00     254.00        2
      2         20.00     254.00      50.00     264.00        2
      3         50.00     264.00      56.00     264.00        2
      4         56.00     264.00      69.00     270.00        2
      5         69.00     270.00      86.00     278.00        1
      6         86.00     278.00     114.00     280.00        1
      7        114.00     280.00     140.00     280.00        1
      8         69.00     270.00     140.00     270.00        2
  User Specified Y-Origin =       210.00(ft)
  Default X-Plus Value = 0.00(ft)
  Default Y-Plus Value = 0.00(ft)
 ISOTROPIC SOIL PARAMETERS
   2 Type(s) of Soil
  Soil  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
  Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
   No.  (pcf)    (pcf)     (psf)     (deg)    Param.   (psf)     No.
    1   100.0    100.0      10.0     30.0    0.00       0.0      0
    2   125.0    125.0     390.0     28.5    0.00       0.0      0
  Specified Peak Ground Acceleration Coefficient (A) =   0.200(g)
  Specified Horizontal Earthquake Coefficient (kh) =   0.200(g)
  Specified Vertical Earthquake Coefficient (kv) =   0.000(g)
  Specified Seismic Pore-Pressure Factor =   0.000
  A Critical Failure Surface Searching Method, Using A Random
  Technique For Generating Circular Surfaces, Has Been Specified.
 25000 Trial Surfaces Have Been Generated.
   500 Surface(s) Initiate(s) From Each Of    50 Points Equally Spaced
  Along The Ground Surface Between  X =   0.00(ft)
                               and  X =  60.00(ft)
  Each Surface Terminates Between   X =  80.00(ft)
                              and   X = 114.00(ft)
  Unless Further Limitations Were Imposed, The Minimum Elevation
  At Which A Surface Extends Is  Y =    220.00(ft)
  10.00(ft) Line Segments Define Each Trial Failure Surface.
  Following Are Displayed The Ten Most Critical Of The Trial
        Failure Surfaces Evaluated. They Are
        Ordered - Most Critical First.
        * * Safety Factors Are Calculated By The Modified Bishop Method * *
        Total Number of Trial Surfaces Attempted =     0
        Number of Trial Surfaces With Valid FS =    0
        Statistical Data On All Valid FS Values:
```

FS Max = 0.000 FS Min = 500.000 FS Ave = NaN
Standard Deviation = 0.000 Coefficient of Variation = NaN %

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	9.796	252.980
2	19.455	250.390
3	29.324	248.775
4	39.304	248.153
5	49.297	248.527
6	59.203	249.896
7	68.923	252.245
8	78.361	255.551
9	87.422	259.781
10	96.017	264.893
11	104.059	270.836
12	111.470	277.551
13	113.661	279.976

Circle Center At X = 40.549 ; Y = 348.370 ; and Radius = 100.225

Factor of Safety
*** 1.854 ***

Individual data on the 0 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	9.796	252.980
2	19.433	250.311
3	29.293	248.642
4	39.272	247.989
5	49.265	248.361
6	59.168	249.752
7	68.876	252.149
8	78.289	255.525
9	87.307	259.847
10	95.836	265.067
11	103.786	271.133
12	111.075	277.980
13	112.749	279.911

Circle Center At X = 40.645 ; Y = 345.652 ; and Radius = 97.672

Factor of Safety
*** 1.855 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	253.224
2	21.947	250.801
3	31.842	249.356
4	41.832	248.903
5	51.817	249.448
6	61.698	250.984
7	71.377	253.497
8	80.758	256.962
9	89.747	261.343
10	98.255	266.598
11	106.197	272.674
12	113.495	279.511
13	113.916	279.994

Circle Center At X = 41.369 ; Y = 349.184 ; and Radius = 100.281

Factor of Safety
*** 1.855 ***

Failure Surface Specified By 13 Coordinate Points

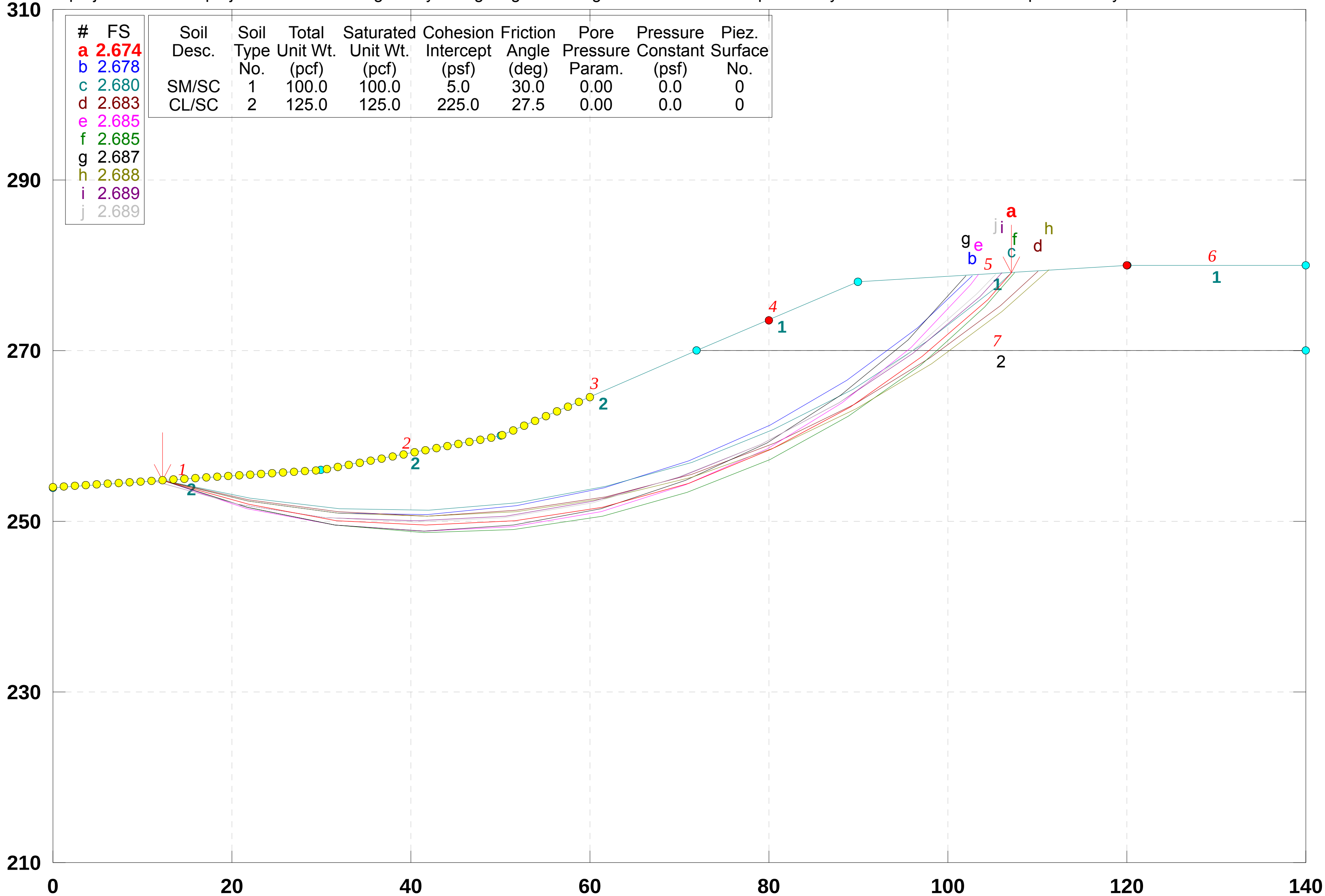
Point No.	X-Surf (ft)	Y-Surf (ft)
1	7.347	252.735
2	16.949	249.940
3	26.782	248.122

```
    4         36.748      247.299
    5         46.746      247.479
    6         56.676      248.659
    7         66.438      250.829
    8         75.933      253.967
    9         85.066      258.040
   10         93.745      263.008
   11        101.882      268.821
   12        109.395      275.420
   13        113.636      279.974
Circle Center At X =    39.959 ; Y =   346.903 ; and Radius =    99.655
       Factor of Safety
      ***    1.855   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1          9.796      252.980
    2         19.445      250.353
    3         29.312      248.726
    4         39.293      248.115
    5         49.284      248.526
    6         59.182      249.955
    7         68.881      252.388
    8         78.282      255.798
    9         87.285      260.150
   10         95.797      265.399
   11        103.728      271.489
   12        110.996      278.358
   13        112.307      279.879
Circle Center At X =    40.273 ; Y =   345.914 ; and Radius =    97.804
       Factor of Safety
      ***    1.855   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         12.245      253.224
    2         21.905      250.638
    3         31.780      249.067
    4         41.766      248.528
    5         51.753      249.029
    6         61.635      250.562
    7         71.305      253.112
    8         80.657      256.651
    9         89.593      261.141
   10         98.014      266.533
   11        105.831      272.770
   12        112.959      279.784
   13        113.083      279.935
Circle Center At X =    41.949 ; Y =   344.820 ; and Radius =    96.292
       Factor of Safety
      ***    1.855   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         11.020      253.102
    2         20.646      250.391
    3         30.501      248.697
    4         40.480      248.038
    5         50.472      248.420
    6         60.371      249.841
    7         70.068      252.284
    8         79.458      255.723
    9         88.439      260.121
   10         96.914      265.430
   11        104.790      271.591
   12        111.982      278.539
   13        113.158      279.940
Circle Center At X =    41.808 ; Y =   343.982 ; and Radius =    95.953
       Factor of Safety
      ***    1.855   ***
```

```
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1          11.020      253.102
    2          20.723      250.682
    3          30.617      249.230
    4          40.606      248.761
    5          50.593      249.279
    6          60.479      250.780
    7          70.170      253.248
    8          79.570      256.660
    9          88.588      260.982
   10          97.135      266.172
   11         105.129      272.180
   12         112.492      278.947
   13         113.394      279.957
Circle Center At X =    40.356 ; Y =   350.044 ; and Radius =   101.284
       Factor of Safety
      ***    1.855   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1           9.796      252.980
    2          19.488      250.516
    3          29.373      249.009
    4          39.359      248.474
    5          49.349      248.915
    6          59.249      250.328
    7          68.964      252.701
    8          78.400      256.009
    9          87.469      260.223
   10          96.084      265.300
   11         104.163      271.194
   12         111.628      277.848
   13         113.586      279.970
Circle Center At X =    39.842 ; Y =   350.874 ; and Radius =   102.402
       Factor of Safety
      ***    1.855   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1           9.796      252.980
    2          19.409      250.224
    3          29.253      248.467
    4          39.226      247.726
    5          49.222      248.010
    6          59.136      249.315
    7          68.865      251.629
    8          78.306      254.925
    9          87.360      259.171
   10          95.932      264.321
   11         103.931      270.322
   12         111.275      277.109
   13         113.810      279.986
Circle Center At X =    41.457 ; Y =   345.282 ; and Radius =    97.581
       Factor of Safety
      ***    1.855   ***
          **** END OF GSTABL7 OUTPUT ****
```

Cross Section B-B' Static Condition

q:\all projects\active projects\17 active projects\106965-2000 geo boyle heights geo investigation\calculations\slope stability\cross section b-b' static-.pl2 Run By: Username 10/4/2017 12:15PM



Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
SM/SC	1	100.0	100.0	5.0	30.0	0.00	0.0	0
CL/SC	2	125.0	125.0	225.0	27.5	0.00	0.0	0

GSTABL7 v.2 FSmin=2.674

Safety Factors Are Calculated By The Modified Bishop Method

```
*** GSTABL7 ***
** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **
** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **
(All Rights Reserved-Unauthorized Use Prohibited)
*********************************************************************************
SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.
*********************************************************************************
Analysis Run Date:        10/4/2017
Time of Run:              12:15PM
Run By:                   Username
Input Data Filename:      Q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\cross section b-b' static-modifi
Output Filename:          Q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\cross section b-b' static-modifi
Unit System:              English
Plotted Output Filename:  Q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\cross section b-b' static-modifi
PROBLEM DESCRIPTION:  Cross Section B-B'
                      Static Condition
BOUNDARY COORDINATES
    6 Top   Boundaries
    7 Total Boundaries
Boundary     X-Left     Y-Left    X-Right    Y-Right    Soil Type
   No.        (ft)       (ft)       (ft)       (ft)     Below Bnd
    1          0.00     254.00      30.00     256.00        2
    2         30.00     256.00      50.00     260.00        2
    3         50.00     260.00      72.00     270.00        2
    4         72.00     270.00      90.00     278.00        1
    5         90.00     278.00     120.00     280.00        1
    6        120.00     280.00     140.00     280.00        1
    7         72.00     270.00     140.00     270.00        2
User Specified Y-Origin =      210.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)
ISOTROPIC SOIL PARAMETERS
 2 Type(s) of Soil
Soil  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
 No.  (pcf)    (pcf)     (psf)     (deg)    Param.   (psf)     No.
  1   100.0    100.0       5.0     30.0    0.00       0.0      0
  2   125.0    125.0     225.0     27.5    0.00       0.0      0
EARTHQUAKE DATA HAS BEEN SUPPRESSED
A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
25000 Trial Surfaces Have Been Generated.
 500 Surface(s) Initiate(s) From Each Of    50 Points Equally Spaced
Along The Ground Surface Between  X =   0.00(ft)
                             and  X =  60.00(ft)
Each Surface Terminates Between   X =  80.00(ft)
                            and   X = 120.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is  Y =    220.00(ft)
10.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
      Failure Surfaces Evaluated. They Are
      Ordered - Most Critical First.
      * * Safety Factors Are Calculated By The Modified Bishop Method * *
      Total Number of Trial Surfaces Attempted =     0
      Number of Trial Surfaces With Valid FS =    0
      Statistical Data On All Valid FS Values:
         FS Max =   0.000   FS Min = 500.000   FS Ave =  NaN
         Standard Deviation =    0.000   Coefficient of Variation =  NaN    %
      Failure Surface Specified By 12 Coordinate Points
        Point      X-Surf      Y-Surf
```

No.	(ft)	(ft)
1	12.245	254.816
2	21.815	251.916
3	31.656	250.141
4	41.636	249.512
5	51.623	250.040
6	61.481	251.717
7	71.080	254.520
8	80.291	258.413
9	88.992	263.342
10	97.065	269.243
11	104.404	276.036
12	107.060	279.137

Circle Center At X = 42.047 ; Y = 335.613 ; and Radius = 86.117

Factor of Safety

*** 2.674 ***

Individual data on the 16 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	9.6	2116.1	0.0	0.0	0.	0.	0.0	0.0	0.0
2	8.2	4654.3	0.0	0.0	0.	0.	0.0	0.0	0.0
3	1.7	1216.4	0.0	0.0	0.	0.	0.0	0.0	0.0
4	10.0	9360.1	0.0	0.0	0.	0.	0.0	0.0	0.0
5	8.4	9858.8	0.0	0.0	0.	0.	0.0	0.0	0.0
6	1.6	2103.6	0.0	0.0	0.	0.	0.0	0.0	0.0
7	9.9	14910.4	0.0	0.0	0.	0.	0.0	0.0	0.0
8	9.6	17136.2	0.0	0.0	0.	0.	0.0	0.0	0.0
9	0.9	1733.8	0.0	0.0	0.	0.	0.0	0.0	0.0
10	8.3	15352.6	0.0	0.0	0.	0.	0.0	0.0	0.0
11	8.7	14809.7	0.0	0.0	0.	0.	0.0	0.0	0.0
12	1.0	1576.5	0.0	0.0	0.	0.	0.0	0.0	0.0
13	7.1	8767.3	0.0	0.0	0.	0.	0.0	0.0	0.0
14	0.8	733.5	0.0	0.0	0.	0.	0.0	0.0	0.0
15	6.5	3733.0	0.0	0.0	0.	0.	0.0	0.0	0.0
16	2.7	388.3	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.939	252.362
3	31.850	251.027
4	41.848	250.830
5	51.803	251.773
6	61.586	253.843
7	71.070	257.014
8	80.131	261.245
9	88.652	266.480
10	96.520	272.651
11	102.800	278.853

Circle Center At X = 38.574 ; Y = 338.433 ; and Radius = 87.664

Factor of Safety

*** 2.678 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	22.008	252.652
3	31.940	251.487
4	41.939	251.332
5	51.902	252.189
6	61.727	254.051
7	71.313	256.896
8	80.563	260.697
9	89.380	265.415
10	97.675	271.000
11	105.363	277.396
12	107.071	279.138

Circle Center At X = 38.459 ; Y = 349.629 ; and Radius = 98.370

Factor of Safety
*** 2.680 ***
Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.958	252.438
3	31.862	251.053
4	41.854	250.676
5	51.834	251.310
6	61.699	252.949
7	71.348	255.576
8	80.682	259.165
9	89.605	263.678
10	98.028	269.069
11	105.862	275.284
12	110.025	279.335

Circle Center At X = 40.567 ; Y = 349.098 ; and Radius = 98.444
Factor of Safety
*** 2.683 ***
Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.693	251.540
3	31.485	249.511
4	41.457	248.763
5	51.442	249.308
6	61.273	251.138
7	70.786	254.221
8	79.821	258.507
9	88.227	263.923
10	95.864	270.379
11	102.604	277.766
12	103.391	278.893

Circle Center At X = 42.228 ; Y = 325.873 ; and Radius = 77.124
Factor of Safety
*** 2.685 ***
Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.717	251.611
3	31.507	249.571
4	41.471	248.725
5	51.465	249.087
6	61.342	250.651
7	70.958	253.394
8	80.174	257.275
9	88.855	262.240
10	96.874	268.214
11	104.114	275.111
12	107.451	279.163

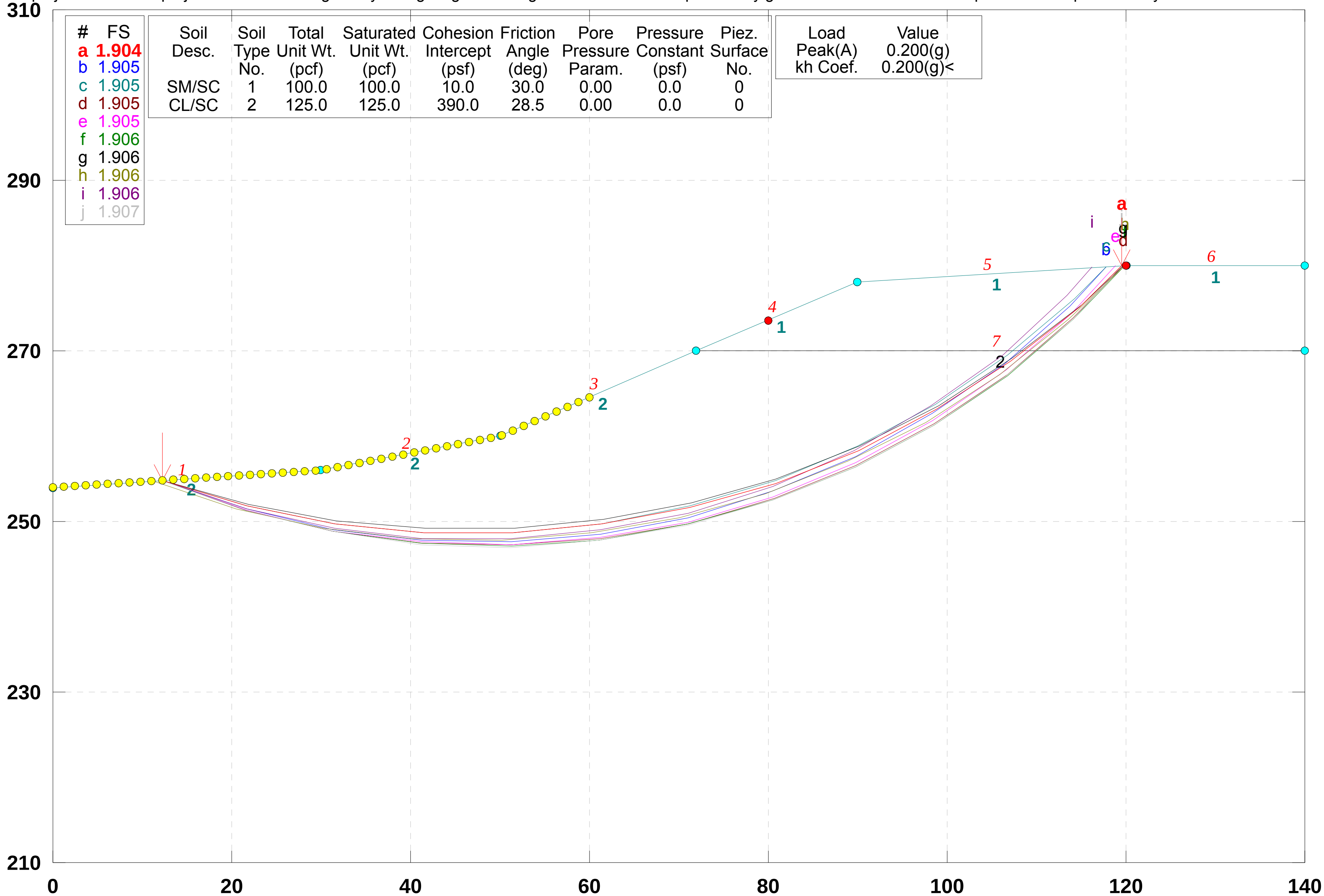
Circle Center At X = 43.445 ; Y = 331.132 ; and Radius = 82.447
Factor of Safety
*** 2.685 ***
Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.706	251.578
3	31.510	249.607
4	41.487	248.935
5	51.467	249.576
6	61.276	251.518
7	70.748	254.727
8	79.717	259.148
9	88.030	264.706
10	95.545	271.304
11	102.112	278.807

```
Circle Center At X =    41.604 ; Y =   325.158 ; and Radius =    76.223
       Factor of Safety
      ***    2.687   ***
Failure Surface Specified By 12 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         12.245      254.816
    2         21.947      252.395
    3         31.844      250.959
    4         41.834      250.521
    5         51.818      251.087
    6         61.695      252.651
    7         71.366      255.197
    8         80.732      258.699
    9         89.701      263.122
   10         98.181      268.422
   11        106.087      274.545
   12        111.216      279.414
Circle Center At X =    41.177 ; Y =   349.815 ; and Radius =    99.307
       Factor of Safety
      ***    2.688   ***
Failure Surface Specified By 12 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         11.020      254.735
    2         20.660      252.073
    3         30.534      250.494
    4         40.523      250.016
    5         50.503      250.645
    6         60.353      252.373
    7         69.951      255.180
    8         79.180      259.030
    9         87.927      263.876
   10         96.084      269.660
   11        103.553      276.311
   12        106.033      279.069
Circle Center At X =    39.822 ; Y =   339.936 ; and Radius =    89.938
       Factor of Safety
      ***    2.689   ***
Failure Surface Specified By 12 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         11.020      254.735
    2         20.638      251.994
    3         30.503      250.360
    4         40.490      249.854
    5         50.471      250.482
    6         60.315      252.237
    7         69.898      255.095
    8         79.096      259.020
    9         87.790      263.961
   10         95.868      269.855
   11        103.227      276.626
   12        105.300      279.020
Circle Center At X =    39.932 ; Y =   337.640 ; and Radius =    87.802
       Factor of Safety
      ***    2.689   ***
          **** END OF GSTABL7 OUTPUT ****
```

Cross Section B-B' Pseudo Static Condition

q:\all projects\active projects\17 active projects\106965-2000 geo boyle heights geo investigation\calculations\slope stability\gstabl files\cross section b-b' pseudo static.pl2 Run By: Username 10/4/2017 01:



#	FS
a	1.904
b	1.905
c	1.905
d	1.905
e	1.905
f	1.906
g	1.906
h	1.906
i	1.906
j	1.907

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
SM/SC	1	100.0	100.0	10.0	30.0	0.00	0.0	0
CL/SC	2	125.0	125.0	390.0	28.5	0.00	0.0	0

Load	Value
Peak(A)	0.200(g)
kh Coef.	0.200(g)<

GSTABL7 v.2 FSmin=1.904

Safety Factors Are Calculated By The Modified Bishop Method

***** GSTABL7 *****

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **
** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

****

SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

```
Analysis Run Date:        10/4/2017
Time of Run:              01:51PM
Run By:                   Username
Input Data Filename:      q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\GSTABL Files\cross section b-b'
Output Filename:          q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\GSTABL Files\cross section b-b'
Unit System:              English
Plotted Output Filename:  q:\All Projects\Active Projects\17 Active Projects\106965-20
00 GEO Boyle Heights Geo Investigation\Calculations\Slope Stability\GSTABL Files\cross section b-b'
PROBLEM DESCRIPTION:  Cross Section B-B'
                        Pseudo Static Condition
BOUNDARY COORDINATES
    6 Top   Boundaries
    7 Total Boundaries
```

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	254.00	30.00	256.00	2
2	30.00	256.00	50.00	260.00	2
3	50.00	260.00	72.00	270.00	2
4	72.00	270.00	90.00	278.00	1
5	90.00	278.00	120.00	280.00	1
6	120.00	280.00	140.00	280.00	1
7	72.00	270.00	140.00	270.00	2

```
User Specified Y-Origin =       210.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)
ISOTROPIC SOIL PARAMETERS
  2 Type(s) of Soil
```

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	100.0	100.0	10.0	30.0	0.00	0.0	0
2	125.0	125.0	390.0	28.5	0.00	0.0	0

```
Specified Peak Ground Acceleration Coefficient (A) =   0.200(g)
Specified Horizontal Earthquake Coefficient (kh) =   0.200(g)
Specified Vertical Earthquake Coefficient (kv) =   0.000(g)
Specified Seismic Pore-Pressure Factor =   0.000
A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
25000 Trial Surfaces Have Been Generated.
  500 Surface(s) Initiate(s) From Each Of    50 Points Equally Spaced
Along The Ground Surface Between  X =   0.00(ft)
                             and  X =  60.00(ft)
Each Surface Terminates Between   X =  80.00(ft)
                             and  X = 120.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is  Y =    220.00(ft)
10.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
      Failure Surfaces Evaluated. They Are
      Ordered - Most Critical First.
      * * Safety Factors Are Calculated By The Modified Bishop Method * *
      Total Number of Trial Surfaces Attempted =     0
      Number of Trial Surfaces With Valid FS =    0
      Statistical Data On All Valid FS Values:
         FS Max =   0.000   FS Min = 500.000   FS Ave =  NaN
```

Standard Deviation = 0.000 Coefficient of Variation = NaN %

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.786	251.823
3	31.579	249.795
4	41.524	248.755
5	51.524	248.711
6	61.479	249.666
7	71.288	251.608
8	80.855	254.518
9	90.084	258.369
10	98.883	263.120
11	107.164	268.726
12	114.845	275.129
13	119.599	279.973

Circle Center At X = 46.959 ; Y = 348.751 ; and Radius = 100.144

Factor of Safety

*** 1.904 ***

Individual data on the 17 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	9.5	2164.6	0.0	0.0	0.	0.	432.9	0.0	0.0
2	8.2	4880.9	0.0	0.0	0.	0.	976.2	0.0	0.0
3	1.6	1223.3	0.0	0.0	0.	0.	244.7	0.0	0.0
4	9.9	9989.5	0.0	0.0	0.	0.	1997.9	0.0	0.0
5	8.5	11035.3	0.0	0.0	0.	0.	2207.1	0.0	0.0
6	1.5	2216.2	0.0	0.0	0.	0.	443.2	0.0	0.0
7	10.0	17129.9	0.0	0.0	0.	0.	3426.0	0.0	0.0
8	9.8	20613.0	0.0	0.0	0.	0.	4122.6	0.0	0.0
9	0.7	1612.4	0.0	0.0	0.	0.	322.5	0.0	0.0
10	8.9	20370.3	0.0	0.0	0.	0.	4074.1	0.0	0.0
11	9.1	20973.9	0.0	0.0	0.	0.	4194.8	0.0	0.0
12	0.1	190.0	0.0	0.0	0.	0.	38.0	0.0	0.0
13	8.8	17481.9	0.0	0.0	0.	0.	3496.4	0.0	0.0
14	8.3	11564.2	0.0	0.0	0.	0.	2312.8	0.0	0.0
15	1.5	1527.0	0.0	0.0	0.	0.	305.4	0.0	0.0
16	6.2	4237.0	0.0	0.0	0.	0.	847.4	0.0	0.0
17	4.8	1075.9	0.0	0.0	0.	0.	215.2	0.0	0.0

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.649	251.417
3	31.368	249.062
4	41.286	247.782
5	51.284	247.590
6	61.244	248.489
7	71.046	250.469
8	80.573	253.505
9	89.714	257.562
10	98.357	262.591
11	106.400	268.533
12	113.748	275.316
13	117.691	279.846

Circle Center At X = 48.040 ; Y = 339.126 ; and Radius = 91.594

Factor of Safety

*** 1.905 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.776	251.789
3	31.566	249.754
4	41.514	248.733
5	51.514	248.736
6	61.461	249.764

```
     7         71.250      251.806
     8         80.779      254.841
     9         89.946      258.836
    10         98.656      263.749
    11        106.817      269.528
    12        114.342      276.114
    13        117.822      279.855
Circle Center At X =    46.479 ; Y =   346.070 ; and Radius =    97.464
       Factor of Safety
      ***    1.905   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
     1         12.245      254.816
     2         21.621      251.340
     3         31.318      248.895
     4         41.221      247.509
     5         51.216      247.199
     6         61.187      247.969
     7         71.016      249.808
     8         80.590      252.697
     9         89.796      256.601
    10         98.528      261.475
    11        106.684      267.261
    12        114.168      273.893
    13        119.700      279.980
Circle Center At X =    49.086 ; Y =   339.800 ; and Radius =    92.625
       Factor of Safety
      ***    1.905   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
     1         12.245      254.816
     2         21.622      251.343
     3         31.322      248.910
     4         41.229      247.548
     5         51.225      247.272
     6         61.192      248.085
     7         71.011      249.978
     8         80.566      252.929
     9         89.742      256.902
    10         98.432      261.850
    11        106.532      267.714
    12        113.946      274.426
    13        118.825      279.922
Circle Center At X =    48.757 ; Y =   338.987 ; and Radius =    91.748
       Factor of Safety
      ***    1.905   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
     1         12.245      254.816
     2         21.608      251.303
     3         31.295      248.824
     4         41.195      247.408
     5         51.189      247.072
     6         61.161      247.819
     7         70.994      249.642
     8         80.571      252.517
     9         89.781      256.412
    10         98.516      261.282
    11        106.672      267.068
    12        114.154      273.702
    13        119.860      279.991
Circle Center At X =    49.290 ; Y =   339.315 ; and Radius =    92.262
       Factor of Safety
      ***    1.906   ***
Failure Surface Specified By 13 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
```

1	12.245	254.816
2	21.833	251.977
3	31.652	250.080
4	41.608	249.142
5	51.608	249.174
6	61.557	250.174
7	71.364	252.134
8	80.934	255.034
9	90.178	258.847
10	99.010	263.538
11	107.345	269.063
12	115.106	275.369
13	119.778	279.985

Circle Center At X = 46.282 ; Y = 352.144 ; and Radius = 103.108

Factor of Safety

*** 1.906 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	11.020	254.735
2	20.487	251.513
3	30.233	249.273
4	40.157	248.038
5	50.154	247.820
6	60.122	248.623
7	69.956	250.437
8	79.554	253.245
9	88.816	257.015
10	97.645	261.710
11	105.950	267.281
12	113.644	273.669
13	119.844	279.990

Circle Center At X = 47.283 ; Y = 345.769 ; and Radius = 97.991

Factor of Safety

*** 1.906 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.676	251.492
3	31.415	249.221
4	41.344	248.033
5	51.344	247.940
6	61.293	248.945
7	71.072	251.035
8	80.563	254.184
9	89.651	258.356
10	98.227	263.499
11	106.188	269.552
12	113.436	276.441
13	116.227	279.748

Circle Center At X = 47.185 ; Y = 338.888 ; and Radius = 91.043

Factor of Safety

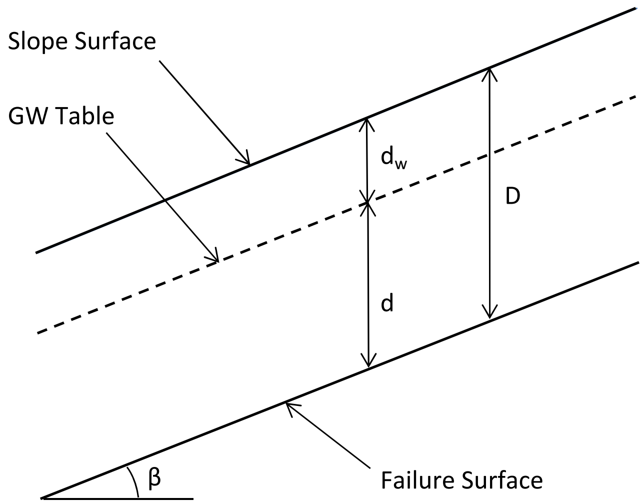
*** 1.906 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.245	254.816
2	21.595	251.270
3	31.276	248.764
4	41.173	247.331
5	51.167	246.986
6	61.139	247.733
7	70.969	249.565
8	80.542	252.458
9	89.741	256.379
10	98.457	261.281
11	106.587	267.104
12	114.032	273.780
13	119.579	279.972

```
Circle Center At X =    49.322 ; Y =   338.459 ; and Radius =    91.492
       Factor of Safety
      ***    1.907   ***
          **** END OF GSTABL7 OUTPUT ****
```

Calculation of Safety Factor for Surficial Slope Stability



FS = Factor of Safety

$$FS\ (\text{Effective Stress}) = \frac{C' + (\gamma D - \gamma_w d)\,(\cos^2\beta)\,(\tan\phi')}{\gamma D \sin\beta \times \cos\beta}$$

$$FS\ (\text{Total Stress}) = \frac{C + \gamma D\,(\cos^2\beta)\,(\tan\phi)}{\gamma D \sin\beta \times \cos\beta}$$

$\gamma = (10 \times 100 + 20 \times 125) / 30 = 115$ pcf

$C = (10 \times 5 + 20 \times 225) / 30 = 150$ psf

$\phi = \tan^{-1}[(10 \times \tan 30 + 20 \times \tan 27.5) / 30] = 28$ degree

Slope Ratio, H:V =	2.2	
β =	24.4	degree
d_w =	0	ft
Unit Weight of Soil, γ =	115	pcf
Cohesion of Soil, Effective, c' =	150	psf
Cohesion of Soil, Total, c =	150	psf
Friction Angle of Soil, Effective, ϕ' =	28	degree
Friction Angle of Soil, Total, ϕ =	28	degree

D (ft)	d (ft)	FS Effective Stress	FS Total Stress
0.50	0.50	7.47	8.11
1.00	1.00	4.00	4.64
1.50	1.50	2.85	3.48
2.00	2.00	2.27	2.91
2.50	2.50	1.92	2.56
3.00	3.00	1.69	2.33

Willdan Geotechnical	Project No. : 106965-2000	Date: By:	9/29/2017 MR

APPENDIX D. PERCOLATION TEST DATA SHEETS

Boring Percolation Testing (based on GS200.1, 12/31/14)

Project Name: Boyle Heights Sports Center Project, Los Angeles, California

Project No.: 106965-2000

Project Location:

Tested by: SM **Date Tested:** 6/28/2017

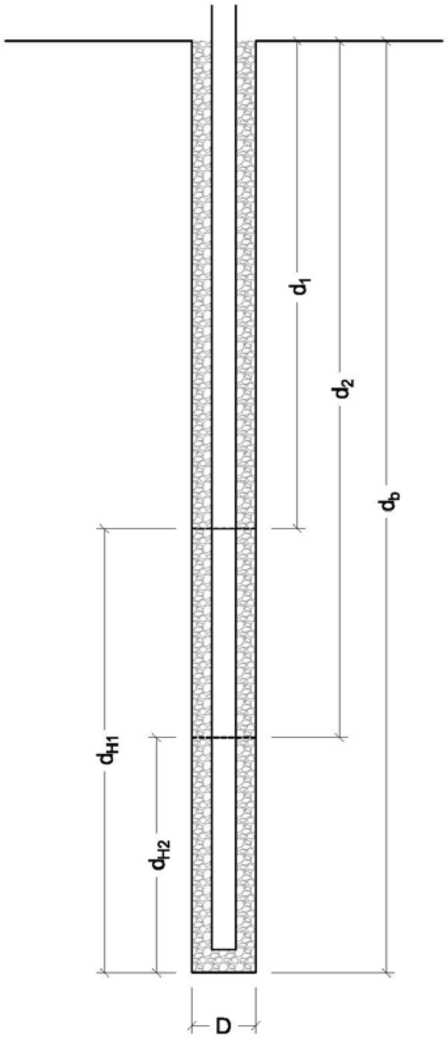
Boring/Test No.: TW-1/1

Depth of Boring, d_b (ft): 5.00

Diameter of Boring, D (in): 8

Water Table Depth (ft):

Initial Depth to Water, d_1 (ft): 0.35



Reading No.	Water Level Measurement			Water Level Calculations				Percolation Rate Calculations		
	Time Interval $\Delta T = T_2 - T_1$ (min)	Initial Depth to Water d_1 (ft)	Final Depth to Water d_2 (ft)	Initial Height of Water Colum $d_{H1} = d_b - d_1$ (in)	Final Height of Water Column $d_{H2} = d_b - d_2$ (in)	Drop in Height $\Delta d_H = d_{H1} - d_{H2}$ (in)	Average Height of Water Column $d_{avg} = (d_{H1}+d_{H2})/2$ (in)	Pre-adjusted Percolation Rate $K_i = \Delta d_H / \Delta T$ (in/hr)	Reduction Factor $R_f = ((2d_{H1} - \Delta d_H) / D) + 1$	Adjusted Percolation Rate $K = K_i / R_f$ (in/hr)
1	30	0.35	1.50	55.80	42.00	13.80	48.90	27.60	13.23	2.09
2	30	0.35	1.39	55.80	43.32	12.48	49.56	24.96	13.39	1.86
3	30	0.35	1.40	55.80	43.20	12.60	49.50	25.20	13.38	1.88
4	30	0.35	1.40	55.80	43.20	12.60	49.50	25.20	13.38	1.88
5	30	0.35	1.40	55.80	43.20	12.60	49.50	25.20	13.38	1.88

Adjusted Percolation Rate = 1.88 **in/hr**

Boring Percolation Testing (based on GS200.1, 12/31/14)

Project Name: Boyle Heights Sports Center Project, Los Angeles, California

Project No.: 106965-2000

Project Location:

Tested by: SM **Date Tested:** 6/28/2017

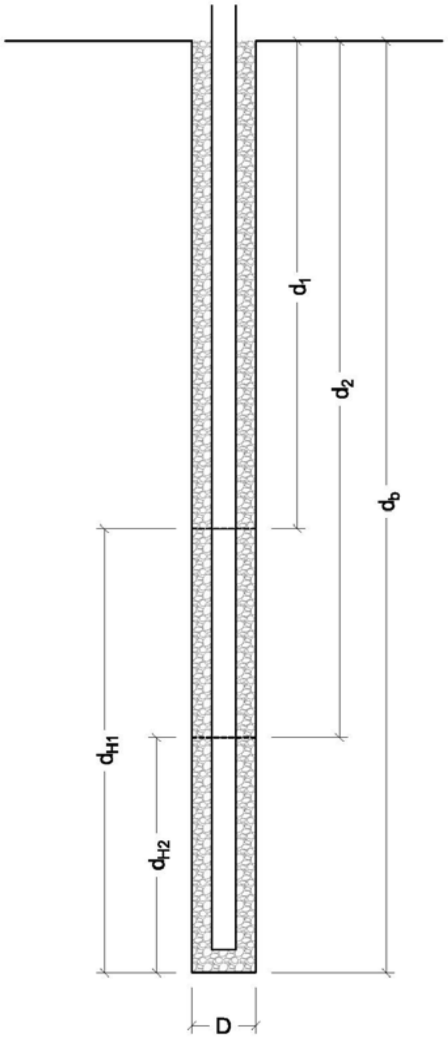
Boring/Test No.: TW-2/1

Depth of Boring, d_b (ft): 10.00

Diameter of Boring, D (in): 8

Water Table Depth (ft):

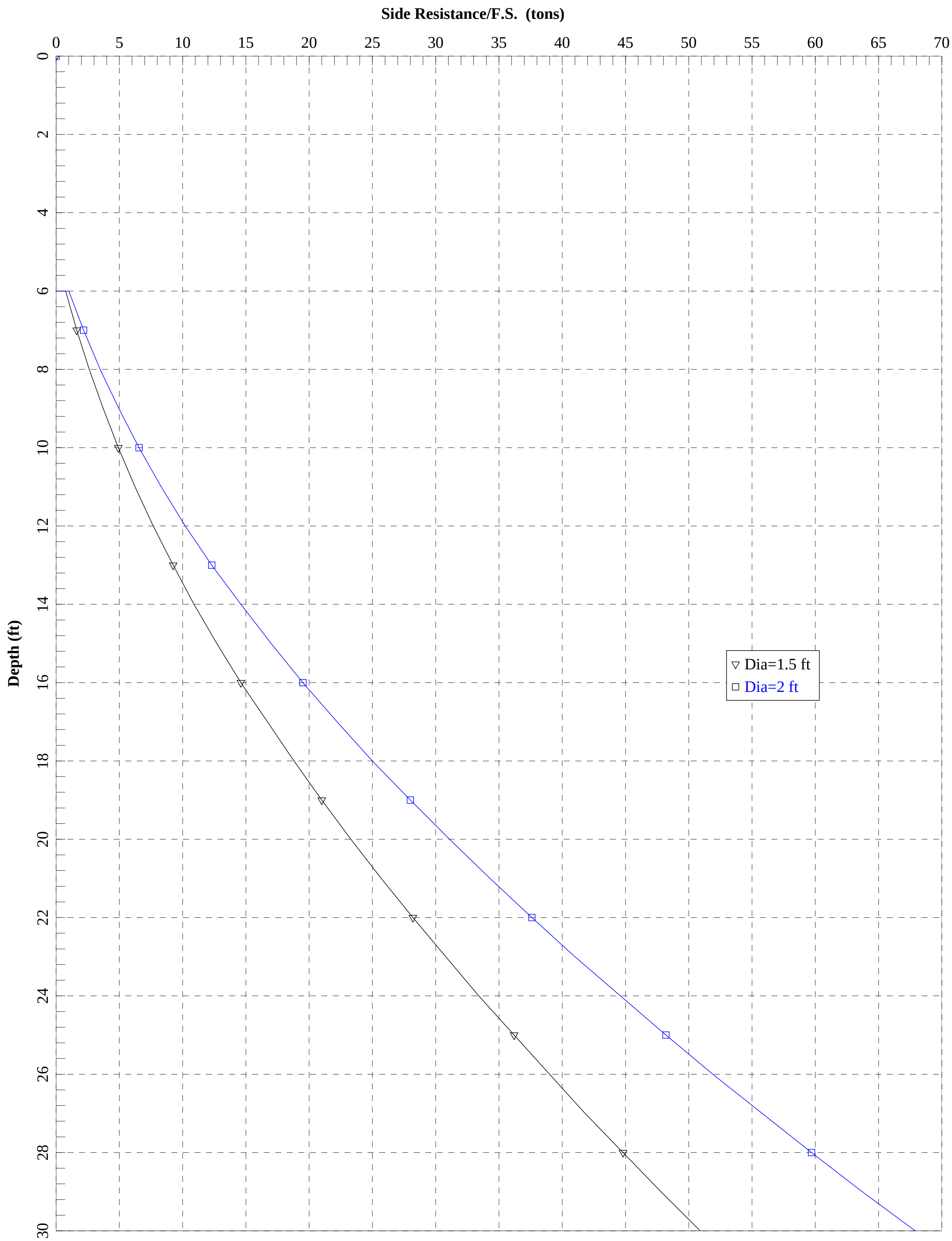
Initial Depth to Water, d_1 (ft): 0.35



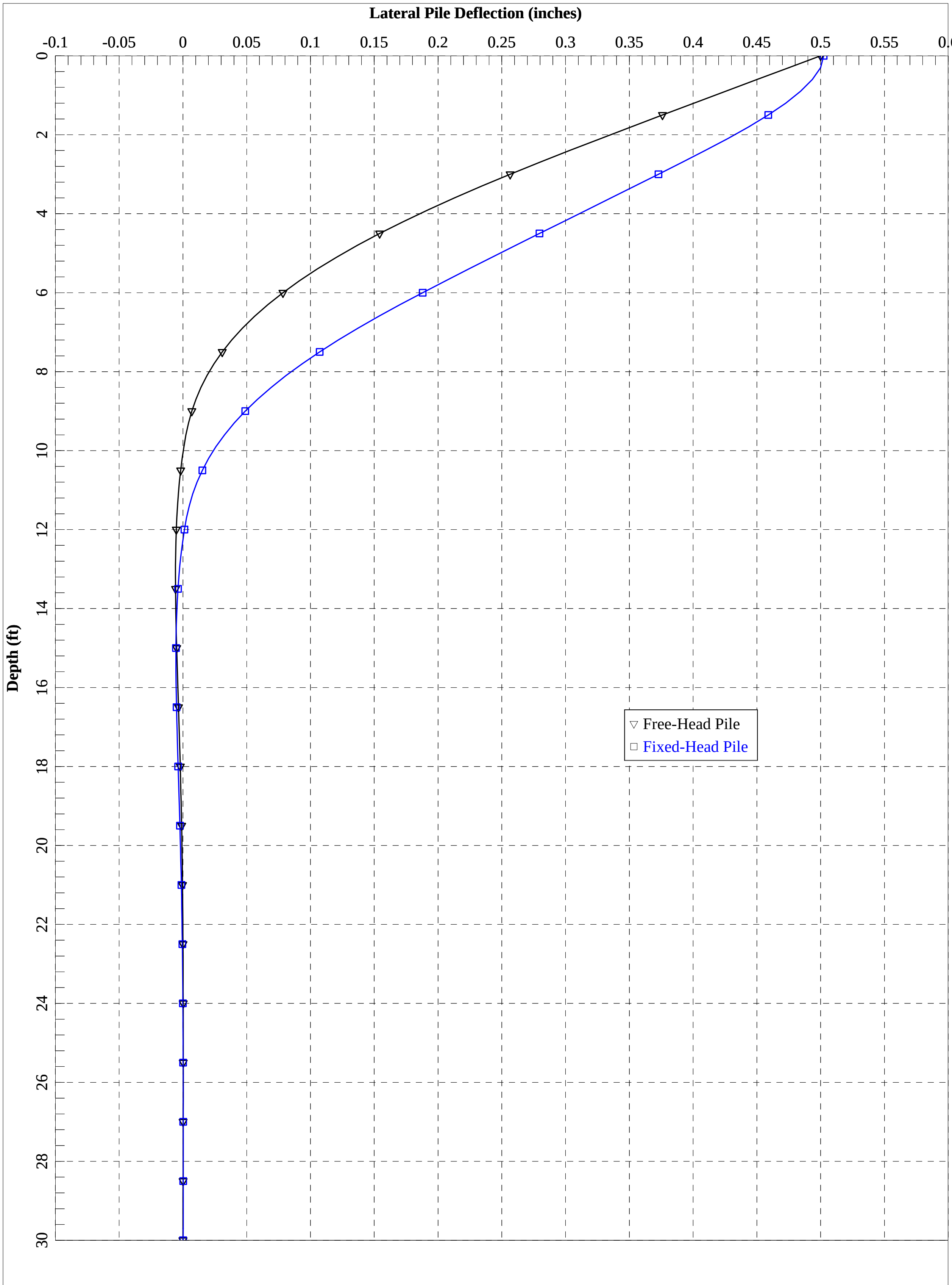
Reading No.	Water Level Measurement			Water Level Calculations				Percolation Rate Calculations		
	Time Interval $\Delta T = T_2 - T_1$ (min)	Initial Depth to Water d_1 (ft)	Final Depth to Water d_2 (ft)	Initial Height of Water Colum $d_{H1} = d_b - d_1$ (in)	Final Height of Water Column $d_{H2} = d_b - d_2$ (in)	Drop in Height $\Delta d_H = d_{H1} - d_{H2}$ (in)	Average Height of Water Column $d_{avg} = (d_{H1}+d_{H2})/2$ (in)	Pre-adjusted Percolation Rate $K_i = \Delta d_H / \Delta T$ (in/hr)	Reduction Factor $R_f = ((2d_{H1} - \Delta d_H) / D) + 1$	Adjusted Percolation Rate $K = K_i / R_f$ (in/hr)
1	30	0.35	3.65	115.80	76.20	39.60	96.00	79.20	25.00	3.17
2	30	0.35	3.45	115.80	78.60	37.20	97.20	74.40	25.30	2.94
3	30	0.35	3.50	115.80	78.00	37.80	96.90	75.60	25.23	3.00
4	30	0.35	3.50	115.80	78.00	37.80	96.90	75.60	25.23	3.00
5	30	0.35	3.50	115.80	78.00	37.80	96.90	75.60	25.23	3.00

Adjusted Percolation Rate = **3.00** **in/hr**

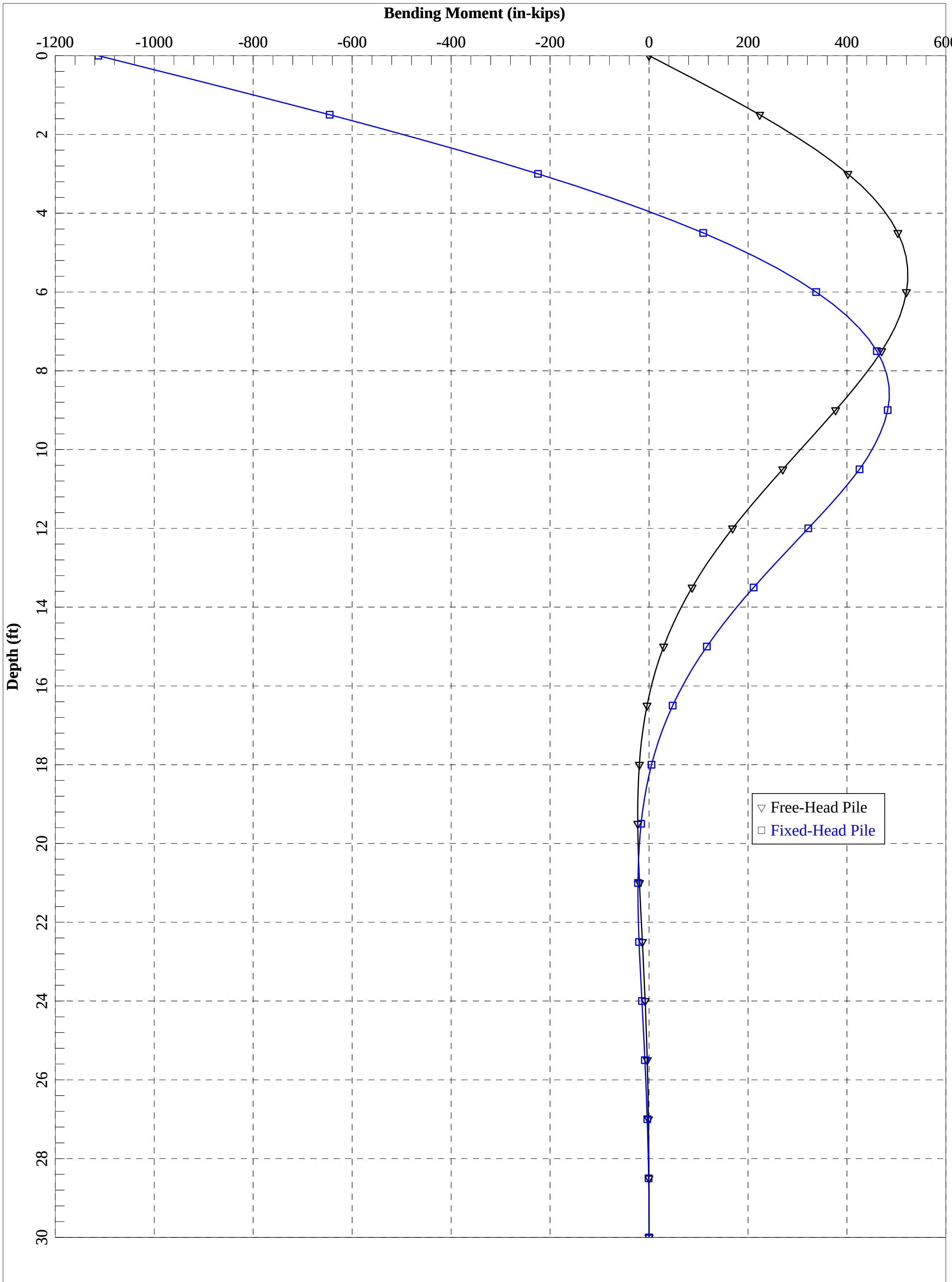
APPENDIX E. CIDH PILE CAPACITY GRAPHS



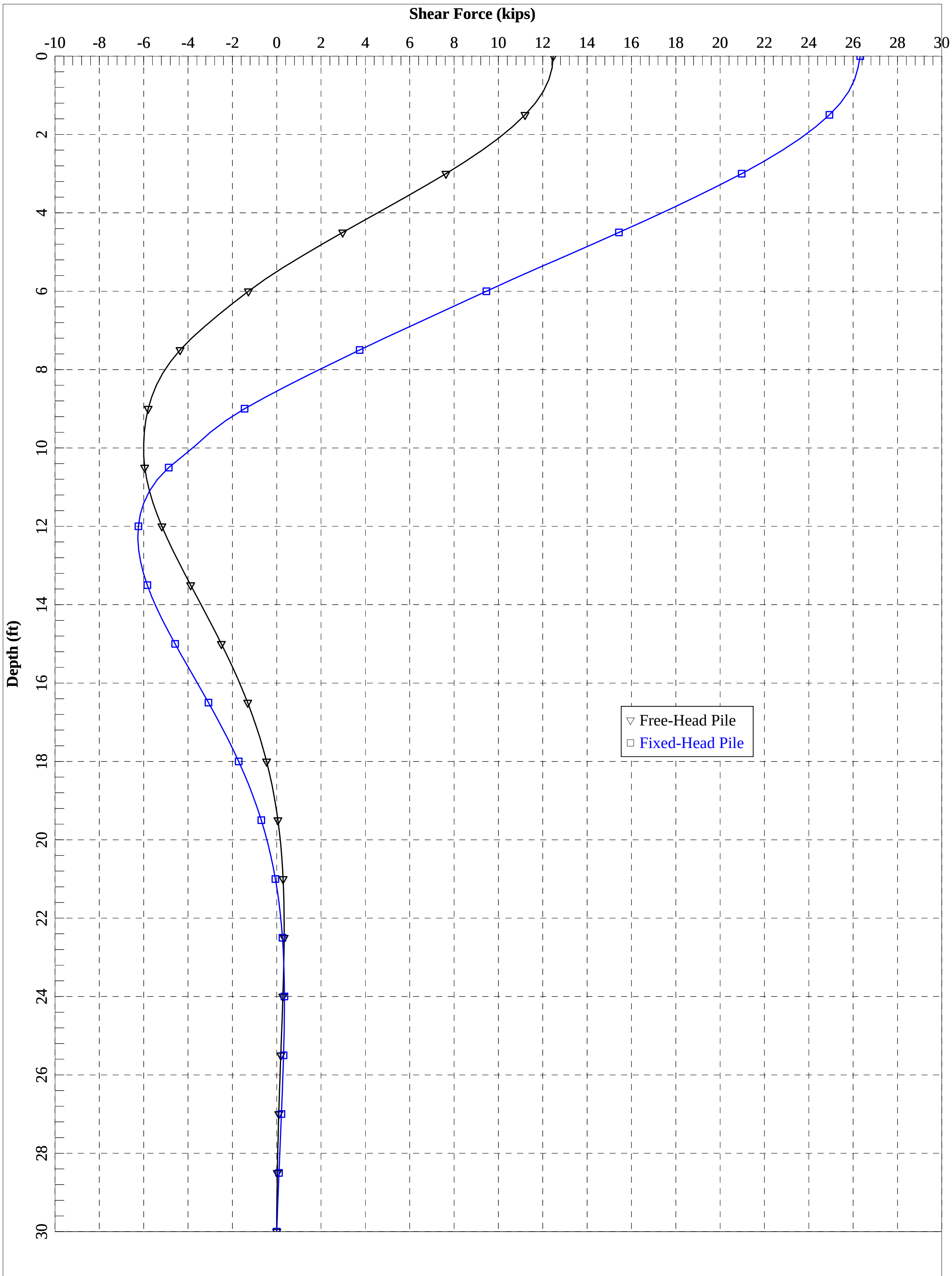
CIDH Pile Downward Axial Capacity



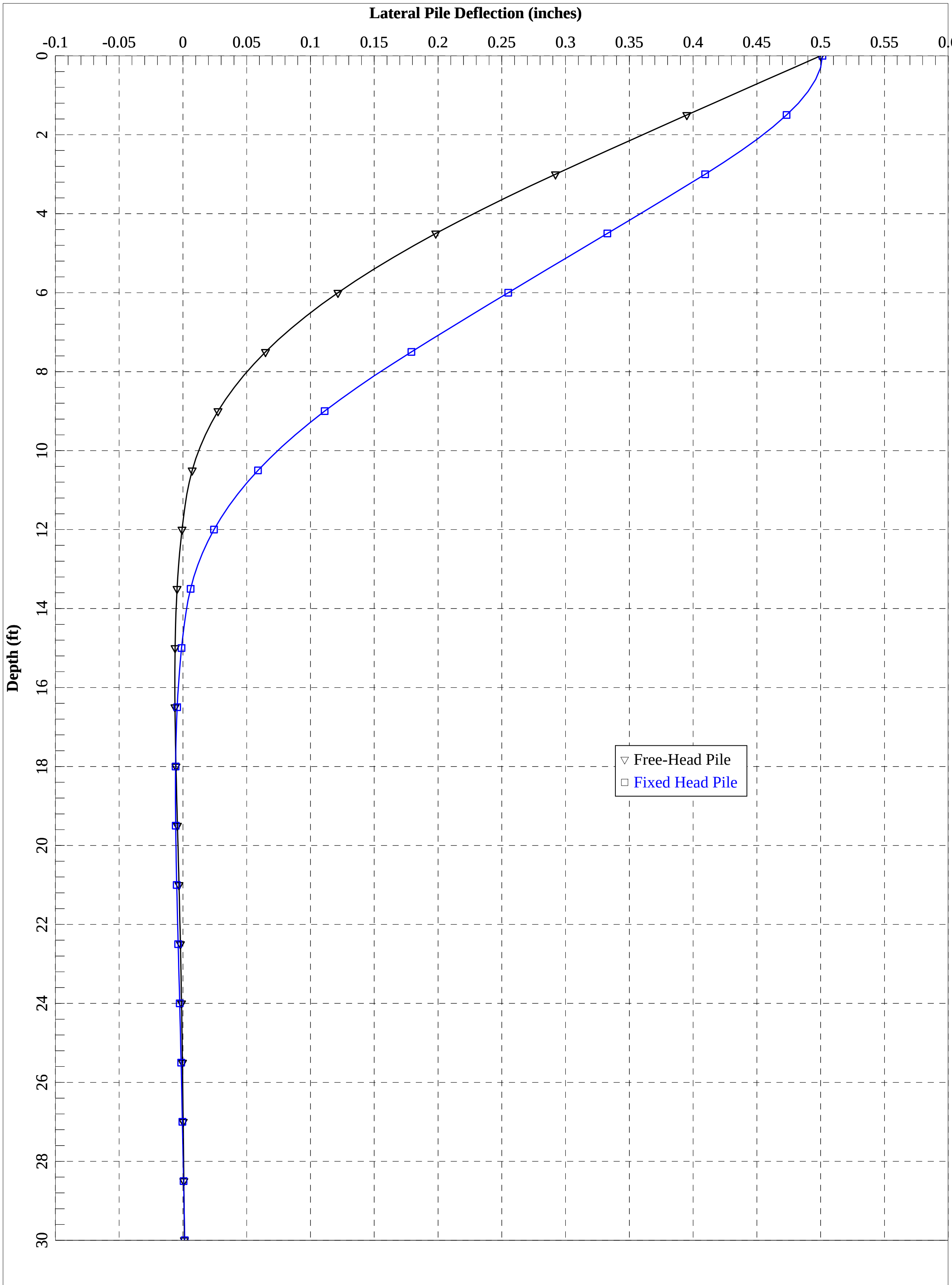
18-in Diameter CIDH Pile Lateral Capacity - Deflection



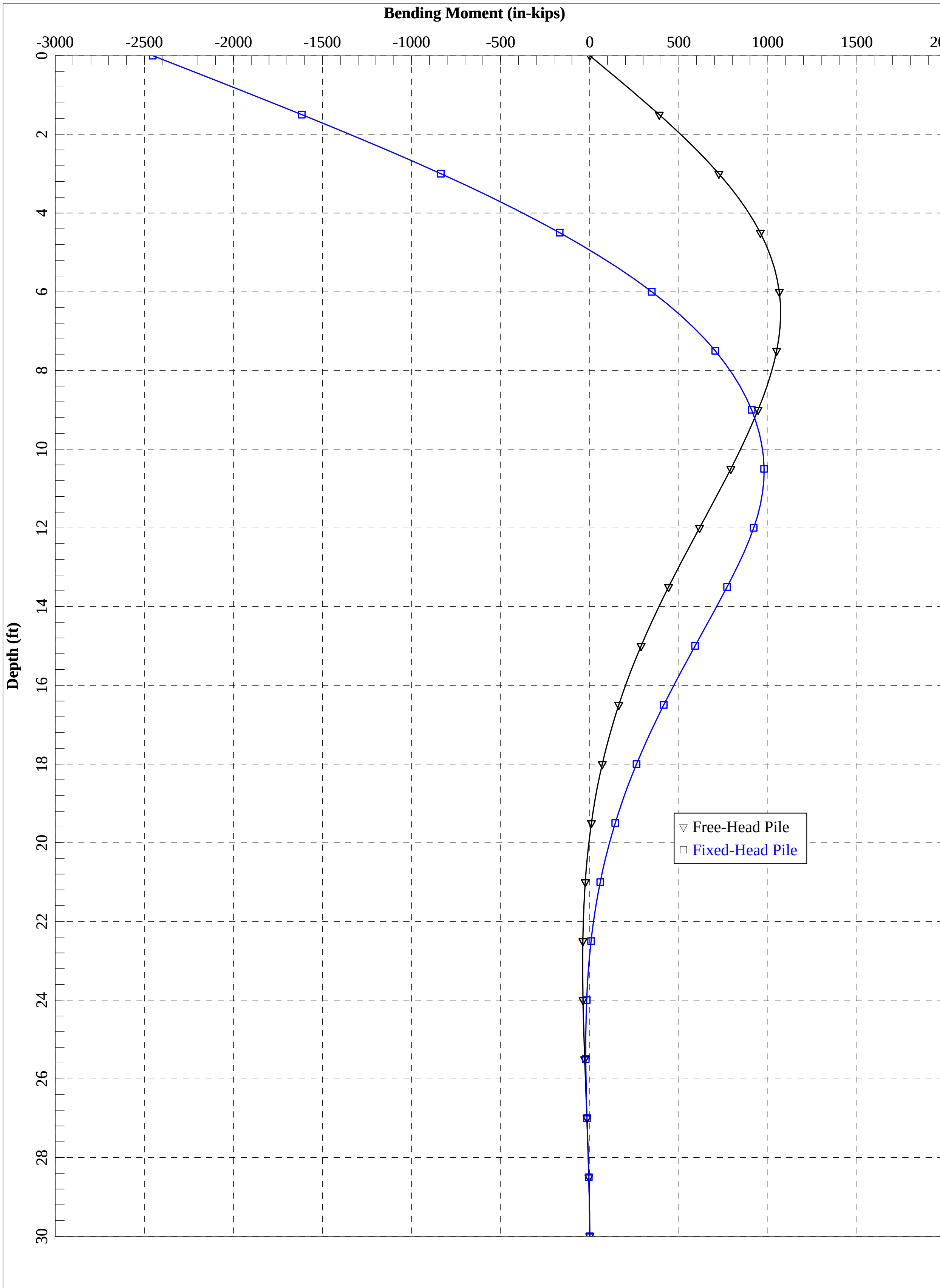
18-in Diameter CIDH Pile Lateral Capacity - Bending Moment



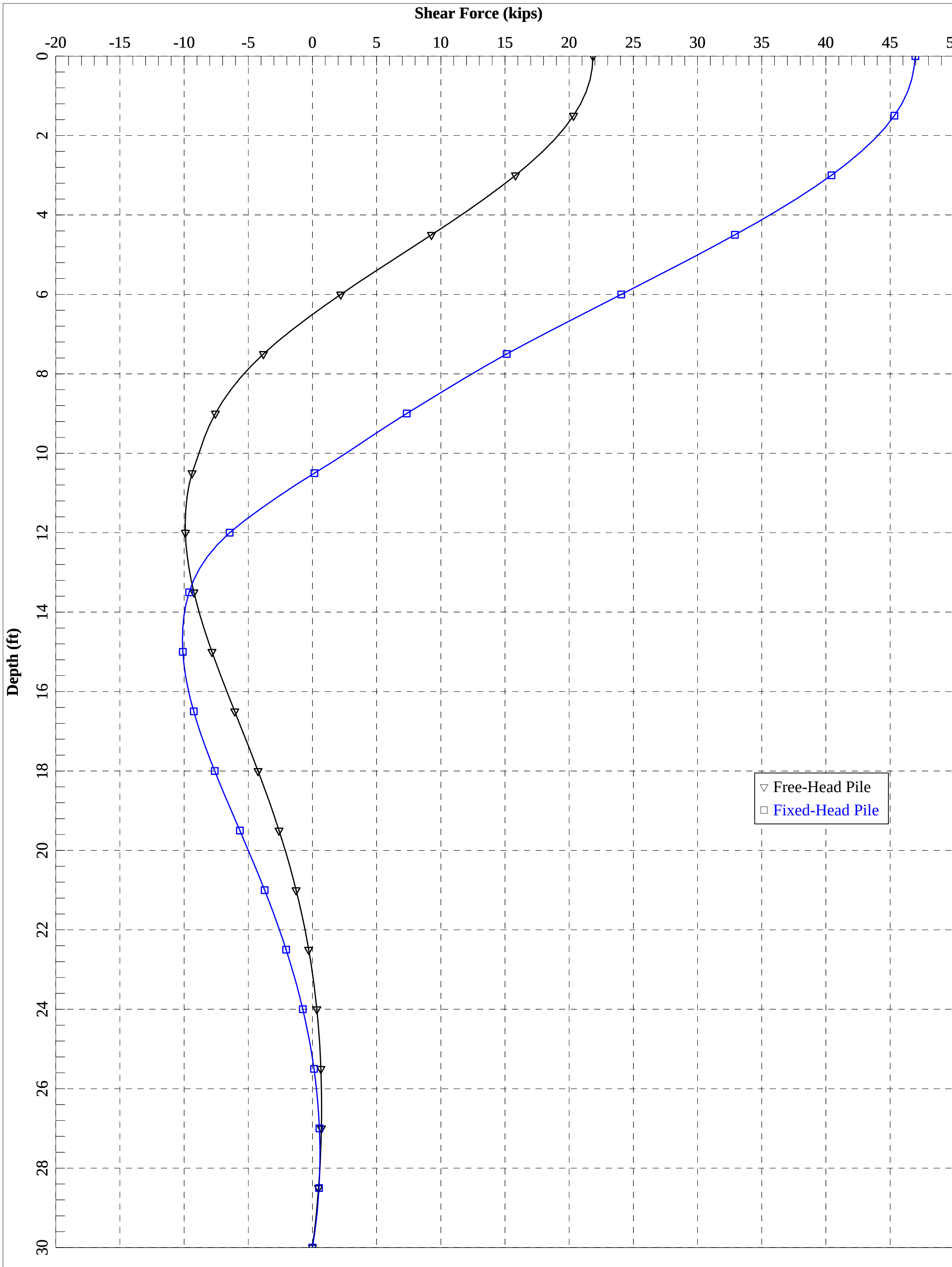
18-in Diameter CIDH Pile Lateral Capacity - Shear Force



24-in Diameter CIDH Pile Lateral Capacity - Deflection



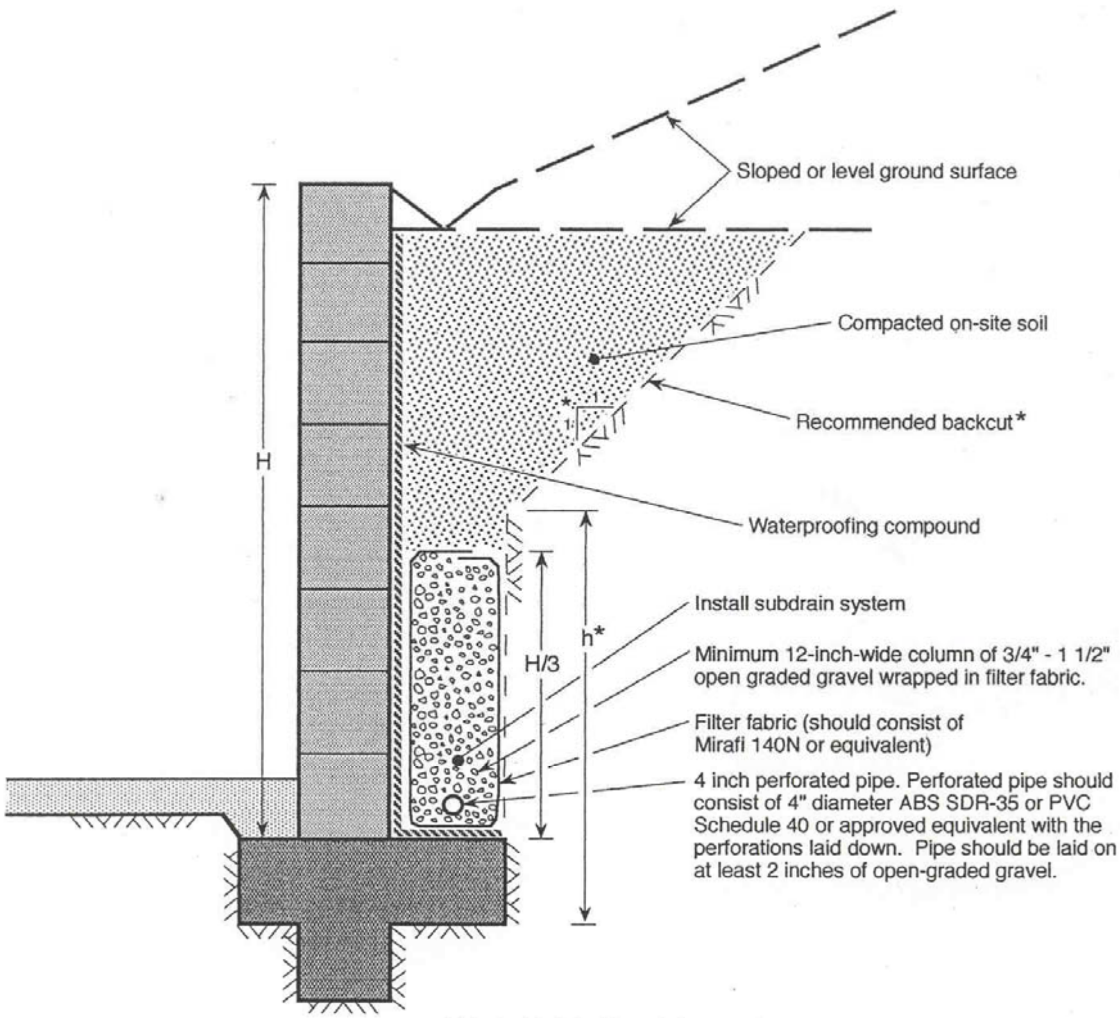
24-in Diameter CIDH Pile Lateral Capacity - Bending Moment



24-in Diameter CIDH Pile Lateral Capacity - Shear Force

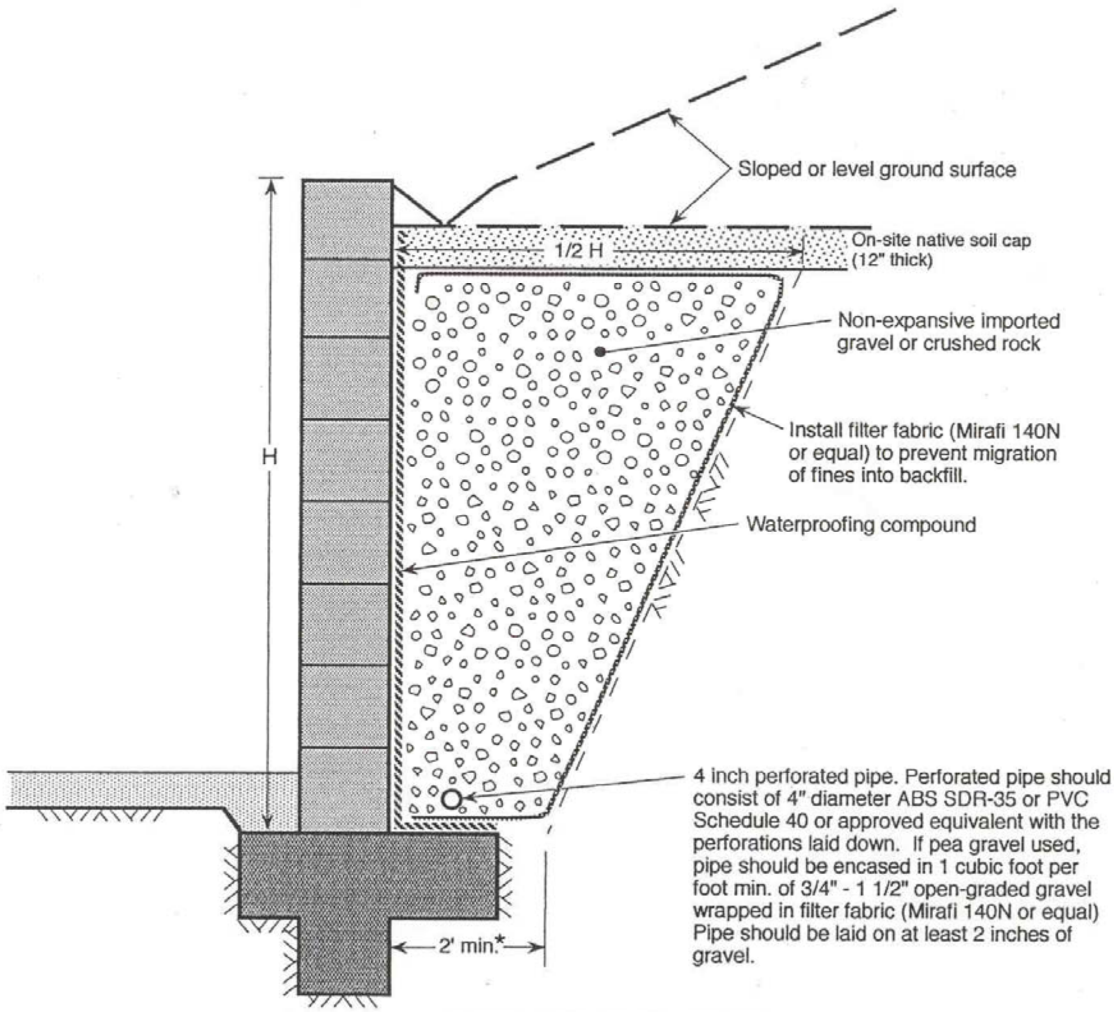
APPENDIX F. TYPICAL RETAINING WALL BACKFILL DETAILS

NATIVE SOIL BACKFILL



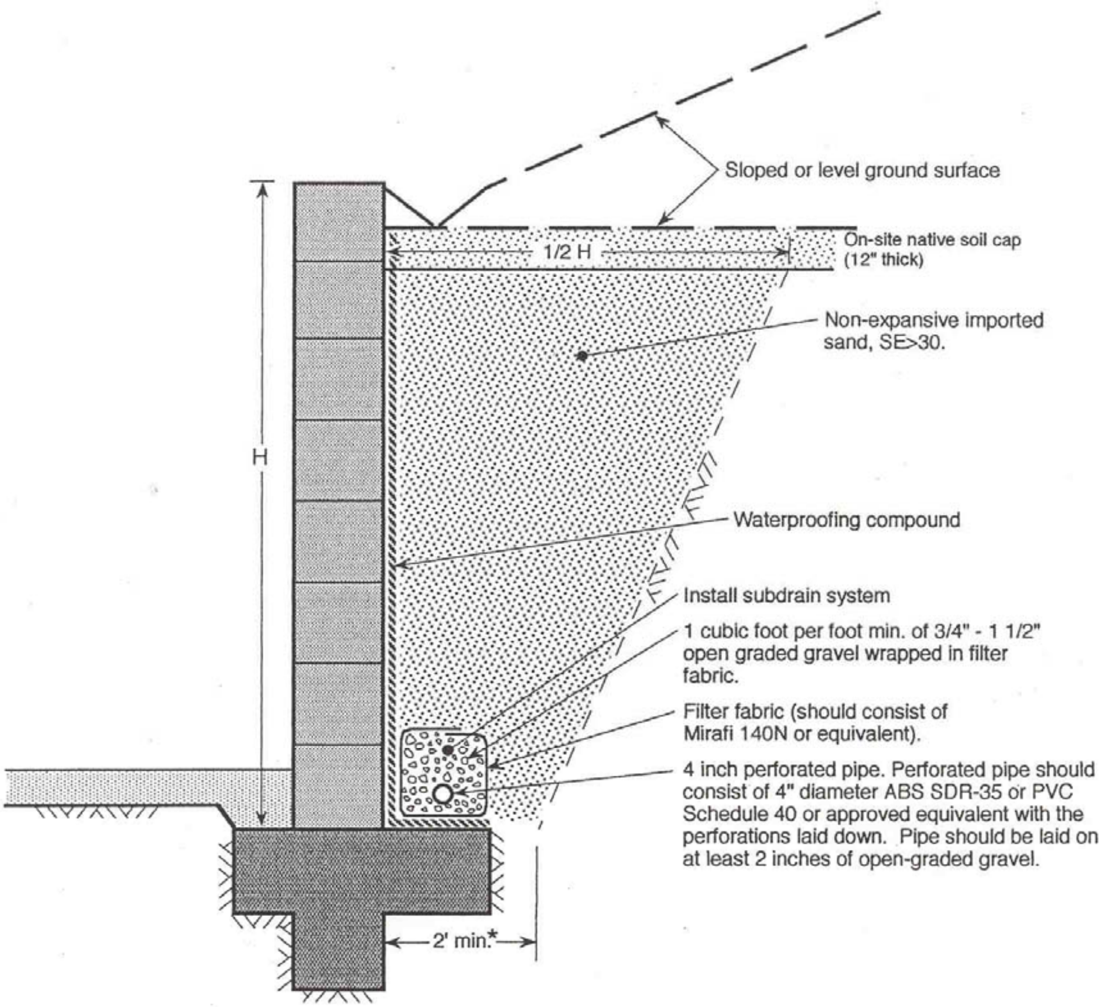
* Vertical height (h) and slope angle of backcut per soils report. Based on geologic conditions, configuration of backcut may require revisions (i.e. reduced vertical height, revised slope angle, etc.)

IMPORTED GRAVEL OR CRUSHED ROCK BACKFILL



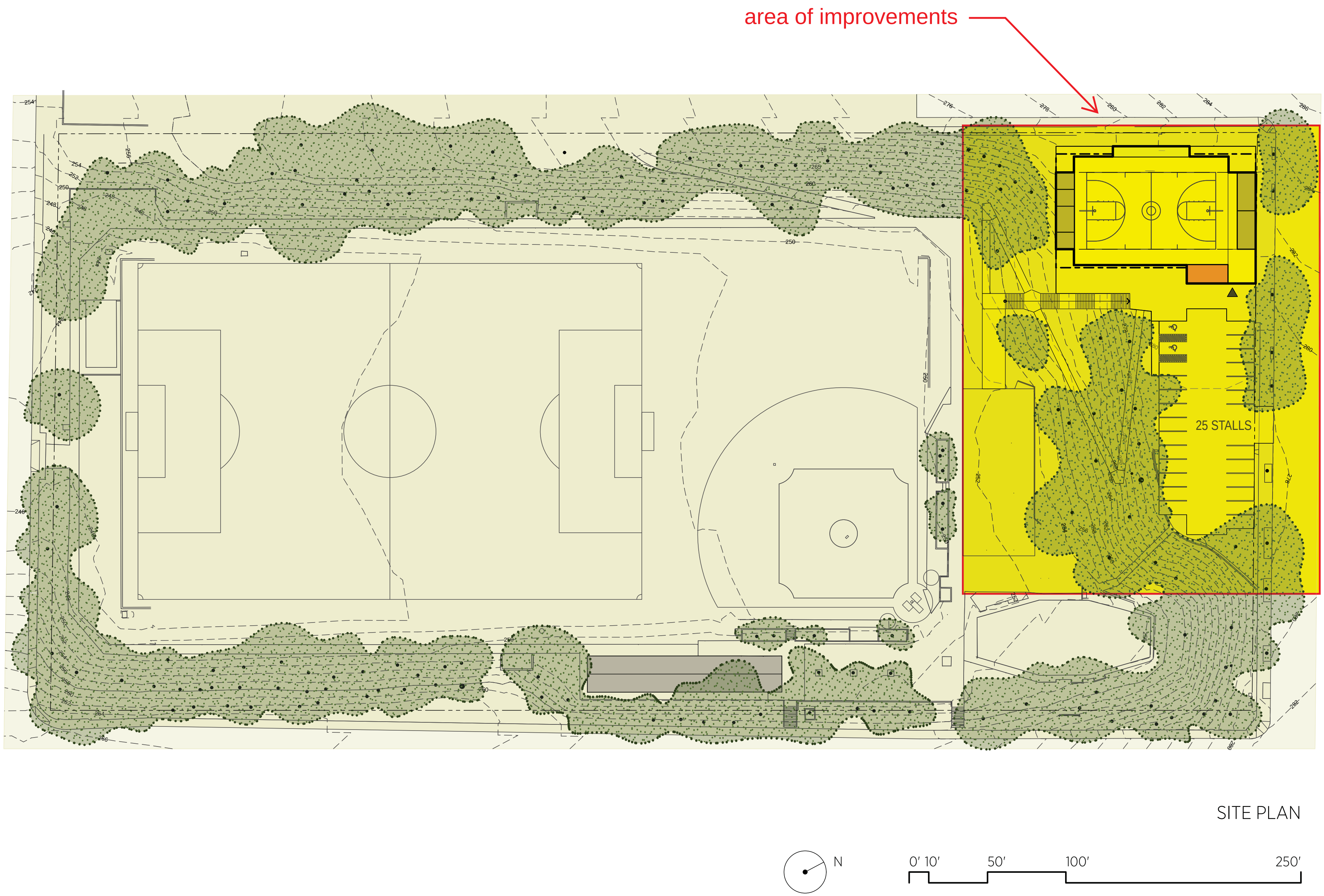
* At base of wall, the non-expansive backfill materials should extend to a min. distance of 2' or to a horizontal distance equal to the heel width of the footing, whichever is greater.

IMPORTED SAND BACKFILL



* At base of wall, the non-expansive backfill materials should extend to a min. distance of 2' or to a horizontal distance equal to the heel width of the footing, whichever is greater.

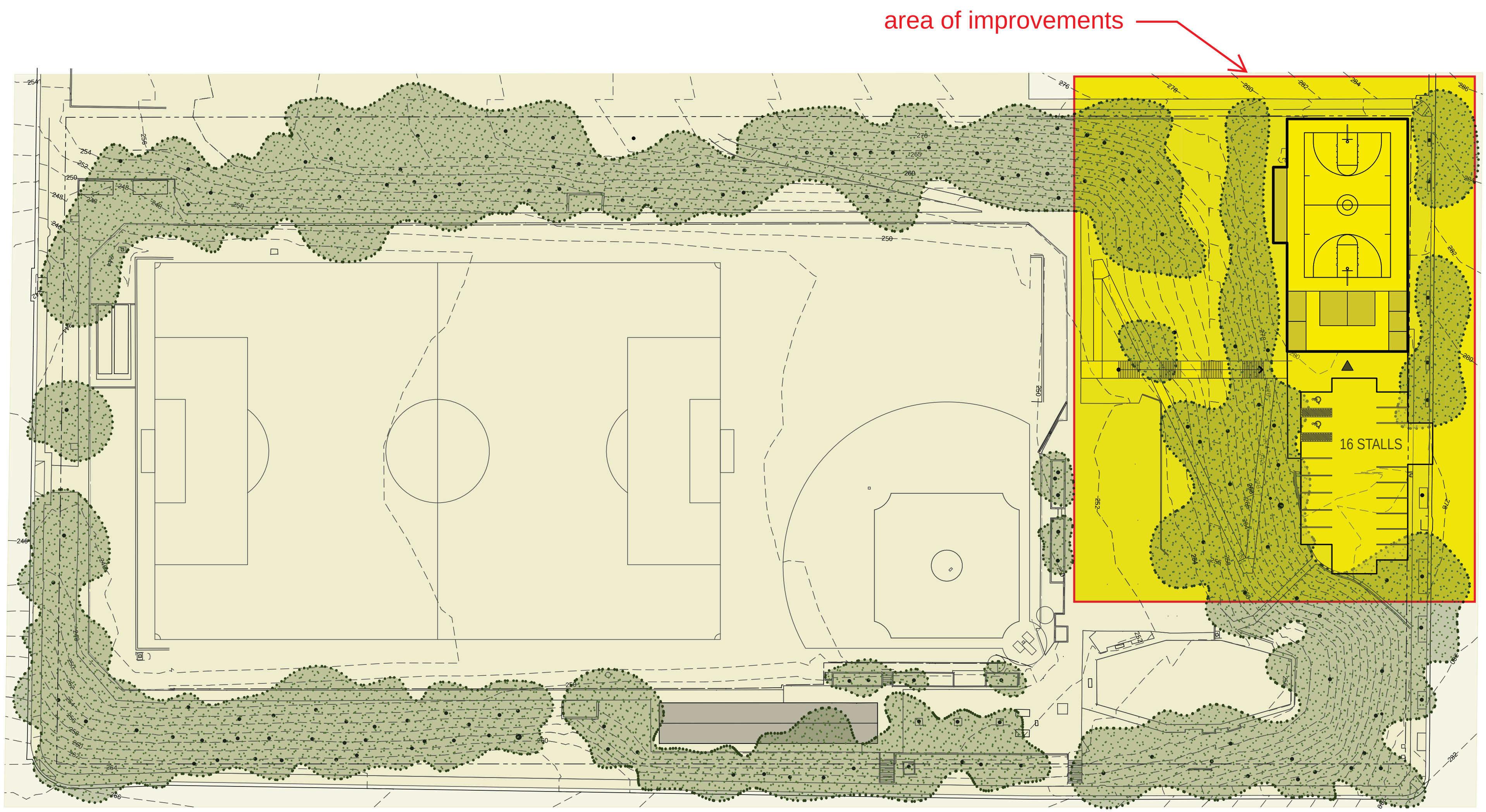
APPENDIX G. PRILIMINARY SITE PLANS



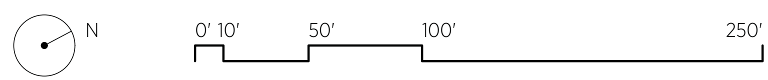
SITE PLAN

SITE PLAN - CORNER

A COMMUNITY BEACON



SITE PLAN - ALTERNATE LAYOUT



SITE PLAN - UPPER LEVEL OPTION

METHANE SOIL GAS INVESTIGATION REPORT
PROPOSED BOYLE HEIGHTS SPORTS CENTER PROJECT
2510 WHITTIER BOULEVARD
LOS ANGELES, CALIFORNIA

PREPARED FOR

CITY OF LOS ANGELES
GEOTECHNICAL ENGINEERING GROUP
1149 SOUTH BROADWAY, SUITE 120
LOS ANGELES, CALIFORNIA 90015-2213

PREPARED BY

WILLDAN GEOTECHNICAL
1515 SOUTH SUNKIST STREET, SUITE E
ANAHEIM, CALIFORNIA 92806
WILLDAN GEOTECHNICAL PROJECT NO. 106965-2010

OCTOBER 31, 2017

WILLDAN Geotechnical | extending your reach

October 31, 2017

Mr. Patrick J. Schmidt, PE, GE
City of Los Angeles
Geotechnical Engineering Group
1149 S. Broadway, Suite 120
Los Angeles, CA 90015-2213

Subject: Methane Soil Gas Investigation Report
Proposed Boyle Heights Sports Center Project, Los Angeles, California
Willdan Geotechnical Project No. 106965-2010

Dear Mr. Schmidt,

Willdan Geotechnical is pleased to submit this report for the proposed Boyle Heights Sports Center project located at 2510 Whittier Boulevard in the City of Los Angeles, California. This report presents the findings and conclusions with respect to methane soil gas investigation performed by our sub-consultant within the subject project site.

We appreciate the opportunity to assist you and look forward to future projects. If you have any questions, please contact us.

Respectfully submitted,
WILLDAN GEOTECHNICAL

REGISTERED PROFESSIONAL ENGINEER
MOHSEN RAHIMIAN
No. 3059
GEOTECHNICAL
STATE OF CALIFORNIA

Mohsen Rahimian

Mohsen Rahimian, PE, GE
Principal Engineer

Attachment: Methane Soil Gas Investigation Report, prepared by Sub-Consultant

Distribution: Addressee (4 unbound wet signed sets and one PDF copy via e-mail)

Engineering | Geotechnical | Environmental | Sustainability | Financial | Homeland Security
Phone: 714.634.3318 | Fax: 714.634.3372 | 1515 South Sunkist Street, Suite E, Anaheim, CA 92806 | www.willdan.com

REPORT OF METHANE SOIL GAS INVESTIGATION
PROPOSED GYMNASIUM BUILDING

2510 WHITTIER BOULEVARD
LOS ANGELES, CA

Prepared for:

WILLDAN GEOTECHNICAL

Anaheim, California

TERRA-PETRA ENVIRONMENTAL ENGINEERING
700 S Flower Street, Suite 2580
Los Angeles, California

October 30, 2017

October 30, 2017

Mohsen Rahimian, PE, GE
Supervising Engineer
Willdan Geotechnical
T. (657) 221-2714
C. (818) 577-3545
E. MRahimian@willdan.com

Subject: **Report of Methane Soil Gas Testing**
Proposed Gymnasium Building
2510 Whittier Blvd. Los Angeles, CA 90023
Tract: TR 5299, Block: None, Lot(s): 19-23

Terra-Petra is pleased to submit this report to summarize the methane soil gas investigation services conducted at the subject site referenced above. The purpose of this investigation was to determine the methane soil gas mitigation requirements, if any, in connection with the proposed gymnasium building. The project site has been determined to be located within a City of Los Angeles Designated Methane Buffer Zone (See **Exhibit 1, Site Location Map**).

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Willdan Geotechnical and any pertinent consultants to be used solely for the design of the proposed project. This report has not been prepared for use by other parties, and may not contain sufficient information for purposes of other parties or other uses.

PROJECT INFORMATION

Terra-Petra was contacted to perform a soil gas investigation for the proposed development under our LADBS Testing License #10224. We understand that the new 10,000 sq ft gymnasium will consist of a high school standard full-sized basketball court, offices, storage rooms, rest rooms and a parking lot. The project will also include grading work at the sloped area for access to the lower portion of the basketball court and synthetic field. The purpose of this investigation was to detect the presence of any elevated levels of methane gas in the in-situ soils at the project site.

SOIL GAS PROBE INSTALLATION & TESTING

The methane soil gas testing at the site was performed based on the procedures conforming to the Los Angeles Department of Building and Safety (LADBS) Information Bulletin Ref. No. 91.71404.1, P/BC 2002-101. City guidelines require that one shallow-depth probe be installed for every 10,000 square feet of site area where the highest concentration of soil gas is most likely to be found, with a minimum of two shallow gas probes regardless of the total area of the site. A total of three (3) shallow probe locations were selected based on the site testing area of approximately 20,560 sq. ft. (See **Exhibit 2, Probe Locations Map**). Predicated on the soil gas testing results at the shallow probes, an additional two (2) deep gas probe locations were selected.

On 10/26/17, shallow and deep borings were drilled using a truck-mounted GeoProbe 7800 direct-push drill rig. Shallow borings were drilled to a depth of 4 feet, with gas probes installed at 4 ft bsg. Terra-Petra was obligated to install the deepest probe a minimum of 20 feet beneath the lowest level of the building. As such, deep boring 2 (DP-2) was drilled to a depth of 20 feet, with nested gas probes installed at depths of 5 ft, 10 ft and 20 ft. DP-1 was drilled to a depth of 19 ft, at which point the drill encountered refusal. Nested gas probes were installed at depths of 5 ft, 10 ft, and 19 ft within DP-1. Gas probes were constructed as shown in **Exhibit 3, Probe Construction Diagrams**. Groundwater was not encountered during the investigation and the historic groundwater level at the site is unknown.

The current investigation was performed in accordance with LADBS standards. Soil gas samples were collected during two rounds of monitoring on 10/26/17 and 10/27/17 from each of the probes. Each sampling period was separated by a time period of approximately 24 hours. As required by the LADBS, all probes were monitored for detectable combustible gas and soil gas pressures using a calibrated CES/Landtec GEM 5000 portable 4-gas detector with a lower limit for reporting methane levels of 1,000 ppmv (parts per million by volume).

TEST RESULTS

Methane soil gas was measured in non-detectable levels for the CES/Landtec GEM 5000 portable 4-gas detector in each of the shallow and deep gas probes during both days of monitoring. The results of the soil gas testing measurements were recorded in an approved format as presented in the attached **Exhibit 5, Form 01 – Certificate of Compliance for Methane Test Data**.

CONCLUSIONS

Methane gas is combustible with a lower explosive limit (LEL) of approximately 5%,v/v in air. In structures, regulatory agencies commonly consider methane concentrations above 25% of the LEL (1.25%,v/v) to be action levels above which gas concentrations must be mitigated. The City of Los Angeles Department of Building and Safety considers methane soil gas concentrations at 0.0%,v/v to be the action level at which soil gas concentrations must be mitigated for buildings to be constructed in a methane zone. For the methane buffer zone, this same action level applies only if the water column pressure is greater than 2 inches.

The calibration of the instrument used to detect combustible methane gas concentrations on site renders any readings of methane gas levels between 0 – 999 ppmv (0 – 0.009%, v/v) as non-detectable. Since all soil gas probes produced non-detectable readings of methane gas, it is possible that methane concentrations in the in-situ soils fall within the range of 101-1,000 ppmv for a Level II classification. Thus, based on the non-detect methane readings and negligible water column pressures encountered, along with LADBS action levels presented above, we recommend that the methane mitigation for the site adheres to design requirements for **Methane Buffer Zone – Level II, ≤ 2-in. water column pressure.** Therefore, as per said design level, no methane mitigation measures are required for this project.

I am a registered California civil engineer with experience in methane gas mitigation systems. Should you have any questions regarding this report, please contact Justin Conaway at 213-458-0494. We appreciate the opportunity to assist you with your project.

Sincerely,

REGISTERED PROFESSIONAL ENGINEER
JOHNNY RAY CONAWAY
NO.
C 19,689
exp. 09-30-19
CIVIL
STATE OF CALIFORNIA

John Conaway, PE
Terra-Petra
LADBS License #10224

<u>Attachments</u>
Exhibit 1: Site Location Map
Exhibit 2: Probe Locations Map
Exhibit 3: Probe Construction Diagrams
Exhibit 4: Field Data Sheets
Exhibit 5: Form 01 – Certificate of Compliance for Methane Test Data

Exhibit 1:
Site Location Map

NavigateLA Map

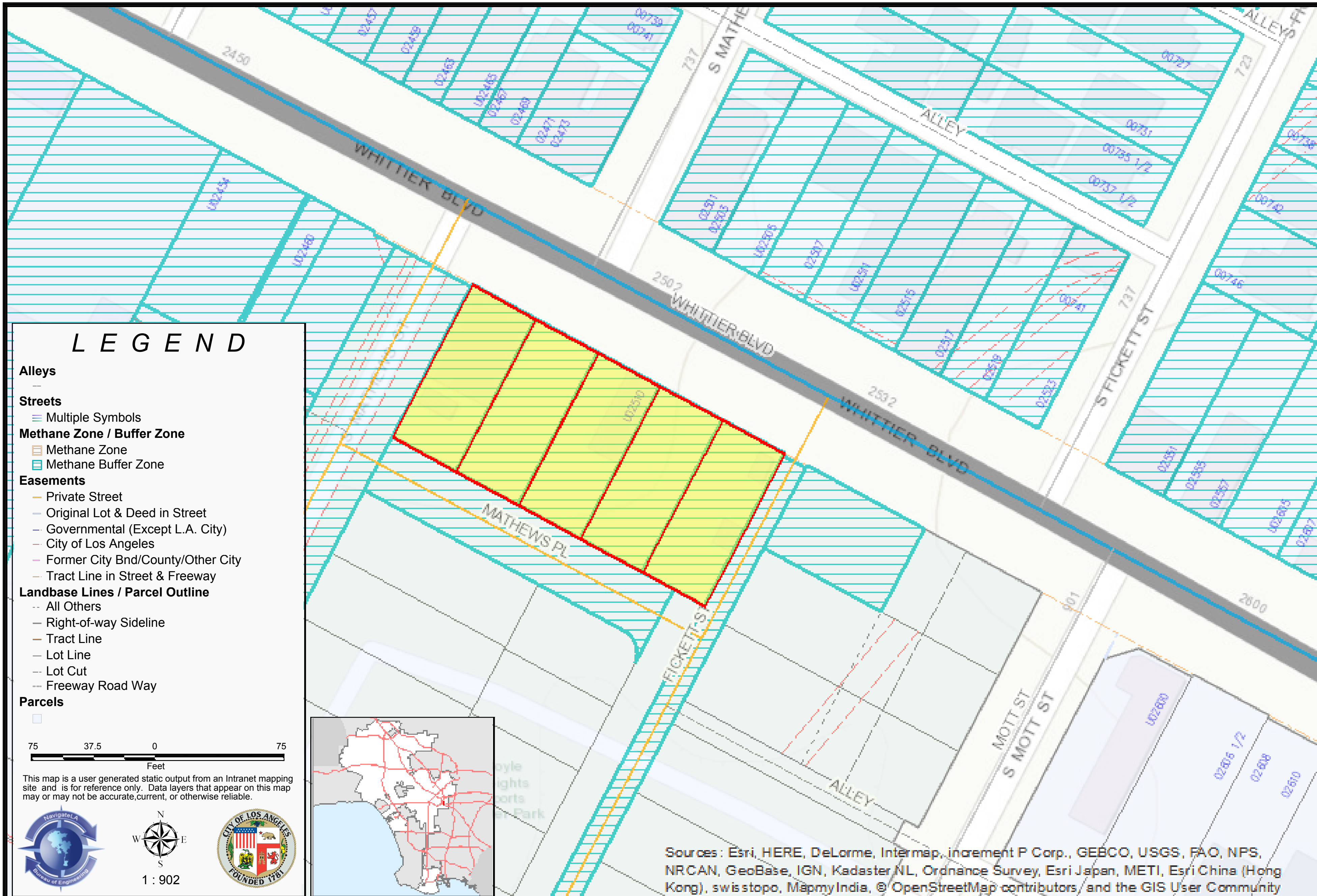


Exhibit 2:
Probe Locations Map

IMAGE SOURCE: GOOGLE EARTH

LEGEND

SP-2 — SHALLOW PROBE

DP-2 — DEEP PROBE

APPROXIMATE PROPERTY LINE

OVERALL SITE

SCALE: 1" = 50'

0' 25' 50'

SCALE: 1" = 50'

EXHIBIT: 2

TITLE: SOIL GAS MONITORING PROBE LOCATIONS

DATE: OCTOBER 27, 2017

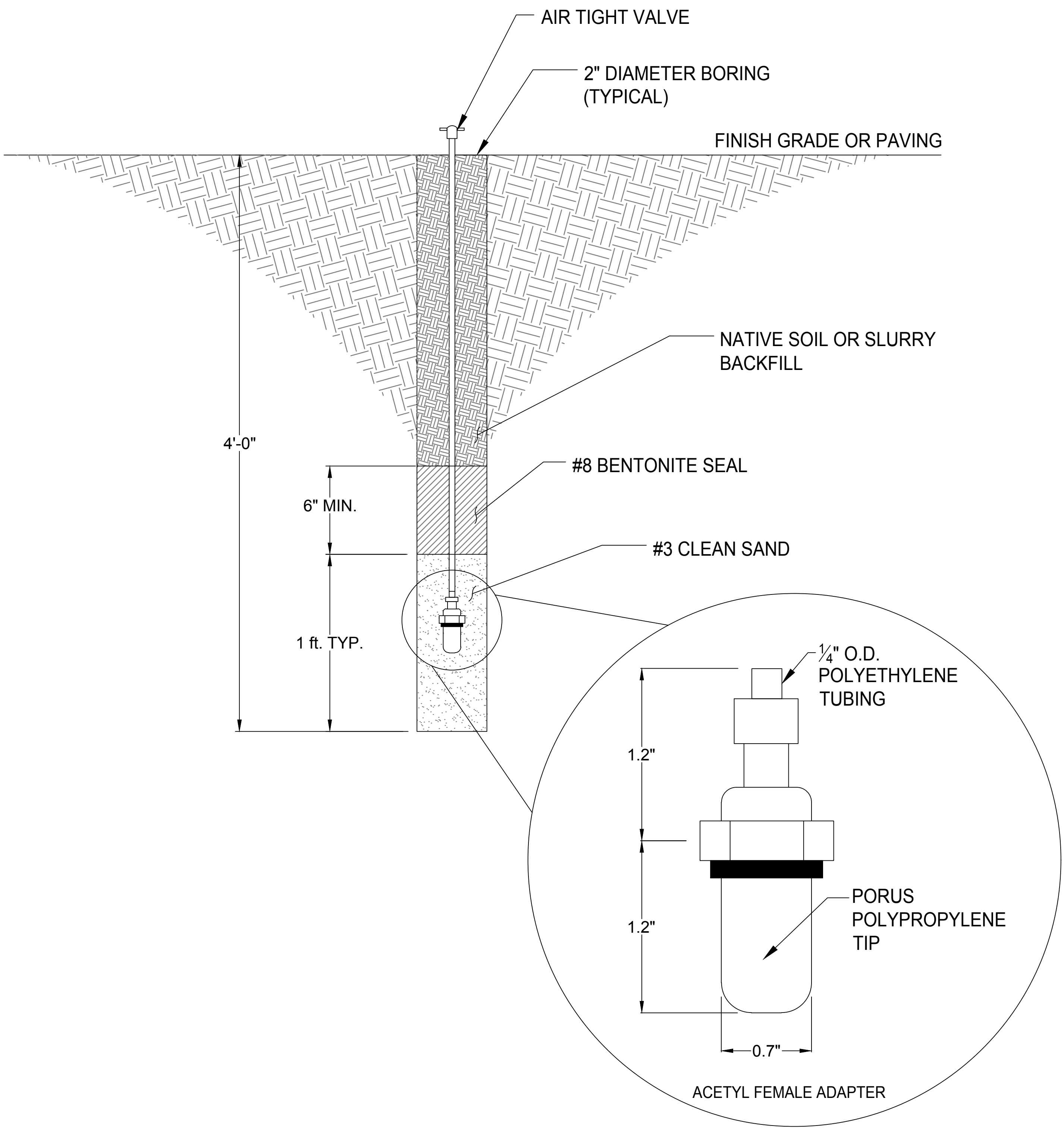
DRAWN BY: J.MORA

CHECKED BY:

ADDRESS: 2510 WHITTIER BLVD.
LOS ANGELES, CA 90023

Terra-Petra
ENVIRONMENTAL ENGINEERING

Exhibit 3:
Probe Construction Diagrams



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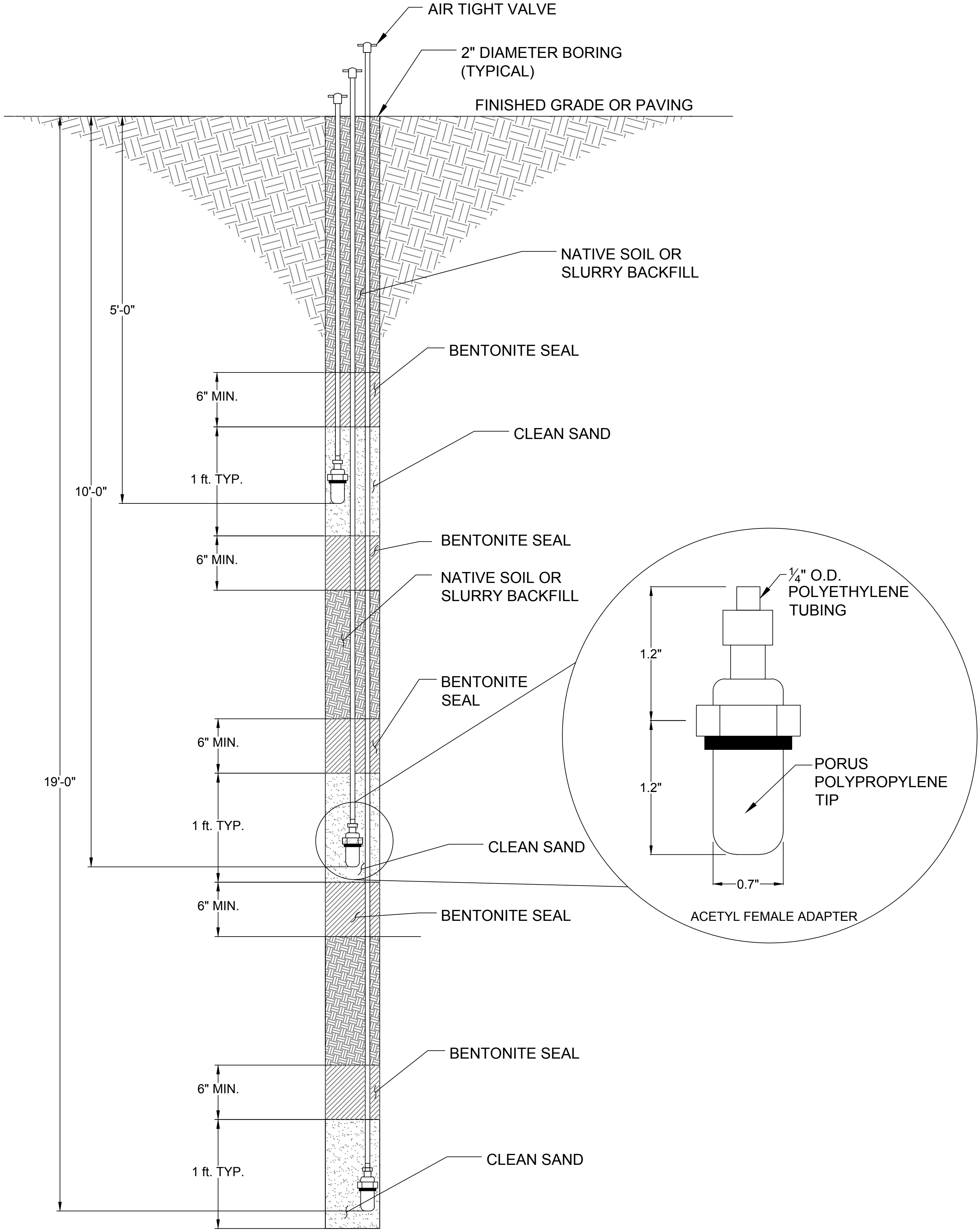
ENVIRONMENTAL ENGINEERING
700 S. Flower St., Ste. 2580, Los Angeles, CA 90017 213.458.0494
Los Angeles (HQ) . San Francisco . New York . Denver . Tacoma

ADDRESS:	TITLE:	EXHIBIT:
2510 WHITTIER BLVD. LOS ANGELES, CA 90023	CONSTRUCTION DIAGRAM FOR SHALLOW PROBE AT 4 FT.	3
	DRAWN BY: J.MORA	DATE: OCTOBER 27, 2017
	CHECKED BY:	



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Los Angeles (HQ) . San Francisco . New York . Denver . Tacoma

ADDRESS:
2510 WHITTIER BLVD.
LOS ANGELES, CA 90023

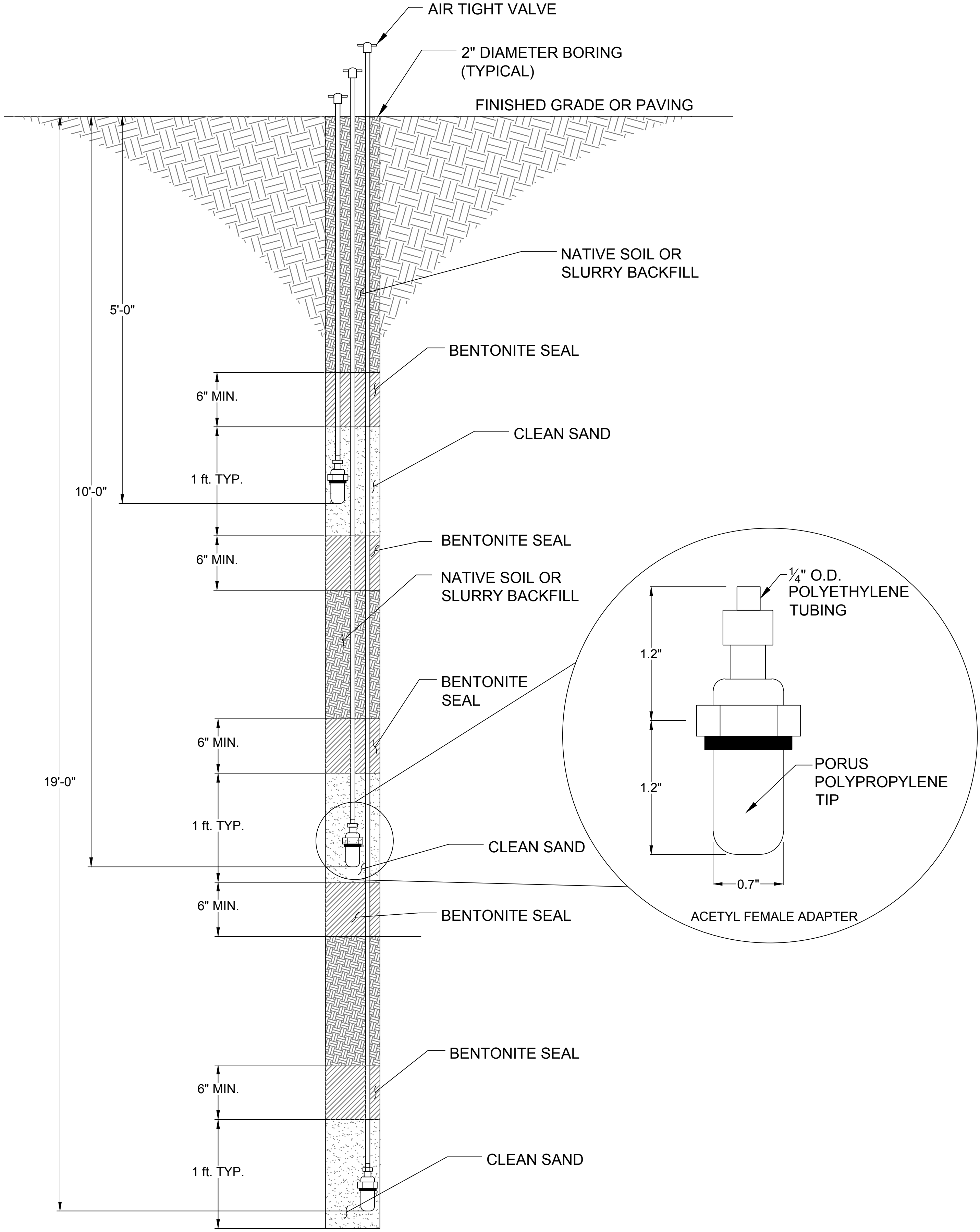
TITLE:
CONSTRUCTION DIAGRAM FOR DEEP PROBE AT 19 FT.

DRAWN BY: J.MORA

DATE: OCTOBER 27, 2017

CHECKED BY:

EXHIBIT: 3



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700 S. Flower St., Ste. 2580, Los Angeles, CA 90017 213.458.0494
Los Angeles (HQ) . San Francisco . New York . Denver . Tacoma

ADDRESS:	TITLE:		EXHIBIT:
2510 WHITTIER BLVD. LOS ANGELES, CA 90023	CONSTRUCTION DIAGRAM FOR DEEP PROBE AT 20 FT.		3
	DRAWN BY: J.MORA	DATE: OCTOBER 27, 2017	
	CHECKED BY:		

Exhibit 4:
Field Data Sheets

Soil Gas Investigation Spreadsheet

Site Location:	**2510 Whittier Blvd., Los Angeles, CA(90023).**							
Date:	**10/26/17**							
Time:	**0700hr.**							
Weather conditions:	**Clear, warm, still, dry.**							
Instrument:	**Landtec GEM 5000 portable 4-gas detector (I/R for methane).**							
Barometric Pressure:	**29.52-in. Hg**							
Drilling Method:	**Truck-mounted GeoProbe 7800 direct-push drill rig.**							
		Probe Press.	**Methane***	**CO_2**	**O_2**	**N_2**		
Probe No.	**Depth**	**(in-H20)**	**(%v/v)**	**(%v/v)**	**(%v/v)**	**(%v/v)**	**Comments:**	
SP-1	**4.0**	**0.00**	**ND**	**0.6**	**18.4**	**Bal.**		
SP-2	**4.0**	**0.00**	**ND**	**1.2**	**17.8**	**Bal.**		
SP-3	**4.0**	**0.00**	**ND**	**0.3**	**19.4**	**Bal.**		
DP-1	**5.0**	**0.00**	**ND**	**0.5**	**18.7**	**Bal.**		
	10.0	**0.01**	**ND**	**1.1**	**18.0**	**Bal.**		
	19.0	**0.02**	**ND**	**1.9**	**16.2**	**Bal.**	**Refusal at 19 ft. bsg.**	
DP-2	**5.0**	**0.01**	**ND**	**0.3**	**18.6**	**Bal.**		
	10.0	**0.04**	**ND**	**1.7**	**16.7**	**Bal.**		
	20.0	**0.02**	**ND**	**2.7**	**16.2**	**Bal.**		
(Note: ND = Not Detected. All gas quality measurements taken with in-line carbon filter.)								

DL SCIENCE, INC.
532 W. Maple ave.
El Segundo. CA 90245
tel. (310) 416-1472
dllucero@sbcglobal.net

Soil Gas Investigation Spreadsheet

Site Location:		2510 Whittier Blvd., Los Angeles, CA(90023).						
Date:		10/27/17						
Time:		0700hr.						
Weather conditions:		Clear, warm, still, dry.						
Instrument:		Landtec GEM 5000 portable 4-gas detector (I/R for methane).						
Barometric Pressure:		29.51-in. Hg						
Drilling Method:		Truck-mounted GeoProbe 7800 direct-push drill rig.						
		Probe Press.	Methane*		CO_2	O_2	N_2	
Probe No.	Depth	(in-H20)	(%v/v)		(%v/v)	(%v/v)	(%v/v)	Comments:
DP-1	5.0	0.02	ND		1.1	18.8	Bal.	
	10.0	0.04	ND		3.7	17.5	Bal.	
	19.0	0.01	ND		3.9	16.2	Bal.	Refusal at 19 ft. bsg.
DP-2	5.0	0.04	ND		2.7	16.3	Bal.	
	10.0	0.01	ND		4.2	14.4	Bal.	
	20.0	0.02	ND		5.8	13.7	Bal.	
(Note: ND = Not Detected. All gas quality measurements taken with in-line carbon filter.)								

DL SCIENCE, INC.
532 W. Maple ave.
El Segundo. CA 90245
tel. (310) 416-1472
dllucero@sbcglobal.net

Exhibit 5:
Form 01 Certificate of Compliance for Methane Test Data

FORM 1 - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 1: Certification Sheet

Site Address: 2510 Whittier Blvd.

Legal Description: Tract: TR 5299 Lot: 19 - 23 Block: None

Building Use: Gymnasium

Architect's, Engineer's or Geologist's Stamp:

REGISTERED PROFFESIONAL ENGINEER
JOHNNY RAY CONAWAY
NO. C 19,689
exp. 09-30-19
CIVIL
STATE OF CALIFORNIA

Name of Architect, Engineer, or Geologist: John Conaway

Mailing Address: 700 S. Flower St #2580, Los Angeles CA 90017

Telephone: 213 458 0494

Name of Testing Laboratory: Terra - Petra

City Test Lab License #: 10224

Telephone: 213 458 0494

I hereby certify that I have tested the above site for the purpose of methane mitigation and that all procedures were conducted by a City of Los Angeles licensed testing agency in conformity with the requirements of the LADBS Information Bulletin P/BC 2014-101. Where the inspection and testing of all or part of the work above is delegated, full responsibility shall be assumed by the architect, engineer or geologist whose signature is affixed thereon.

Signed: Johnny R Conaway date 10/30/2017

Required Data:

- Project is in the ~~(Methane Zone)~~ or (Methane Buffer Zone).
- Depth of ground water observed during testing: N/A feet below the Impervious Membrane.
- Depth of Historical High Ground Water Table Elevation*: UNK feet below the Impervious Membrane.
- Design Methane Concentration**: 101 - 1,000 parts per million in volume (ppmv).
- Design Methane Pressure***: ≤ 2 inches of water column.
- Site Design Level: (Level I, Level II, Level III, Level IV, Level V) with ≤ 2 inches of water column.

De-watering:

- De-watering ~~(is)~~ (is not) required per Section 7104.3.7.
- Pump discharge rate N/A cubic feet per minute per reference geology or soil report: ______ dated ______.

Additional Investigation:

- Additional investigation ~~(was)~~ (was not) conducted.

Latest Grading on Site:

- Date of last grading on site (was) ~~(was not)~~ more than 30 days before Site Testing.
- See Attached explanation of the effect on soil gas survey results by grading operations.

Notes:

* Historical High Ground Water Table Elevation shall mean the highest recorded elevation of ground water table based on historical records and field investigations as determined by the engineer for the methane mitigation system.

** Design Methane Concentration shall mean the highest recorded measured methane concentration from either Shallow Soil Gas Test or any Gas Probe Set on the site.

*** Design Methane Pressure shall mean the highest total pressure measured from any Gas Probe Set on the site.

FORM 1 (CONTINUED) - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 2: Test Data - Shallow Soil Gas Test and Gas Probe Test

Site Address: 2510 Whittier Blvd, Los Angeles CA
Description of Gas Analysis Instrument(s): Infra Red
Instrument Name and Model: LAND TEC Gem 5000 Instrument Accuracy: ± 1,000 ppmv.
City of Los Angeles Testing License #: 10224

Date	Time	Probe Set #	Concentration (ppmv)	Pressure (inches water column)	Probe Depth (feet)	Description / Probe Location
						SEE SITE PLAN FOR PROBE LOCATIONS
10/26/2017	7:00	SP-1	ND*	0.00	4.0	
" "	" "	SP-2	ND*	0.00	4.0	
" "	" "	SP-3	ND*	0.00	4.0	
" "	" "	DP-1	ND*	0.00	5.0	
" "	" "	" "	ND*	0.01	10.0	
" "	" "	" "	ND*	0.02	19.0	
" "	" "	DP-2	ND*	0.01	5.0	
" "	" "	" "	ND*	0.04	10.0	
" "	" "	" "	ND*	0.02	20.0	
10/27/2017	7:00	DP-1	ND*	0.02	5.0	
" "	" "	" "	ND*	0.04	10.0	
" "	" "	" "	ND*	0.01	19.0	
" "	" "	DP-2	ND*	0.04	5.0	
" "	" "	" "	ND*	0.01	10.0	
" "	" "	" "	ND*	0.02	20.0	

*ND = NON DETECT

Table 1B - MITIGATION REQUIREMENTS FOR METHANE BUFFER ZONE (See notes)

2510 WHITTIER BLVD.

		Site Design Level	Level I		Level II		Level III		Level IV		Level V
		Design Methane Concentration (ppmv)	**0 - 100**		**101 - 1,000**		**1,001 - 5,000**		**5,001 - 12,500**		**> 12,500**
		Design Methane Pressure (See note 1) **(inches of water column)**	**≤ 2"**	**> 2"**	**≤ 2"**	**> 2"**	**≤ 2"**	**> 2"**	**≤ 2"**	**> 2"**	**All Pressure**
PASSIVE SYSTEM		De-watering System		X		X		X	X	X	X
PASSIVE SYSTEM	**Sub-Slab Vent System**	Perforated Horizontal Pipes		X		X		X	X	X	X
PASSIVE SYSTEM	**Sub-Slab Vent System**	Gravel Blanket Thickness Under Impervious Membrane		2"		3"		3"	2"	4"	4"
PASSIVE SYSTEM	**Sub-Slab Vent System**	Gravel Thickness Surrounding Perforated Horizontal Pipes		2"		3"		3"	2"	4"	4"
PASSIVE SYSTEM	**Sub-Slab Vent System**	Vent Risers		X		X		X	X	X	X
PASSIVE SYSTEM		Impervious Membrane		X		X		X	X	X	X
ACTIVE SYSTEM	**Sub-Slab System**	Mechanical Extraction System (See note 2)								X	X
ACTIVE SYSTEM	**Lowest Occupied Space System**	Gas Detection System (See note 3)		X		X		X	X	X	X
ACTIVE SYSTEM	**Lowest Occupied Space System**	Mechanical Ventilation (See Notes 3, 4, 5)		X		X		X	X	X	X
ACTIVE SYSTEM	**Lowest Occupied Space System**	Alarm System		X		X		X	X	X	X
ACTIVE SYSTEM		Control Panel		X		X		X	X	X	X
MISC. SYSTEM		Trench Dam		X		X		X	X	X	X
MISC. SYSTEM		Conduit or Cable Seal Fitting		X		X		X	X	X	X
MISC. SYSTEM		Additional Vent Risers (See note 5)									X

NOTES FOR TABLES 1A AND 1B:

"x" = Indicates a required mitigation component

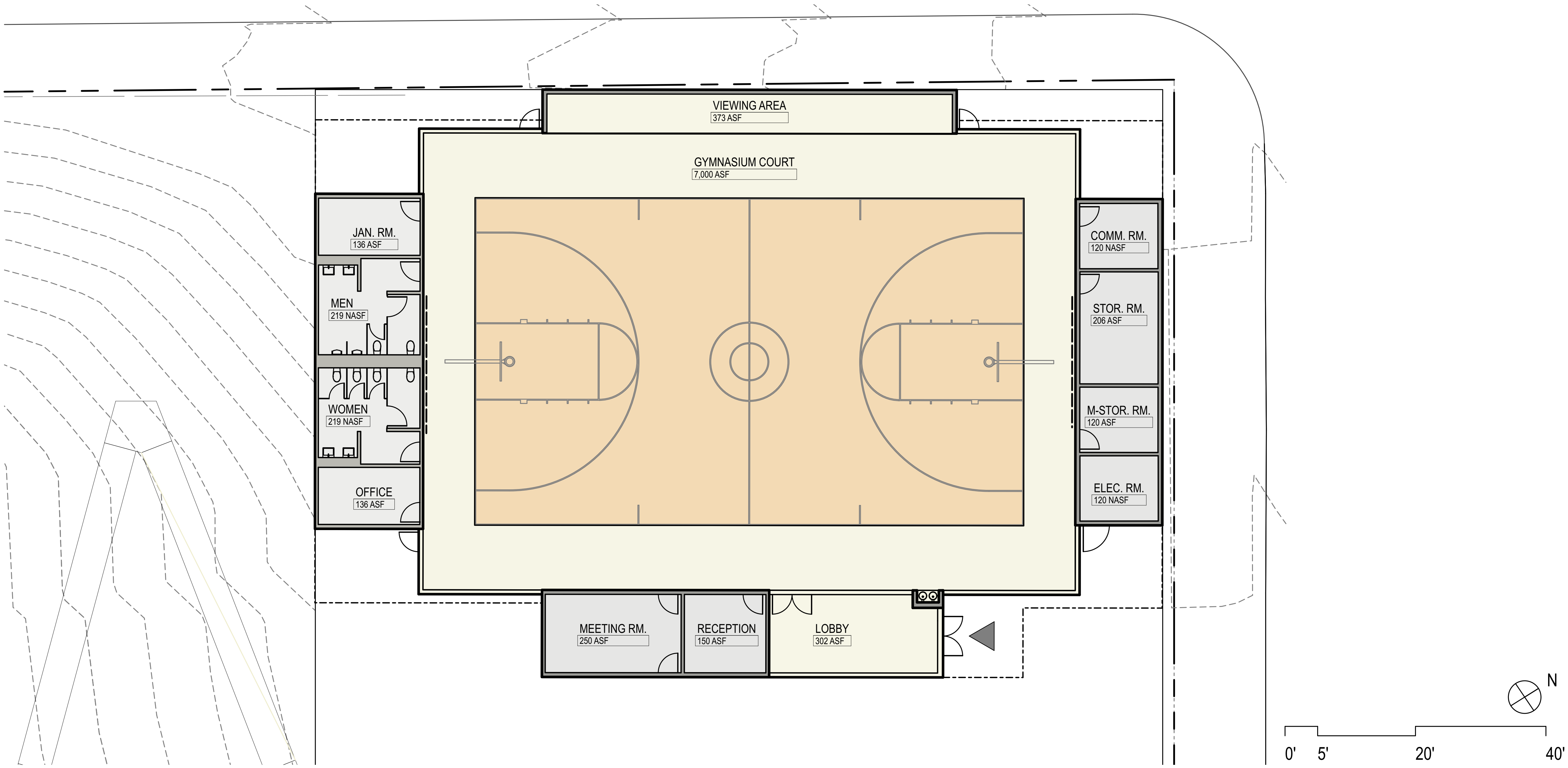
1. De-watering is not required when the maximum Historical High Ground Water Table Elevation, or projecterd post-construction ground water level, is more than 12 inches below the bottom of the Perforated Horizontal Pipes.
2. The Mechanical Extraction System shall be capabale of providing an equivalent of a complete change of air 20 minutes of the total volume of the Gravel Blanket.
3. The mechanical ventilation system shall be capable of providing an equivalent of one complete change of the lowest occupied space every 15 minutes.
4. Vent openings to comply with Item IV.B.4 on sheet 1 may be used in lieu of mechanical ventilation.
5. The total quantity of the installed Vent Risers shall be increased to twice the rate for the Passive System.

Terra-Petra
ENVIRONMENTAL ENGINEERING
700 S. Flower St., Ste. 2580, Los Angeles, CA 90017 213.458.0494
Los Angeles (HQ) . San Francisco . New York . Denver . Tacoma

ADDRESS:	TITLE:		EXHIBIT:
2510 WHITTIER BLVD. LOS ANGELES, CA 90023	TABLE 1B		5
	DRAWN BY: J.MORA	DATE: OCTOBER 27, 2017	
	CHECKED BY:		

FLOOR PLAN - OPTION A

PLAN DE EDIFICIO - OPCIÓN A



PAUL MURDOCH ARCHITECTS

COUNCIL DISTRICT 14 | **JOSÉ HUIZAR**

TEAM HUIZAR

ENGINEERING
CITY OF LOS ANGELES

VIEW FROM WHITTIER BOULEVARD
VISTA DESDE EL BULEVAR WHITTIER

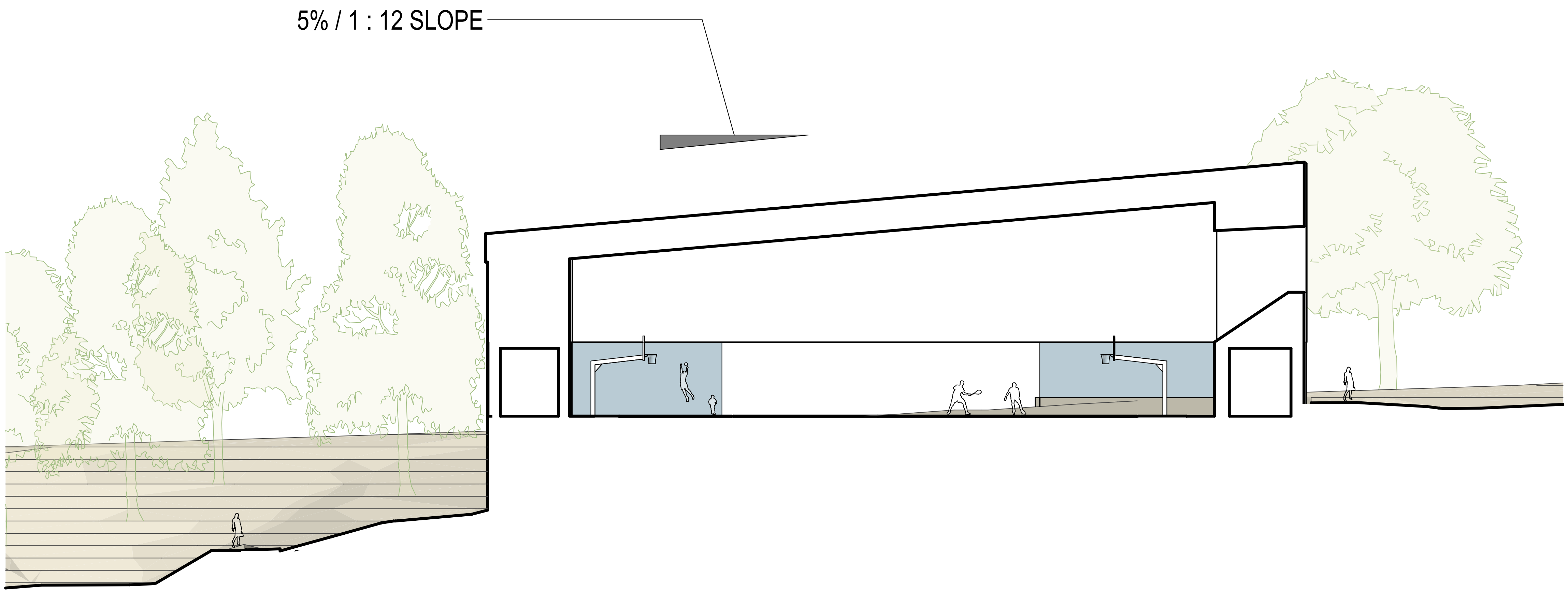
CORNER VIEW FROM WHITTIER BOULEVARD

VISTA DESDE LA ESQUINA DEL BULEVAR WHITTIER

PARK VIEW FROM RAMP
VISTA DESDE LA RAMPA EN EL PARQUE

PARK VIEW FROM LOWER LEVEL
VISTA DESDE EL NIVEL INFERIOR DEL PARQUE

BUILDING HEIGHT STUDY
ESTUDIO DE ALTURA DEL EDIFICIO



Appendix E

Hazardous Building Materials Survey Report

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Hazardous Building Materials Survey

Boyle Heights Sports Center Gym Project
2500 Whittier Boulevard
Los Angeles, California

ICF International

601 West 5th Street, Suite 900 | Los Angeles, California 90071

July 2, 2018 | Project No. 209403013

Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Hazardous Building Materials Survey

Boyle Heights Sports Center Gym Project
2500 Whittier Boulevard
Los Angeles, California

Mr. Gilberto Ruiz

ICF International

601 West 5th Street, Suite 900 | Los Angeles, California 90071

July 2, 2018 | Project No. 209403013

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1 INTRODUCTION

In accordance with ICF International's authorization, Ninyo & Moore has performed a hazardous building materials survey (HBMS) in support of the upcoming demolition activities of four structures at 2500 Whittier Boulevard, Los Angeles, California (site; Figure 1). This report has been prepared in accordance with generally accepted environmental science and engineering practices. This report is based on conditions at the site at the time of the sampling activities and provides documentation of our findings and recommendations.

2 PURPOSE AND SCOPE OF SERVICES

The objective of the survey is to provide information about current conditions within the site structures regarding the potential presence of asbestos containing materials (ACMs), lead containing surfaces (LCS), and other hazardous materials present within the structure which will require removal prior to the planned demolition activities. For the purposes of this assessment, LCS refers to lead-based paint (LBP), as defined by the California Department of Public Health (CDPH) and United States Department of Housing and Urban Development (HUD).

The scope of services we performed for the study is identified below.

- Performed a visual reconnaissance of the structures to evaluate for the possible presence of ACMs and LCS.
- Collected 68 bulk samples and submitted these samples to an independent laboratory for analysis of asbestos content. Samples were analyzed in accordance with the United States Environmental Protection Agency (EPA) recommended method of Polarized Light Microscopy (PLM) in accordance with EPA Test Method 600/R-93/116 July 93.
- Collected 85 X-Ray fluorescence (XRF) readings (including calibrations) of potential LCS.
- Performed a visual assessment and quantification of miscellaneous hazardous materials including, but not limited to, fluorescent light bulbs (possible mercury); fluorescent light ballasts (possible polychlorinated biphenyls [PCB]-containing oils); high intensity light bulbs (possible mercury); thermostat switches (possible liquid mercury and/or batteries); emergency lighting and exit signs (possible lead acid or other metal containing batteries or tritium); heating, ventilation, and air-conditioning and refrigeration systems (possible chlorofluorocarbon gas); and other possible hazardous materials.
- Prepared a field drawing showing ACM and LCS sampling locations.
- Prepared this HBMS report, which presents our data and summarizes field activities, evaluated materials, and locations. This report includes a field drawn sample location map, a general building description, laboratory testing information, laboratory test results, and conclusions and recommendations.

3 SITE BUILDING DESCRIPTIONS

The scope of work is comprised of four structures: Building 1; Building 2; Shed 1; and Shed 2.

- **Building 1** is a two-story wood-framed slab on grade building with various rooms, which occupies an approximate 2,500 square foot (SF) area. The interior walls and ceilings are finished with button board (plaster/drywall) or sheetrock in some areas. The concrete flooring is either finished with vinyl floor tiles, ceramic tiles, or is unfinished. The exterior walls are finished with stucco. The roof system is finished with asphalt sheeting.

- **Building 2** is a one-story wood-framed slab on grade garage building, which occupies an approximate 1,000 SF area. The interior walls and ceilings are finished with button board (plaster/drywall) or sheetrock. The concrete flooring is unfinished. The exterior walls are finished with stucco. The roof system is finished with asphalt sheeting.

- **Shed 1** is a one-story wood-framed storage shed, which occupies an approximate 120 SF area. The interior walls and ceilings are wood. The wood flooring is unfinished. The exterior walls wood. The roof system includes sheet metal over asphalt shingles.

- **Shed 2** is a one-story wood-framed mechanical shed, which occupies an approximate 100 SF area. The interior walls are wood. The concrete floor is unfinished. The exterior is metal sheeting. The structure does not have a roof.

4 FIELD LIMITATIONS

There is a possibility that additional ACMs and LCSs may be encountered in inaccessible areas (e.g., wall cavities, interstitial spaces) during building demolition activities. The roof area of Building 1 was not accessible at the time of the field survey.

5 ASBESTOS SAMPLE COLLECTION AND LABORATORY ANALYSIS

The asbestos survey was performed on May 23, 2018, by Mr. Pedro Rodriguez-Mendez, a California Department of Occupational Safety and Health (DOSH) Site-Surveillance Technician. The survey was performed under the direct supervision of Mr. Michael Cushner, a DOSH Certified Asbestos Consultant. Consultant certificates are presented in Appendix A.

5.1 Asbestos Survey

The survey and sampling procedures were performed in accordance with the guidelines published by the EPA in 40 Code of Federal Regulations (CFR) Part 763 Subpart E, October 30, 1987 (Asbestos Hazard Emergency Response Act [AHERA]); the EPA guidance document "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials (EPA 560/5-85-030a, October 1985); the National Emission Standards for Hazardous Air Pollutants (NESHAP; 40 CFR Part 61, subpart M); and the South Coast Air Quality Management District (SCAQMD) Rule 1403.

The survey consisted of three parts including: visual evaluation, sampling, and quantification of the building materials.

5.1.1 Visual Evaluation

Initial observations were made throughout the structure to evaluate for the presence and condition of accessible suspect materials. Materials which were similar in general appearance were grouped into homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction, or application date), as recommended by the EPA. Each homogeneous area was observed for material type, location, condition, and friability.

The definition of friability is any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. The EPA's NESHAP regulation has different material categories for ACMs. These categories are used when demolition or renovation projects are being conducted. Each identified suspect homogeneous material was placed in one of the following EPA classifications:

- **Category I Non-friable** - NESHAP defines a Category I non-friable ACM as packing, gaskets, resilient floor covering (except sheet flooring products which are considered friable), and asphalt roofing products which contain more than one percent asbestos.
- **Category II Non-friable** - NESHAP defines a Category II non-friable ACM as any material, except for Category I non-friable ACM, which contains more than one percent asbestos and cannot be reduced to a powder by hand pressure when dry.
- **Regulated Asbestos Containing Material (RACM)** - is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

In accordance with the EPA and AHERA, suspect materials were placed in one of three categories:

- **Surfacing Materials** - materials generally applied via sprayed or trowel methods,
- **Thermal Systems Insulations (TSI)** - materials generally applied to various mechanical systems, or
- **Miscellaneous Materials** - any materials which do not fit in the Surfacing or TSI classifications.

If asbestos is identified in a sample from a homogeneous area, the entire homogeneous area is considered to contain asbestos.

Representative samples were collected from each homogeneous area within the survey area, except areas that were inaccessible, or areas of assumed ACM, within the limitations of the survey.

5.1.2 Sampling Procedures

Following the walkthrough and review of reports, the inspector collected selected samples of accessible materials identified as suspect ACM. EPA, AHERA, NESHAP, and SCAQMD guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material. Samples of surfacing material were collected in general accordance with the EPA sampling protocol outlined in EPA 560/5-85-030a, October 1985. Representative samples were taken from already damaged areas or areas which were the least visible. Samples of miscellaneous materials were taken as randomly as possible, while attempting to sample already damaged areas so as to minimize disturbance of the material. Generally, three samples of each homogeneous material were collected of miscellaneous materials and TSI, if present.

5.1.3 Quantification

Quantities of accessible and/or exposed building materials that were suspected of containing asbestos were estimated by taking approximate measurements in the field. Quantities are presented in SF or linear feet to be used as a guide for contractor estimates on bidding for abatement activities. It is the abatement contractor’s responsibility to confirm quantities prior to bidding and removal.

5.2 Asbestos Laboratory Analysis Procedures

Analysis was performed at EMSL Dallas (EMSL) in Dallas Texas. EMSL is a National Volunteer Laboratory Accreditation Program accredited laboratory. A chain-of-custody, documenting the possession of the samples from the time they were collected until analyzed and stored, was submitted with the bulk samples. Custody documentation began at the time samples were collected and each transferor retained a copy of the chain-of-custody record.

Analysis was performed by using the bulk sample for visual observation and slide preparation(s) for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (chrysotile, amosite, crocidolite, anthophyllite, and actinolite/tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.), and non-fibrous constituents. Refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation identified asbestos. The same characteristics were used to identify the non-asbestos constituents.

The microscopist visually estimated relative amounts of each constituent by determining the volume of each constituent in proportion to the total volume of the sample, using a stereoscope. The bulk samples were analyzed by PLM with dispersion staining as described by the method of the determination of asbestos in bulk insulation, EPA/600/R-93/116, July 1993. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays which result enable mineral identification.

6 LCS SURVEY

The LCS survey was performed on May 23, 2018, by Mr. Pedro Rodriguez-Mendez, a CDPH Lead-Related Construction (LRC) Sampling Technician. The survey was performed under the supervision of Mr. Michael Cushner, a CDPH LRC Inspector/Assessor and Project Monitor. Consultant certificates are presented in Appendix A.

6.1 Lead Survey

The survey was conducted using a portable Niton XLP analyzer in accordance with accepted environmental science and engineering practices. The protocol used for selecting components and sampling locations was that contained in the federal HUD “Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing” (Chapter 7 “Lead-Based Paint Inspection”), except the inspection was limited to accessible materials and once a pattern was recognized for the component results, fewer readings for each component were collected.

6.2 Lead Readings

The XRF analyzer used for the testing is a direct-reading instrument that determines the concentration of lead in paints by subjecting the paint to energy from a small radioactive source when the instrument is held against the paint and analyzing the absorption of X-Rays by the paint. The instrument was calibrated to the manufacturer’s specifications and was also verified, at least every four hours and at the beginning and completion of each set of readings, against known lead sample standards produced by the National Institute of Standards and Testing. The XRF instrument measures lead in units of milligrams of lead per square centimeter of tested surface (mg/cm^2). A total of 85 XRF readings were collecting (including calibration readings) over the course of this survey. The CDPH requires that after a lead evaluation is performed a copy of

CDPH form 8552 “Lead Hazard Evaluation Report” should be submitted. Ninyo & Moore has faxed this form to the CDPH and a copy is included in Appendix B.

7 INVENTORY OF UNIVERSAL WASTES

A visual evaluation of the structures was performed to quantify miscellaneous hazardous building materials. This included, but was not limited to, potential mercury-containing thermostats, switches, and fluorescent light tubes; items potentially containing PCBs; potential tritium or battery-containing exit signs; and potential CFC-containing refrigeration systems.

8 SURVEY AND INVENTORY RESULTS

The following sections describe the survey and inventory results.

8.1 Asbestos Results Summary

A total of 68 samples of suspect ACMs were collected and transferred to EMSL for analysis. The lower limit of reliable detection for asbestos using the PLM method is approximately 1 percent by volume. In the state of California, DOSH regulations define asbestos containing construction materials (ACCMs) if one sample from a homogeneous area contains asbestos content of greater than one tenth of 1 percent (>0.1 percent) which is confirmed by PLM 1,000-point count analysis. Materials in which no asbestos was detected are defined in the laboratory report as “None detected.” Materials containing asbestos, but in amounts less than 1 percent, are defined as containing “trace” amounts and for the purpose of this report are assumed to be ACCM. Inaccessible suspect ACMs that are suspect of being ACM or ACCM, which were inaccessible are noted to be assumed asbestos containing.

Based on field observations and the analytical results of bulk samples collected during the survey, ACMs were detected within the structures which will be impacted by the upcoming demolition activities for the structures. The ACMs, ACCMs, and assumed ACMs found to be present are summarized in Table 1. Other building materials which were sampled and found to be non-asbestos containing are summarized in Table 2. A copy of the laboratory analytical report and chain-of-custody records are presented in Appendix C. General photographic documentation of the ACMs is presented in Appendix D. The sampling locations of the materials found to be ACM are presented within the field drawings provided in Appendix E.

Table 1 – Positive Asbestos Survey Results

Material	Location	ACM Category	Condition	Result	Approximate Quantity	Photograph No.
Building 1						
Window putty	Exterior second floor windows	NESHAP Category II Non-friable	Good	2% CH	8 Total	2
Stucco and felt	Exterior walls	NESHAP Category II Non-friable	Good	2% CH (texture) ND (stucco) ND (felt)	2,500 SF	3
Baseboard plaster	Baseboard	NESHAP Category II Non-friable*	Good	<1% CH (finish coat) ND (base coat) ND (concrete)	200 SF	4
Sporadic mastic on concrete	Throughout	NESHAP Category I Non-friable	Fair	2% CH (mastic) ND (concrete)	2,500 SF	5
1' x 1' vinyl floor tile and mastic	Throughout first floor	NESHAP Category I Non-friable	Good	2% CH (tile) 5% CH (mastic)	1,650 SF	5
9" x 9" vinyl floor tile and mastic	Throughout kitchen/dining areas	NESHAP Category I Non-friable	Good	4% CH (tile) ND (mastic)	850 SF	6
Button board (plaster and drywall)	Throughout main walls and ceilings	NESHAP Category II Non-friable*	Good	<1% CH (finish coat) ND (base coat) ND (drywall)	5,000 SF	7
Drywall and joint compound	Partition walls throughout first floor rooms	RACM	Good	ND (drywall) 2% CH (joint compound)	250 SF	8
Roof and associated roofing materials	Roof	NESHAP Category I Non-friable	Unknown	ASSUMED**	2,500 SF	-
Building 2						
Drywall and joint compound	Partition walls between garages	NESHAP Category II on-friable*	Good	ND (drywall) 2% CH (joint compound)	600 SF	11
Shed 1						
No asbestos found						
Shed 2						
No asbestos found						

Notes:
ACM – asbestos containing material
CH – chrysotile
NESHAP – National Emission Standards for Hazardous Air Pollutants
No. – number
PLM – polarized light microscopy
RACM – regulated ACM
SF square feet
" – inch
' – foot
% – percent
*initial PLM results is less than 1 percent ACM. Material is required to be treated as ACM, unless further analyzed by PLM 1,000-point count.
**material was not accessible at the time of the survey. The roofing material must be assumed to be ACM until it is sampled and analyzed for asbestos content.

Please note that quantities of ACMs are approximate. It is the abatement contractor's responsibility to confirm quantities prior to bidding and removal activities.

Table 2 – Non-Asbestos Containing Materials Sampled	
Sample Material Description	**Material Location**
Building 1	
Brick mortar	Exterior front of building
Cove base and glue	Throughout
Concrete flooring	Throughout
Building 2	
Asphalt sheeting	Roof
Penetration mastic	Roof
Parapet wall	Roof
Exterior stucco and felt	Exterior walls
Window putty	Exterior windows
Base board (plaster and drywall)	Interior wall and ceilings
Cove base and glue	Interior walls
Concrete slab	Interior floor
Shed 1	
Asphalt shingles	Roof under metal sheeting
Stucco	Exterior walls
Shed 2	
No suspect materials	
Parking lot*	
Asphalt	Parking lot

Notes:
*The asphalt parking lot was sampled to confirm the presence of asbestos.

8.2 Lead-Containing Surfaces Summary

Federal efforts to regulate LBP began with the LBP Poison Prevention Act in 1971. In 1973, the Consumer Product Safety Commission (CPSC) defined LBP as paint having lead content equal to or greater than 0.5 percent by weight (1.0 mg/cm^2 by XRF) in a dry film of newly applied paint. In 1978, the CPSC lowered the allowable lead levels in new paint to 0.06 percent. HUD developed guidelines relating to HUD facilities that specified lead content of 0.5 percent as an action level in determining the need for corrective action. In Los Angeles County a more stringent action level for lead based paint is 0.7 mg/cm2 which was utilized for this survey. Federal and State DOSH do not define the amount of lead in paint to a regulatory requirement, rather the activities, or task, define when the regulation is in effect. Both Federal and State standards use the term “trigger task” activities. In the work place, employers must make certain assumptions of the exposure levels and comply with regulations based on the level of disturbance rather than the lead level.

A total of 85 XRF readings were collected from the representative testing combinations (e.g., unique combination of room equivalent, building component, and substrate) within the structures. LCSs were detected within the structures.

Building components with lead content greater than 0.7 mg/cm^2 and their estimated quantities are presented in Table 3. A summary of the XRF analysis data is included in the attached Table A. General photographic documentation is presented in Appendix D.

Table 3 – Lead Based Paint Summary						
Room/Area	Component	Substrate	Condition	Color	Approximate Quantity	Photograph No.
Building 1						
Room 1	Door	Wood	Intact	Beige	2 each	9
Building 2						
Garage 1	Sink	Porcelain	Intact	White	1 each	12
Garage 1	Toilet	Porcelain	Intact	White	1 each	12
Shed 1						
Exterior	Door	Wood	Intact	Beige	1 each	14
Exterior	Door	Wood	Intact	Silver	80 SF	14
Interior	Wall	Wood	Intact	Beige	96 SF	NA
Interior	Wall	Wood	Intact	Beige	80 SF	NA
Interior	Wall	Wood	Intact	Beige	96 SF	NA
Interior	Door	Wood	Intact	Beige	1 each	NA
Shed 2						
No lead containing surfaces found						

Notes:
No. – number
SF – square feet

Please note that quantities of LCSs are approximate. It is the abatement contractor's responsibility to confirm quantities prior to bidding and removal activities.

8.3 Universal Wastes Inventory

Universal wastes were found within the structure. The locations of universal wastes identified are presented below in Table 4.

Table 4 – Universal Waste Inventory		
Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building 1		
Throughout	Light ballasts	25
Throughout	Fluorescent light bulbs	30
Ceiling plenum	Rodent feces	2,500 SF
Roof*	Unknown	Unknown
Building 2		
No universal waste found		
Shed 1		
No universal waste found		
Shed 2		
No universal waste found		

Notes:
SF – square feet
*Roofing area was not accessible at the time of the field survey.

9 RECOMMENDATIONS

The following recommendations are provided.

9.1 Asbestos

- The identified ACMs should not be disturbed. Prior to demolition activities which would disturb identified ACMs, a licensed abatement removal contractor should remove these building materials. The licensed abatement contractor must maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities.

- Applicable laws and regulations should be followed, including those provisions requiring notification to regulatory agencies, building occupants, renovation contractors, and workers of the presence of asbestos.

- Building materials which were analyzed by PLM and a result with less than one percent, should be further analyzed by PLM 1,000-point count analysis in order to determine if the material may be treated as ACCM which will save the building owner on disposal costs.

- The roofing area on Building 1 should be sampled and analyzed for asbestos content, once accessible. Otherwise, the roofing material must be treated as ACM and abated prior to demolition of the building.

- Asbestos abatement monitoring consulting services should be performed by a third party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances, verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities.

9.2 Lead

- The identified LCSs should not be disturbed. All disturbances and removal activities should be performed by a licensed abatement contractor with certified lead personnel. Any painted LCSs in a non-intact condition should be stabilized and the substrate should be encapsulated. All lead related removal activities should be performed in accordance with the DOSH Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1.

- Proper LCS waste stream categorization is required for lead components which will be removed. Prior to disposal, a composite sample of the representative LCS material should be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LCS waste material must be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample must be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample must be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA- (California-) Hazardous waste.

- Lead abatement monitoring consulting services should be performed by a third party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances, verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities.

9.3 Universal Wastes

- Universal wastes discussed in this report (Table 4), should be removed and properly recycled or disposed by the licensed abatement contractor prior to demolition activities. The rodent droppings are not required to be removed in preparation for demolition of Building 1.

- Contractor should provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements.

- Monitoring consulting services should be performed by a third party environmental consultant, to ensure the appropriate removal of hazardous materials prior to building demolition activities.

10 LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated. However, if additional suspect ACMs or LCSs are encountered during demolition activities, these materials should be sampled by a qualified personnel, and analyzed for content prior to further disturbance. In addition, please note that quantities of ACMs and LCSs are approximate. These numbers should be confirmed prior to removal or repair activities.

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory which is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

Table A – XRF Readings Summary

Reading No.	Room	Floor	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
1	Start			Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				0.7	Positive	N/A	1.1
2				Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				0.7	Positive	N/A	1.0
3				Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				0.7	Positive	N/A	1.1
Building 1											
4	Central room	1	-	Floor tile	Vinyl	Fair	Speckled brown	0.7	Negative	N/A	0.00
5	Central room	1	A	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
6	Central room	1	D	Column	Plaster	Fair	Biege	0.7	Negative	N/A	0.02
7	Central room	1	A	Door frame	Metal	Fair	Biege	0.7	Negative	N/A	0.00
8	Central room	1	D	Column	Plaster	Fair	Grey	0.7	Negative	N/A	0.05
9	Central room	1	C	Wall	Plaster	Fair	Blue	0.7	Negative	N/A	0.06
10	Central room	1	D	Wall	Plaster	Fair	Blue	0.7	Negative	N/A	0.11
11	Central room	1	C	Staircase 1	Wood	Fair	Biege	0.7	Negative	N/A	0.24
12	Kitchen	1	A	Wall	'Plaster	Fair	Blue	0.7	Negative	N/A	0.06
13	Kitchen	1	C	Wall	'Plaster	Fair	Biege	0.7	Negative	N/A	0.10
14	Kitchen	1	-	Floor tile	Vinyl	Fair	Speckled brown	0.7	Negative	N/A	0.00
15	Kitchen	1	C	Wall	Plaster	Fair	Blue	0.7	Negative	N/A	0.06
16	Kitchen	1	C	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.02
17	Heater closet	1	-	Floor tile	Vinyl	Fair	Speckled pink	0.7	Negative	N/A	0.01
18	Heater closet	1	B	Wall	Plaster	Fair	biege	0.7	Negative	N/A	0.22
19	Room 1	1	D	Wall	Plaster	Fair	biege	0.7	Negative	N/A	0.00
20	Room 1	1	D	Wall	Plaster	Fair	Pink	0.7	Negative	N/A	0.00
21	Room 1	1	A	Door	Wood	Fair	Biege	0.7	Positive	2 each	1.31
22	Room 1	1	B	Door frame	Wood	Fair	Biege	0.7	Negative	N/A	0.05
23	Room 1	1	B	Door jam	Wood	Fair	Biege	0.7	Negative	N/A	0.07
24	Room 2	1	C	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
25	Room 2	1	B	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
26	Room 2	1	-	Floor	Vinyl	Fair	Speckled brown	0.7	Negative	N/A	0.00
27	Room 3	1	B	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
28	Room 3	1	B	Wall	Plaster	Fair	Brown	0.7	Negative	N/A	0.00
29	Central room	1	C	Staircase 2	Wood	Fair	Biege	0.7	Negative	N/A	0.01
30	Bathroom	1	B	Sink	Porcelain	Fair	White	0.7	Negative	N/A	0.02
31	Bathroom	1	B	Toilet	Porcelain	Fair	White	0.7	Negative	N/A	0.01
32	Bathroom	1	C	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.08

Table A – XRF Readings Summary

Reading No.	Room	Floor	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
33	Mezannine Room 1	2	C	Wall	Plaster	Fair	Grey	0.7	Negative	N/A	0.02
34	Mezannine Room 1	2	-	Floor	Wood	Fair	Reddish brown	0.7	Negative	N/A	0.03
35	Mezannine Room 1	2	D	Wall	Plaster	Fair	Grey	0.7	Negative	N/A	0.27
36	Mezannine Room 1	2	-	Ceiling	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
37	Mezannine Room 2	2	C	Window frame	Metal	Fair	Biege	0.7	Negative	N/A	0.00
38	Central room	1	-	Ceiling	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
39	Central room	1	B	Door	Wood	Fair	Biege	0.7	Negative	N/A	0.00
40	Central room	1	A	Door frame	Metal	Fair	Biege	0.7	Negative	N/A	0.00
41	Central room	1	A	Door jam	Metal	Fair	Biege	0.7	Negative	N/A	0.00
42	Central room	1	-	Ceiling heater	Fabricated meta	Fair	Grey	0.7	Negative	N/A	0.02
43	Room 3	1	D	Wall baseboard	Concrete	Fair	Red	0.7	Negative	N/A	0.00
44	Exterior	1	B	Wall	Stucco	Fair	Biege	0.7	Negative	N/A	0.01
45	Exterior	1	C	Wall	Stucco	Fair	Pink	0.7	Negative	N/A	0.03
46	Exterior	1	A	Pipe Casing	Metal	Fair	Pink	0.7	Negative	N/A	0.02
47	Exterior	1	A	Electrical Panel	Metal	Fair	Pink	0.7	Negative	N/A	0.03
Shed 1											
48	Exterior	1	A	Door	Wood	Fair	Biege	0.7	Positive	1 each	15.4
49	Exterior	1	A	Door	Wood	Fair	Silver	0.7	Positive	80 SF	3.7
50	Interior	1	B	Wall	Wood	Fair	Biege	0.7	Positive	96 SF	5.9
51	Interior	1	C	Wall	Wood	Fair	Biege	0.7	Positive	80 SF	5.7
52	Interior	1	D	Wall	Wood	Fair	Biege	0.7	Positive	96 SF	5.0
53	Interior	1	-	Floor	Wood	Fair	White	0.7	Negative	N/A	0.11
54	Interior	1	B	Closet Door	Wood	Fair	Biege	0.7	Positive	1 each	2.5
55	Interior	1	-	Floor	Wood	Fair	Green	0.7	Negative	N/A	0.04
56	Interior	1	-	Ceiling	Wood	Fair	Biege	0.7	Negative	N/A	0.02
57	Exterior	1	D	Wall	Concrete	Fair	Biege	0.7	Negative	N/A	0.10
58	Exterior	1	D	Wall	Concrete	Fair	Green	0.7	Negative	N/A	0.21
Building 2											
59	Garage 1	1	C	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
60	Garage 1	1	C	Wall	Plaster	Fair	Off-white	0.7	Negative	N/A	0.00
61	Garage 1	1	A	Partition wall	Drywall	Fair	Biege	0.7	Negative	N/A	0.00
62	Garage 1	1	-	Ceiling	Plaster	Fair	White	0.7	Negative	N/A	0.00

Table A – XRF Readings Summary											
Reading No.	Room	Floor	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
63	Garage 1	1	A	Door frame	Wood	Fair	White	0.7	Negative	N/A	0.00
64	Garage 1	1	B	Rolling door	Metal	Fair	White	0.7	Negative	N/A	0.00
65	Garage 1	1	A	Sink	Porcelain	Fair	White	0.7	Positive	1 each	8.1
66	Garage 1	1	D	Toilet	Porcelain	Fair	White	0.7	Positive	1 each	8.1
67	Garage 3	1	D	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
68	Garage 3	1	A	Wall	Plaster	Fair	Biege	0.7	Negative	N/A	0.00
69	Garage 3	1	A	Door frame	Wood	Fair	White	0.7	Negative	N/A	0.00
70	Garage 3	1	B	Door track	Metal	Fair	Black	0.7	Negative	N/A	0.01
71	Garage 3	1	B	Window	Metal	Fair	Brown	0.7	Negative	N/A	0.00
72	Garage 3	1	A	Partition wall	Drywall	Fair	Biege	0.7	Negative	N/A	0.00
73	Exterior	1	D	Wall	Stucco	Fair	Biege	0.7	Negative	N/A	0.01
74	Exterior	1	A	Wall	Stucco	Fair	Biege	0.7	Negative	N/A	0.00
75	Exterior	1	A	Wall pipe	Metal	Fair	White	0.7	Negative	N/A	0.23
76	Exterior	1	A	Wall panel	Metal	Fair	Biege	0.7	Negative	N/A	0.03
77	Exterior	1	B	Wall	Stucco	Fair	Purple	0.7	Negative	N/A	0.03
78	Exterior	1	C	Wall	Stucco	Fair	White	0.7	Negative	N/A	0.00
79	Exterior	1	D	Fascia	Metal	Fair	Biege	0.7	Negative	N/A	0.04
Shed 2											
80	Exterior wall	1	B	Wall	Metal	Fair	Black	0.7	Negative	N/A	0.00
81	Exterior wall	1	B	Wall Frame	Wood	Fair	Biege	0.7	Negative	N/A	0.00
82	Exterior frame	1	D	Wall	Metal	Fair	Violet	0.7	Negative	N/A	0.00
83	End	Standard Calibration Check 1.04 +/- 0.06 mg/cm^2						0.7	Positive	N/A	1.00
84		Standard Calibration Check 1.04 +/- 0.06 mg/cm^2						0.7	Positive	N/A	1.00
85		Standard Calibration Check 1.04 +/- 0.06 mg/cm^2						0.7	Positive	N/A	0.90

Notes:

mg/cm^2 - micrograms per cubic centimeter

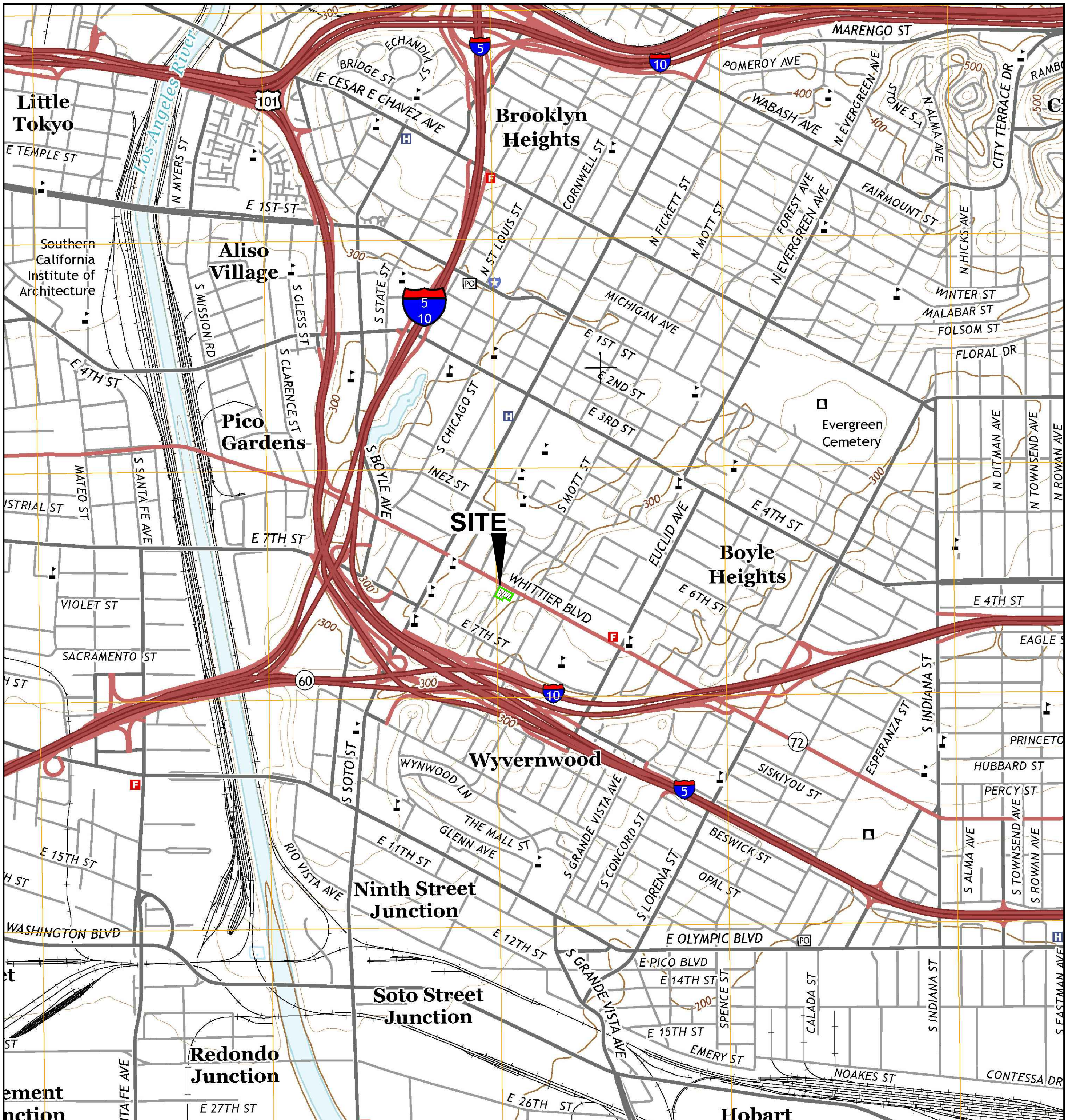
No. - number

N/A - not applicable

SF - square feet

XRF - X-Ray fluorescence

FIGURE



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: USGS, 2015.

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FIGURE 1

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

SITE LOCATION

2500 WHITTIER BOULEVARD
LOS ANGELES, CALIFORNIA

209403013 I 7/18

209403013_SL.dwg 03/19/2019 GK, JP

LEGEND

SITE BOUNDARY

LOCATION OF EXISTING BUILDING

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: GOGLE EARTH, 2018.

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FIGURE 2

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

SITE PLAN

2500 WHITTIER BOULEVARD
LOS ANGELES, CALIFORNIA

209403013 I 7/18

APPENDIX A

Consultant Certificates

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Michael S Cushner
Name

Certification No. **11-4711**

Expires on **07/20/18**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

State of California Department of Public Health

Lead-Related Construction Certificate

Certificate Type	Expiration Date
Inspector/Assessor	09/26/2018
Project Monitor	09/26/2018

Michael S. Cushner ID #: **16953**

State of California
Division of Occupational Safety and Health
Certified Site Surveillance Technician

Pedro Rodriguez-Mendez
Name

Certification No. 13-5109

Expires on 01/15/19

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

State of California Department of Public Health

Lead-Related Construction Certificate

Certificate Type	Expiration Date
Sampling Technician	01/09/2019

Pedro Rodriguez ID #: 23793

APPENDIX B

California Department of Public Health Form 8552

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation 5/23/18

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

[x] Lead Inspection [ ] Risk assessment [ ] Clearance Inspection [ ] Other (specify) ______

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
2500 Whittier Blvd	Los Angeles	Los Angeles	90023

Construction date (year) of structure: Unknown

Type of structure: [x] Multi-unit building [ ] School or daycare [ ] Single family dwelling [x] Other______

Children living in structure? [ ] Yes [x] No [ ] Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
City of Los Angeles / Nur D. Malhis	213.85.4737

Address [number, street, apartment (if applicable)]	City	State	Zip Code
1149 S. Broadway St, Suite 830	Los Angeles	CA	90015

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

[ ] No lead-based paint detected [x] Intact lead-based paint detected [ ] Deteriorated lead-based paint detected

[ ] No lead hazards detected [ ] Lead-contaminated dust found [ ] Lead-contaminated soil found [ ] Other______

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Michael Cushner	949.753.7070

Address [number, street, apartment (if applicable)]	City	State	Zip Code
475 Goddard #200	Irvine	CA	92618

CDPH certification number	Signature	Date
16953	[signature]	6-20-18

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Pedro Rodriguez 13-5109

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

APPENDIX C

Analytical Results and Chain-of-Custody Records

EMSL Analytical, Inc.
3317 3rd Ave S, Suite D 2nd floor Seattle, WA 98134
Tel/Fax: (206) 269-6310 / (206) 900-8789
http://www.emsl.com / seattlelab@emsl.com

EMSL Order: 511801433
Customer ID: 32ninm50
Customer PO:
Project ID:

Attention: Michael Cushner
Ninyo & Moore
475 Goddard
Suite 200
Irvine, CA 92618
Project: 209403013 Boyle Heights/ Sports Center Gym

Phone: (949) 795-2599
Fax:
Received Date: 05/23/2018 1:50 PM
Analysis Date: 05/29/2018 - 05/30/2018
Collected Date:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
1 511801433-0001	Window putty: Bldg 1 exteriror, 2nd floor @window S	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
2 511801433-0002	Window putty: Bldg 1 exteriror, 2nd floor @window S	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
3 511801433-0003	Window putty: Bldg 1 exteriror, 2nd floor @window W	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
4 511801433-0004	Brick mortar: Bldg 1 exterior, front brick N	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
5 511801433-0005	Brick mortar: Bldg 1 exterior, front brick NW	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
6 511801433-0006	Brick mortar: Bldg 1 exterior, front brick NE	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
7-Texture 511801433-0007	Exterior stucco/felt: Bldg 1 exterior, wall NE	White/Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
7-Stucco 511801433-0007A	Exterior stucco/felt: Bldg 1 exterior, wall NE	Gray/White Non-Fibrous Homogeneous	3% Cellulose	15% Quartz 82% Non-fibrous (Other)	None Detected
7-Felt 511801433-0007B	Exterior stucco/felt: Bldg 1 exterior, wall NE	Black Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
8-Texture 511801433-0008	Exterior stucco/felt: Bldg 1 exterior, wall SE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
8-Stucco 511801433-0008A	Exterior stucco/felt: Bldg 1 exterior, wall SE	Gray/Green Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
8-Felt 511801433-0008B	Exterior stucco/felt: Bldg 1 exterior, wall SE	Black Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
9-Texture 511801433-0009	Exterior stucco/felt: Bldg 1 exterior, wall SW	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-Stucco 511801433-0009A	Exterior stucco/felt: Bldg 1 exterior, wall SW	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
9-Felt 511801433-0009B	Exterior stucco/felt: Bldg 1 exterior, wall SW	Black Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
10-Finish Coat 511801433-0010	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor W	White/Green Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	<1% Chrysotile

Initial report from: 05/30/2018 15:38:17

EMSL Analytical, Inc.
3317 3rd Ave S, Suite D 2nd floor Seattle, WA 98134
Tel/Fax: (206) 269-6310 / (206) 900-8789
http://www.emsl.com / seattlelab@emsl.com

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
Inseparable paint / coating layer included in analysis					
10-Base Coat *511801433-0010A*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor W	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
10-Concrete *511801433-0010B*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor W	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
11-Finish Coat *511801433-0011*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor NW	White/Green Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	<1% Chrysotile
11-Base Coat *511801433-0011A*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor NW	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
11-Concrete *511801433-0011B*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor NW	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
12-Finish Coat *511801433-0012*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor E	White/Green Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	<1% Chrysotile
12-Base Coat *511801433-0012A*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor E	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
12-Concrete *511801433-0012B*	Baseboard, plaster, concrete: Bldg 1 main/central room, 1st floor E	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
13-Cove Base *511801433-0013*	Cove base (4") brown and glue: Bldg 1 main/central, 1st floor N wall	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-Mastic *511801433-0013A*	Cove base (4") brown and glue: Bldg 1 main/central, 1st floor N wall	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Concrete *511801433-0014*	Floor concrete: Bldg 1 adjacent to kitchen, 1st floor floor under tile	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
14-Mastic *511801433-0014A*	Floor concrete: Bldg 1 adjacent to kitchen, 1st floor floor under tile	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
Small amount of material					
15 *511801433-0015*	Floor concrete: Bldg 1 main/central room, 1st floor floor under tile E	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
16 *511801433-0016*	Floor concrete: Bldg 1 main/central room, 1st floor floor under tile W	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2018 15:38:17

EMSL Analytical, Inc.
3317 3rd Ave S, Suite D 2nd floor Seattle, WA 98134
Tel/Fax: (206) 269-6310 / (206) 900-8789
http://www.emsl.com / seattlelab@emsl.com

EMSL Order: 511801433
Customer ID: 32ninm50
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
17-Floor Tile 511801433-0017	1'x1' VFT and mastic w/leveling compound: Bldg 1 main/central room, 1st floor	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
17-Mastic 511801433-0017A	1'x1' VFT and mastic w/leveling compound: Bldg 1 main/central room, 1st floor	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
17-Leveler 511801433-0017B	1'x1' VFT and mastic w/leveling compound: Bldg 1 main/central room, 1st floor	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18-Floor Tile 511801433-0018	1'x1' VFT and mastic: Bldg 1 1st floor room 1 NE	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
18-Mastic 511801433-0018A	1'x1' VFT and mastic: Bldg 1 1st floor room 1 NE	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
19-Floor Tile 511801433-0019	1'x1' VFT and mastic: Bldg 1 1st floor room 2 N	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
19-Mastic 511801433-0019A	1'x1' VFT and mastic: Bldg 1 1st floor room 2 N	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
20-Floor Tile 511801433-0020	9"x9" VFT w/mastic and leveling compound: Bldg 1 E of kitchen, 1st floor central	Brown Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
20-Mastic 511801433-0020A	9"x9" VFT w/mastic and leveling compound: Bldg 1 E of kitchen, 1st floor central	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21-Floor Tile 511801433-0021	9"x9" VFT w/mastic: Bldg 1 Kitchen floor, 1st floor central	Tan Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
21-Mastic 511801433-0021A	9"x9" VFT w/mastic: Bldg 1 Kitchen floor, 1st floor central	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22-Floor Tile 511801433-0022	9"x9" VFT w/mastic: Bldg 1 W of Kitchen, 1st floor central	Brown Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
22-Mastic 511801433-0022A	9"x9" VFT w/mastic: Bldg 1 W of Kitchen, 1st floor central	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23-Finish Coat 511801433-0023	Button board (plaster and drywall): Bldg 1 Room E of kitchen wall, 1st floor	White/Green Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	<1% Chrysotile
23-Base Coat 511801433-0023A	Button board (plaster and drywall): Bldg 1 Room E of kitchen wall, 1st floor	Gray Non-Fibrous Homogeneous	2% Cellulose	20% Quartz 78% Non-fibrous (Other)	None Detected
23-Drywall 511801433-0023B	Button board (plaster and drywall): Bldg 1 Room E of kitchen wall, 1st floor	Brown/White Fibrous Heterogeneous	20% Cellulose	60% Gypsum 20% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2018 15:38:17

EMSL Analytical, Inc.
3317 3rd Ave S, Suite D 2nd floor Seattle, WA 98134
Tel/Fax: (206) 269-6310 / (206) 900-8789
http://www.emsl.com / seattlelab@emsl.com

EMSL Order: 511801433
Customer ID: 32ninm50
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
24-Finish Coat 511801433-0024	Button board (plaster and drywall): Bldg 1 main central room, E wall	White/Green Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	<1% Chrysotile
24-Base Coat 511801433-0024A	Button board (plaster and drywall): Bldg 1 main central room, E wall	Gray Non-Fibrous Homogeneous	2% Cellulose	15% Quartz 83% Non-fibrous (Other)	None Detected
24-Drywall 511801433-0024B	Button board (plaster and drywall): Bldg 1 main central room, E wall	Brown/White Fibrous Heterogeneous	20% Cellulose	60% Gypsum 20% Non-fibrous (Other)	None Detected
25-Finish Coat 511801433-0025	Button board (plaster and drywall): Bldg 1 2nd floor SE room wall	White/Green Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	<1% Chrysotile
25-Base Coat 511801433-0025A	Button board (plaster and drywall): Bldg 1 2nd floor SE room wall	Gray Non-Fibrous Homogeneous	2% Cellulose	15% Quartz 83% Non-fibrous (Other)	None Detected
25-Drywall 511801433-0025B	Button board (plaster and drywall): Bldg 1 2nd floor SE room wall	Brown/White Fibrous Heterogeneous	15% Cellulose	60% Gypsum 25% Non-fibrous (Other)	None Detected
26-Finish Coat 511801433-0026	Button board (plaster and drywall): Bldg 1 2nd floor SW room wall	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26-Base Coat 511801433-0026A	Button board (plaster and drywall): Bldg 1 2nd floor SW room wall	Gray Non-Fibrous Homogeneous	2% Cellulose	15% Quartz 83% Non-fibrous (Other)	None Detected
26-Drywall 511801433-0026B	Button board (plaster and drywall): Bldg 1 2nd floor SW room wall	Brown/White Fibrous Homogeneous	15% Cellulose	60% Gypsum 25% Non-fibrous (Other)	None Detected
27-Finish Coat 511801433-0027	Button board (plaster and drywall): Bldg 1 1st floor kitchen ceiling	Tan/Green Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	<1% Chrysotile
27-Base Coat 511801433-0027A	Button board (plaster and drywall): Bldg 1 1st floor kitchen ceiling	Gray Non-Fibrous Homogeneous	2% Cellulose	20% Quartz 78% Non-fibrous (Other)	None Detected
27-Drywall 511801433-0027B	Button board (plaster and drywall): Bldg 1 1st floor kitchen ceiling	Brown/White Fibrous Heterogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
28-Finish Coat 511801433-0028	Button board (plaster and drywall): Bldg 1 2nd floor SE room ceiling	Gray/Green Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	<1% Chrysotile
28-Base Coat 511801433-0028A	Button board (plaster and drywall): Bldg 1 2nd floor SE room ceiling	Gray Non-Fibrous Homogeneous	2% Cellulose	20% Quartz 78% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2018 15:38:17

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http://www.emsl.com / seattlelab@emsl.com

EMSL Order:	511801433
Customer ID:	32ninm50
Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
28-Drywall 511801433-0028B	Button board (plaster and drywall): Bldg 1 2nd floor SE room ceiling	Brown/White Fibrous Heterogeneous	15% Cellulose	70% Gypsum 15% Non-fibrous (Other)	None Detected
29-Finish Coat 511801433-0029	Button board (plaster and drywall): Bldg 1 2nd floor SE room	Green Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	<1% Chrysotile
29-Base Coat 511801433-0029A	Button board (plaster and drywall): Bldg 1 2nd floor SE room	Gray Non-Fibrous Homogeneous	2% Cellulose	20% Quartz 78% Non-fibrous (Other)	None Detected
29-Drywall 511801433-0029B	Button board (plaster and drywall): Bldg 1 2nd floor SE room	Brown/White Fibrous Homogeneous	20% Cellulose	60% Gypsum 20% Non-fibrous (Other)	None Detected
30-Drywall 511801433-0030	Drywall and joint compound: Bldg 1 1st floor N room 1, wall	Brown/White Fibrous Heterogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
30-Joint Compound 511801433-0030A	Drywall and joint compound: Bldg 1 1st floor N room 1, wall	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
31-Drywall 511801433-0031	Drywall and joint compound: Bldg 1 1st floor N room 2, wall	Brown/White Fibrous Heterogeneous	15% Cellulose	70% Gypsum 15% Non-fibrous (Other)	None Detected
31-Joint Compound 511801433-0031A *Inseparable paint / coating layer included in analysis*	Drywall and joint compound: Bldg 1 1st floor N room 2, wall	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
32-Drywall 511801433-0032	Drywall and joint compound: Bldg 1 1st floor main/central room N	Brown/White Fibrous Homogeneous	10% Cellulose	60% Gypsum 30% Non-fibrous (Other)	None Detected
32-Joint Compound 511801433-0032A	Drywall and joint compound: Bldg 1 1st floor main/central room N	White Non-Fibrous Homogeneous		40% Ca Carbonate 58% Non-fibrous (Other)	2% Chrysotile
33-Shingle 511801433-0033	Roof core/asphalt sheeting: Bldg 2 roof N	White/Black Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
33-Felt 511801433-0033A	Roof core/asphalt sheeting: Bldg 2 roof N	Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
34-Shingle 511801433-0034	Roof core/asphalt sheeting: Bldg 2 roof central	White/Black Fibrous Heterogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
34-Felt 511801433-0034A	Roof core/asphalt sheeting: Bldg 2 roof central	Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
35-Shingle 511801433-0035	Roof core/asphalt sheeting: Bldg 2 roof S	Gray/Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
35-Felt 511801433-0035A	Roof core/asphalt sheeting: Bldg 2 roof S	Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
36 511801433-0036	Penetration mastic: Bldg 2 roof @ pipe	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
37 511801433-0037	Penetration mastic: Bldg 2 roof @ electrical conduit	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
38 511801433-0038	Penetration mastic: Bldg 2 roof @ patch	Black Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
39-Shingle 511801433-0039	Parapet wall/asphalt sheeting: Bldg 2 roof SE	White/Black Fibrous Homogeneous	25% Glass	75% Non-fibrous (Other)	None Detected
39-Felt 511801433-0039A	Parapet wall/asphalt sheeting: Bldg 2 roof SE	Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
40-Shingle 511801433-0040	Parapet wall/asphalt sheeting: Bldg 2 roof S	White/Black Fibrous Homogeneous	30% Glass	70% Non-fibrous (Other)	None Detected
40-Felt 511801433-0040A	Parapet wall/asphalt sheeting: Bldg 2 roof S	Black Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
41-Shingle 511801433-0041	Parapet wall/asphalt sheeting: Bldg 2 roof SW	White/Black Fibrous Homogeneous	30% Glass	70% Non-fibrous (Other)	None Detected
41-Felt 511801433-0041A	Parapet wall/asphalt sheeting: Bldg 2 roof SW	Black Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
42-Stucco 511801433-0042	Exterior stucco and felt: Bldg 2 exterior wall NE	Gray/White Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
42-Felt 511801433-0042A	Exterior stucco and felt: Bldg 2 exterior wall NE	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
43-Stucco 511801433-0043	Exterior stucco and felt: Bldg 2 exterior wall SE	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
43-Felt 511801433-0043A	Exterior stucco and felt: Bldg 2 exterior wall SE	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
44-Finish Coat 511801433-0044	Exterior stucco and felt: Bldg 2 exterior wall W	Tan Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
44-Base Coat 511801433-0044A	Exterior stucco and felt: Bldg 2 exterior wall W	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
44-Felt 511801433-0044B	Exterior stucco and felt: Bldg 2 exterior wall W	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
45 511801433-0045	Window putty: Bldg 2 exterior N window	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46 511801433-0046	Window putty: Bldg 2 exterior N window	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47 511801433-0047	Window putty: Bldg 2 exterior N window	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48-Finish Coat 511801433-0048	Button board/plaster and drywall: Bldg 2 garage 1 perimeter walls S	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 511801433
Customer ID: 32ninm50
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
48-Base Coat 511801433-0048A	Button board/plaster and drywall: Bldg 2 garage 1 perimeter walls S	Gray Non-Fibrous Homogeneous	2% Cellulose	15% Quartz 83% Non-fibrous (Other)	None Detected
48-Drywall 511801433-0048B	Button board/plaster and drywall: Bldg 2 garage 1 perimeter walls S	Brown/White Fibrous Heterogeneous	15% Cellulose	70% Gypsum 15% Non-fibrous (Other)	None Detected
49-Finish Coat 511801433-0049	Button board/plaster and drywall: Bldg 2 garage 3 perimeter walls E	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-Base Coat 511801433-0049A	Button board/plaster and drywall: Bldg 2 garage 3 perimeter walls E	Gray Non-Fibrous Homogeneous	2% Cellulose	20% Quartz 78% Non-fibrous (Other)	None Detected
49-Drywall 511801433-0049B	Button board/plaster and drywall: Bldg 2 garage 3 perimeter walls E	Brown/White Fibrous Heterogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
50-Finish Coat 511801433-0050	Button board/plaster and drywall: Bldg 2 garage 3 perimeter walls W	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
50-Base Coat 511801433-0050A	Button board/plaster and drywall: Bldg 2 garage 3 perimeter walls W	Gray Non-Fibrous Homogeneous	2% Cellulose	20% Quartz 78% Non-fibrous (Other)	None Detected
50-Drywall 511801433-0050B	Button board/plaster and drywall: Bldg 2 garage 3 perimeter walls W	Tan/Pink Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
51-Finish Coat 511801433-0051	Button board/plaster and drywall: Bldg 2 garage 1 ceiling	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
51-Base Coat 511801433-0051A	Button board/plaster and drywall: Bldg 2 garage 1 ceiling	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
51-Drywall 511801433-0051B	Button board/plaster and drywall: Bldg 2 garage 1 ceiling	Brown/White Fibrous Homogeneous	15% Cellulose	60% Gypsum 25% Non-fibrous (Other)	None Detected
52-Finish Coat 511801433-0052	Button board/plaster and drywall: Bldg 2 garage 2 ceiling	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
52-Base Coat 511801433-0052A	Button board/plaster and drywall: Bldg 2 garage 2 ceiling	Gray Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
52-Drywall 511801433-0052B	Button board/plaster and drywall: Bldg 2 garage 2 ceiling	Brown/White Fibrous Homogeneous	15% Cellulose	60% Gypsum 25% Non-fibrous (Other)	None Detected
53-Cove Base 511801433-0053	4" cove base and glue: Bldg 2 garage 1 wall N	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
53-Mastic 511801433-0053A	4" cove base and glue: Bldg 2 garage 1 wall N	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order:	511801433
Customer ID:	32ninm50
Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
54-Drywall 511801433-0054	Drywall and joint compound: Bldg 2 garage 1 N wall	Brown/White Fibrous Heterogeneous	10% Cellulose	65% Gypsum 25% Non-fibrous (Other)	None Detected
54-Joint Compound 511801433-0054A	Drywall and joint compound: Bldg 2 garage 1 N wall	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	<1% Chrysotile
55-Drywall 511801433-0055	Drywall and joint compound: Bldg 2 garage 1 NE wall	Brown/White Fibrous Heterogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
55-Joint Compound 511801433-0055A	Drywall and joint compound: Bldg 2 garage 1 NE wall	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	<1% Chrysotile
56-Drywall 511801433-0056	Drywall and joint compound: Bldg 2 garage 3 S wall	Brown/White Fibrous Homogeneous	10% Cellulose	60% Gypsum 30% Non-fibrous (Other)	None Detected
56-Joint Compound 511801433-0056A	Drywall and joint compound: Bldg 2 garage 3 S wall	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	<1% Chrysotile
57 511801433-0057	Slab concrete/floor: Bldg 2 garage 1 NE floor	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
58 511801433-0058	Slab concrete/floor: Bldg 2 garage 3 NE floor	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
59 511801433-0059	Slab concrete/floor: Bldg 2 garage 3 NE floor	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
60 511801433-0060	Roof core/asphalt shingles: Shed 1 roof N	Gray/Black Fibrous Heterogeneous	45% Cellulose	55% Non-fibrous (Other)	None Detected
61 511801433-0061	Roof core/asphalt shingles: Shed 1 roof NW	Black Fibrous Heterogeneous	55% Cellulose	45% Non-fibrous (Other)	None Detected
62 511801433-0062	Roof core/asphalt shingles: Shed 1 roof SW	Gray/Black Non-Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
63 511801433-0063 *Inseparable paint / coating layer included in analysis*	Ext. stucco: Shed 1 exterior walls N	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
64 511801433-0064	Ext. stucco: Shed 1 exterior walls SW	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
65 511801433-0065	Ext. stucco: Shed 1 exterior walls NE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
66 511801433-0066	Asphalt/concrete: 2500 whittier blvd/site, parking lot area W	Black Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
67 511801433-0067	Asphalt/concrete: 2500 whittier blvd/site, parking lot area central	Gray/Black Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
68 511801433-0068	Asphalt/concrete: 2500 whittier blvd/site, parking lot area E	Gray/Black Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected

Initial report from: 05/30/2018 15:38:17

Analyst(s)

Jason Stuhr (86)
Rudy Baum (44)

Lauren Kerber, Laboratory Manager
or Other Approved Signatory

Initial report from: 05/30/2018 15:38:17

OrderID: 511801433

GEN-FM-10-1: Sample Transfer-One Time
Revision 4.2
Revision Date: 1/05/2016
Effective Date: 1/05/2016

EMSL

EMSL Analytical, Inc.

Sample Transfer Form

#511801433

Receiving Lab:	EMSL- Huntington Beach	Phone Number:	
		Fax Number:	
Relinquished to:	EMSL- Seattle	Phone Number:	
		Fax Number:	

Does new lab hold equivalent or additional accreditation? * ☒ Yes ☐ No

EMSL Customer ID # (if known):	32ninm50
Client Name:	Ninyo & Moore
Client Project:	209403013 Boyle Heights/ Sports Center Gym
Tests to be Performed:	PLM
Date Received:	5/23/18
Date Relinquished:	5/24/18
Date Due:	3 day TAT DUE 5/30 1:50p
Special Instructions: (e.g. Work Order #, required qualifications, project specific procedures/modifications)	Per Michael C. okay to send out to Seattle- CT 5/24/18 *Verified and counted for by HB admin*

Relinquished by (Signature):	Date:	Received by (Signature):	Date:
[signature]	5/24		
Relinquished by (Signature):	Date:	Received by (Signature):	Date:

Customer Agreement- Please sign form and send to the receiving laboratory. By signing below, you agree to permit the above named receiving lab to transfer samples to a separate EMSL lab with equivalent qualifications* for analysis. The final report will be issued from the analyzing laboratory. Ensure any requirements are listed in special instructions.

Name (please print):	Signature:	Agent of:	Date:
Carolyn Tan	[signature]		

If this is a recurring project or sample type that may require samples to be relinquished on a regular basis, a Standing Agreement form must be completed.

* Receiving and analyzing labs shall be aware of required qualifications of project prior to transfer of samples.

Note: If customer has been notified and approved this transfer verbally or by e-mail, the receiving lab must sign for the customer above. EMSL employee filling out form on behalf of customer shall print name of person to whom they spoke, date agreement was received, and then sign under Signature.

#511801433

Sheet 1 of 6

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: Boyle Heights / Sports Center Gym Project No.: 209403013 Project Manager: Michael Cushner mcushner@ninyoandmoore.com	Date Sampled: 5/23/18 Sampled By: Pedro Rodriguez prodriguez@ninyoandmoore.com	Laboratory: LA Testing Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Analysis: PLM EPA 600/R-93/116 TAT: Standard/Normal / 1-Week

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/ Pedro Rodriguez	Ninyo & Moore	5/23/18		Olom(WF) ✓ / 5/23 2:15P	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1	Building 1	Exterior - 2nd Floor - @ window - S	1	Window Putty	8 total	Y	good
	2		- 2nd Floor @ window - S					
	3		- 2nd Floor - W					
	4		- Front Brick - North	2	Brick Mortar	400 SF	N	
	5		- NW					
	6		- NE					
	7		- Wall - NE	3	Exterior Stucco + Felt	2,500 SF		
	8		- Wall - SE					
	9		- Wall - SW					
	10		Main/Central Room - 1st Floor - W	4	Baseboard Plaster + concrete	200 SF	N	good
	11		- NW					
	12		- E					
	13		Main/Central - 1st. - North wall	5	Cove base (4") brown + glue	150 LF	N	good

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: Boyle Heights / Sports Center Gym Project No.: 209403013 Project Manager: Michael Cushner mcushner@ninyoandmoore.com	Date Sampled: 5/23/18 Sampled By: Pedro Rodriguez prodriguez@ninyoandmoore.com	Laboratory: LA Testing Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Analysis: PLM EPA 600/R-93/116 TAT: Standard/Normal

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/ Pedro Rodriguez	Ninyo & Moore	5/23/18		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	14	Building 1	Adjacent to Kitchen - 1st Floor under Tile	6	Floor Concrete	2,500 SF	N	good
	15		Main/Central Room - 1st Floor - E - under Tile					
	16		- 1st - W					
	17		Main/Central Room - 1st Floor	6/7	1'x1' VFT + Mastic + Leveling Compound	1,650 SF	N	
	18		ROOM 1 - NE	6	1'x1' VFT + Mastic			
	19		ROOM 2 - N	6				
	20		East of Kitchen - Central - 1st Floor	8/7	9"x9" VFT + Mastic + Leveling Comp.	850 SF	N	
	21		Kitchen Floor - Central - 1st Floor	8	9"x9" VFT + Mastic			
	22		West of Kitchen - 1st Floor	8				
	23		Room East of Kitchen wall - 1st Floor	9	Button Board (Plaster + Drywall)	5,000 SF	N/y	
	24		Main/Central Room wall - 1st - East					
	25		2nd Floor Southeast Room wall					
	26		2nd Floor South-west Room - wall					

#511801433 Sheet 3 of 6

OrderID: 511801433

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: Boyle Heights/Sports Center Gym Project No.: 209403013 Project Manager: Michael Cushner mcushner@ninyoandmoore.com	Date Sampled: 5/23/18 Sampled By: Pedro Rodriguez prodriguez@ninyoandmoore.com	Laboratory: LA Testing Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Analysis: PLM EPA 600/R-93/116 — TAT: Standard/Normal

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
[signature] / Pedro Rodriguez	Ninyo & Moore	5/23/18		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	27	Building 1	1st Floor Kitchen Ceiling	9	Button board (Plaster + Drywall)	5,000	Y/N	good
	28	↓	2nd Floor South west Room Ceiling.	↓	↓	↓	↓	↓
	29	↓	2nd Floor South east Room ↓	↓	↓	↓	↓	↓
	30	↓	1st Floor North Room 1 - wall	10	Drywall + Joint Compound.	250 SF	Y	↓
	31	↓	1st Floor North Room 2 ↓	↓	↓	↓	↓	↓
	32	↓	1st Floor Maid/Central Room ↓ - North	↓	↓	↓	↓	↓
	33	Building 2	Roof - North	11	Roof Core / Asphalt sheeting	1,000 SF	N	good
	34	↓	↓ - Central	↓	↓	↓	↓	↓
	35	↓	↓ - South	↓	↓	↓	↓	↓
	36	↓	Roof - @ Pipe	12	Penetration Mastic	6 SF	N	good
	37	↓	- @ electrical Conduit.	↓	↓	↓	↓	↓
	38	↓	- @ patch	↓	↓	↓	↓	↓
	39	↓	Roof - South east	13	Parapet Wall / Asphalt sheeting	30 SF	N	good

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: Boyle Heights / Sports Center Gym Project No.: 209403013 Project Manager: Michael Cushner mcushner@ninyoandmoore.com	Date Sampled: 5/23/18 Sampled By: Pedro Rodriguez prodriguez@ninyoandmoore.com	Laboratory: LA Testing Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Analysis: PLM EPA 600/R-93/116 TAT: Standard/Normal

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
[signature] / Pedro Rodriguez	Ninyo & Moore	5/23/18		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	40	Building 2	Roof - South	13	Parapet wall / Asphalt Sheeting	30 SF	N	good
	41	↓	↓ - South West	13	↓ ↓	↓	↓	↓
	42	↓	Exterior wall - NE	14	Exterior Stucco + Felt	1,700 SF	N	↓
	43	↓	↓ ↓ - SE	↓	↓ ↓	↓	↓	↓
	44	↓	↓ ↓ - W	↓	↓ ↓	↓	↓	↓
	45	↓	Exterior North window	15	Window Putty	2 total	N	↓
	46	↓	↓ ↓	↓	↓ ↓	↓	↓	↓
	47	↓	↓ ↓	↓	↓ ↓	↓	↓	↓
	48	↓	Garage 1 Perimeter walls -ØS.	16	Button Board / Plaster + Drywall	2,500 SF	↓	good
	49	↓	↓ 3 Hallway - E	↓	↓ ↓	↓	↓	↓
	50	↓	↓ 3 ↓ - W	↓	↓ ↓	↓	↓	↓
	51	↓	↓ 1 - Ceiling - O	↓	↓ ↓	↓	↓	↓
	52	↓	↓ 2 ↓ - O	↓	↓ ↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

#511801433

Sheet 5 of 6

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: Boyle Heights / Sports Center Gym Project No.: 209403013 Project Manager: Michael Cushner mcushner@ninyoandmoore.com	Date Sampled: 5/23/18 Sampled By: Pedro Rodriguez prodriguez@ninyoandmoore.com	Laboratory: LA Testing Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Analysis: PLM EPA 600/R-93/116 — TAT: Standard/Normal

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/ Pedro Rodriguez	Ninyo & Moore	5/23/18		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	53	Building 2	Gym 1, Wall - N	17	4" Cove base + Glue	100 LF	N	good
	54		Gym 1 - N Wall	18	Drywall + Joint Comp.	600 SF	Y	good
	55		1 - NE Wall					
	56		3 - South wall					
	57		Gym 1 - NE - Floor	19	Slab Concrete / Floor	1,000 SF	N	
	58		3 - NE					
	59		3 - SE					
	60	Shed 1	Roof - N	20	Roof Core / asphalt shingles	120 SF		
	61	Shed 1	- NW					
	62		- SW					
	63		Exterior Wall, - N	21	Ext. Stucco	400 SF		
	64		- SW					
	65		- NE					

#511801433

Sheet 6 of 6

OrderID: 511801433

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : Boyle Heights / Sports Center Gym Project No.: 209403013 Project Manager: Michael Cushner mcushner@ninyoandmoore.com	Date Sampled: 5/23/18 Sampled By: Pedro Rodriguez prodriguez@ninyoandmoore.com	Laboratory: LA Testing Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Analysis: PLM EPA 600/R-93/116 | TAT: Standard/Normal

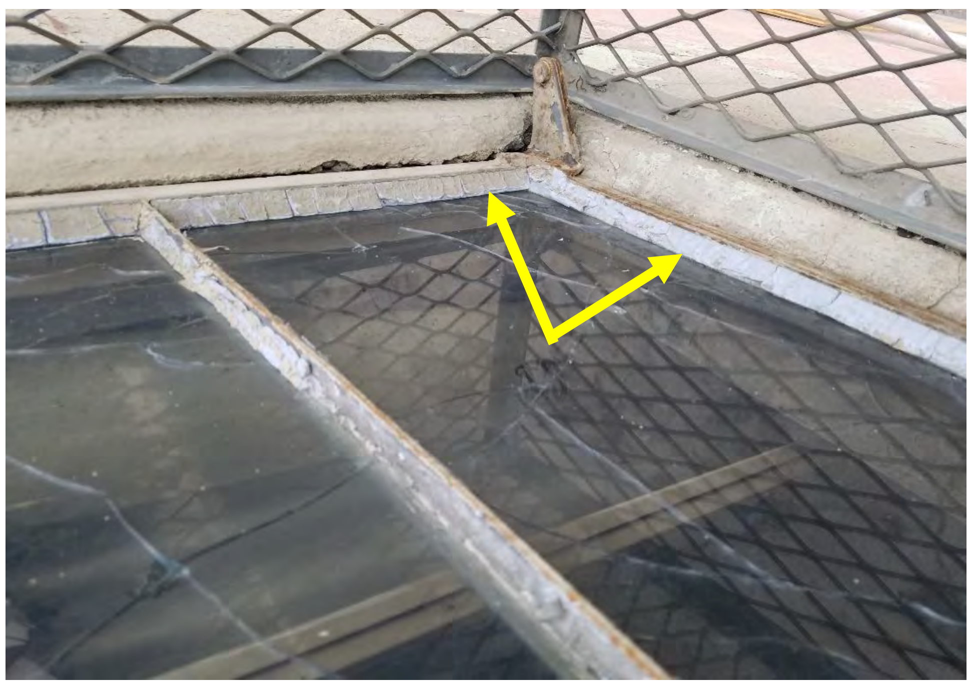
Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/ Pedro Rodriguez	Ninyo & Moore	5/23/18		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	66	2500 Whittier Blvd / Site	Parking Lot Area - West	22	Asphalt Concrete	To be Calc.	N	Fair
	67	↓	↓ - Central	↓	↓	↓	↓	↓
	68	↓	↓ - East	↓	↓	↓	↓	↓

APPENDIX D

Photographs

Photograph 1: General front view of Building 1.



Photograph 2: Building 1: view of asbestos-containing window putty.

Photograph 3: **Building 1: view of asbestos-containing exterior stucco.**

Photograph 4: **Building 1: view of asbestos-containing baseboard plaster.**

Photograph 5: **Building 1: view of asbestos-containing 1'x1' vinyl floor tile and mastic.**

Photograph 6: **Building 1: view of asbestos-containing 9"x9" vinyl floor tile.**

Photograph 7: Building 1: view of asbestos-containing button board (plaster/drywall) throughout walls and ceilings.

Photograph 8: Building 1: view of asbestos-containing joint compound associated with drywall.

Photograph 9: Building 1: view of lead containing door.

Photograph 10: General view of Building 2.

Photograph 11: **Building 2: view of asbestos-containing joint compound associated with drywall.**

Photograph 12: **Building 2: view of restroom with lead containing sink and toilet.**

Photograph 13: **General view of shed 1 (green) and shed 2 (yellow).**

Photograph 14: **Shed 1: view of lead-containing main door.**

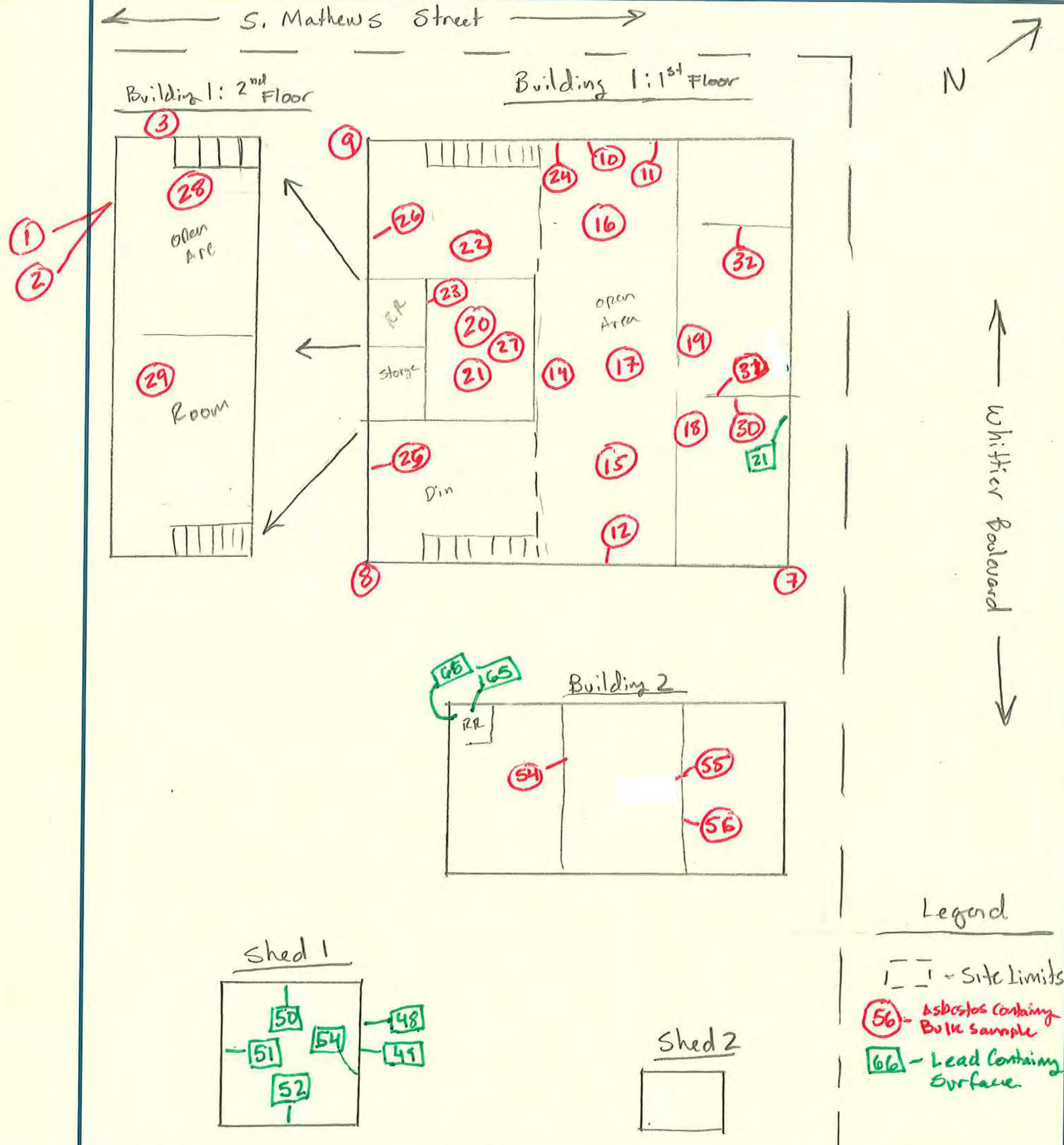
Photograph 15: **Shed 1: view of rodent feces throughout ceiling plenum.**

APPENDIX E

Field Drawings

Ninyo & Moore

Project Name Boyle Heights / Gym Project	
Project Number 209403013	
Calculated By PRM	Date 5/23/18
Checked By MSC	Date 7/2/18
Scale Not to Scale.	Sheet 1 of 1



Field Drawing of Asbestos and Lead Containing Sample Locations

Appendix F

Noise Impact Analysis Memorandum

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Boyle Heights Sports Center Gym Project: Environmental Noise Report

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September 2018

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ICF. 2018. Boyle Heights Sports Center Gym Project: Environmental Noise Report. Draft. September. (ICF 00202.18.) Los Angeles, CA. Prepared for Los Angeles Bureau of Engineering, Environmental Management Group, Los Angeles, CA.

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Acronyms and Abbreviations

µPa	micropascals
ADT	average daily traffic
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Los Angeles
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibels
FHWA	Federal Highway Administration
HVAC	heating, ventilation, and air-conditioning
Hz	Hertz
in/s	inches per second
L_{eq}	equivalent sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
L_{xx}	percentile-exceeded sound level
PPV	peak particle velocity
proposed project	Boyle Heights Sports Center Gym Project
RCNM	Roadway Construction Noise Model

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Chapter 1
Introduction

This technical report has been prepared to support the City of Los Angeles (City) environmental review process and provide information regarding the potential effects of noise and ground-borne vibration associated with the proposed Boyle Heights Sports Center Gym Project (proposed project), located at 2500 Whittier Boulevard. This study, described herein, evaluates the potential short- and long-term noise and ground-borne vibration impacts associated with project development. The report describes the environmental setting for the project, including the existing noise environment, as well as applicable laws and regulations and documents the assumptions, methodologies, and findings used to evaluate the impacts.

1.1 Project Description

The proposed project includes construction of a new 10,000-square-foot gymnasium, consisting of a full-sized basketball court, staff offices, equipment storage rooms, restrooms, showers, a community room, a plaza for special gatherings, green space, pedestrian paths, and parking.

The proposed project would be located at 2500 Whittier Boulevard, in the Boyle Heights Community Plan area of the city of Los Angeles. Specifically, the project site is bounded by Whittier Boulevard on the north, South Mathews Street on the west, and the existing Boyle Heights Sports Center facilities on the east and south. Two vacant single-story buildings currently occupy the site; these are approximately 2,500 and 1,100 square feet in area. The site comprises two relatively flat areas in the northwest (higher area) and southeast (lower area) portions of the site; the two areas are separated by a slope.

Existing land uses in the project area include multi- and single-family residences in the neighborhoods surrounding the project site and commercial uses along Whittier Boulevard. A number of public facilities are in the vicinity of the project site, including Soto Street Elementary School, along 7th Street; SEA Charter School/Soto Education Center, at the southwest corner of South Soto Street and Rogers Avenue; Soto Street Children's Center, at the southeast corner of South Fickett Street and 7th Street; and Park Place Head Start, on the south side of 7th Street, across from the Boyle Heights Sports Center. Bishop Mora Salesian High School and School of Santa Isabel are immediately west of the project site and the existing Boyle Heights Sports Center. The confluence of Interstate 5, State Route 60, and Interstate 10 is approximately 600 feet south of the site. The project site, ambient noise measurement locations, and construction noise receptors are shown in Figure 1-1. The proposed project site plan is shown in Figure 1-2.

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Figure 1-1. Project Site, Noise Measurement Locations, and Construction Receptors

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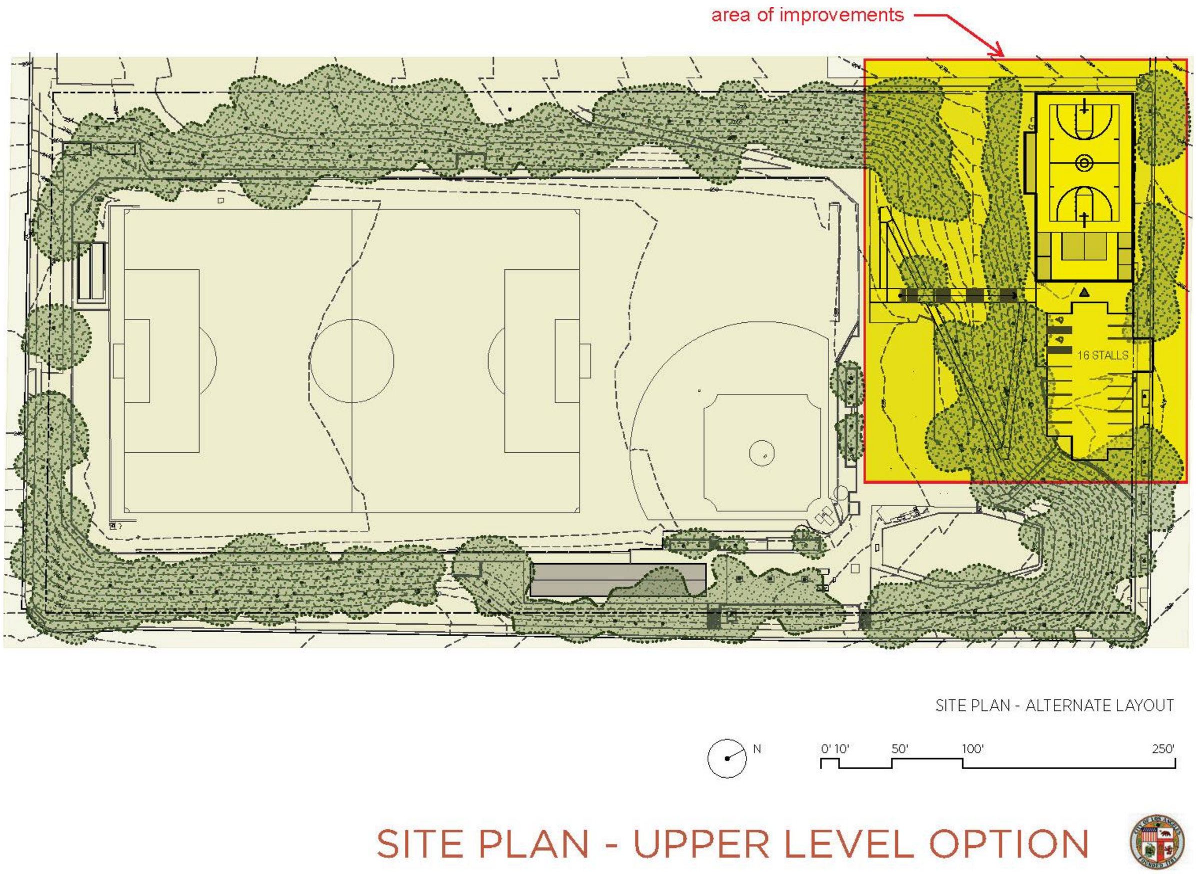
Figure 1-2. Project Site Plan



1.2 Organization of Report

This report is divided into six chapters, including the Introduction. Chapter 2 describes the environmental setting, starting with background information about environmental noise and vibration and then the existing (baseline) noise conditions in the project vicinity. Chapter 3 describes the applicable laws and regulations that apply to the project as well as some additional guidelines regarding ground-borne vibration, which is not specifically addressed by City regulations. Chapter 4 provides a brief description of the methodologies used in the impact analyses, the results of the analyses, and the noise and vibration control methods included for compliance with applicable standards and guidelines. Chapter 5 provides the summary and conclusions. Chapter 6 lists the sources referenced in preparation of this report.

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Chapter 2
Environmental Setting

2.1 Noise Fundamentals

Noise is commonly defined as unwanted sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is often defined as sound that is objectionable because it is disturbing or annoying.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor.

The following sections provide an explanation of key concepts and acoustical terms used in the analysis of environmental and community noise.

2.1.1 Frequency, Amplitude, and Decibels

Continuous sound can be described by *frequency* (pitch) and *amplitude* (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of Hz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. The amplitude of a sound is typically described in terms of the *sound pressure level*, which refers to the root-mean-square pressure of a sound wave, and measured in units called micropascals (μPa). One μPa is approximately one hundred-billionth (0.00000000001) of normal atmospheric pressure. Sound pressure levels for different kinds of noise environments can range from less than 100 to more than 100,000,000 μPa. Because of this large range of values, sound is rarely expressed in terms of μPa. Instead, a logarithmic scale is used to describe the sound pressure level (also referred to as simply the sound level) in terms of decibels, abbreviated dB. Specifically, the decibel describes the ratio of the actual sound pressure to a reference pressure and is calculated as follows:

$$SPL = 20 \times \log_{10}\left(\frac{X}{20\mu Pa}\right)$$

where *X* is the actual sound pressure and 20 μPa is the standard reference pressure level for acoustical measurements in air. The threshold of hearing for young people is about 0 dB, which corresponds to 20 μPa.

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one excavator produces a sound pressure level of 80 dB, two excavators would not produce 160 dB. Rather, they would combine to produce 83 dB. The cumulative sound level of any number of sources, such as excavators, can be determined using decibel addition. The same decibel addition is used for A-weighted decibels, as described below.

2.1.2 Perception of Noise and A-Weighting

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels in various frequency bands are adjusted (or "weighted"), depending on human sensitivity to those frequencies. The resulting sound pressure level is expressed in A-weighted decibels, abbreviated dBA. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted sound levels of those sounds. Table 2-1 describes typical A-weighted sound levels for various noise sources.

Human Response to Noise

Noise-sensitive receptors (also called "receivers") are locations where people reside or where the presence of unwanted sound may adversely affect the use of the land. The effects of noise on people can be listed in three general categories.

- Subjective effects of annoyance, nuisance, or dissatisfaction
- Interference with activities such as speech, sleep, learning, or working
- Physiological effects such as startling and hearing loss

In most cases, effects from sounds typically found in the natural environment (compared with an industrial or occupational setting) would be limited to the first two categories: creating an annoyance or interfering with activities. (Further discussion of health-related effects is provided below.) No completely satisfactory method exists to measure the subjective effects of sound or the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard arises primarily from the wide variation in individual thresholds of annoyance and habituation to sound. Therefore, an important way of determining a person's subjective reaction to a new sound is by comparing it to the existing baseline or "ambient" environment to which that person has adapted. In general, the more the level or tonal (frequency) variations of a sound exceeds the previously existing ambient sound level or tonal quality, the less acceptable the new sound will be, as judged by the exposed individual.

Table 2-1. Typical Noise Levels in the Environment

Common Outdoor Noise Source	Sound Level (dBA)	Common Indoor Noise Source
	— 110 —	Rock band
Jet flying at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: California Department of Transportation 2013a.

Studies have shown that, under controlled conditions in an acoustics laboratory, a healthy human ear is able to discern changes in sound levels of 1 dBA. In the normal environment, the healthy human ear can detect changes of about 2 dBA; however, it is widely accepted that a doubling of sound energy, which results in a change of 3 dBA in the normal environment, is considered just noticeable to most people. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud. Accordingly, a doubling of sound energy (e.g., doubling the volume of traffic on a highway), resulting in a 3 dBA increase in sound, would generally be barely detectable.

Equipment and vehicle operation during nighttime hours can result in noise events that disturb the sleep of people living in nearby residential areas. Interior noise levels between 50 and 55 dBA, maximum sound level, during nighttime hours (10 p.m. to 7 a.m.) were found to result in sleep disturbance and annoyance (Nelson 1987).

2.1.3 Noise Descriptors

Because sound levels can vary markedly over a short period of time, various descriptors or noise "metrics" have been developed to quantify environmental and community noise. These metrics generally describe either the average character of the noise or the statistical behavior of the variations in the noise level. The primary metrics used in this report are described below.

Equivalent Sound Level (L_{eq}) is the most common metric used to describe short-term average noise levels. Many noise sources produce levels that fluctuate over time; examples include mechanical equipment that cycles on and off or construction work, which can vary sporadically. The L_{eq} describes the average acoustical energy content of noise for an identified period of time, commonly 1 hour. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustical energy over the duration of the exposure. For many noise sources, the L_{eq} will vary, depending on the time of day. A prime example is traffic noise, which rises and falls, depending on the amount of traffic on a given street or freeway.

Maximum Sound Level (L_{max}) and **Minimum Sound Level (L_{min})** refer to the maximum and minimum sound levels, respectively, that occur during the noise measurement period. More specifically, they describe the root-mean-square sound levels that correspond to the loudest and quietest 1-second intervals that occur during the measurement.

Percentile-Exceeded Sound Level (L_{xx}) describes the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time)

Community Noise Equivalent Level (CNEL) is a measure of the cumulative 24-hour noise level that considers not only the variation of the A-weighted noise level but also the duration and the time of day of the disturbance. The CNEL is derived from the 24 A-weighted 1-hour L_{eq} that occurs in a day, with "penalties" applied to the L_{eq} occurring during the evening hours (7 p.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.) to account for increased noise sensitivity during these hours. Specifically, the CNEL is calculated by adding 5 dBA to the evening L_{eq}, adding 10 dBA to the nighttime L_{eq}, and then taking the average value for all 24 hours.

2.1.4 Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the following important factors:

- **Geometric Spreading**. Sound from a single source (i.e., a *point source*) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a *line source*) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The change in sound level (i.e., attenuation) from a line source is 3 dBA per doubling of distance.
- **Ground Absorption**. Usually the noise path between the source and the observer is very close to the ground. The excess noise attenuation from ground absorption occurs because of acoustic energy losses on sound wave reflection. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done

for simplification only; for distances of less than 200 feet, prediction results based on this scheme are sufficiently accurate. For acoustically “hard” sites (i.e., sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receptor), no excess ground attenuation is assumed because the sound wave is reflected without energy losses. For acoustically absorptive or “soft” sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

- **Atmospheric Effects**. Research by the California Department of Transportation (Caltrans) and others has shown that atmospheric conditions can have a major effect on noise levels (Caltrans 2013a). Wind has been shown to be the single most important meteorological factor within approximately 500 feet, whereas vertical air temperature gradients are more important over longer distances. Other factors, such as air temperature, humidity, and turbulence, also have major effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur because of temperature inversion conditions (i.e., increasing temperature with elevation, with cooler air near the surface, where the sound source tends to be; warmer air above that acts as a cap, causing a reflection of ground level–generated sound).
- **Shielding by Natural or Human-Made Features**. A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receptor, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor with the specific purpose of reducing noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

2.2 Environmental Vibration Fundamentals

Ground-borne vibration is an oscillatory motion of the soil with respect to the equilibrium position. It can be quantified in terms of *velocity* or *acceleration*. Velocity describes the instantaneous speed of the motion, and acceleration is the instantaneous rate of change of the speed. Each of these measures can be further described in terms of *frequency* and *amplitude*.

In contrast to airborne sound, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually much lower than the threshold of human perception. Most perceptible indoor vibration is caused by sources within buildings, such as mechanical equipment while in operation, people moving, or doors slamming. Typical outdoor sources of perceptible ground-borne vibration are heavy construction activities (such as blasting and pile driving), railroad operations, and heavy trucks on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible.

Ground-borne vibration, which can be a serious concern for neighbors of nearby sources, can cause buildings to shake and rumbling sounds to be heard. Vibration can result in effects that range from annoyance to structural damage. Variations in geology and distance result in different vibration levels, with different frequencies and amplitudes.

Ground-borne vibration can be described in terms of peak particle velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second (in/s). For transient vibration sources (single isolated vibration events such as blasting), the human response to vibration varies from barely perceptible, at a PPV of 0.04 in/s; to distinctly perceptible, at a PPV of 0.25 in/s; to severe, at a PPV of 2.0 in/s. For continuous or frequent intermittent vibration sources (such as impact pile driving or vibratory compaction equipment), the human response to vibration varies from barely perceptible, at a PPV of 0.01 in/s; to distinctly perceptible, at a PPV of 0.04 in/s; to severe, at a PPV of 0.4 in/s (Caltrans 2013b). If a person is engaged in any type of physical activity, vibration tolerance increases considerably (Caltrans 2013b).

2.3 Existing Conditions

The existing noise-sensitive receivers in the immediate vicinity of the proposed project include multi- and single-family residences, primarily to the north and southeast; Soto Street Elementary School, along 7th Street; Soto Street Children's Center, at the southeast corner of South Fickett Street and 7th Street; Park Place Head Start Day Care Center, adjacent to the Soto Street Children's Center; and Bishop Mora Salesian High School and School of Santa Isabel, immediately west of the project site. Other land uses in the vicinity include commercial businesses and retail stores; the closest commercial uses to the project site are on the north side of Whittier Boulevard, directly across the street from the project site. The primary existing noise sources in the project area are traffic on local streets and nearby freeways, aircraft overflights, and exterior activities at nearby schools, fields, recreational areas, parking lots, and businesses.

To document the existing noise environment, short-term noise measurements (15 minutes in duration) were obtained at four locations in the vicinity of the project site on Wednesday, May 30, 2018. The locations are identified in Figure 1-1; additional details and a summary of the measurement results are provided in Table 2-2.

Measured noise levels were lowest in areas located away from, or shielded from, the more highly traveled roadways in the project area, such as Whittier Boulevard (ST-1, ST-3, and ST-4), with average noise levels (L_{eq}) being approximately 56 to 58 dBA. Noise levels were slightly higher for measurement location ST-2, which was subjected to higher levels of traffic noise from Whittier Boulevard, with an L_{eq} of approximately 61 dBA.

Table 2-2. Summary of Short-Term Noise Measurements

Location #, Description	Measured Noise Levels, dBA	
	Date, Time	L_{eq}
ST-1, sidewalk in front of the Park Place Head Start Day Care Center at 2630 E. 7th Street	5/30/18, 9:57 a.m.–10:12 a.m.	57.9
ST-2, sidewalk along S. Mathews Street, behind the School of Santa Isabel at 2424 Whittier Boulevard	5/30/18, 10:23 a.m.–10:38 a.m.	60.8
ST-3, sidewalk in front of the single-family residence at 926 S. Mott Street	5/30/18, 11:17 a.m.–11:32 a.m.	57.3
ST-4, in alley adjacent to the single-family residence at 734 S. Mathews Street	5/30/18, 11:41 a.m.–11:56 a.m.	56.3

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Chapter 3
Applicable Laws and Regulations

3.1 State Regulations

California requires each local government entity to perform noise studies and implement a noise element as part of its general plan. The purpose of the noise element is to limit the exposure of the community to excessive noise levels; the noise element must be used to guide decisions concerning land use. The state provides guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

3.1.1 California Department of Transportation

None of the local laws and regulations discussed below provide any quantitative criteria regarding ground-borne noise and vibration. Therefore, although the proposed project would not be subject to Caltrans oversight, guidance published by the agency nonetheless provides ground-borne vibration criteria that are useful in establishing thresholds of impact. Caltrans' widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013b) provides guidance for two types of potential impact, (1) damage to structures and (2) annoyance to people. Guideline criteria for each are provided in Tables 3-1 and 3-2.

Table 3-1. Caltrans Guideline: Vibration Damage Criteria

	Maximum PPV (in/s)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013b.

Note: Transient sources, such as blasting or drop balls, create a single isolated vibration event. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 3-2. Caltrans Guideline: Vibration Annoyance Criteria

Human Response	Maximum PPV (in/s) Transient Sources	Maximum PPV (in/s) Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2013b.

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Based on these guidelines, a project would have a significant vibration impact, relative to potential building damage, if:

- PPV vibration levels from construction equipment are 0.3 in/s or greater at any existing residential structure or 0.5 in/s at nearby schools or commercial structures.

A project would have a significant vibration impact, relative to potential annoyance, if:

- PPV vibration levels from construction equipment are 0.04 in/s or greater at any existing residence.

3.2 Local

3.2.1 L.A. CEQA Thresholds Guide

The *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) defines noise-sensitive land uses as residences, transient lodging, schools, day-care facilities, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks and provides noise/land use compatibility guidelines, as summarized in Table 3-3.

Table 3-3. Land Use Noise Compatibility Guidelines

Land Use	Community Noise Exposure CNEL, dB			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-family, duplex, mobile homes	50–60	55–70	70–75	above 70
Multi-family homes	50–65	60–70	70–75	above 70
Schools, libraries, churches, hospitals, nursing homes	50–70	60–70	70–80	above 80
Transient lodging – motels, hotels	50–65	60–70	70–80	above 80
Auditoriums, concert halls, amphitheaters	—	50–70	—	above 65
Sports arena, outdoor spectator sports	—	50–75	—	above 70
Playgrounds, neighborhoods parks	50–70	—	67–75	above 72
Golf courses, riding stables, water, recreation, cemeteries	50–75	—	70–80	above 80

Normally Acceptable: Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction and without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air-conditioning, will normally suffice.

Normally Unacceptable: New construction or development generally should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development generally should not be undertaken.

Source: City of Los Angeles 2006.

The *L.A. CEQA Thresholds Guide* also establishes significance criteria for four different types of noise sources, (1) construction, (2) operations, (3) railroads, and (4) airports. These criteria are summarized below.

Construction Noise

A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise-sensitive use;
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Operational Noise (including project-generated traffic)

A project would normally have a significant impact related to noise levels from operations if it causes the ambient noise level, measured at the property line of affected uses, to increase by 3 dBA CNEL, to or within the "normally unacceptable" or "clearly unacceptable" category (refer to Table 3-3, above), or 5 dBA or greater. For example, for residences, this means a significant impact would occur if a project causes the ambient noise level to increase by 3 dBA or greater to 70 dBA CNEL or greater or increase by 5 dBA or greater.

The *L.A. CEQA Thresholds Guide* also addresses potential noise impacts associated with railroads and airports. However, the proposed project does not propose to alter any existing railroad or airport operations or expose any new noise-sensitive receptors to excessive noise or vibration from railroad or airport operations. Therefore, these noise sources are not addressed any further in this report.

3.2.2 City of Los Angeles Municipal Code

Construction Noise

Section 41.40 (a) of the City Municipal Code prohibits the use, operation, repair, or servicing of construction equipment, as well as job-site delivery of construction materials, between the hours of 9:00 p.m. and 7:00 a.m. where such activities would disturb “persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence” (City of Los Angeles 2017). Construction noise emanating from property zoned for manufacturing or industrial uses is exempted from the Section 41.40 (a) standards. In addition, Section 41.40 (c) prohibits construction, grading, and related job-site deliveries on or within 500 feet of land developed with residential structures before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday or at any time on Sunday.

Section 112.05 of the City Municipal Code places limits on the maximum noise levels may be produced by powered equipment or tools in or within 500 feet of any residential zone between the hours of 7:00 a.m. and 10:00 p.m.[1] The proscribed limits shall not apply where compliance is technically infeasible and the burden of proving that compliance is technically infeasible is on the person or persons charged with violation of the standard. Technical infeasibility shall mean that the noise limit cannot be complied with despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during operation of the equipment.

Operational Noise

Chapter XI, Noise Regulation, of the City’s Municipal Code regulates noise from non-transportation noise sources, such as commercial or industrial operations, mechanical equipment, or residential activities. It is noted that although these regulations do not apply to vehicles operating on public rights-of-way, they do apply to noise generated by vehicles on private property, such as truck operations at commercial or industrial facilities. The exact noise standards vary, depending on the type of noise source, but the allowable noise levels are generally determined relative to the existing ambient noise levels at the affected location. Section 111.01(a) defines ambient noise as “the composite of noise from all sources near and far in a given environment, exclusive of occasional and transient intrusive noise sources and the particular noise source or sources to be measured. Ambient noise shall be averaged over a period of at least 15 minutes…” Section 111.03 provides

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[1] The noise limit is 75 dBA at a distance of 50 feet for typical construction equipment.

minimum ambient noise levels for various land uses, as shown in Table 3-4, below. In the event that the actual measured ambient noise level at the subject location is lower than that provided in the table, the level in the table shall be assumed.

Table 3-4. City of Los Angeles Assumed Minimum Ambient Noise Levels

	Assumed Minimum Ambient Noise (L_{eq}), dBA	
Zone	**Daytime (7 a.m.–10 p.m.)**	**Nighttime (10 p.m.–7 a.m.)**
A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5	50	40
P, PB, CR, C1, C1.5, C2, C4, C5, and CM	60	55
M1, MR1, and MR2	60	55
M2 and M3	65	65
Source: City of Los Angeles 2013.		

At the boundary line between two zones, the allowable noise level of the quieter zone shall be used. The allowable noise levels are then adjusted if certain conditions apply to the alleged offensive noise, as follows:

- For steady-tone noise with an audible fundamental frequency or overtones (except for noise emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to September 8, 1986), reduce allowable noise level by 5 dBA.
- For repeated impulsive noise, reduce allowable noise level by 5 dBA.
- For noise occurring less than 15 minutes in any period of 60 consecutive minutes between the hours of 7:00 a.m. and 10:00 p.m., increase allowable noise level by 5 dBA.

The City's Noise Ordinance is not explicit in defining the length of time over which an average noise level should be assessed. However, based on the noted reference to "60 consecutive minutes," above, it is concluded that the 1-hour L_{eq} metric should be used.

3.2.3 City of Los Angeles General Plan Noise Element

The noise element of the City's General Plan (1999) defines the following land uses to be noise sensitive: single- and multi-family dwellings; long-term care facilities, including convalescent and retirement facilities; dormitories; motels; hotels; transient lodging and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves; and parks.

The noise element contains the following polices that are relevant to the proposed project:

Program 5 – Continue to enforce, as applicable, City, state, and federal regulations intended to abate or eliminate disturbances of the peace and other intrusive noise.

Program 9 – Continue to operate City equipment, vehicles, and facilities in accordance with any applicable City, state, or federal regulations.

Program 11 – For a proposed development project that is deemed to have a potentially significant noise impact on noise-sensitive uses, as defined by this chapter, require mitigation measures, as appropriate, in accordance with California Environmental Quality Act (CEQA) and City procedures.

Program 13 – Continue to plan, design, and construct or oversee construction of public projects, as well as projects on City-owned properties, so as to minimize potential noise impacts on noise-sensitive uses and maintain or reduce existing ambient noise levels.

Chapter 4
Project Impact Analysis and Mitigation Methods

4.1 Methodology

4.1.1 Construction Noise and Vibration

The evaluation of potential noise and vibration impacts associated with construction activities was based on the proposed project's construction equipment schedule and phasing information.

Noise

Construction-related noise was analyzed using data and modeling methodologies from the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) (FHWA 2008), which predicts noise levels at nearby receptors by analyzing the type of equipment, the distance from source to receptor, usage factors, and the presence or absence of intervening shielding between source and receptor. This methodology calculates the composite average noise levels for the multiple pieces of equipment scheduled to be used during each construction phase. The source-to-receptor distances used in the analysis of the maximum noise levels from construction equipment (see Tables 4-3 and 4-4) were the distance from the receptor to the nearest location within the project site. The source-to-receptor distances used in the analysis of average hourly noise levels from construction equipment (see Tables 4-5 and 4-6) were the acoustical average distances between the relevant construction area and each receptor. The acoustical average distance is used to represent noise sources that are mobile or distributed over an area (such as the project site); it is calculated by multiplying the shortest distance between the receiver and the noise source area by the farthest distance and then taking the square root of the product. Noise levels for each phase of construction were analyzed at four receptors in the vicinity of the project site. These receptors, illustrated in Figure 1-1, represent the closest noise-sensitive receptors in each direction from the project site. For all analyses at receptor R4, a 4 dB reduction was applied to anticipated noise levels to account for shielding provided by building structures located between R4 and the project site. The construction schedule and equipment inventory for the project is provided in Table 4-1, and the associated noise levels are provided in Table 4-2. The noise levels are provided for a reference distance of 50 feet. Consistent with the RCNM methodology, it was assumed that construction noise levels would be reduced at a rate of 6 dB per doubling of distance from the source.

Table 4-1. Anticipated Construction Phasing, Dates, and Equipment

Construction Phase	Anticipated Start Date	Anticipated End Date	Equipment (Number of Pieces)
Phase 1 – Demolition	09/02/19	10/04/19	Rubber-tired dozer (1) Concrete/industrial saw (1) Scraper (1) Front-end loader (1)
Phase 2 – Site Preparation	10/07/19	10/18/19	Front-end loader (2)

Construction Phase	Anticipated Start Date	Anticipated End Date	Equipment (Number of Pieces)
Phase 3 – Grading	10/21/19	11/22/19	Bulldozer (1) Hydraulic excavator (1) Dump truck (1) Compactor (1) Front-end loader (1)
Phase 4 – Building Construction	11/25/19	04/09/21	Crane (1) Forklift (1) Concrete truck (1) Vibrator (1) Generator (1) Electric power tools (1) Boom lift (1) Scissor lift (1)
Phase 5 – Architectural Coating	04/12/21	06/30/21	Electric power tools (1) Boom lift (1) Forklift (1) Scissor lift (1)

Table 4-2. Construction Equipment Reference Noise Levels

Equipment Item	Maximum Noise Level (L_{max}) at 50 feet, dBA[1]	Average Noise Level (L_{eq}) at 50 feet, dBA[1]
Bulldozer	81.7	77.7
Compactor	83.2	76.2
Concrete truck	81.4	74.4
Concrete saw	89.6	82.6
Crane	80.6	72.6
Dump truck	76.5	72.5
Excavator	80.7	76.7
Forklift	77.6	73.6
Front-end loader	79.1	75.1
Generator	80.6	77.6
Electric power tools	85.2	82.2
Scraper	83.6	79.6
Scissor lift (boom lift)	74.7	67.7
Vibratory concrete mixer	80.0	73.0

[1] Obtained or estimated from FHWA 2008 (RCNM).

Noise level reductions from the temporary construction barriers proposed under Mitigation Measure NOI-1 were determined using a proprietary spreadsheet model[2] that calculates barrier insertion loss at each receptor based on the height of the barrier, the height of each noise source, the height of each receptor, the distance from the receptor to the barrier, the distance from the noise source to the barrier, and the average frequency of the noise.

Vibration

Construction-related vibration was analyzed using data and modeling methodologies provided by Caltrans' *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013b). This guidance manual provides typical vibration source levels for various types of construction equipment as well as methods for estimating the propagation of ground-borne vibration over distance. The project would not require high-impact construction methods, such as pile driving or blasting. Therefore, the highest ground-borne vibration levels would be associated with conventional heavy construction equipment, such as bulldozers and loaders. According to Caltrans data, these sources generate a PPV of 0.089 in/s at a reference distance of 25 feet.

The following equation from the guidance manual was used to estimate the change in PPV levels over distance:

$$PPV_{rec} = PPV_{ref} \times (25/D)^n$$

where PPV_{rec} is the PPV at a receptor; PPV_{ref} is the reference PPV at 25 feet from the equipment (0.089 in/s); D is the distance from the equipment to the receiver, in feet; and n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1).

4.1.2 Operational Noise

The analysis of traffic noise in the study area was performed qualitatively and based on data from the trip generation assessment memorandum for the proposed project (Fehr and Peers 2018). Noise from on-site operations (including parking lot and heating, ventilation, and air-conditioning [HVAC] noise) was analyzed qualitatively, based on a comparison to existing land uses and the noise environment.

4.2 Impact Analysis

4.2.1 Construction

The analysis below describes the temporary impacts related to noise and vibration as a result of the proposed project during construction.

Noise

Two types of short-term noise impacts could occur during project construction. Construction workers' vehicles and haul trucks, which would transport equipment and materials, would incrementally increase noise levels on access roads. Although there would be a relatively high

[2] Spreadsheet calculations based on Fresnel number calculations for diffraction over a single barrier.

single-event noise level, which could cause an intermittent noise nuisance (e.g., passing trucks at 50 feet would generate up to 77 dBA), the effect on longer-term ambient noise levels (e.g., the daily average noise levels considered in the *L.A. CEQA Thresholds Guide*) would be low because of the infrequent traffic volumes. Therefore, short-term construction-related impacts associated with commuting workers and the transport of equipment to the project site would be less than significant.

The second type of short-term noise impact would be related to noise generated during physical project construction. Construction of the proposed project is anticipated to begin in September 2019 and last approximately 22 months. Day-to-day construction activities would vary throughout the construction process and cease once construction of the project is completed. In accordance with the City Municipal Code, construction would not take place outside the hours of 7 a.m. to 9 p.m. Monday through Friday or 8 a.m. to 6 p.m. on Saturdays or national holidays or at any time on Sunday. Project construction would be broken down into phases. The phases of construction and anticipated construction equipment for each are summarized in Table 4-1.

Based on City Municipal Code standards, construction noise would present a significant impact if maximum noise levels from on-site activity were to exceed 75 dBA at any residence. Table 4-3 summarizes the maximum noise levels (L_{max}) that would be experienced at the closest sensitive receptors during each phase of construction. Maximum noise levels during the demolition, building construction, and architectural coating phases would exceed 75 dBA at receptors R2 and R3, which would be a significant impact. Therefore, the construction contractor would implement Mitigation Measure NOI-1 (see Section 4.3 and Figure 4-1) to ensure that noise levels at nearby homes would be reduced as necessary to comply with the City's standard.

Table 4-3. Maximum Noise Levels from Construction Equipment

	Maximum Noise Level (L_{max}) at Closest Sensitive Receptors, dBA			
Phase	**R1: Soto Street Children's Center**	**R2: School of Santa Isabel**	**R3: Single-family Residence at 924 S. Mott St**	**R4: Single-family Residence at 741 S. Mathews St**
Demolition	67	79	81	75
Site Preparation	56	68	69	64
Grading	61	73	74	69
Building Construction	63	75	76	71
Architectural Coating	63	75	76	71
Significant Impact (Exceeds 75 dBA)?				
Demolition	No	Yes	Yes	No
Site Preparation	No	No	No	No
Grading	No	No	No	No
Building Construction	No	No	Yes	No
Architectural Coating	No	No	Yes	No

According to the *L.A. CEQA Thresholds Guide*, because construction would last for more than 10 days in a 3-month period, a significant impact would occur if construction noise levels were to exceed the existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive land use. Based on the construction equipment information provided in Table 4-1, average hourly noise levels (i.e., 1-hour

L_{eq}) were estimated for each phase of construction at each of the four construction receptors considered in the analysis (refer to Figure 1-1). The results of the analyses are summarized in Table 4-4, below. The table also indicates the average weekday daytime ambient noise levels at each receptor, based on the noise measurements summarized in Table 2-2. Referring to Table 4-4, impacts at receptor R1 would be less than significant during all of the construction phases. However significant impacts would occur under all other analyzed scenarios, except for site preparation noise levels at R2 and R4. Therefore, the construction contractor would implement Mitigation Measure NOI-1 (see Section 4.3 and Figure 4-1) to ensure that construction noise levels at nearby homes would be reduced to within less than 5 dBA of ambient levels as required by the *L.A. CEQA Thresholds Guide* threshold.

Table 4-4. Estimated Construction Noise Levels

	1-Hour L_{eq} at Closest Sensitive Receptors, dBA			
Phase	**R1: Soto Street Children's Center**	**R2: School of Santa Isabel**	**R3: Single-family Residence at 924 S. Mott St**	**R4: Single-family Residence at 741 S. Mathews St**
Construction Noise Levels				
Demolition	62	71	71	67
Site Preparation	55	63	64	60
Grading	59	68	69	64
Building Construction	62	70	71	66
Architectural Coating	59	68	69	64
Ambient Noise Levels				
Average ambient noise level	58	61	57	56
Construction Noise Increase Over Ambient				
Demolition	4	10	14	11
Site Preparation	0	2	7	4
Grading	1	7	12	8
Building Construction	4	9	14	10
Architectural Coating	1	7	12	8
Significant Impact (Exceeds Ambient by 5 dBA or more)?				
Demolition	No	Yes	Yes	Yes
Site Preparation	No	No	Yes	No
Grading	No	Yes	Yes	Yes
Building Construction	No	Yes	Yes	Yes
Architectural Coating	No	Yes	Yes	Yes

Vibration

Referring to the equipment schedule provided in Table 4-1, various pieces of heavy equipment, such as bulldozers and excavators, would be used at the project site. Vibration levels (PPV, in/s) were estimated at each of the four receptors considered in the construction analysis (refer to Figure 1-1), using the methodology described in Section 4.1.1. The results of the analyses are summarized in Table 4-5, below. The results are presented as a range of vibration levels, based on the estimated range of distances from each receptor that would occur as construction activity shifts around the project site and impacts are assessed relative to the highest predicted PPV. Referring to the table, ground-borne vibration from construction would not exceed the thresholds developed either for potential annoyance at nearby homes or for potential vibration damage at nearby structures. Therefore, the impact associated with construction vibration would be less than significant.

Table 4-5. Estimated Construction Vibration Levels

	R1: Soto Street Children's Center	R2: School of Santa Isabel	R3: Single-family Residence at 924 S. Mott St	R4: Single-family Residence at 741 S. Mathews St
Estimated range of PPV at closest sensitive receptors, in/s	0.002–0.003	0.004–0.011	0.004–0.013	0.004–0.011
Significant impact relative to potential annoyance threshold (0.04 in/s at homes)?	No	No	No	No
Significant impact relative to potential damage threshold (0.3 in/s at homes, 0.5 in/s at schools)?	No	No	No	No

4.2.2 Project Operation

Traffic

The project would generate new vehicle trips that would add incrementally to traffic on surrounding streets and could change the associated traffic noise. According to the trip generation assessment memorandum for the proposed project (Fehr and Peers 2018), the project is anticipated to generate a total of 288 daily trips, including 18 trips in the weekday AM peak hour and 23 trips in the weekday PM peak hour. Relative to existing traffic on nearby roadways, such small increases in traffic noise would generally be considered imperceptible. Therefore, the impact would be less than significant.

On-Site Activity

The proposed project would introduce new noise sources in the study area once the project is operational. These would include the parking lot and HVAC mechanical equipment. Each of these is discussed further below.

Parking Lot Noise

The proposed parking lot would occupy the northeastern portion of the project site (see Figure 1-2). Activities at this location would generate sporadic noise from vehicles starting, car doors slamming, people talking, etc. Although short-term noise would most likely be audible at nearby receptors, it would not generate substantial long-term noise levels (such as those measured by the 1-hour L_{eq} considered in the City Municipal Code). In addition, there is an existing parking lot associated with the School of Santa Isabel directly west of the project site, and street parking is currently available on South Mott Street and Whittier Boulevard. Therefore, the proposed parking lot would be consistent with the existing uses and outdoor activity in the vicinity of the project site. As a result, noise impacts from the proposed parking area would not be significant.

HVAC Noise

The project would require typical mechanical equipment for HVAC functions that would generate noise, but the associated noise levels would be consistent with those generated by similar equipment at the surrounding residences, schools, and commercial buildings. Given the heavily developed nature of the area, the project would not generate significant noise levels above those already experienced in the project vicinity, and it is not anticipated to cause increases in existing ambient noise levels beyond those permitted by the City Municipal Code. As a result, noise impacts from on-site mechanical equipment would not be significant.

Vibration

Mechanical equipment installed at the project site would produce some vibration that may be perceptible within the building. However, there would be no major operational vibration sources that would generate perceptible ground-borne vibration at any nearby lands uses. As a result, there would be no off-site vibration impacts.

4.3 Mitigation Measures

As noted in Section 4.2, the only significant impacts from the project would occur due to noise during project construction. The following mitigation measure is provided to reduce this impact to a less-than-significant level.

NOI-1: Implement Construction Site Noise Control Measures

The following methods shall be included as part of the project to ensure compliance with the City's noise standards and CEQA thresholds for construction:

1. The construction contractor shall conduct all activities in compliance with the applicable restrictions contained in the *L.A. CEQA Thresholds Guide,* including limiting construction noise levels to less than 5 dBA over the existing ambient exterior noise levels at noise-sensitive land uses. The construction contractor shall also comply with the City of Los Angeles Municipal Code, including limiting maximum noise levels at adjacent homes to 75 dBA or less. Such compliance will be achieved using methods that may include, but are not limited to:
    a. Prohibiting construction activity (including deliveries, equipment maintenance, or operation of any construction equipment) at the project site before 7 a.m. or after 9 p.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday, or at any time on Sunday;
    b. Temporary construction noise barriers shall be installed as described below:
        1) A barrier with a minimum height of 15 feet above ground level shall be installed along the eastern property line of the project site during all phases of construction. The barrier shall wrap around the southern corner of the project site and extend an additional 100 feet to the east. The location of this barrier is identified in Figure 4-1.

2) A barrier with a minimum height of 12 feet above ground level shall be installed along the northern and western property lines of the project site and a portion of the southern property line of the project site. This barrier will connect with the 15-foot barrier described above. The location of this barrier is identified in Figure 4-1.

3) The barriers shall be constructed from acoustical blankets hung over or from a supporting frame. The blankets shall provide a minimum sound transmission class rating of 28 and a minimum noise reduction coefficient (NRC) of 0.80 and be firmly secured to the framework, with the sound-absorptive side of the blankets oriented toward the construction equipment. The blankets shall be overlapped by at least 4 inches at seams and taped and/or closed with hook-and-loop fasteners (i.e., Velcro®) so that no gaps exist. The largest blankets available should be used to minimize the number of seams. The blankets shall be draped to the ground to eliminate any gaps at the base of the barrier.

c. Using low-noise-generating construction equipment;

d. Maintaining all construction equipment, including mufflers and ancillary noise abatement equipment;

e. Ensuring that all mobile and stationary noise-producing construction equipment used on the project site that is regulated for noise output by a local, state, or federal agency complies with such regulation while in the course of project activity;

f. Scheduling high noise-producing activities during periods that are least sensitive;

g. Switching off construction equipment when not in use;

h. Positioning stationary construction equipment, such as generators and compressors, as far away as practical from noise-sensitive receptors;

i. Restricting the use of noise-producing signals, including horns, whistles, alarms, and bells, to safety warning purposes only;

j. Routing construction-related truck traffic away from noise-sensitive areas; and

k. Reducing construction vehicle speeds.

Figure 4-1. Location of Temporary Construction Noise Barriers

4.4 Impacts After Mitigation

Table 4-6 summarizes the maximum noise levels (L_{max}) that would be experienced with implementation of Mitigation Measure NOI-1. Table 4-7 summarizes the average hourly noise levels that would be experienced with implementation of Mitigation Measure NOI-1, along with the corresponding noise increases relative to ambient noise. As shown in Table 4-6 and Table 4-7, with implementation of Mitigation Measure NOI-1, all maximum noise levels would be reduced to 75 dBA or less and all average hourly noise levels would be reduced to less than 5 dBA above ambient levels. Therefore, with the implementations of Mitigation Measure NOI-1, construction noise would comply with both the City's Municipal Codes Standards and the *L.A. CEQA Thresholds* and the impacts would be less than significant.

Table 4-6. Maximum Noise Levels from Construction Equipment with Mitigation Measure NOI-1 Incorporated

Phase	Maximum Noise Level (L_{max}) at Closest Sensitive Receptors with Mitigation Measure NOI-1 Incorporated, dBA			
	R1: Soto Street Children's Center	R2: School of Santa Isabel	R3: Single-family Residence at 924 S. Mott St	R4: Single-family Residence at 741 S. Mathews St
Demolition	60	71	69	67
Site Preparation	54	63	60	59
Grading	56	66	63	62
Building Construction	56	67	65	62
Architectural Coating	56	67	65	62
Significant Impact (Exceeds 75 dBA)?				
Demolition	No	No	No	No
Site Preparation	No	No	No	No
Grading	No	No	No	No
Building Construction	No	No	No	No
Architectural Coating	No	No	No	No

Table 4-7. Estimated Construction Noise Levels with Implementation of Mitigation Measure NOI-1

Phase	1-Hour L_{eq} at Closest Sensitive Receptors after Implementation of Mitigation Measure NOI-1, dBA			
	R1: Soto Street Children's Center	R2: School of Santa Isabel	R3: Single-family Residence at 924 S. Mott St	R4: Single-family Residence at 741 S. Mathews St
Construction Noise Levels				
Demolition	58	64	61	60
Site Preparation	52	58	54	54
Grading	56	62	59	58
Building Construction	56	63	60	59
Architectural Coating	53	61	58	57
Ambient Noise Levels				
Average ambient noise level	58	61	57	56
Construction Noise Increase Over Ambient				
Demolition	0	3	4	4
Site Preparation	0	0	0	0
Grading	0	1	2	2
Building Construction	0	2	3	3
Architectural Coating	0	0	1	1
Significant Impact (Exceeds Ambient by 5 dBA or more)?				
Demolition	No	No	No	No
Site Preparation	No	No	No	No
Grading	No	No	No	No
Building Construction	No	No	No	No
Architectural Coating	No	No	No	No

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Chapter 5
Summary and Conclusions

This technical report has been prepared to evaluate the potential short- and long-term noise and ground-borne vibration impacts associated with project development. The following summarizes the results of this analysis:

- The proposed project includes construction of a new 10,000-square-foot gymnasium, consisting of a full-sized basketball court, staff offices, equipment storage rooms, restrooms, showers, a community room, a plaza for special gatherings, green space, pedestrian paths, and parking.
- Project construction has the potential to generate noise levels in excess of the *L.A. CEQA Thresholds Guide* noise standards and the City Municipal Code noise standards. However, with Mitigation Measure NOI-1 incorporated into the construction process, significant impacts would be less than significant.
- Project operation would not generate noise levels in excess of the *L.A. CEQA Thresholds Guide* noise standards or the City Municipal Code noise standards. Therefore impacts associated with project operation would be less than significant.
- Once operational, the project would not include substantial sources of vibration and, therefore, would not generate any ground-borne vibration impacts.

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Chapter 6
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Appendix A

Construction Noise Analysis

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/7/2018
Case Description: Phase 1 - Demolition

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
R1	Commercial	58	58	58

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	755	0
Concrete Saw	No	20		89.6	755	0
Scraper	No	40		83.6	755	0
Front End Loader	No	40		79.1	755	0

			Results													
		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Dozer		58.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Concrete Saw		66	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Scraper		60	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Front End Loader		55.5	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Total	66	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R2	Commercial	61	61	61

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	279	0
Concrete Saw	No	20		89.6	279	0
Scraper	No	40		83.6	279	0
Front End Loader	No	40		79.1	279	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		66.7	62.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw		74.6	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		68.6	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	74.6	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R3	Residential	57	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	259	0
Concrete Saw	No	20		89.6	259	0
Scraper	No	40		83.6	259	0
Front End Loader	No	40		79.1	259	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67.4	63.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	75.3	68.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	75.3	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R4	Residential	56	56	56

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	271	0
Concrete Saw	No	20		89.6	271	0
Scraper	No	40		83.6	271	0
Front End Loader	No	40		79.1	271	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw		74.9	67.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		68.9	64.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	74.9	70.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/7/2018
Case Description: Phase 2 - Site Preparation

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
R1	Commercial	58	58	58

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Front End Loader	No	40		79.1	755	0
Front End Loader	No	40		79.1	755	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		55.5	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		55.5	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	55.5	54.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R2	Commercial	61	61	61

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	279	0
Front End Loader	No	40		79.1	279	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	64.2	63.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R3	Residential	57	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	259	0
Front End Loader	No	40		79.1	259	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	64.8	63.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R4	Residential	56	56	56

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	271	0
Front End Loader	No	40		79.1	271	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	64.4	63.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/7/2018
Case Description: Phase 3 - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R1	Commercial	58	58	58

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	755	0
Excavator	No	40		80.7	755	0
Dump Truck	No	40		76.5	755	0
Compactor (ground)	No	20		83.2	755	0
Front End Loader	No	40		79.1	755	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	58.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.1	53.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	59.7	52.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	55.5	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.7	59.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R2	Commercial	61	61	61

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	279	0
Excavator	No	40		80.7	279	0
Dump Truck	No	40		76.5	279	0
Compactor (ground)	No	20		83.2	279	0
Front End Loader	No	40		79.1	279	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	66.7	62.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.8	61.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.5	57.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	68.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.3	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R3	Residential	57	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	259	0
Excavator	No	40		80.7	259	0
Dump Truck	No	40		76.5	259	0
Compactor (ground)	No	20		83.2	259	0
Front End Loader	No	40		79.1	259	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67.4	63.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	66.4	62.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	68.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.9	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R4	Residential	56	56	56

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	271	0
Excavator	No	40		80.7	271	0
Dump Truck	No	40		76.5	271	0
Compactor (ground)	No	20		83.2	271	0
Front End Loader	No	40		79.1	271	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	66	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	61.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	68.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.6	68.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/7/2018
Case Description: Phase 4 - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R1	Commercial	58	58	58

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	755	0
Backhoe	No	40		77.6	755	0
Concrete Pump Truck	No	20		81.4	755	0
Vibratory Concrete Mixer	No	20		80	755	0
Generator	No	50		80.6	755	0
Pneumatic Tools	No	50		85.2	755	0
Man Lift	No	20		74.7	755	0
Man Lift	No	20		74.7	755	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	57	49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	57.8	50.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	56.4	49.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	57.1	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	61.6	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	51.1	44.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	51.1	44.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	61.6	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R2	Commercial	61	61	61

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	279	0
Backhoe	No	40		77.6	279	0
Concrete Pump Truck	No	20		81.4	279	0
Vibratory Concrete Mixer	No	20		80	279	0
Generator	No	50		80.6	279	0
Pneumatic Tools	No	50		85.2	279	0
Man Lift	No	20		74.7	279	0
Man Lift	No	20		74.7	279	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65.6	57.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62.6	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	66.5	59.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	65.7	62.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	70.2	67.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	59.8	52.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	59.8	52.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.2	70.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R3	Residential	57	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	259	0
Backhoe	No	40		77.6	259	0
Concrete Pump Truck	No	20		81.4	259	0
Vibratory Concrete Mixer	No	20		80	259	0
Generator	No	50		80.6	259	0
Pneumatic Tools	No	50		85.2	259	0
Man Lift	No	20		74.7	259	0
Man Lift	No	20		74.7	259	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	66.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	67.1	60.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.7	58.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	66.3	63.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	70.9	67.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	60.4	53.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	60.4	53.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.9	70.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R4	Residential	56	56	56

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	271	0
Backhoe	No	40		77.6	271	0
Concrete Pump Truck	No	20		81.4	271	0
Vibratory Concrete Mixer	No	20		80	271	0
Generator	No	50		80.6	271	0
Pneumatic Tools	No	50		85.2	271	0
Man Lift	No	20		74.7	271	0
Man Lift	No	20		74.7	271	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	66.7	59.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vibratory Concrete Mixer	65.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	66	62.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	70.5	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	60	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	60	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.5	70.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/7/2018
Case Description: Phase 5 - Architectural Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R1	Commercial	58	58	58

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Pneumatic Tools	No	50		85.2	755	0
Man Lift	No	20		74.7	755	0
Man Lift	No	20		74.7	755	0
Backhoe	No	40		77.6	755	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Pneumatic Tools		61.6	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift		51.1	44.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift		51.1	44.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	61.6	59.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R2	Commercial	61	61	61

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Pneumatic Tools	No	50		85.2	279	0
Man Lift	No	20		74.7	279	0
Man Lift	No	20		74.7	279	0
Backhoe	No	40		77.6	279	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Pneumatic Tools	70.2	67.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	59.8	52.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	59.8	52.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62.6	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.2	68.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R3	Residential	57	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Pneumatic Tools	No	50		85.2	259	0
Man Lift	No	20		74.7	259	0
Man Lift	No	20		74.7	259	0
Backhoe	No	40		77.6	259	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Pneumatic Tools	70.9	67.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	60.4	53.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	60.4	53.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.9	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
R4	Residential	56	56	56

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Pneumatic Tools	No	50		85.2	271	0
Man Lift	No	20		74.7	271	0
Man Lift	No	20		74.7	271	0
Backhoe	No	40		77.6	271	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Pneumatic Tools		70.5	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift		60	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift		60	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	70.5	68.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Appendix G
Trip Generation Assessment Memorandum

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FEHR & PEERS

MEMORANDUM

Date: May 31, 2018

To: Lee Lisecki, ICF Jones & Stokes, Inc.

From: Netai Basu and Catrina Meyer, Fehr & Peers

Subject: ***Trip Generation Assessment for the Boyle Heights Sports Center Gym Project***

LA18-3035

This memorandum documents the trip generation estimates developed by Fehr & Peers for the proposed indoor community sports center at 2500 Whittier Boulevard in Los Angeles, California. The purpose of this assessment is to determine whether the project would generate a net change in trips that would warrant the preparation of a traffic impact study or a traffic technical memorandum.

PROJECT DESCRIPTION

The project is proposed on the block between Whittier Boulevard to the north, 7th Street to the south, Mathews Street to the west, and Mott Street to the east. Figure 1 shows the project site plan. It is located within the Boyle Heights Community Plan area of the City of Los Angeles. The Bishop Mora Salesian High School and the School of Santa Isabel are located directly to the west of the project site. Other surrounding land uses include elementary and middle schools, single- and multi-family homes, and commercial uses on Whitter Boulevard.

The proposed project would demolish two vacant commercial structures, totaling 3,600 square feet, and construct a 10,000 square foot sports center gym that will include one full-sized basketball court, staff offices, equipment storage, restrooms, showers, and a community room. The proposed site will also include a plaza for special gatherings, pedestrian paths, and additional parking.

The proposed project includes improvements only in the northwest area of the Boyle Heights Sports Center complex. The playground, soccer and baseball fields on the remainder of the recreational facilities will remain as they are.

TRIP GENERATION ESTIMATES

Trip generation estimates were developed for the project using trip generation rates from *Trip Generation, 10th Edition* (Institute of Transportation Engineers [ITE], 2017). Weekday daily and peak hour trips were estimated for the proposed use. As indicated in Table 1, it is estimated that the proposed Recreational Community Facility will generate 288 daily trips, including 18 trips (12 in and 6 out) in the weekday AM peak hour and 23 trips (11 in and 12 out) in the weekday PM peak hour.

CITY OF LOS ANGELES TRAFFIC STUDY THRESHOLD AND CONCLUSION

The City of Los Angeles Department of Transportation (*LADOT Transportation Impact Study Guidelines*, December 2016) has established a standard that requires that a technical memorandum be prepared when:

- A project is likely to add 25 to 42 AM or PM peak hour trips, and
- The project is likely to significantly impact nearby intersection(s) which are presently believed to be operating at LOS E or F.

A traffic impact study is required when a project is likely to add 500 or more daily trips or likely to add 43 or more AM or PM peak hour trips.

Using these standards, the peak hour trip generation of the proposed project, 18 trips in the AM peak hour and 23 trips in the PM peak hour, is below the threshold for requiring either a technical memorandum or a traffic impact study. Even without considering the net trip generation of the proposed project by subtracting the trips that may be generated by the existing uses in the section of the existing park where the project is proposed, the number of trips falls below the LADOT threshold for further study.

If you have any questions or require additional information, please call us at (213) 261-3050. Thank you.

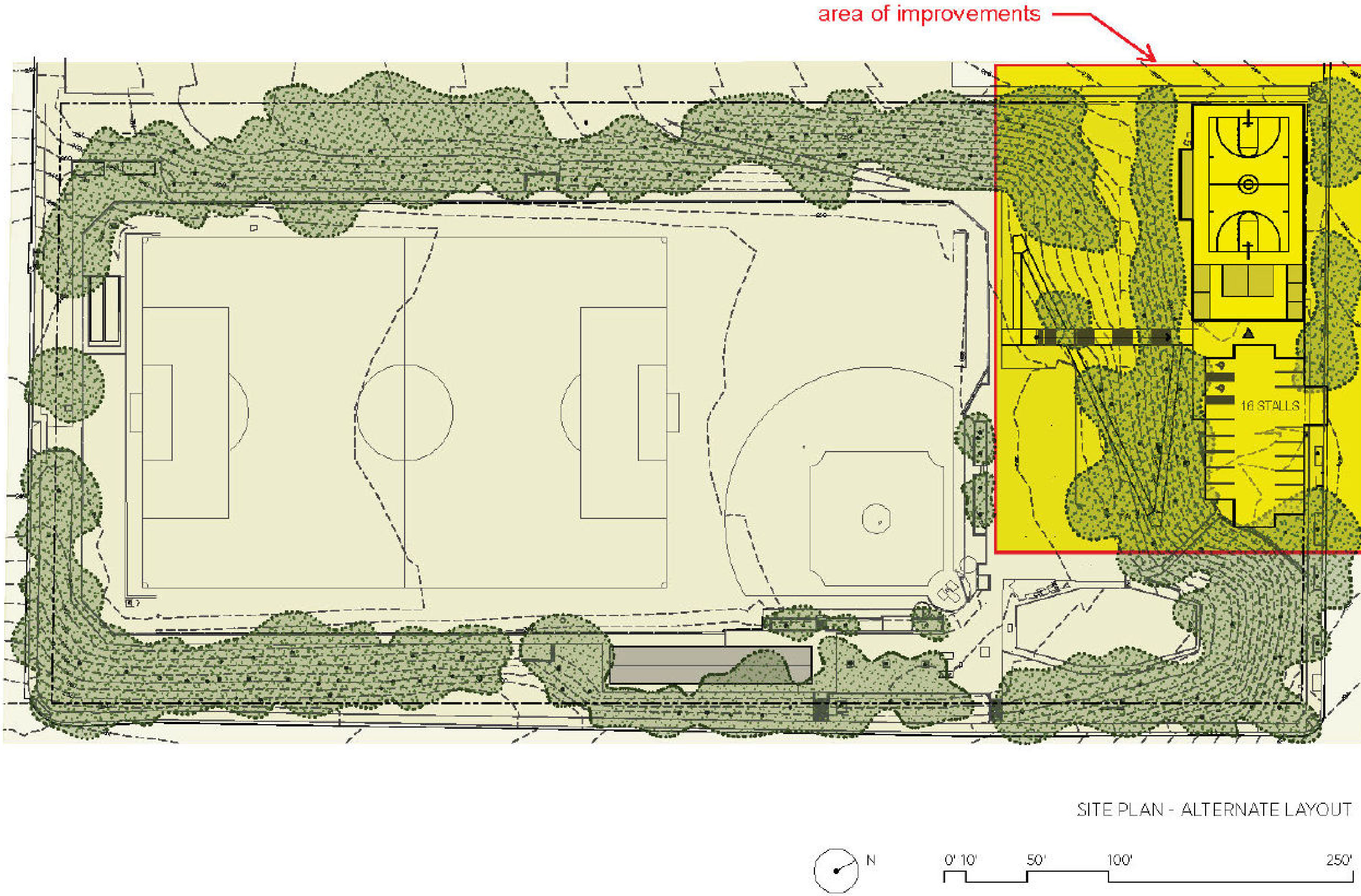

Figure 1

Boyle Heights Sports Center Gym Site Plan

TABLE 1
BOYLE HEIGHTS SPORTS CENTER
TRIP GENERATION ANALYSIS

Land Use	ITE Land Use Code [a]	Size	Trip Generation Rates								Estimated Trip Generation						
			Daily	AM Peak Hour			PM Peak Hour			Trip Rate	Daily	AM Peak Hour			PM Peak Hour		
			Rate	Rate	% In	% Out	Rate	% In	% Out	Unit	Trips	In	Out	Total	In	Out	Total
Recreational Community Center	495	10.00 ksf	28.82	1.76	66%	34%	2.31	47%	53%	per ksf	288	12	6	18	11	12	23

Notes:

[a] Institute of Transportation Engineers (ITE), *Trip Generation, 10th Edition*, 2017.

Appendix H
Biological Resources Record Searches

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Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Los Angeles (3411812))

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S2	
big free-tailed bat *Nyctinomops macrotis*	AMACD04020	None	None	G5	S3	SSC
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California glossy snake *Arizona elegans occidentalis*	ARADB01017	None	None	G5T2	S2	SSC
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G3G4	S3S4	SSC
Davidson's saltscale *Atriplex serenana var. davidsonii*	PDCHE041T1	None	None	G5T1	S1	1B.2
Greata's aster *Symphyotrichum greatae*	PDASTE80U0	None	None	G2	S2	1B.3
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G5	S4	
least Bell's vireo *Vireo bellii pusillus*	ABPBW01114	Endangered	Endangered	G5T2	S2	
Los Angeles sunflower *Helianthus nuttallii ssp. parishii*	PDAST4N102	None	None	G5TH	SH	1A
mesa horkelia *Horkelia cuneata var. puberula*	PDROS0W045	None	None	G4T1	S1	1B.1
Parish's gooseberry *Ribes divaricatum var. parishii*	PDGRO020F3	None	None	G5TX	SX	1A
Plummer's mariposa-lily *Calochortus plummerae*	PMLIL0D150	None	None	G4	S4	4.2
prostrate vernal pool navarretia *Navarretia prostrata*	PDPLM0C0Q0	None	None	G2	S2	1B.1
Robinson's pepper-grass *Lepidium virginicum var. robinsonii*	PDBRA1M114	None	None	G5T3	S3	4.3
salt spring checkerbloom *Sidalcea neomexicana*	PDMAL110J0	None	None	G4	S2	2B.2
southern California legless lizard *Anniella stebbinsi*	ARACC01060	None	None	G3	S3	SSC
southwestern willow flycatcher *Empidonax traillii extimus*	ABPAE33043	Endangered	Endangered	G5T2	S1	
Walnut Forest *Walnut Forest*	CTT81600CA	None	None	G1	S1.1	
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G5T4	S3S4	SSC

Record Count: 21

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Los Angeles County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

Coastal California Gnatcatcher *Polioptila californica californica* Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8178

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Black Swift Cypseloides niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Common Yellowthroat Geothlypis trichas sinuosa This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Costa's Hummingbird Calypte costae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Marbled Godwit Limosa fedoa This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

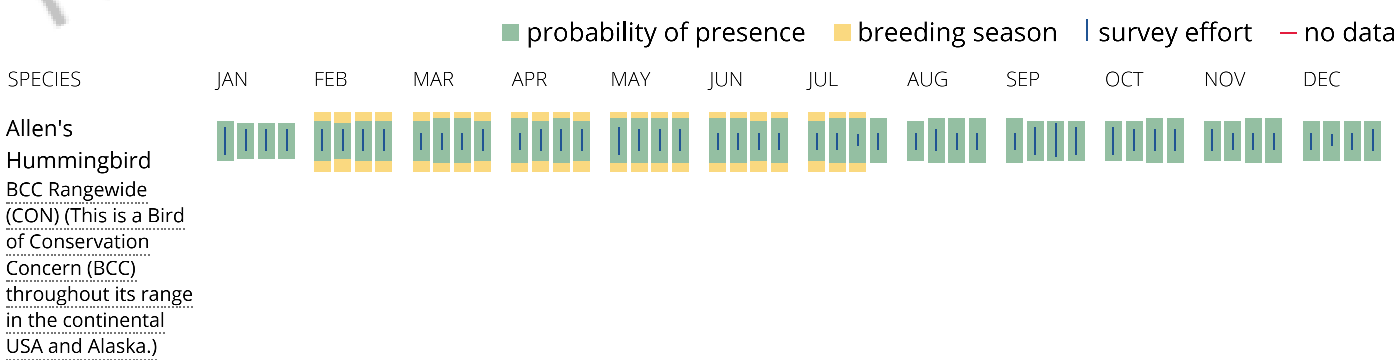
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

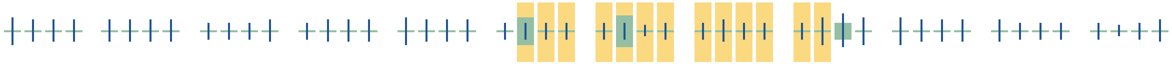
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

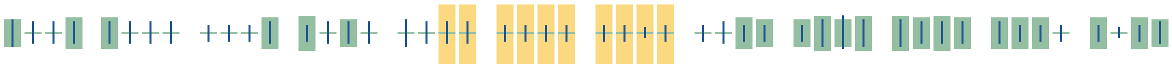
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



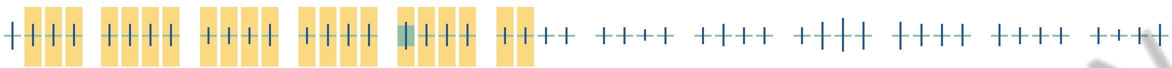
Black Swift
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

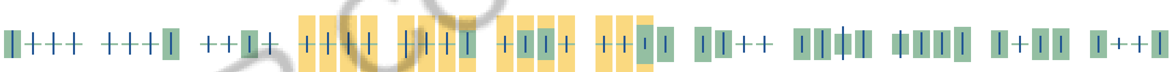


Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

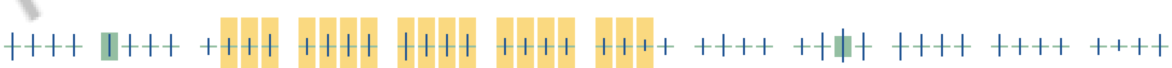


Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

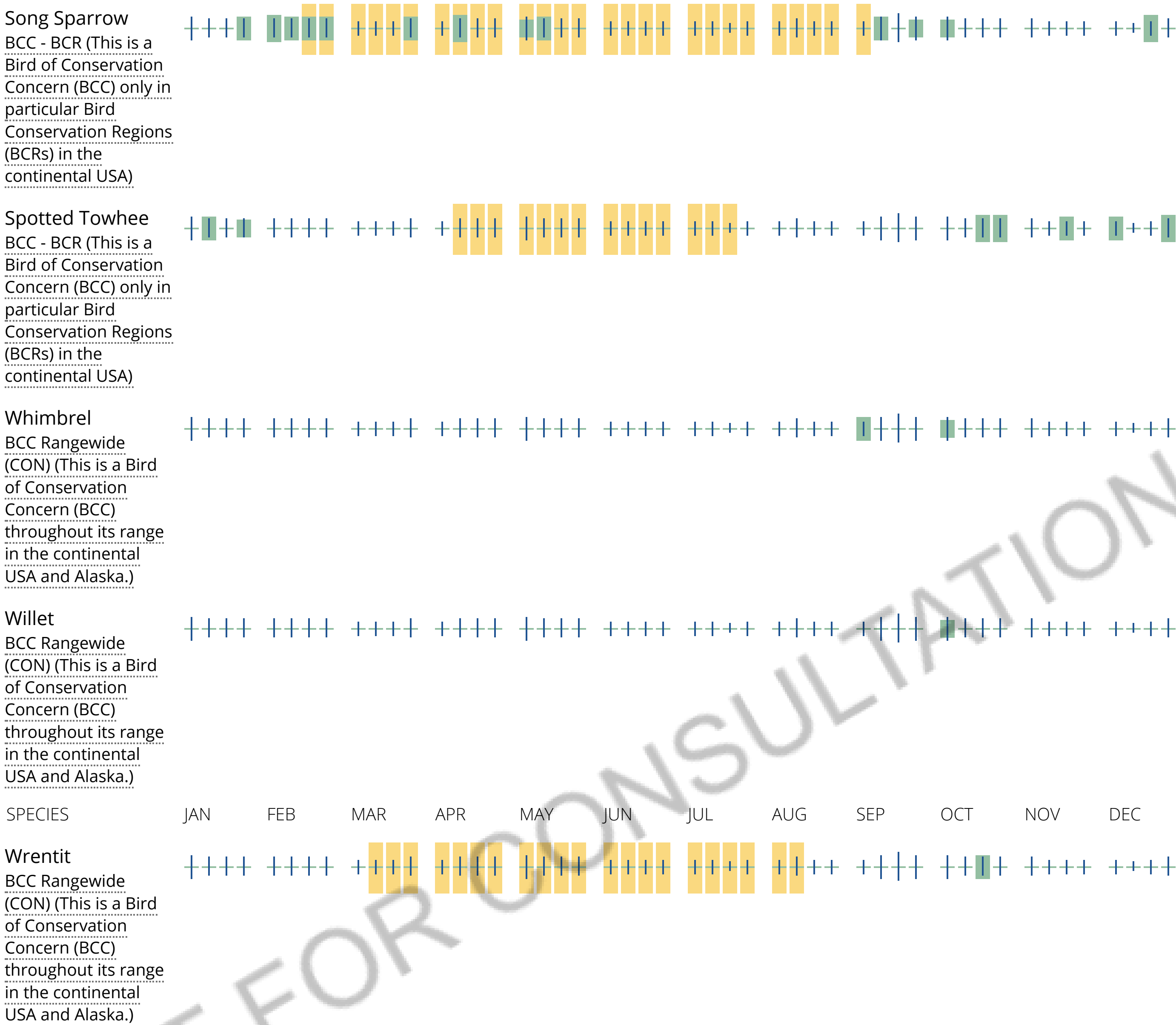
Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

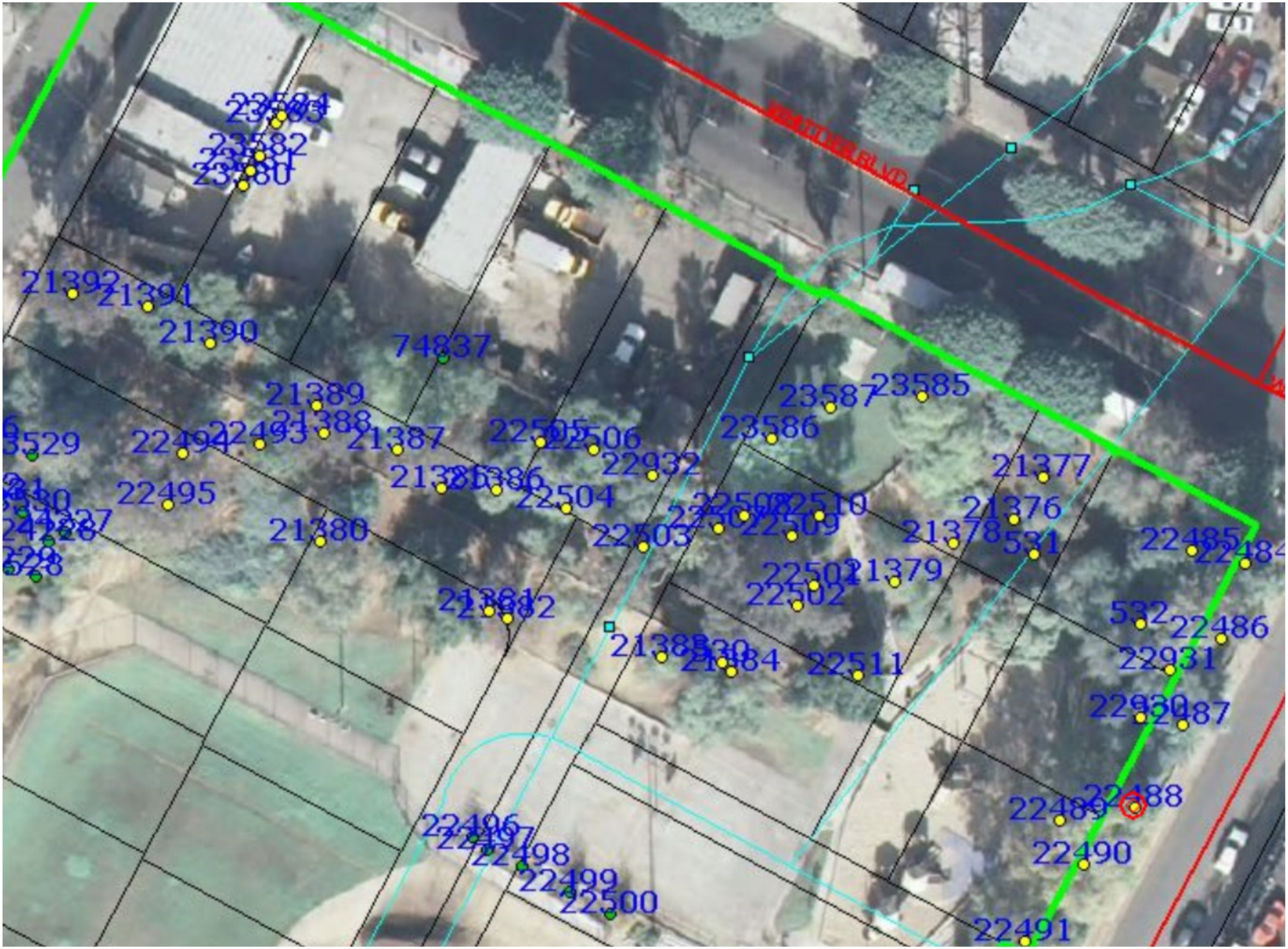
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Boyle Heights Sports Center Gymnasium- Tree Survey

Park Name	Site ID	Species	Height	Diameter	Condition	Maintenance	Observations
Boyle Heights Sports Center	530	Schinus molle/California peppertree	41 - 50 ft.	19	Fair	Prune	Poor Structure
Boyle Heights Sports Center	531	Corymbia ficifolia/red flowering gum	41 - 50 ft.	17	Dead	Removal	None
Boyle Heights Sports Center	532	Olea europaea/Olive	31 - 40 ft.	20	Fair	Prune	Previous Failure
Boyle Heights Sports Center	21376	Cupaniopsis anacardioides/Carrotwood	21 - 30 ft.	7	Poor	Removal	Signs of stress
Boyle Heights Sports Center	21377	Eucalyptus polyanthemos/Silver dollar gum	11 - 20 ft.	6	Good	No work necessary	None
Boyle Heights Sports Center	21378	Eucalyptus polyanthemos/Silver dollar gum	21 - 30 ft.	12	Good	No work necessary	None
Boyle Heights Sports Center	21379	Fraxinus uhdei/Evergreen ash	11 - 20 ft.	20	Fair	No work necessary	Signs of stress
Boyle Heights Sports Center	21380	Corymbia citriodora/lemon scented gum	51 - 75 ft.	17	Poor	Prune	Sparse
Boyle Heights Sports Center	21381	Eucalyptus sideroxylon/Red ironbark	41 - 50 ft.	22	Critical	Removal	Serious Decline
Boyle Heights Sports Center	21382	Eucalyptus sideroxylon/Red ironbark	41 - 50 ft.	16	Critical	Removal	Serious Decline
Boyle Heights Sports Center	21383	Eucalyptus sideroxylon/Red ironbark	21 - 30 ft.	10	Good	No work necessary	Pest Problem
Boyle Heights Sports Center	21384	Schinus molle/California peppertree	41 - 50 ft.	22	Fair	Prune	Poor Structure
Boyle Heights Sports Center	21385	Eucalyptus sideroxylon/Red ironbark	41 - 50 ft.	14	Critical	Removal	Serious Decline
Boyle Heights Sports Center	21386	Fraxinus uhdei/Evergreen ash	21 - 30 ft.	12	Poor	Removal	Serious Decline
Boyle Heights Sports Center	21387	Jacaranda mimosifolia/Jacaranda	21 - 30 ft.	10	Poor	Prune	Signs of stress
Boyle Heights Sports Center	21388	Eucalyptus sideroxylon/Red ironbark	51 - 75 ft.	26	Poor	No work necessary	Sparse
Boyle Heights Sports Center	21389	Pinus halepensis/Aleppo pine	11 - 20 ft.	13	Fair	No work necessary	Poor Structure
Boyle Heights Sports Center	21390	Jacaranda mimosifolia/Jacaranda	11 - 20 ft.	5	Critical	Removal	Poor Location
Boyle Heights Sports Center	21391	Pinus halepensis/Aleppo pine	11 - 20 ft.	19	Good	No work necessary	Cavity/Decay
Boyle Heights Sports Center	21392	Eucalyptus sideroxylon/Red ironbark	51 - 75 ft.	38	Fair	Prune	Signs of stress
Boyle Heights Sports Center	22484	Pinus canariensis/Canary Island pine	51 - 75 ft.	17	Good	Prune	None
Boyle Heights Sports Center	22485	Eucalyptus robusta/Swamp mahogony	51 - 75 ft.	26	Good	Prune	None
Boyle Heights Sports Center	22486	Schinus terebinthefolius/BRAZILIAN PEPPER	21 - 30 ft.	10	Poor	Removal	Cavity/Decay
Boyle Heights Sports Center	22487	Schinus terebinthefolius/BRAZILIAN PEPPER	21 - 30 ft.	8	Fair	Prune	Previous Failure
Boyle Heights Sports Center	22488	Pinus canariensis/Canary Island pine	31 - 40 ft.	13	Fair	Prune	Utility Pruned
Boyle Heights Sports Center	22489	Fraxinus uhdei/Evergreen ash	41 - 50 ft.	19	Critical	Removal	Cavity/Decay
Boyle Heights Sports Center	22490	Fraxinus uhdei/Evergreen ash	51 - 75 ft.	22	Poor	No work necessary	Poor Structure
Boyle Heights Sports Center	22491	Fraxinus uhdei/Evergreen ash	51 - 75 ft.	28	Poor	Prune	None
Boyle Heights Sports Center	22492	Ficus benjamina/Benjamin fig	31 - 40 ft.	21	Fair	Prune	Poor Structure
Boyle Heights Sports Center	22493	Stump/Not a tree	N/A	14	N/A	Stump Removal	None
Boyle Heights Sports Center	22494	Eucalyptus sideroxylon/Red ironbark	51 - 75 ft.	23	Dead	Removal	None
Boyle Heights Sports Center	22495	Jacaranda mimosifolia/Jacaranda	11 - 20 ft.	8	Fair	Prune	Signs of stress
Boyle Heights Sports Center	22501	Eucalyptus polyanthemos/Silver dollar gum	51 - 75 ft.	29	Good	No work necessary	None
Boyle Heights Sports Center	22502	Eucalyptus polyanthemos/Silver dollar gum	21 - 30 ft.	3	Good	Prune	None
Boyle Heights Sports Center	22503	Eucalyptus spp./EUCALYPTUS SPECIES	41 - 50 ft.	19	Fair	Prune	None
Boyle Heights Sports Center	22504	Schinus molle/California peppertree	21 - 30 ft.	8	Critical	Removal	Signs of stress
Boyle Heights Sports Center	22505	Acacia baileyana/Bailey acacia	21 - 30 ft.	16	Dead	Removal	Cavity/Decay
Boyle Heights Sports Center	22506	Pinus halepensis/Aleppo pine	41 - 50 ft.	19	Good	Prune	Other
Boyle Heights Sports Center	22507	Washingtonia robusta/Mexican fan palm	51 - 75 ft.	25	Good	Prune	None
Boyle Heights Sports Center	22508	Phoenix canariensis/Canary Island date palm	11 - 20 ft.	32	Good	Prune	None
Boyle Heights Sports Center	22509	Eucalyptus polyanthemos/Silver dollar gum	21 - 30 ft.	3	Good	Prune	None
Boyle Heights Sports Center	22510	Eucalyptus polyanthemos/Silver dollar gum	21 - 30 ft.	4	Good	Prune	None
Boyle Heights Sports Center	22511	Pinus halepensis/Aleppo pine	41 - 50 ft.	17	Good	Prune	Poor Structure
Boyle Heights Sports Center	22930	Olea europaea/Olive	31 - 40 ft.	21	Fair	Unassigned	Previous Failure

Boyle Heights Sports Center Gymnasium- Tree Survey

Park Name	Site ID	Species	Height	Diameter	Condition	Maintenance	Observations
Boyle Heights Sports Center	22931	Olea europaea/Olive	21 - 30 ft.	22	Fair	Prune	Previous Failure
Boyle Heights Sports Center	22932	Olea europaea/Olive	41 - 50 ft.	11	Good	Prune	None
Boyle Heights Sports Center	23580	Cupressus sempervirens/Italian cypress	11 - 20 ft.	3	Good	No work necessary	None
Boyle Heights Sports Center	23581	Cupressus sempervirens/Italian cypress	11 - 20 ft.	3	Good	No work necessary	None
Boyle Heights Sports Center	23582	Cupressus sempervirens/Italian cypress	01 - 10 ft.	3	Good	No work necessary	None
Boyle Heights Sports Center	23583	Cupressus sempervirens/Italian cypress	01 - 10 ft.	3	Good	No work necessary	None
Boyle Heights Sports Center	23584	Cupressus sempervirens/Italian cypress	01 - 10 ft.	4	Good	No work necessary	None
Boyle Heights Sports Center	23585	Jacaranda mimosifolia/Jacaranda	41 - 50 ft.	17	Fair	Prune	Previous Failure
Boyle Heights Sports Center	23586	Fraxinus uhdei/Evergreen ash	41 - 50 ft.	15	Dead	Removal	None
Boyle Heights Sports Center	23587	Brachychiton acerifolius/FLAME TREE	21 - 30 ft.	11	Good	Prune	None
Boyle Heights Sports Center	69678	Ficus microcarpa nitida/Indian laurel fig	21 - 30 ft.	30	Good	Prune	None
Boyle Heights Sports Center	69679	Ficus microcarpa nitida/Indian laurel fig	21 - 30 ft.	30	Good	Prune	None
Boyle Heights Sports Center	69680	Ficus microcarpa nitida/Indian laurel fig	21 - 30 ft.	24	Good	Prune	None
Total	**57**						



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Scientific Name	Common Name	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming Period	Habitat	Micro Habitat	Elevation Low (m)	Elevation Low (ft)	Elevation High (m)	Elevation High (ft)	CA Endemic	States	Counties	Quads	EO Total	EO A	EO B	EO C	EO D	EO X	EO U	EO Historical	EO Recent	EO Extant	EO Possibly Extirpated	EO Extirpated	Notes	Full Scientific Name	Synonyms	Element Code	USDA PLANTS Symbol	Flora Status	CBR Reason	Date Added	Date Changed	Last Update
Atriplex serenana var. davidsonii	Davidson's saltscale	Chenopodiaceae	annual herb	1B.2	G5T1	S1	None	None	Apr-Oct	Coastal bluff scrub, Coastal scrub	alkaline	10	30	200	655	F	BA	LAX, ORA, RIV, SBA, SCT, SCZ, SDG, SLO, SRO, VEN	Laguna Beach (3311757), Winchester (3311761), Tustin (3311767), Newport Beach (3311768), Lakeview (3311771), Perris (3311772), El Casco (3311781), Yorba Linda (3311787), Santa Catalina East (3311833), Seal Beach (3311861), San Pedro (3311863), Santa Cruz Island C (3311985), Santa Rosa Island South (3312071), Los Angeles (3411812), Hollywood (3411813), Malibu Beach (3411816), Oxnard (3411922), Ojai (3411942), Matilija (3411943), Santa Barbara (3411946), Goleta (3411947), Gaviota (3412042), Zaca Creek (3412062), Guadalupe (3412085)	27	0	2	1	1	4	19	16	11	23	4	0	Is plant extirpated from LAX Co.? Known from SCZ Isl. From a single collection in 1930. Need quads for SDG Co. and SCT and SRO islands. See North American Flora 21:57 (1916) for original description.	Atriplex serenana A. Nels. var. davidsonii (Standl.) Munz		PDCHE041T1	ATSED			34335		41642
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	G3G4	S3S4	None	None	(Feb)Mar-Jun	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland		15	45	700	2295	T		LAX, ORA, SBA, SBD, SCT, SCZ, SDG, SRO, VEN	Wildomar (3311753), Canada Gobernadora (3311755), San Juan Capistrano (3311756), Laguna Beach (3311757), Santiago Peak (3311765), El Toro (3311766), Tustin (3311767), Corona South (3311775), Black Star Canyon (3311776), Orange (3311777), Prado Dam (3311786), Yorba Linda (3311787), La Habra (3311788), Santa Catalina East (3311833), Santa Catalina South (3311834), Santa Catalina North (3311844), Santa Catalina West (3311845), San Pedro (3311863), Torrance (3311873), Redondo Beach (3311874), Santa Cruz Island C (3311985), Santa Cruz Island B (3311986), Santa Cruz Island A (3311987), Santa Rosa Island South (3312071), Santa Rosa Island North (3312081), Guasti (3411715), Ontario													Threatened by development.	Calochortus catalinae Wats.		PMLIL0D080	CACA5			27030		40252
Calochortus plummerae	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	G4	S4	None	None	May-Jul	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland	granitic, rocky	100	325	1700	5575	T		LAX, ORA, RIV, SBD, VEN	Idyllwild (3311666), Blackburn Canyon (3311667), Lake Fulmor (3311677), San Jacinto (3311678), Cabazon (3311687), Beaumont (3311688), Bachelor Mtn. (3311751), Sitton Peak (3311754), Lake Elsinore (3311763), Corona South (3311775), Black Star Canyon (3311776), El Casco (3311781), Sunnymead (3311782), Riverside East (3311783), Riverside West (3311784), La Habra (3311788), Whittier (3311881), San Gorgonio Mtn. (3411617), Forest Falls (3411618), Moonridge (3411627), Big Bear Lake (3411628), Big Bear City (3411637), Yucaipa (3411711), Redlands (3411712), Fontana (3411714), Ontario (3411716), San Dimas (3411717), Baldwin Park (3411718), Keller Peak (3411721), Harrison Mtn.	230	4	37	25	12	8	144	61	169	222	7	1	Previously on List 1B.2; more common than originally known. Threatened by development, fire suppression, foot traffic, mining, powerline construction, and recreational activities. Possibly threatened by vegetation clearing, collecting, road maintenance, and non-native plants. Less common at higher elevations. Hybridizes with C. weedii var. intermedius. See Pittonia 2:70 (1890) for original description, and Annals of the Missouri Botanical Garden 27:515 (1940) for taxonomic treatment.	Calochortus plummerae Greene		PMLIL0D150	CAPL2			34335		43010

Scientific Name	Common Name	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming Period	Habitat	Micro Habitat	Elevation Low (m)	Elevation Low (ft)	Elevation High (m)	Elevation High (ft)	CA Endemic	States	Counties	Quads	EO Total	EO A	EO B	EO C	EO D	EO X	EO U	EO Historical	EO Recent	EO Extant	EO Possibly Extirpated	EO Extirpated	Notes	Full Scientific Name	Synonyms	Element Code	USDA PLANTS Symbol	Flora Status	CBR Reason	Date Added	Date Changed	Last Update
Clinopodium mimuloides	monkey-flower savory	Lamiaceae	perennial herb	4.2	G3	S3	None	None	Jun-Oct	Chaparral, North Coast coniferous forest	streambanks, mesic	305	1000	1800	5905	T		LAX, MNT, SBA, SLO, VEN	Los Angeles (3411812), Pasadena (3411822), Chilao Flat (3411831), Condor Peak (3411832), Acton (3411846), Val Verde (3411846), Devils Heart Peak (3411858), Burnt Peak (3411865), Liebre Mtn. (3411866), Hildreth Peak (3411955), Madulce Peak (3411965), Big Pine Mtn. (3411966), San Rafael Mtn. (3411967), Hurricane Deck (3411977), Bald Mountain (3411978), Los Olivos (3412061), Tepusquet Canyon (3412082), San Luis Obispo (3512036), Bradley (3512077), Cambria (3512151), Pico Creek (3512152), Burnett Peak (3512172), Burro Mountain (3512173), Villa Creek (3512174), Jolon (3512182), Cape San Martin (3512184), Cone Peak (3612114), Junipero Serra Peak (3612124), Tassajara Hot Springs (3612125), Pfeiffer Point (3612127), Paraiso													See Satureja mimuloides in The Jepson Manual (1993). See Rev. Gen. Pl. 2: 515 (1891) for revised nomenclature.	Clinopodium mimuloides (Benth.) Kuntze		PDLAM1T040	CLMI9			39206		40252
Helianthus nuttallii ssp. parishii	Los Angeles sunflower	Asteraceae	perennial rhizomatous herb	1A	G5TH	SH	None	None	Aug-Oct	Marshes and swamps (coastal salt and freshwater)		10	30	1525	5005	T		LAX, ORA, SBD	Newport Beach (3311768), San Bernardino South (3411713), Telegraph Peak (3411735), Los Angeles (3411812), Hollywood (3411813), Pasadena (3411822), Whitaker Peak (3411856)	7	0	0	0	0	5	2	7	0	2	2	3	Last seen in 1937. Extirpated by urbanization. See Proceedings of the American Academy of Arts and Sciences 14:7 (1883) for original description, and Memoirs of the Torrey Botanical Club 22(3):147-152 (1969) for taxonomic treatment.	Helianthus nuttallii T. & G. ssp. parishii (Gray) Heiser		PDAST4N102	HENUP			27030		42850
Hordeum intercedens	vernal barley	Poaceae	annual herb	3.2	G3G4	S3S4	None	None	Mar-Jun	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools		5	15	1000	3280	F	BA	ANA, FRE, KNG, KRN, LAX, MER, MNO, NEV, ORA, RIV, SBA, SBR, SBT, SCM, SCT, SCZ, SDG, SMI, SMT, SNI, SRO, TUL, VEN	Potrero (3211655), Otay Mesa (3211658), Jamul Mountains (3211668), National City (3211761), Point Loma (3211762), La Mesa (3211771), La Jolla (3211772), Poway (3211781), Del Mar (3211782), San Clemente Island South (3211873), San Clemente Island Central (3211874), San Clemente Island North (3211885), Santa Ysabel (3311616), Encinitas (3311713), San Marcos (3311722), San Luis Rey (3311723), Morro Hill (3311733), Las Pulgas Canyon (3311734), San Onofre Bluff (3311735), Fallbrook (3311743), Margarita Peak (3311744), San Clemente (3311745), Dana Point (3311746), Murrieta (3311752), San Juan Capistrano (3311756), Laguna Beach (3311757), Winchester (3311761), Lake Elsinore (3311763), El Toro (3311766), Tustin													Move to CRPR 1B or 4? Many herbarium specimens of H. intercedens are possible misidentifications of H. depressum; need annotations. Many mainland occurrences are in decline or possibly extirpated; need field surveys. Threatened by development, habitat loss, road construction, and non-native plants. Previously confused with H. pusillum. Similar to H. depressum; the two may hybridize in RIV Co. See Acta Inst. Bot. Acad. Sci. U.R.S.S. Ser. 1, Fasc. 5:222 (1941) for original description and Nordic Journal of Botany 2:307-321	Hordeum intercedens Nevski		PMPOA380E0	HOIN2			34335		41534
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	1B.1	G4T1	S1	None	None	Feb-Jul(Sep)	Chaparral (maritime), Cismontane woodland, Coastal scrub	sandy or gravelly	70	225	810	2655	T		LAX, ORA, RIV, SBA, SBD, SDG, SLO, VEN	Cabazon (3311687), Beaumont (3311688), Pala (3311731), Pechanga (3311741), Temecula (3311742), Murrieta (3311752), Sitton Peak (3311754), Canada Gobernadora (3311755), Laguna Beach (3311757), Alberhill (3311764), Black Star Canyon (3311776), Redondo Beach (3311874), Venice (3311884), San Bernardino South (3411713), Fontana (3411714), Ontario (3411716), San Dimas (3411717), Baldwin Park (3411718), Cucamonga Peak (3411725), Mt. Baldy (3411726), Glendora (3411727), Azusa (3411728), Waterman Mtn. (3411738), El Monte (3411811), Los Angeles (3411812), Hollywood (3411813), Beverly Hills (3411814), Point Dume (3411817), Triunfo Pass (3411818), Mt. Wilson	103	0	4	2	1	24	72	76	27	79	14	10	Many historical occurrences extirpated; need current information on status of occurrences. Possibly threatened by habitat conversion. Intergrades with other sspp.; populations representing true ssp. puberula declining. See Pittonia 1:102 (1887) for original description, and Lloydia 1:87-88 (1938) and Novon 17(3):315-325 (2007) for revised nomenclature.	Horkelia cuneata Lindl. var. puberula (Rydb.) Ertter & Reveal	Horkelia cuneata ssp. puberula	PDROS0W045				36892		41059

Scientific Name	Common Name	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming Period	Habitat	Micro Habitat	Elevation Low (m)	Elevation Low (ft)	Elevation High (m)	Elevation High (ft)	CA Endemic	States	Counties	Quads	EO Total	EO A	EO B	EO C	EO D	EO X	EO U	EO Historical	EO Recent	EO Extant	EO Possibly Extirpated	EO Extirpated	Notes	Full Scientific Name	Synonyms	Element Code	USDA PLANTS Symbol	Flora Status	CBR Reason	Date Added	Date Changed	Last Update
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Brassicaceae	annual herb	4.3	G5T3	S3	None	None	Jan-Jul	Chaparral, Coastal scrub		1	0	885	2905	F	BA	LAX, ORA, RIV, SBA, SBD, SCZ, SDG, VEN	Campo (3211654), Tecate (3211656), Otay Mountain (3211657), Otay Mesa (3211658), Morena Reservoir (3211665), Dulzura (3211667), Jamul Mountains (3211668), Viejas Mountain (3211676), Alpine (3211677), El Cajon Mtn. (3211687), San Vicente Reservoir (3211688), Imperial Beach (3211751), National City (3211761), Point Loma (3211762), La Mesa (3211771), La Jolla (3211772), Poway (3211781), Del Mar (3211782), San Clemente Island South (3211873), San Clemente Island North (3211885), Ramona (3311617), San Pasqual (3311618), Rodriquez Mtn. (3311628), Bucksnort Mtn. (3311645), Beauty Mountain (3311646), Aguanga (3311647), Vail Lake (3311648), Butterfly Peak (3311655), Sage	142	1	6	5	1	1	128	73	69	141	1	0	Previously CRPR 1B.2; more common than originally known. Threatened by development. Possibly threatened by non-native plants. A synonym of L. virginicum ssp. menziesii in TJM 2. See Mitteilungen aus dem Botanischen Museum der Universität Zürich 28:255-256 (1906) for original description and Madroño 3(7):265-320 (1936) for taxonomic treatment.	Lepidium virginicum L. var. robinsonii (Thell.) Hitchc.		PDBRA1M114	LEVIR			34335		43010
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	annual herb	1B.1	G2	S2	None	None	Apr-Jul	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools	Mesic	3	5	1210	3970	T		ALA, FRE, LAX, MER, MNT, ORA, RIV, SBD, SBT, SCL, SDG, SLO	National City (3211761), La Jolla (3211772), San Onofre Bluff (3311735), San Clemente (3311745), Murrieta (3311752), Wildomar (3311753), Laguna Beach (3311757), Newport Beach (3311768), Long Beach (3311872), Torrance (3311873), Whittier (3311881), South Gate (3311882), Inglewood (3311883), Venice (3311884), Guasti (3411715), Ontario (3411716), Los Angeles (3411812), Bradley (3512077), Tierra Redonda Mountain (3512078), Jolon (3512182), Joaquin Rocks (3612034), Santa Rita Peak (3612035), Hepsedam Peak (3612037), Idria (3612046), Hernandez Reservoir (3612047), Rock Spring Peak (3612048), San Felipe (3612184), Los Banos (3712017), Turner Ranch (3712026), San Luis Ranch (3712027), Arena	60	3	8	2	0	9	38	20	40	51	6	3	Threatened by vehicles, road maintenance, and recreational activities. See Proceedings of the American Academy of Arts and Sciences 17:223 (1881) for original description, and Pittonia 1:130 (1887) for revised nomenclature.	Navarretia prostrata (Gray) Greene		PDPLM0C0Q0	NAPR2			36892		42011
Phacelia hubbyi	Hubby's phacelia	Hydrophyllaceae	annual herb	4.2	G4	S4	None	None	Apr-Jul	Chaparral, Coastal scrub, Valley and foothill grassland	gravelly, rocky, talus	0	0	1000	3280	T		KRN, LAX, SBA, VEN	Yorba Linda (3311787), San Pedro (3311863), Torrance (3311873), Redondo Beach (3311874), Santa Cruz Island D (3311984), Santa Cruz Island C (3311985), San Dimas (3411717), Los Angeles (3411812), Hollywood (3411813), Malibu Beach (3411816), Point Dume (3411817), Triunfo Pass (3411818), Burbank (3411823), Van Nuys (3411824), Sunland (3411833), Val Verde (3411846), Acton (3411846), Piru (3411847), Warm Springs Mountain (3411855), Ventura (3411933), Matilija (3411943), Santa Barbara (3411946), Goleta (3411947), Hildreth Peak (3411955), Little Pine Mtn. (3411956), San Marcos Pass (3411957), Santa Ynez (3412051), Lompoc (3412064), Twitchell Dam (3412083), Cinco (3511831)													Many collections old; need field surveys. Possibly threatened by development, fire suppression, and weed control measures. See P. cicutaria var. hubbyi in The Jepson Manual (1993). See Contr. Gray Herb. 49: 29 (1917) for original description, and Leaflets of Western Botany III(5): 120 (1942) and Madroño 56(3):205-207 (2009) for revised nomenclature.	Phacelia hubbyi (J.F. Macbr.) L.M. Garrison	Phacelia cicutaria var. hubbyi	PDHYD0C0R4	PHHU4			39115		42661

Scientific Name	Common Name	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming Period	Habitat	Micro Habitat	Elevation Low (m)	Elevation Low (ft)	Elevation High (m)	Elevation High (ft)	CA Endemic	States	Counties	Quads	EO Total	EO A	EO B	EO C	EO D	EO X	EO U	EO Historical	EO Recent	EO Extant	EO Possibly Extirpated	EO Extirpated	Notes	Full Scientific Name	Synonyms	Element Code	USDA PLANTS Symbol	Flora Status	CBR Reason	Date Added	Date Changed	Last Update
Sidalcea neomexicana	salt spring checkerbloom	Malvaceae	perennial herb	2B.2	G4	S2	None	None	Mar-Jun	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas	alkaline, mesic	15	45	1530	5020	F	AZ, CO, ID, NE, NM, NV, OR, SO, TX, UT, WY	KRN, LAX, ORA, RIV, SBD, SDG, VEN	La Jolla (3211772), Del Mar (3211782), Julian (3311615), Borrego Mountain (3311622), Oceanside (3311724), Pechanga (3311741), Canada Gobernadora (3311755), Santiago Peak (3311765), Tustin (3311767), Lakeview (3311771), Prado Dam (3311786), Los Alamitos (3311871), Forest Falls (3411618), Twentynine Palms (3411621), Lucerne Valley (3411648), Yucaipa (3411711), San Bernardino South (3411713), Ontario (3411716), Harrison Mtn. (3411722), Los Angeles (3411812), Hollywood (3411813), Beverly Hills (3411814), Pasadena (3411822), Lake Hughes (3411864), Alamo Mountain (3411868), Matilija (3411943), Lockwood Valley (3411961), Reyes Peak (3411963), Sawmill	30	0	1	0	0	8	21	25	5	22	7	1	See University of Washington Publications in Biology 18:1-96 (1957) for taxonomic treatment.	Sidalcea neomexicana Gray		PDMAL110J0	SINE3			34335		41437
Symphyotrichum greatae	Greata's aster	Asteraceae	perennial rhizomatous herb	1B.3	G2	S2	None	None	Jun-Oct	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland	mesic	300	980	2010	6595	T		LAX, SBD, VEN	Mt. Baldy (3411726), Glendora (3411727), Azusa (3411728), Cajon (3411734), Telegraph Peak (3411735), Mount San Antonio (3411736), Crystal Lake (3411737), Waterman Mtn. (3411738), Juniper Hills (3411748), Los Angeles (3411812), Beverly Hills (3411814), Mt. Wilson (3411821), Pasadena (3411822), Burbank (3411823), Chilao Flat (3411831), Condor Peak (3411832), Sunland (3411833), San Fernando (3411834), Pacifico Mountain (3411841), Agua Dulce (3411843), Acton (3411846), Val Verde (3411846), Piru (3411847), Fillmore (3411848), Whitaker Peak (3411856), Burnt Peak (3411865), Liebre Mtn. (3411866)	56	1	2	1	0	3	49	40	16	53	3	0	Threatened by recreational activities, trail maintenance, and non-native plants. See Bulletin of the Southern California Academy of Sciences 1:15 (1902) for original description, Phytologia 71(3):167-170 (1991) for nomenclatural correction, and Phytologia 77(3): 283 (1994) for revised nomenclature.	Symphyotrichum greatae (Parish) G.L. Nesom	Aster greatae	PDASTE80U0	SYGR7			27030		40498