

Exhibit B
Environmental Documents (ENV-2021-4281-ND)

**DEPARTMENT OF
CITY PLANNING**

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Lillian Office

Case Number: ENV-2021-4281-ND

Project Location: 711 North Lillian Way (711-723 North Lillian Way), Los Angeles, California, 90038

Community Plan Area: Hollywood

Council District: 13 – Mitch O’Farrell

Project Description: The project involves the removal of an existing surface parking lot, and construction, use, and maintenance of a new, three-story, 56 feet in height commercial office building with a floor area of 30,385 square feet, equating to a floor area ratio (FAR) of approximately 1.5:1. The proposed development will have two (2) subterranean parking levels and ground level parking that will contain a total of 83 vehicular parking stalls. The project will provide a total of nine (9) bicycle parking stalls, including three (3) short-term, and six (6) long-term parking stalls. The project will provide approximately 3,658 square feet of open space, inclusive of a 2,346 square-foot roof deck. The project involves grading that will result in the export of approximately 19,000 cubic yards of earth from the project site.

In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land use; a Zone Change from R3-1 to (T)(Q)CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119. The proposed project would not preclude a residential project on the subject site. In the event that the project proposes a residential use at the subject site, the development would comply with the Los Angeles Municipal Code (LAMC) requirements of the site’s current R3-1 zoning. In addition, any development that is considered a Project under CEQA would require the appropriate analysis.

PREPARED BY:

The City of Los Angeles
Department of City Planning

APPLICANT:

Robert Herscu

October 2021

INITIAL STUDY

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INITIAL STUDY

1 INTRODUCTION

This Initial Study (IS) document evaluates potential environmental effects resulting from construction and operation of the proposed **Lillian Office** (“Project”). The proposed Project is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). Therefore, this document has been prepared in compliance with the relevant provisions of CEQA and the State CEQA Guidelines as implemented by the City of Los Angeles (City). Based on the analysis provided within this Initial Study, the City has concluded that the Project will not result in significant impacts on the environment. This Initial Study and Negative Declaration are intended as informational documents, and are ultimately required to be adopted by the decision maker prior to project approval by the City.

1.1 PURPOSE OF AN INITIAL STUDY

The California Environmental Quality Act was enacted in 1970 with several basic purposes: (1) to inform governmental decision makers and the public about the potential significant environmental effects of proposed projects; (2) to identify ways that environmental damage can be avoided or significantly reduced; (3) to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures; and (4) to disclose to the public the reasons behind a project’s approval even if significant environmental effects are anticipated.

An application for the proposed project has been submitted to the City of Los Angeles Department of City Planning for discretionary review. The Department of City Planning, as Lead Agency, has determined that the project is subject to CEQA, and 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 a Mitigated Negative Declaration.

This Initial Study has been prepared in accordance with CEQA (Public Resources Code §21000 et seq.), the State CEQA Guidelines (Title 14, California Code of Regulations, §15000 et seq.), and the City of Los Angeles CEQA Guidelines (1981, amended 2006).

1.2. ORGANIZATION OF THE INITIAL STUDY

This Initial Study is organized into four sections as follows:

1 INTRODUCTION

Describes the purpose and content of the Initial Study and provides an overview of the CEQA process.

2 EXECUTIVE SUMMARY

Provides Project information, identifies key areas of environmental concern, and includes a determination whether the project may have a significant effect on the environment.

3 PROJECT DESCRIPTION

Provides a description of the environmental setting and the Project, including project characteristics and a list of discretionary actions.

4 EVALUATION OF ENVIRONMENTAL IMPACTS

Contains the completed Initial Study Checklist and discussion of the environmental factors that would be potentially affected by the Project.

INITIAL STUDY

2 EXECUTIVE SUMMARY

PROJECT TITLE	LILLIAN OFFICE
ENVIRONMENTAL CASE NO.	ENV-2021-4281-ND
RELATED CASES	CPC-2021-4280-GPA-ZC-BL
PROJECT LOCATION	711 NORTH LILLIAN WAY (711-723 NORTH LILLIAN WAY), LOS ANGELES, CALIFORNIA, 90038
COMMUNITY PLAN AREA	HOLLYWOOD
EXISTING GENERAL PLAN DESIGNATION	MEDIUM RESIDENTIAL
PROPOSED GENERAL PLAN DESIGNATION	COMMERCIAL MANUFACTURING
EXISTING ZONING	R3-1
PROPOSED ZONING	(T)(Q)CM-1
COUNCIL DISTRICT	13
LEAD AGENCY	City of Los Angeles
STAFF CONTACT	TREVOR MARTIN
ADDRESS	200 NORTH SPRING STREET, ROOM 763, LOS ANGELES, CA 90012
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APPLICANT	ROBERT HERSCU, 711 LILLIAN LLC, HERSCU 711 LLC, 717 LILLIAN LLC, CAHUENGA HERSCU LLC, 720 CAHUENGA LLC, & HERSCU LILLIAN LLC
ADDRESS	1801 CENTURY PARK EAST, LOS ANGELES, CA 90067
PHONE NUMBER	(310) 280-2830

ENVIRONMENTAL SETTING

The subject property is a level, rectangular-shaped, parcel of land comprised of three (3) contiguous lots encompassing a total lot area of approximately 20,258 square feet. The subject property has 150 feet of street frontage along the westerly side of Lillian Way.

The subject property comprises two (2) vacant lots and a surface parking lot containing 22 vehicular parking spaces. The surfacing parking lot occupying the northerly lot was approved under Case No. ZA-2016-1547-CU-ZAA. The two southerly lots had each been previously developed with two-story apartment buildings. On February 1, 2019, the Department of Building and Safety (LADBS) issued a permit for the demolition of a two-story, 6-unit apartment building located at 717 North Lillian Way (B18LA22589). On February 2, 2019, LADBS issued a permit for the demolition of a two-story, 7-unit apartment building located at 711-713 North Lillian Way (B18LA23636).

The project site is zoned R3-1 and is located within the Hollywood Community Plan Area which designates the subject property for Medium Residential land uses corresponding the R3 Zone. The project site is located in a Transit Priority Area in the City of Los Angeles (ZI-2452), a Los Angeles State Enterprise Zone (ZI-2374), an Urban Agriculture Incentive Zone, and an Urban Agriculture Incentive Zone. The project site is not located within the boundaries of or subject to any specific plan, community design overlay, or interim control ordinance.

The subject property is not located within a Very High Fire Hazard Severity Zone, Flood Zone, Hazardous Waste site, BOE Special Grading Area, Hillside Area, Alquist-Priolo Fault Zone, Landslide Zone, Liquefaction Zone, Preliminary Fault Rupture Study Area, or Tsunami Inundation Zone. The project site is located within approximately 2.59 kilometers of the nearest fault (Hollywood Fault).

Surrounding properties are within the R3-1, C2-1D, C4-1XL-SN, and CM-1VL-SN zones and contain a variety of residential, commercial retail, commercial studio, and office uses. The neighborhood is characterized by level topography and improved streets. The property to the north is zoned R3-1 and is improved with a two-story, residential duplex. The property abutting the project site to the east is zoned C2-1D and is improved with a Pavilions grocery store and surface parking lot. Adjoining the project site to the south is a single-story commercial office building. Further south, fronting along the north side of Melrose Avenue, are C4-1XL zoned properties consisting of a veterinarian hospital (LA Pet Clinic), a furniture store (Mi Deco), and a tattoo parlor (Spotlight Tattoo). Lots adjoining the subject property to the west are zoned CM-1VL-SN and are improved with a single-story commercial office building and surface parking lot. Abutting the project site to the northwest is a single-story media studio.

(For additional detail, see “Section 3. PROJECT DESCRIPTION”).

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

(e.g. permits, financing approval, or participation agreement)

The project may need additional discretionary and ministerial actions and approvals that may be deemed necessary, including, but not limited to, temporary street closure(s), demolition, grading, excavation, shoring, foundation, building, and signage.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities / Service Systems |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Noise | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Geology / Soils | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

(To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- 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 on the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Trevor Martin

 PRINTED NAME


 SIGNATURE

Planning Assistant

 TITLE
 10/2/2021

 DATE

EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of a mitigation measure has reduced an effect from "Potentially Significant Impact" to "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross referenced).
- 5) Earlier analysis must be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR, or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated
- 7) Supporting Information Sources: A sources list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whichever format is selected.
- 9) The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significance.

INITIAL STUDY

3 PROJECT DESCRIPTION

3.1 PROJECT SUMMARY

The project involves the removal of an existing surface parking lot, and construction, use, and maintenance of a new, three-story, 56 feet in height, commercial office building with a floor area of 30,385 square feet, equating to a floor area ratio (FAR) of approximately 1.5:1. The proposed development will have two (2) subterranean parking levels containing 75 vehicular stalls and ground level parking that will contain a total of 8 vehicular parking stalls for a total of 83 vehicle parking stalls. The project will provide a total of nine (9) bicycle parking stalls, including three (3) short-term, and six (6) long-term parking stalls. The project will provide approximately 3,658 square feet of open space, inclusive of a 2,346 square-foot roof deck. The project involves grading that will result in the export of approximately 19,000 cubic yards of earth from the project site. The project will not result in the removal of any street trees.

In order to facilitate the development of the proposed project, the applicant is requesting a General Plan Amendment changing the subject property's Medium Residential land use designation to Commercial Manufacturing; a Zone Change from R3-1 to (T)(Q)CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119.

3.2 ENVIRONMENTAL SETTING

3.2.1 Project Location and Existing Conditions

The subject property is a level, rectangular-shaped, parcel of land comprised of three (3) contiguous lots encompassing a total lot area of approximately 20,258 square feet. The subject property has 150 feet of street frontage along the westerly side of Lillian Way. The subject property comprises two (2) vacant lots and a surface parking lot containing 22 vehicular parking spaces. The surfacing parking lot occupying the northerly lot was approved under Case No. ZA-2016-1547-CU-ZAA, which granted a Conditional Use to permit a surface parking lot in the R3-1 Zone; approved a Zoning Administrator's Adjustment to permit a 6-foot-high fence and wall in the required front yard; and approved a Zoning Administrator's Adjustment to allow a 3-foot front yard in lieu of the 15-foot front yard required in the R3 Zone and to allow a 12-foot encroachment into the established 15-foot Building Line. The two southerly lots had each been previously developed with two-story apartment buildings. On February 1, 2019, the Department of Building and Safety (LADBS) issued a permit for the demolition of a two-story, 6-unit apartment building located at 717 North Lillian Way (B18LA22589). On February 2, 2019, LADBS issued a permit for the demolition of a two-story, 7-unit apartment building located at 711-713 North Lillian Way (B18LA23636).

The project site is zoned R3-1 and is located within the Hollywood Community Plan Area which designates the subject property for Medium Residential land uses corresponding to the R3 Zone. The project site is located in a Transit Priority Area in the City of Los Angeles (ZI-2452), a Los Angeles State Enterprise Zone (ZI-2374), an Urban Agriculture Incentive Zone, and an Urban Agriculture Incentive Zone. The project site is not located within the boundaries of or subject to any specific plan, community design overlay, or interim control ordinance.

The subject property is not located within a Very High Fire Hazard Severity Zone, Flood Zone, Hazardous Waste site, BOE Special Grading Area, Hillside Area, Alquist-Priolo Fault Zone, Landslide Zone, Liquefaction Zone, Preliminary Fault Rupture Study Area, or Tsunami Inundation Zone. The project site is located within approximately 2.59 kilometers of the nearest fault (Hollywood Fault).

3.2.2 Surrounding Land Uses

Surrounding properties are within the R3-1, C2-1D, C4-1XL-SN, and CM-1VL-SN zones and contain a variety of residential, commercial retail, commercial studio, and office uses. The neighborhood is characterized by level topography and improved streets. The property to the north is zoned R3-1 and is improved with a two-story, residential duplex. The property abutting the project site to the east is zoned C2-1D and is improved with a Pavilions grocery store and surface parking lot. Adjoining the project site to the south is a single-story commercial office building. Further south, fronting along the north side of Melrose Avenue, are C4-1XL zoned properties consisting of a veterinarian hospital (LA Pet Clinic), a furniture store (Mi Deco), and a tattoo parlor (Spotlight Tattoo). Lots adjoining the subject property to the west are zoned CM-1VL-SN and are improved with a single-story commercial office building and surface parking lot. Abutting the project site to the northwest is a single-story media studio.

3.3 DESCRIPTION OF PROJECT

3.3.1 Project Overview

The project involves the removal of an existing surface parking lot, and construction, use, and maintenance of a new, three-story, 56 feet in height, commercial office building with a floor area of 30,385 square feet, equating to a floor area ratio (FAR) of approximately 1.5:1. The proposed development will have two (2) subterranean parking levels containing 75 vehicular stalls and ground level parking that will contain a total of 8 vehicular parking stalls for a total of 83 vehicle parking stalls. The project will provide a total of nine (9) bicycle parking stalls, including three (3) short-term, and six (6) long-term parking stalls. The project will provide approximately 3,658 square feet of open space, inclusive of a 2,346 square-foot roof deck. The project involves grading that will result in the export of approximately 19,000 cubic yards of earth from the project site. The project will not result in the removal of any street trees.

In order to facilitate the development of the proposed project, the applicant is requesting a General Plan Amendment changing the subject property's Medium Residential land use designation to Commercial Manufacturing land uses; a Zone Change from R3-1 to

(T)(Q)CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119.

3.4 REQUESTED PERMITS AND APPROVALS

The list below includes the anticipated requests for approval of the Project. The Negative Declaration will analyze impacts associated with the Project and will provide environmental review sufficient for all necessary entitlements and public agency actions associated with the Project. The discretionary entitlements, reviews, permits and approvals required to implement the Project include, but are not necessarily limited to, the following:

- Pursuant to Los Angeles Municipal Code (LAMC) Section 11.5.6, a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject parcels from Medium Residential to Commercial Manufacturing land uses;
- Pursuant to LAMC Section 12.32 F, a Zone Change from R3-1 to (T)(Q)CM-1;
- Pursuant to LAMC Section 12.23 R, a Building Line Removal to remove a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119; and
- Other discretionary and ministerial actions and approvals that may be deemed necessary, including, but not limited to, temporary street closure(s), demolition, grading, excavation, shoring, foundation, building, and signage.

INITIAL STUDY

4 ENVIRONMENTAL IMPACT ANALYSIS

I. AESTHETICS

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Except as provided in Public

Resources Code Section 21099 would the project:

- 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. In non-urbanized areas, substantially degrade the existing visual character or quality of public views the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- 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 significant impact would occur if the proposed project would have a substantial adverse effect on a scenic vista. A scenic vista refers to views of focal points or panoramic views of broader geographic areas that have visual interest. A focal point view would consist of a view of a notable object, building, or setting. Diminishment of a scenic vista would occur if the bulk or design of a building or development contrasts enough with a visually interesting view, so that the quality of the view is permanently affected. The project involves the removal of an existing surface parking lot, and construction, use, and maintenance of a new, three-story, 56 feet in height commercial office building with a floor area of 30,385 square feet. The project is not located on or near any scenic vista. Therefore, no impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, or other locally recognized desirable aesthetic natural feature within a state scenic highway?

No Impact. A significant impact would occur if the proposed project would substantially damage scenic resources within a State Scenic Highway. The City of Los Angeles General Plan Transportation Element (Map E: Scenic Highways in the City of Los Angeles) indicates that no City-designated scenic highways are located near the project site. Therefore, no impacts related to scenic highways would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. A significant impact would occur if the proposed project would substantially degrade the existing visual character or quality of the project site and its surroundings. Significant impacts to the visual character of the site and its surroundings are generally based on the removal of features with aesthetic value, the introduction of contrasting urban features into a local area, and the degree to which the elements of the proposed project detract from the visual character of an area. The project involves the demolition of an existing parking lot and the construction, use, and maintenance of a new, three-story, 56 feet in height commercial office building with a floor area of 30,385 square feet. The subject site is located in an urbanized area in the City. Surrounding properties are developed with one- to two-story commercial and residential developments, and a surface parking lot. The height and scale of the proposed building would be consistent with the surrounding development. The proposed project will not change the visual character of its surroundings. Therefore, impacts will be less than significant, and no mitigation is required.

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

Less Than Significant Impact. A significant impact would occur if light and glare substantially altered the character of off-site areas surrounding the site or interfered with the performance of an off-site activity. Light impacts are typically associated with the use of artificial light during the evening and night-time hours. Glare may be a daytime occurrence caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass and reflective cladding materials, and may interfere with the safe operation of a motor vehicle on adjacent streets. Daytime glare is common in urban areas and is typically associated with mid- to high-rise buildings with exterior facades largely or entirely comprised of highly reflective glass or mirror-like materials. Nighttime glare is primarily associated with bright point-source lighting that contrasts with existing low ambient light conditions. The project involves the construction of a new, three-story, commercial office building having a maximum height of 56 feet. Due to the urbanized nature of the neighborhood, moderate level of ambient nighttime light already exists. Nighttime lighting sources include street lights, vehicle headlights, and interior and exterior building illumination. The proposed project would include nighttime security lighting primarily along the perimeter of the

project site. The proposed lighting however, will be shielded from adjacent properties and would not substantially change existing ambient nighttime lighting conditions. The proposed project does not include any elements or features that would create substantial new sources of glare. Therefore, impacts related to light or glare would be less than significant, and no mitigation is required.

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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. The Project Site is located within a developed and urbanized area of the City. No farmland or agricultural activity exists on or near the Project Site. No portion of the Project Site is designated as Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. As such, no impacts would occur, and no mitigation is required.

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

No Impact. The Project Site is located within the jurisdiction of the City of Los Angeles and is subject to the applicable land use and zoning requirements of the LAMC. The Project Site currently has a land use designation of Medium Residential and is zoned R3-1. The subject property comprises two vacant lots and a surface parking lot. The two vacant lots had been previously developed with two, two-story apartment buildings. In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land uses, and a Zone Change from R3-1 to (T)(Q)CM-1. As such, the Project Site is not zoned for agricultural production, and there is no farmland at the Project Site. In addition, no Williamson Act Contracts are in effect for the Project Site. Therefore, no impacts would occur, and no mitigation is required.

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. As previously stated, the Project Site has a current land use designation of Medium Residential and is zoned R3-1. As such, the Project Site is not zoned as forest land or timberland, and there is no timberland production at the Project Site. Therefore, no impacts would occur, and no mitigation is required.

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

No Impact. The Project Site is not designated or zoned for forest or timberland or used for foresting. Additionally, the Project Site is located in an urbanized area of the City and is not within any forestland area. As such, no impacts would occur, and no mitigation is required.

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. Neither the Project Site nor nearby properties are currently utilized for agricultural or forestry uses. The Project Site is not classified in any "Farmland" category designated by the State of California. As such, no impacts would occur, and no mitigation is required.

III. AIR QUALITY

Where available, the significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The South Coast Air Quality Management District (SCAQMD) is the agency primarily responsible for comprehensive air pollution control in the South Coast Air Basin and reducing emissions from area and point stationary, mobile, and indirect sources. SCAQMD prepared the 2016 Air Quality Management Plan (AQMP) to meet federal and state ambient air quality standards. A significant air quality impact may occur if a project is inconsistent with the AQMP or would in some way represent a substantial hindrance to employing the policies or obtaining the goals of that plan. The proposed project is not expected to conflict with or obstruct the implementation of the AQMP and SCAQMD rules. According to the Air Quality and Green House Gas Impact Analysis prepared by DKA Planning dated April 2021 and utilizing CalEEMod, the project does not reach the established threshold of potential significance for air quality per the SCAQMD. Therefore, impacts would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment under an applicable federal or state ambient air quality standard?

A significant impact would occur if the proposed project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Project construction and operation emissions are estimated using California Emissions Estimator Model (CalEEMod), a statewide land use emissions computer model designed to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from land use projects. According to the CalEEMod model results as summarized in the Air Quality and GHG Impact Analysis conducted by DKA Planning dated April 2021, Overall Construction (Maximum Daily Emission) for the proposed project would not exceed the SCAQMD thresholds for the criteria pollutants Reactive Organic Compounds (ROG), Nitrogen Oxides (NOx), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), and Respirable Particulate Matter (PM₁₀ and PM_{2.5}). The project is estimated to generate less than the SCAQMD threshold of 75 pounds per day (lbs/day) for ROG, 100 lbs/day for NOx, 550 lbs/day for CO, 150 lbs per day for SO₂, 150 lbs/day for PM₁₀, and 55 lbs/day for PM_{2.5}. Additionally, the project output is also below the significance thresholds for these criteria pollutants with regard to Overall Operational Emissions. The project is estimated to generate less than the SCAQMD threshold of 55 pounds per day (lbs/day) for ROG, 55 lbs/day for NOx, 550 lbs/day for CO, 150 lbs per day for SO₂, 150 lbs/day for PM₁₀, and 55 lbs/day for PM_{2.5}. Motor vehicles that access the project site would be the predominant source of long-term project emissions. Additional emissions would be generated by area sources, such as energy use and landscape maintenance activities. Therefore, the proposed project would result in a less-than-significant impact related to regional operational emissions.

c) Expose sensitive receptors to substantial pollutant concentrations?

A significant impact would occur if the proposed project were to expose sensitive receptors to pollutant concentrations. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities.

The project site is surrounded by a mix of residential, commercial retail, commercial studio, and office uses. The property to the north is improved with a two-story, residential duplex. The property abutting the project site to the east is improved with a Pavilions grocery store and surface parking lot. Adjoining the project site to the south is a C4-1XL zoned lot improved with a single-story commercial office building. Further south, fronting along the north side of Melrose Avenue, are C4-1XL zoned properties consisting of a veterinarian hospital (LA Pet Clinic), a furniture store (Mi Deco), and a tattoo parlor (Spotlight Tattoo). Lots adjoining the subject property to the west are zoned CM-1VL-SN and are improved with a single-story commercial office building and surface parking lot. Abutting the project site to the northwest is a single-story media studio.

The subject property comprises two vacant lots and a surface parking lot, that will be removed as part of the proposed project. The project involves grading that will result in the export of 19,000 cubic yards of earth from the project site and is subject to grading and construction standards to mitigate air pollution and dust impacts. Additionally, the project is not expected to contribute to pollutant concentrations or expose surrounding residences and other sensitive receptors to substantial pollutant concentrations. The project is required to meet SCAQMD District Rule 403 as well as the City's requirements for demolition, grading, and construction related to air pollution. Therefore, construction and operation of the project would result in a less than significant impact for both localized and regional air pollution emissions.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. The construction, use, and maintenance of the proposed three-story commercial office building would not cause an odor nuisance. 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 proposed commercial land use would not result in activities that create objectionable odors. Therefore, the proposed project would result in a less than significant impact related to objectionable odors.

IV. BIOLOGICAL RESOURCES

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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 Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 Wildlife or US Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 Wildlife or U.S. Fish and Wildlife Service?

No Impact. The project site is located within a highly urbanized area that does contain any biological resources or habitat area. The site is currently zoned R3-1 and is designated for

Medium Residential land uses by the General Plan. The subject property comprises two vacant lots and a surface parking lot. The two vacant lots had been previously developed with two, two-story apartment buildings. The project involves the demolition and removal of the existing surface parking lot, and the construction of a new, three-story commercial office building. In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land uses, and a Zone Change from R3-1 to (T)(Q)CM-1. The proposed commercial office building is a use that is common within the neighborhood. Therefore, no impact will result, and no mitigation is required.

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 Wildlife or U.S. Fish and Wildlife Service?

No Impact. A significant impact would occur if any riparian habitat or natural community would be lost or destroyed as a result of urban development. The project site does not contain any riparian habitat and does not contain any streams or water courses necessary to support riparian habitat. Therefore, the proposed project would not have any effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Services. No impacts would occur, and no mitigation is required.

c) Have a substantial adverse effect on state or federally protected wetlands (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 protect wetlands would be modified or removed by a project. The project site does not contain any federally protected wetlands, wetland resources, or other waters of the United States as defined by Section 404 of the Clean Water Act. The project site is located in a highly urbanized area and comprises two vacant lots and a surface parking lot. The two vacant lots had been previously developed with two, two-story apartment buildings. Therefore, the proposed project would not have any 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. As such, no impacts would occur, and no mitigation is required.

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?

No Impact. A significant impact would occur if the proposed project would interfere with, or remove access to, a migratory wildlife corridor or impede use of native wildlife nursery sites. Due to the highly urbanized nature of the project site and surrounding area, the project site does not support habitat for native resident or migratory species or contain native nurseries. Therefore, the proposed project would not interfere with wildlife movement or impede the use of native wildlife nursery sites. As such, no impact would occur, and no mitigation is required.

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

No Impact. A significant impact would occur if the proposed project would be inconsistent with local regulations pertaining to biological resources. The proposed project would not conflict with any policies or ordinances protecting biological resources, such as the City of Los Angeles Protected Tree Ordinance (No. 177,404). According to a Tree Report prepared by McKinley & Associates dated July 28, 2021, the project site does not contain locally protected biological resources, such as oak trees, Southern California black walnut, western sycamore, and California bay trees. The proposed project would be required to comply with the provisions of the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC). Both the MBTA and CFGC protects migratory birds that may use trees on or adjacent to the project site for nesting and may be disturbed during construction of the proposed project. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands). No impacts would occur, and no mitigation is required.

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. The project site and its vicinity are not part of any draft or adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan. Therefore, the proposed project would not conflict with the provisions of any adopted conservation plan. No impacts would occur, and no mitigation is required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Cause a substantial adverse change in the significance of a historical resource as pursuant to State CEQA Guidelines §15064.5?

No Impact. A significant impact would occur if the proposed project would substantially alter the environmental context of or remove identified historical resources. The project site comprises two vacant lots and a surface parking lot. The two vacant lots had been previously developed with two, two-story apartment buildings. The subject site does not contain any historic resources per Survey LA. Therefore, no impacts would occur, and no mitigation is required.

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

Less than Significant Impact. A significant impact would occur if a known or unknown archaeological resource was removed, altered, or destroyed as a result of the proposed project. Section 15064.5 of the State CEQA guidelines defines significant archaeological resources as resources that meet the criteria for historical resources, or resources that constitute unique archaeological resources. The applicant shall abide by current law if archaeological resources are discovered during grading or construction. Therefore, impacts will be less than significant, and no mitigation is required.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. A significant impact would occur if previously interred human remains would be disturbed during excavation activities associated with project construction. No human remains are expected to be located on the project site; however, the applicant shall abide by current law if human remains are discovered during grading or construction. Therefore, impacts will be less than significant, and no mitigation is required.

VI. ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The project would be designed and operated in accordance with the applicable State Building Code Title 24 regulations and City of Los Angeles Green Building Code, which impose energy conservation measures. The majority of the energy usage in the project consists of lighting and climate control. Adherence to the aforementioned energy requirements will ensure conformance with the State’s goal of promoting energy and lighting efficiency. As such, impacts of the project would be less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. The project involves the construction, use, and maintenance of a new three-story, 30,385 square-foot office building. As stated above, the project’s improvements and operations would be in accordance with applicable State Building Code Title 24 regulations and City of Los Angeles Green Building Code, which impose energy conservation measures. As such, impacts of the project would be less than significant, and no mitigation is required.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Directly or indirectly cause 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 would cause personal injury or death or result in property damage as a result of a fault rupture occurring on the project site and if the project site is located within a State-designated Alquist-Priolo Zone or other designated fault zone. According to the California Department of Conservation Special Studies Zone Map, the project site is not located within an Alquist-Priolo Special Studies Zone or Fault Rupture Study Area. As such, the proposed project would not expose people or structures to potential adverse effects resulting from the rupture of known earthquake faults. The Alquist-Priolo Earthquake Fault Zoning Act is intended to mitigate the hazard of surface fault rupture on structures for human occupancy. Therefore, no impacts would occur.

ii) Strong seismic ground shaking?

Less Than Significant Impact. A significant impact would occur if the proposed project would cause personal injury or death or resulted in property damage as a result of seismic ground shaking. The entire Southern California region is susceptible to strong ground shaking from severe earthquakes. Consequently, the proposed project could expose people and structures to strong seismic ground shaking. The design of the Project would be in accordance with the provisions of the latest California Building Code and Los Angeles Building Code (implemented at the time of building permits) and will mitigate the potential effects of strong ground shaking. The design and construction of the Project is required to comply with the most current codes regulating seismic risk, including the California Building Code and the LAMC, which incorporates the International Building Code (IBC). Compliance with current California Building Code and LAMC requirements will minimize the potential to expose people or structures to substantial risk of loss, injury or death. In addition, a Geotechnical Investigation Report prepared by Geocon West, Inc. dated August 11, 2021, and attached to the environmental case file, concluded that the site can be developed as proposed, provided the recommendations of the report are followed and implemented during design and construction. Therefore, impacts related to seismic ground shaking will be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. A significant impact may occur if a proposed project site is located within a liquefaction zone. Liquefaction is the loss of soil strength or stiffness due to a buildup of pore-water pressure during severe ground shaking. The site is not located in the California Department of Conservation's Seismic Hazard Zones Map, and the project site is not located within a liquefaction zone. In addition, a Geotechnical Investigation Report prepared by Geocon West, Inc. dated August 11, 2021, and attached to the environmental case file, concluded that the site can be developed as proposed, provided the recommendations of the report are followed and implemented during design and construction. Therefore, impacts related to seismic-related ground failure, including liquefaction, will be less than significant.

iv) Landslides?

No Impact. A significant impact would occur if the proposed project would be implemented on a site that would be located in a hillside area with unstable geological conditions or soil types that would be susceptible to failure when saturated. According to the California Department of Conservation, Division of Mines and Geology, the Seismic Hazard Zones Map for this area shows the project site is not located within a landslide hazard zone. The project site and surrounding area are relatively flat. Therefore, the proposed project would not expose people or structures to potential effects resulting from landslides. As such, no impacts would occur, and no mitigation is required.

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

Less Than Significant Impact. The project involves the removal of an existing surface parking lot, and the construction, use, and maintenance of a new three-story, 30,385 square-foot commercial office building. The proposed development will have two (2) subterranean parking levels and ground level parking that will contain a total of 83 vehicular parking stalls. The project involves grading that will result in the export of approximately 19,000 cubic yards of soil from the project site. As such, the proposed project would result in ground surface disturbance during site clearance, excavation, and grading, which could create the potential for soil erosion to occur. Construction activities would be performed in accordance with the requirements of the Los Angeles Building Code and the Los Angeles Regional Water Quality Control Board (LARWQBC) through the City's Stormwater Management Division. Therefore, the proposed project would not result in substantial soil erosion or the loss of topsoil. As such, impacts would be less than significant, and no mitigation is required.

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 any unstable geological conditions would result in any type of geological failure, including lateral spreading, off-site landslides, liquefaction, or collapse. The proposed project would not have the potential to expose people and structures to seismic-related ground failure, including liquefaction and landslide. Subsidence and ground collapse generally occur in areas with active groundwater withdrawal or petroleum production. The extraction of groundwater or petroleum from sedimentary source rocks can cause the permanent collapse of the pore space previously occupied by the removed fluid. The project site is not identified as being located in an oil field or within an oil drilling area. The proposed project would be required to implement standard construction practices that would ensure that the integrity of the project site and the proposed structures is maintained. A Geotechnical Investigation Report prepared by Geocon West, Inc. dated August 11, 2021, and attached to the environmental case file, concluded that the site can be developed as proposed, provided the recommendations of the report are followed and implemented during design and construction. Subsequently, a Los Angeles Building & Safety Soils Report Approval Letter (Log #118564) dated September 2, 2021, concluded that project's Geotechnical Investigation Report prepared by Geocon West, Inc. is acceptable. Furthermore, the proposed commercial development will be required by the Department of Building and Safety to comply with the City of Los Angeles Uniform Building Code (UBC) which is designed to assure safe construction and includes building foundation requirements appropriate to site conditions. With the implementation

of the Building Code requirements, the potential for landslide lateral spreading, subsidence, liquefaction or collapse would be less-than-significant, and no mitigation is required.

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

No Impact. A significant impact would occur if the proposed project would be built on expansive soils without proper site preparation or design features to provide adequate foundations for project buildings, thus, posing a hazard to life and property. Expansive soils have relatively high clay mineral and expand with the addition of water and shrink when dried, which can cause damage to overlying structures. Soils on the project site may have the potential to shrink and swell resulting from changes in the moisture content. The project site is not located in an area known to have expansive soils. A Geotechnical Investigation Report prepared by Geocon West, Inc. dated August 11, 2021, and attached to the environmental case file, concluded that the site can be developed as proposed, provided the recommendations of the report are followed and implemented during design and construction. Subsequently, a Los Angeles Building & Safety Soils Report Approval Letter (Log #118564) dated September 2, 2021, concluded that project's Geotechnical Investigation Report prepared by Geocon West, Inc. is acceptable. Therefore, no impact will result, and no mitigation is required.

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

No Impact. A project would cause a significant impact if adequate wastewater disposal is not available. The project site is located in a highly urbanized area, where wastewater infrastructure is currently in place. The proposed project would connect to existing sewer lines that serve the project site and would not use septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur, and no mitigation is required.

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

Less Than Significant Impact. Based on the criteria established in the State's CEQA Guidelines and Appendix G, a significant impact could occur if grading or excavation activities associated with the Project were to disturb unique paleontological resources or unique geologic features that presently exist within the Project Site. The Project Site is located within an urbanized area that has been subject to grading and development in the past and is not known to contain any unique paleontological resource or site or unique geologic feature. Potential paleontological or geologic impacts of the Project would be less than significant, and no mitigation is required.

VIII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less Than Significant Impact. Greenhouse gases (GHG) are those gaseous constituents of the atmosphere, both natural and anthropogenic (human generated), that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the earth's surface, the atmosphere itself, and by clouds. 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 (CO₂), methane (CH₄), and nitrous oxide (N₂O), keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). Without the greenhouse effect, the Earth would be a frozen globe with an average surface temperature of about 5°F. The City has adopted the LA Green Plan to provide a citywide plan for achieving the City's GHG emissions targets, for both existing and future generation of GHG emissions. In order to implement the goal of improving energy conservation and efficiency, the Los Angeles City Council has adopted multiple ordinances and updates to establish the current Los Angeles Green Building Code (LAGBC) (Ordinance No. 179,890). The LAGBC requires projects to achieve a 20 percent reduction in potable water use and wastewater generation. As the LAGBC includes applicable provisions of the State's CALGreen Code, a new project that can demonstrate it complies with the LAGBC is considered consistent with statewide GHG reduction goals and policies including AB32 (California Global Warming Solutions Act of 2006). Through required implementation of the LAGBC, the proposed project would be consistent with local and statewide goals and policies aimed at reducing the generation of GHGs. Therefore, the proposed project's generation of GHG emissions would not make a cumulatively considerable contribution to emissions. Therefore, impacts will be less than significant, and no mitigation is required.

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

Less Than Significant Impact. The California legislature passed Senate Bill (SB) 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plans to achieve the per capita GHG reduction targets. For the SCAG region, the SCS is contained in the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2012-2035 RTP/SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas on existing main streets, in downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. In addition, SB 743, adopted September 27, 2013, encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled that contribute to GHG emissions, as required by AB 32. The project involves the removal of an existing surface parking lot, and the construction, use, and maintenance of a new three-story, 30,385 square-foot commercial office building on a site currently zoned R3-1 and designated by the Hollywood Community Plan for Medium Residential land uses. In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land use, and a Zone Change from R3-1 to (T)(Q)CM-1. The project would not interfere with SCAG’s ability to implement the regional strategies outlined in the 2012-2035 RTP/SCS. Therefore, impacts will be less than significant.

IX. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The project involves the construction, use, and maintenance of a new three-story, commercial office building that would involve the limited use and storage of common hazardous substances typical of those used in commercial developments, including lubricants, paints, solvents, custodial products (e.g., cleaning supplies), pesticides and other landscaping supplies. No industrial uses or activities are proposed that would result in the use or discharge of unregulated hazardous materials and/or substances, or create a public hazard through transport, use, or disposal. The project will comply with all applicable rules of the Southern California Air Quality Management District. With compliance to applicable standards and regulations and adherence to manufacturer's instructions related to the transport, use, or disposal of hazardous materials, 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, and impacts would be less than significant.

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?

No Impact. A significant impact would occur if the proposed project created a significant hazard to the public or environment due to a reasonably foreseeable release of hazardous materials. The project site comprises two vacant lots and a surface parking lot. The subject property does not contain any buildings on site that would may otherwise contain asbestos-containing materials (ACMs) and lead-based paint (LBP). The project involves the removal of the surface parking lot and the construction, use, and maintenance of a new three-story, 30,385 square-foot office building substantially reducing the likelihood of any present asbestos fibers being released into the atmosphere. Given the project's proposed scope of work, and required compliance with existing State laws regarding removal, the proposed project would result in no impact related to asbestos and LBP.

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

No Impact. A project would normally have a significant impact to hazards and hazardous materials if: (a) the project involved a risk of accidental explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals or radiation); or (b) the project involved the creation of any health hazard or potential health hazard (i.e., such as exposure to lead based paint, polychlorinated biphenyls, or asbestos). While there are several schools located within one-quarter mile of the project site, the construction and operation of the office building will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Given the project's proposed scope of work and required compliance with existing State laws regarding removal (if needed), the proposed project would result in no impact related to hazardous emissions, materials, substances, or waste. Therefore, no impact would occur, and no mitigation is required.

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 project site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would create a significant hazard to the public or the environment. The California Department of Toxic Substances Control (DTSC) maintains a database (EnviroStor) that provides access to detailed information on hazardous waste permitted sites and corrective action facilities, as well as existing site cleanup information. EnviroStor also provides information on investigation, cleanup, permitting, and/or corrective actions that are planned, being conducted, or have been completed under DTSC's oversight. A review of EnviroStor did not identify any records of hazardous waste facilities on the project site. Therefore, the proposed project would not be located on a site that is included on a list of hazardous materials sites or create a significant hazard to the public or the environment, and no impact would occur.

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

No Impact. A significant project-related impact may occur if the Project were placed within a public airport land use plan area, or within two miles of a public airport, and subject to a safety hazard. The closest public airport to the Project Site is the Bob Hope Airport, approximately 8.5 miles away. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area, and no impacts would occur.

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

No Impact. The project is located in close proximity to the nearest emergency route – Santa Monica Boulevard (City of Los Angeles, Safety Element of the Los Angeles City General Plan, Critical Facilities and Lifeline Systems, Exhibit H, November 1996.) The proposed project would not require the closure of any public or private streets and would not impede emergency vehicle access to the project site or surrounding area. Additionally, emergency access to and from the project site would be provided in accordance with requirements of the Los Angeles Fire Department (LAFD). Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and no impact would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The project site is located within a highly urbanized area of the City and does not include wildlands or high-fire-hazard terrain or vegetation. In addition, the project site is not identified by the City as being located within an area susceptible to fire hazards. Additionally, the proposed commercial development use would not create a fire hazard that has the potential to exacerbate the current environmental condition relative to wildfires. Therefore, the project would

not subject people or structures to a significant risk or loss, injury, or death as a result of exposure to wildland fires. No impacts related to this issue would occur, and no mitigation is required.

X. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Result in substantial erosion or siltation on- or off-site;				
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;				
iii. 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; or				
iv. Impede or redirect flood flows?				
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. Based on the criteria established in the State's CEQA Guidelines and Appendix G, a project could have a significant impact on surface water quality if discharges associated with the project were to create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC) or that cause regulatory standards to be violated, as defined in the applicable National Pollution Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for the receiving water body. For the purpose of this specific issue, a significant impact may occur if the project would discharge water that does not meet the quality standards of local agencies that regulate surface water quality and water discharge into stormwater drainage systems.

The project is expected to comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include the Standard Urban Storm Water Mitigation Plan (SUSMP) requirements to reduce potential water quality impacts and the City's Low Impact Development (LID) Ordinance. The purpose of the LID standards is to reduce the peak discharge rate, volume, and duration of flow through the use of site design and stormwater quality control measures. The LID Ordinance requires that the project retain or treat the first three-quarters of an inch of rainfall in a 24-hour period. LID practices can effectively remove nutrients, bacteria, and metals while reducing the volume and intensity of stormwater flows.

The project involves the construction, use, and maintenance of a new three-story, 30,385 square-foot office building in an area characterized by commercial and residential uses. The project does not involve the introduction of new activities or features that could be sources of contaminants that would degrade groundwater quality. As a result, the project would not create or contribute runoff water that would exceed the pollutant profile associated with the existing condition of the Project Site and its surroundings. As such, potential water quality impacts from the project would be less than significant, and no mitigation is required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. Based on the criteria established in the State's CEQA Guidelines and Appendix G, a project could have a significant impact on groundwater level if the project were to change potable water levels sufficiently to (a) reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or respond to emergencies and drought; (b) reduce yields of adjacent wells or well fields (public or private); (c) adversely change the rate or direction of flow of groundwater; or (d) result in demonstrable and sustained reduction in groundwater recharge capacity. The project is not adjacent to a well field nor part of a groundwater recharge area. As such, the project site is not a source of substantial groundwater recharge. Impacts on groundwater would be less than significant, and no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site;

Less Than Significant Impact. Site-generated surface water runoff would continue to flow to the City's storm drain system. Impermeable surfaces resulting from the development of the project would not significantly change the volume of stormwater runoff. Accordingly, since the volume of runoff from the site would not measurably increase over existing conditions, water runoff after development would not exceed the capacity of existing or planned drainage systems. Any project that creates, adds, or replaces 500 square feet of impervious surface must comply with the Low impact Development (LID) Ordinance or alternatively, the City's Standard Urban Stormwater Mitigation Plan (SUSMP), as an LAMC requirement to address water runoff and storm water pollution. Therefore, the proposed project would result in less-than-significant impacts related to existing storm drain capacities or water quality.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

Less than Significant Impact. Based on the criteria established in the State's CEQA Guidelines and Appendix G, a project could have a significant impact on surface water hydrology if the project were to result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow. The project site does not contain, nor is adjacent to, any stream or river. The project would connect to existing drainage infrastructure and therefore would not alter existing drainage patterns. Impacts would be less than significant, and no mitigation is required.

iii. 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; or

Less than Significant Impact. Based on the criteria established in the State's CEQA Guidelines and Appendix G, a project could have a significant impact on surface water quality if discharges associated with the project were to create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body. Runoff from the project site would be collected on the site and directed towards existing storm drains in the project vicinity. Pursuant to local practice and City regulations, stormwater retention would be required as part of SUSMP implementation features and the requirements of the Low Impact Development (LID) ordinance requirements. The primary purpose of the LID ordinance is to ensure that development and redevelopment projects mitigate runoff in a manner that captures rainwater and removes pollutants while reducing the volume and intensity of stormwater flows. Accordingly, with compliance to the LID ordinance, the

project would not create or contribute to surface runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation is required.

iv. Impede or redirect flood flows?

Less than Significant Impact. The project site is located in an urbanized area that is currently served by storm drain infrastructure. The project would not change this local drainage pattern; therefore, the project would not have the potential to impede or redirect floodwater flows. Impacts would be less than significant, and no mitigation is required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. A significant impact would occur if the project site were sufficiently close to the ocean or other water body to potentially be at risk of seismically induced tidal phenomena (e.g., seiche and tsunami), or was within a flood zone, and if the project site utilized, stored or otherwise contained pollutants that would be at risk of release if inundated. The Project Site is not located within a Tsunami Inundation Zone or Flood Zone. Furthermore, the proposed use does not involve the storage or use of substantial quantities of potential pollutants. No impacts would occur, and no mitigation measures are necessary.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. A significant impact could occur if the project includes potential sources of water pollutants that would have the potential to interfere with a water quality control plan or sustainable groundwater management plan. The project involves the construction, use, and maintenance of a new three-story commercial office building. The project would comply with the City's Low Impact Development (LID) ordinance, the primary purpose of which is to ensure that development and redevelopment projects mitigate runoff in a manner that captures rainwater and removes pollutants while reducing the volume and intensity of storm water flows. Impacts would be less than significant, and no mitigation is required.

XI. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Physically divide an established community?

No Impact. A significant impact would occur if the proposed project would be sufficiently large or configured in such a way so as to create a physical barrier within an established community. A physical division of an established community is caused by an impediment to through travel or a physical barrier, such as a new freeway with limited access between neighborhoods on either side of the freeway, or major street closures. The proposed project would not involve any street vacation or closure or result in development of new thoroughfares or highways. The proposed project, which involves the construction, use, and maintenance of a new three-story commercial office building in an urbanized area of Los Angeles, would not divide an established community. Therefore, no impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. A significant impact may occur if a project is inconsistent with the General Plan or zoning designations currently applicable to the project site, and would cause adverse environmental effects, which the General Plan and zoning ordinance are designed to avoid or mitigation. The project site is located within Hollywood Community Plan Area and is currently zoned R3-1 with a General Plan land use designation of Medium Residential. The proposed project involves the construction, use, and maintenance of a new three-story, 30,385 square-foot office building. In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land uses; a Zone Change from R3-1 to (T)(Q)CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119. The decision maker will determine whether the discretionary requests would conflict with applicable plans/policies. Impacts related to land use have been mitigated elsewhere or are addressed through compliance with existing regulations. Therefore, the impact would be less than significant.

XII. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 would occur if the proposed project would result in the loss of availability of known mineral resources of regional value or locally important mineral recovery site. The project site is not classified by the City as containing significant mineral deposits. The project site is currently designated for Medium Residential land uses and not as a mineral extraction land use. In addition, the project site is not identified by the City as being located in an oil field or within an oil drilling area. Therefore, the proposed project would not result in the loss of availability of any known, regionally or locally valuable mineral resource, and no impact 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. A significant impact would occur if the proposed project would result in the loss of availability of known mineral resources of regional value or locally important mineral resource recovery site. The project site is not classified by the City as containing significant mineral deposits. The project site is currently designated for Medium Residential land uses and not as a mineral extraction land use. In addition, the project site is not identified by the City as being located in an oil field or within an oil drilling area. Therefore, the proposed project would not result in the loss of availability of any known, regionally- or locally-valuable mineral resource, and no impact would occur.

XIII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact. A noise impact is considered potentially significant if project construction activities extended beyond ordinance time limits for construction or construction-related noise levels exceed the ordinance noise level standards unless technically infeasible to do so. The project involves the construction, use, and maintenance of a new three-story commercial office building. Construction noise levels will vary at any given receptor and are dependent on the construction phase, equipment type, duration of use, distance between the noise source and receptor, and the presence or absence of barriers between the noise source and receptor. The project does not propose to deviate from any requirements of the Noise Element of the General Plan, Section 111 of the L.A.M.C., or any other applicable noise standard. The project is required to comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574, and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible. Construction noise is typically governed by ordinance limits on allowable times of equipment operations. The City of Los Angeles limits construction activities to the hours of 7:00 a.m. and 9:00 p.m. on weekdays and 8:00 a.m. to 6:00 p.m. on any Saturday. Construction is not permitted on any national holiday or on Sunday. Therefore, impacts will be less than significant, and no mitigation is required.

b) Generation of, excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The City of Los Angeles does not address vibration in the LAMC or in the Noise Element of the General Plan. According to the Federal Transit Administration (FTA), ground vibrations from construction activities very rarely reach the level capable of damaging structures. The construction activities that typically generate the most severe vibrations are blasting and impact pile driving. The project would be constructed using standard construction techniques and no blasting or impact pile driving is anticipated. Heavy construction equipment (e.g., bulldozers, scrapers, excavators, compactors, and motor graders) would generate a limited amount of ground-borne vibration during construction activities at a short distance away from the source. Post-construction on-site activities would be limited to typical commercial office uses that would not generate excessive ground-borne noise or vibration. As such, ground-borne vibration and noise levels associated with the project would be less than significant, and no mitigation measures are required.

c) For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two 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. The project is not located within two miles of a private airstrip or an airport land use plan. Therefore, no impact will result.

XIV. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Induce substantial unplanned 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 potentially significant impact would occur if the proposed project would induce substantial population growth that would not have otherwise occurred as rapidly or in as great a magnitude. The project involves the construction, use, and maintenance of a new three-story commercial office building on a site that is currently zoned R3-1 and is designated by the Hollywood Community Plan for Medium Residential land uses. The project site currently comprises two vacant lots and a surface parking lot. The two vacant lots had been previously developed with two, two-story apartment buildings. In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land uses; a Zone Change from R3-1 to (T)(Q)CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119. The proposed three-story commercial building would not substantially induce population growth in the project area, either directly or indirectly. The physical secondary or indirect impacts of population growth such as increased traffic or noise have been adequately mitigated in other portions of this document. Therefore, the impact would be less than significant.

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

Less Than Significant Impact. A significant impact may occur if a project would result in the displacement of existing housing units, necessitating the construction of replacement housing elsewhere. The project involves the construction, use, and maintenance of a new three-story commercial office building on a site that is currently zoned R3-1 and is designated by the Hollywood Community Plan for Medium Residential land uses. The project site currently comprises two vacant lots and a surface parking lot. In order to facilitate the development of the

proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land use; a Zone Change from R3-1 to (T)(Q)CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119. The project does not represent a displacement of substantial numbers of existing housing as a new commercial development on a site that does not currently contain residential uses. The proposed project would not preclude a residential project on the subject site. In the event that the project proposes a residential use at the subject site, the development would comply with the Los Angeles Municipal Code (LAMC) requirements of the site's current R3-1 zoning. In addition, any development that is considered a Project under CEQA would require the appropriate analysis. Therefore, impacts will be less than significant.

XV. PUBLIC SERVICES

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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Fire protection?

Less Than Significant Impact. A significant impact would occur if the Los Angeles Fire Department (LAFD) could not adequately serve the proposed project, necessitating a new or physically altered station. The project site and the surrounding area are currently served by LAFD Fire Station 27, located at 1327 North Cole Avenue, located approximately 1 mile north of the project site. The proposed project involves the construction, use, and maintenance of a new three-story commercial office building, which could increase the number of emergency calls and demand for LAFD fire and emergency services. To maintain the level of fire protection and emergency services, the LAFD may require additional fire personnel and equipment. However, it is not anticipated that there would be a need to build a new or expand an existing fire station to serve the proposed project and maintain acceptable service ratios, response times, or other performance objectives for fire protection. By analyzing data from previous years and continuously monitoring current data regarding response times, types of incidents, and call frequencies, LAFD can shift resources to meet local demands for fire protection and emergency services. The proposed project would neither create capacity or service level problems nor result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection. Therefore, the proposed project would result in a less than significant impact, and no mitigation is required.

b) Police protection?

Less Than Significant Impact. The construction, use, and maintenance of new commercial building has the potential to increase the demand for police services in the area. However, the project site and the surrounding area are currently served by the LAPD Hollywood Police Station at 1358 North Wilcox Avenue, approximately 1 mile north of the project site. Given that there is a police station in close proximity to the project site, it is not anticipated that there would be a need to build a new or expand an existing police station to serve the proposed project and maintain acceptable service ratios, response times, or other performance objectives for police protection. Impacts will be less than significant.

c) Schools?

Less than Significant Impact. A significant impact would occur if the proposed project would include substantial employment or population growth, which could generate a demand for school facilities that would exceed the capacity of the school district. The proposed project involves the construction, use, and maintenance of a new three-story commercial office building. Although the project does not include a residential component, the addition of a new office building could potentially draw in new residents to the area as a result of new employment opportunities, which could increase enrollment at schools that service the area. However, development of the proposed project would be subject to California Government Code Section 65995, which would allow LAUSD to collect impact fees from developers of new commercial development. Conformance to California Government Code Section 65995 is deemed to provide full and complete mitigation of impacts to school facilities. Therefore, the proposed project would result in a less-than-significant impact to public schools.

d) Parks?

Less Than Significant Impact. A significant impact would occur if the proposed project would exceed the capacity or capability of the local park system to serve the proposed project. The City of Los Angeles Department of Recreation and Parks (RAP) is responsible for the provision, maintenance, and operation of public recreational and park facilities and services in the City. The proposed project involves the construction, use, and maintenance of a new three-story commercial office building, which is unlikely to result in increased demand for parks and recreation facilities. In addition, the project will provide approximately 3,658 square feet of open space, inclusive of a 2,346 square-foot roof deck for employees. These project features would help reduce the demand for park space created by the proposed project to less than significant levels. Furthermore, non-residential development is exempt from park fees per LAMC Section 12.33. Therefore, the project would not create capacity or service level problems, or result in substantial physical impacts associated with the provision or new or altered parks facilities, and project impacts would be less than significant.

e) Other public facilities?

No Impact. The proposed project involves the construction, use, and maintenance of a new two-story commercial retail and office building, which will not result in increased demand for library

services and resources of the Los Angeles Public Library (LAPL) System. Therefore, the proposed project would result in no impact on library services.

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

No Impact. The proposed project involves the construction, use, and maintenance of a new three-story commercial building. The project will not result in the addition of any new residential units that would potentially lead to increased use of existing neighborhood and regional parks or other recreational facilities. Therefore, the project will have no impact.

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?

No Impact. The proposed project would not require the construction or expansion of recreational facilities beyond the limits of the project site. The project involves the construction, use, and maintenance of a new three-story commercial building. The project would not result in the addition of any residential units would otherwise potentially include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, the project will have no impact.

XVII. TRANSPORTATION¹

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact. The project will result in a net increase of 242 daily vehicle trips and a net increase of 1,775 net daily vehicle miles traveled (VMT) for the site. The net increase of 242 daily vehicle trips does not exceed the Department of Transportation's (LADOT) threshold of 250 daily vehicle trips that requires further VMT analysis. Therefore, the project is not expected to contribute significantly to any traffic congestion or affect any congestion management program. Therefore, impacts will be less than significant.

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. A significant impact may occur if the adopted Los Angeles County Metropolitan Transportation authority (Metro) thresholds for a significant project impact would be exceeded. The Congestion Management Program (CMP) was adopted to regulate and monitor regional traffic growth and transportation improvement programs. The CMP designates a transportation network that includes all state highways and some arterials within the County of Los Angeles. The project will result in a net increase of 242 daily vehicle trips and a net increase of 1,775 net daily vehicle miles traveled (VMT) for the site. The net increase of 242 daily vehicle

¹ While the new VMT Transportation Thresholds have been adopted, this is in place as an option until July 1, 2020.

trips does not exceed the Department of Transportation's (LADOT) threshold of 250 daily vehicle trips that requires further VMT analysis. Therefore, the project is not expected to contribute significantly to any traffic congestion or affect any congestion management program. Therefore, impacts will be less than significant.

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

No Impact. A significant impact could occur if a project were to include new roadway design or introduces a new land use or features into an area with specific transportation requirements and characteristics that have not been previously experienced in that area, or if access or other features were designed in such a way as to create hazard conditions. The project site currently comprises two vacant lots and a surface parking lot. The project involves the removal of the existing surface parking lot, and the construction, use, and maintenance of a new three-story, 30,385 square-foot commercial office building. The project proposes two (2) common access driveways along Lillian Way. Adherence to all emergency response plan requirements set forth by the City and LAFD would be required through the duration of the project's construction and operation phases. There would be no impacts regarding hazards due to a design feature, and no mitigation is required.

d) Result in inadequate emergency access?

No Impact. A significant impact would occur if the proposed project would result in inadequate emergency access. The project does not propose any changes to emergency access, and will require approval of plans by the Fire Department. Further, the project must comply with all applicable City fire safety regulations. Therefore, no impact will occur.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?

Less than Significant Impact. A significant impact would occur if the project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, which is Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). The site is not listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(l). Therefore, impacts would be less than significant.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant Impact. Approved by Governor Brown on September 25, 2014, Assembly Bill 52 (AB52) establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources (TCRs), as defined in Public Resources Code Section 21074, as part of CEQA. Effective July 1, 2015, AB 52 applies to projects that file a Notice of Preparation on or after July 1, 2015. PRC Section 21084.2 now establishes that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. To help determine whether a project may have such an effect, PRC Section 21080.3.1 requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. As a result of AB 52, the following must take place: 1) prescribed notification and response timelines; 2) consultation on alternatives, resource identification, significance determinations, impact evaluation, and mitigation measures; and 3) documentation of all consultation efforts to support CEQA findings for the administrative record.

Under AB 52, if a lead agency determines that a project may cause a substantial adverse change to a TCR, the lead agency must consider measures to mitigate that impact. PRC Section 21074 provides a definition of a TCR. In brief, in order to be considered a TCR, 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 supported by substantial evidence, to treat as a TCR. In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the State register of historic resources or City Designated Cultural Resource. In applying those criteria, a lead agency shall consider the value of the resource to the tribe.

As specified in AB 52, lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the tribe has submitted a written request to be notified. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation. An informational letter was mailed to a total of 10 Tribes known to have resources in this area, on June 24, 2021, describing the Project and requesting any information regarding resources that may exist on or near the Project site. No responses were received from the Tribes within the 30-day notification period.

As previously stated, the project involves the removal of an existing surface parking lot, and construction, use, and maintenance of a new, three-story, commercial office building. The proposed development will have two (2) subterranean parking levels and ground level parking that will contain a total of 83 vehicular parking stalls. The project involves grading that will result in the export of approximately 19,000 cubic yards of soil from the project site. In the event subsurface cultural resources are unearthed, the Project would comply with City regulations on how artifacts found during construction must be handled. As such the potential for the Project to significantly impact a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe would be less than significant and no mitigation measures are required.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. Prior to any construction activities, the project applicant would be required to coordinate with the City of Los Angeles Bureau of Sanitation (BOS) to determine the exact wastewater conveyance requirements of the proposed project, and any upgrades to the wastewater lines in the vicinity of the project site that are needed to adequately serve the proposed project would be undertaken as part of the project. Therefore, impacts related to wastewater treatment would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. A significant impact would occur if the proposed project would increase water consumption or wastewater generation to such a degree that the capacity of facilities currently serving the project site would be exceeded. The Los Angeles Department of Water and Power (LADWP) conducts water planning based on forecast population growth. The proposed project involves the construction, use, and maintenance of a new three-story commercial office building, which is not considered substantial in consideration of anticipated growth. The proposed project would be consistent with Citywide growth, and, therefore, the project demand for water is not anticipated to require new water supply entitlements and/or require the expansion of existing or construction of new water treatment facilities beyond those already considered in the LADWP 2010 Urban Water Management Plan. Thus, it is anticipated that the proposed project would not create any water system capacity issues, and there would be sufficient reliable water supplies available to meet project demands. Prior to any construction activities, the project applicant would be required to coordinate with the City of Los Angeles Bureau of Sanitation (BOS) to determine the exact wastewater conveyance requirements of the proposed project, and any upgrades to the wastewater lines in the vicinity of the project site that are needed to adequately serve the proposed project would be undertaken as part of the project. Therefore, the proposed project would have a less-than-significant impact related to water or wastewater infrastructure.

c) 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. The project will be served by the City's sewer system and is not expected to exceed wastewater treatment requirements in the area. Impacts will be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. The proposed three-story commercial office building will be required to comply with current regulations required by the Department of Building and Safety (LAMC Section 99.04.408.1) and the Bureau of Sanitation (LAMC Section 66.32), which requires the recycling and proper disposal of solid waste. Therefore, impacts will be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. A significant impact could occur if a project would generate solid waste that was not disposed of in accordance with applicable regulations. These regulations include:

- California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939). AB 939 requires cities and counties to reduce the amount of solid waste entering existing landfills through recycling, reuse, and waste prevention efforts. These efforts have included permitting procedures for waste haulers and handlers.

- California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), which requires local jurisdictions to adopt an ordinance requiring commercial buildings to provide an adequate storage area for the collection and removal of recyclable materials. The City of Los Angeles passed such an ordinance in 1997.
- AB 341 of 2012 requires businesses to arrange for recycling services.
- Los Angeles Green Code incorporates the CALGreen Code and is applicable to the construction of new buildings by addressing construction waste reduction, disposal, and recycling.
- Los Angeles Citywide Construction and Demolition Waste Recycling Ordinance requires haulers and contractors responsible for handling C&D waste to obtain a Private Solid Waste Hauler Permit from the Bureau of Sanitation prior to collecting, hauling, and transporting C&D waste, and C&D waste can only be taken to City-certified C&D processing facilities.

The proposed commercial development project must comply with federal, state, and local statutes and regulations relating to solid waste. Impacts will therefore be less than significant.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project is not located in or near State responsibility areas or lands classified as very high fire hazard severity zones. The Project Site is located within an urbanized area of the City and does not include wildlands or high-fire-hazard terrain. As such, no impacts would occur, and no mitigation is required.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The Project is not located in or near State responsibility areas or lands classified as very high fire hazard severity zones. The Project Site is located within an urbanized area of the City and does not include wildlands or high-fire-hazard terrain. As such, no impacts would occur, and no mitigation is required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The Project is not located in or near State responsibility areas or lands classified as very high fire hazard zones. The Project Site is located within an urbanized area of the City and does not include wildlands or high-fire-hazard terrain. In addition, the Project Site is not identified by the City as being located within an area susceptible to fire hazards. As such, no impacts would occur, and no mitigation is required.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The Project is not located in or near State responsibility areas or lands classified as very high fire hazard zones. The Project Site is located within an urbanized area of the City and does not include wildlands or high-fire-hazard terrain. In addition, as previously discussed, the Project Site is not susceptible to potential flooding or landslides, nor would the Project result in potential drainage changes. As such, no impacts would occur, and no mitigation is required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Does the project have the potential to substantially 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. Based on the analysis of this Initial Study, the proposed project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. However, during project construction, the proposed project may encounter unknown cultural resources, including archaeological and paleontological resources. Compliance with existing regulations would reduce impacts to less than significant levels.

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. A significant impact may occur if the proposed project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately but significant when viewed together. Although projects may be constructed in the project vicinity, the cumulative impacts to which the proposed project would contribute would be less than significant.

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

Less Than Significant Impact. A significant impact may occur if the proposed project has the potential to result in significant impacts, as discussed in the preceding sections. The proposed project would not have the potential to result in substantial adverse impacts on human beings either directly or indirectly. Therefore, impacts will be less than significant.

DEPARTMENT OF
CITY PLANNING
COMMISSION OFFICE
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NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION

Public Resources Code Section 21092 and Cal. Code of Regulations Title 14, Section 15072 (the Guidelines for the California Environmental Quality Act) require a local agency to provide a notice of intent to adopt a negative declaration to the public, responsible agencies, trustee agencies, and the county clerk of each county within which the proposed project is located, sufficiently prior to adoption by the lead agency of the negative declaration to allow the public and agencies the review period provided under Section 15105 of the Guidelines.

Project Title: ENV-2021-4281-ND

Project Location: 711 North Lillian Way (711-723 North Lillian Way); Hollywood

Project Description: The project involves the removal of an existing surface parking lot, and construction, use, and maintenance of a new, three-story, 56 feet in height commercial office building with a floor area of 30,385 square feet, equating to a floor area ratio (FAR) of approximately 1.5:1. The proposed development will have two (2) subterranean parking levels and ground level parking that will contain a total of 83 vehicular parking stalls. The project will provide a total of nine (9) bicycle parking stalls, including three (3) short-term, and six (6) long-term parking stalls. The project will provide approximately 3,658 square feet of open space, inclusive of a 2,346 square-foot roof deck. The project involves grading that will result in the export of approximately 19,000 cubic yards of earth from the project site. In order to facilitate the development of the proposed office building, the applicant is requesting a General Plan Amendment to amend the Hollywood Community Plan to re-designate the subject site from Medium Residential to Commercial Manufacturing land use; a Zone Change from R3-1 to (T)(Q) CM-1; and a Building Line Removal of a 15-foot Building Line along the westerly side of Lillian Way, established under Ordinance No. 109119. The proposed project would not preclude a residential project on the subject site. In the event that the project proposes a residential use at the subject site, the development would comply with the Los Angeles Municipal Code (LAMC) requirements of the site's current R3-1 zoning. In addition, any development that is considered a Project under CEQA would require the appropriate analysis.

Schedule: The City of Los Angeles will receive comments on the negative declaration beginning October 14, 2021, for 20 days, ending November 3, 2021. The City of Los Angeles, as lead agency, will make a determination on the project, following a public hearing to be scheduled.

Copies of the negative declaration and all documents referenced in the proposed negative declaration are available for review during the lead agency's normal business hours at: City of Los Angeles Planning Dept., 200 N. Spring St., Room 763, Los Angeles, CA 90012.

Signature: Tim Madine Date: 10/12/2021



Gary Benjamin <gary@alchemyplanning.com>

Request for proposal for 30,000 sf. office project at 711 N. Lillian Wy.

Jonathan Chambers <jchambers@gibsontrans.com>
To: Gary Benjamin <gary@alchemyplanning.com>

Thu, Mar 18, 2021 at 2:17 PM

Gary,

Thanks for reaching out. I just ran this through the VMT calculator and it actually only generates 242 daily trips, so should not qualify for a transportation assessment, or at least not a VMT analysis. Since the project needs a General Plan amendment and zone change, it is possible that some transportation analysis could be requested, but likely not.

Do you have a case planner yet? I would recommend going through the process of getting an LADOT referral form to confirm that nothing is needed. I don't think you'll need me for any of that, but let me know if you feel or find out otherwise.

Jonathan Chambers, P.E.*Senior Associate*

Gibson Transportation Consulting, Inc.

555 W. 5th Street, Suite 3375

Los Angeles, CA 90013

www.gibsontransportation.com

Phone: (213) 683-0088

Fax: (213) 683-0033

From: Gary Benjamin <gary@alchemyplanning.com>
Sent: Thursday, March 18, 2021 2:05 PM
To: Jonathan Chambers <jchambers@gibsontrans.com>
Subject: Request for proposal for 30,000 sf. office project at 711 N. Lillian Wy.

Hi Jonathan,

I hope all is well! I think I have a more congenial client for you this time, for a project at [711-723 N. Lillian Wy.](#) in the Hollywood area.

The project (conceptual plans attached) consists of a new 30,000 sf. creative office building on a vacant lot and would involve a General Plan Amendment and Zone Change. I haven't run the VMT calculations yet, but am assuming a traffic

study would be needed. Are you able to confirm that VMT and/or access and circulation analysis would be required for this project?

If so, and if you are interested in assisting with a project, please prepare a proposal made out to:

Robert Herscu

The HQ Group

1801 Century Park East Suite 1560

Los Angeles CA 90067

Please feel free to reach out with any questions and if you would like to discuss.

Best Regards,

Gary

--

Gary Benjamin, AICP

Principal


Alchemy Planning + Land Use

T: 213.479.7521

E: gary@alchemyplanning.com

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 **VMT Calculator - 711 Lillian Way.pdf**
475K



Trevor Martin <trevor.martin@lacity.org>

Fwd: City Planning requesting confirmation of VMT screening for 711 N. Lillian Wy.

1 message

Gary Benjamin <gary@alchemyplanning.com>
To: Trevor Martin <trevor.martin@lacity.org>

Wed, Jul 21, 2021 at 3:22 PM

Hi Trevor,

Please see below:

----- Forwarded message -----

From: **Wes Pringle** <wes.pringle@lacity.org>

Date: Wed, Jul 21, 2021 at 8:11 AM

Subject: Re: City Planning requesting confirmation of VMT screening for 711 N. Lillian Wy.

To: Gary Benjamin <gary@alchemyplanning.com>

Hi Gary,

The 30,385 square-foot office project will not generate enough trips to require a transportation analysis under the VMT traffic assessment guidelines.

Wes

On Tue, Jul 20, 2021 at 5:07 PM Gary Benjamin <gary@alchemyplanning.com> wrote:

Hi Wes,

I hope all is well with you! I am currently working on a 30,385 sf. office building project at 711 N. Lillian Wy., which is seeking a General Plan Amendment and Zone Change.

I had previously determined that the project was under the 250 net daily trip threshold, but the City Planner working on the case sent me the below message:

- *Would you mind reaching out to DOT for confirmation that no further VMT analysis is required per the Project's VMT calculation? An email response from DOT will suffice.*

I have attached the project plans. Are you able to confirm that no further VMT analysis is needed for this project?

Best Regards,

Gary

--

Gary Benjamin, AICP

Principal

Alchemy Planning + Land Use

T: 213.479.7521

E: gary@alchemyplanning.comW: alchemyplanning.comThe logo features the word "ALCHEMY" in large, bold, black capital letters, with "PLANNING + LAND USE" in smaller, orange capital letters below it.

ALCHEMY
PLANNING + LAND USE

--

Wes Pringle, P.E.

Transportation Engineer

Metro Development Review

100 S. Main St, 9th Floor

Los Angeles, CA 90012

Los Angeles Department of Transportation

213.972.8482    



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--

Gary Benjamin, AICP

Principal

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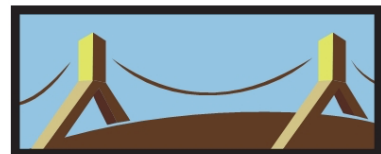
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711 LILLIAN WAY PROJECT

Noise Technical Report



Prepared by DKA Planning
20445 Prospect Road, Suite C
San Jose, CA 95129
April 2021

NOISE TECHNICAL REPORT

Introduction

This technical report evaluates noise impacts that would be generated by construction and operation of the Proposed Project at 711 Lillian Way. The analysis compares these impacts to applicable regulations and thresholds of significance. Noise measurements, calculation worksheets, and a map of noise receptors and measurement locations are included in the Technical Appendix.

Fundamentals of Noise

Characteristics of Sound

Sound can be described in terms of its loudness (amplitude) and frequency (pitch). The standard unit of measurement for sound is the decibel (i.e., dB). Because the human ear is not equally sensitive to sound at all frequencies, the A-weighted scale (dBA) is used to reflect the normal hearing sensitivity range. On this scale, the range of human hearing extends from 3 to 140 dBA. Table 1 provides examples of A-weighted noise levels from common sources.

Table 1
A-Weighted Decibel Scale

Typical A-Weighted Sound Levels	Sound Level (dBA L_{eq})
Near Jet Engine	130
Rock and Roll Band	110
Jet flyover at 1,000 feet	100
Power Motor	90
Food Blender	80
Living Room Music	70
Human Voice at 3 feet	60
Residential Air Conditioner at 50 feet	50
Bird Calls	40
Quiet Living Room	30
Average Whisper	20
Rustling Leaves	10

Source: Cowan, James P., Handbook of Environmental Acoustics, 1993.
These noise levels are approximations intended for general reference and informational use.

Noise Definitions. This noise analysis discusses sound levels in terms of equivalent noise level (L_{eq}), maximum noise level (L_{max}) and the Community Noise Equivalent Level (CNEL).

- Equivalent Noise Level (L_{eq}): L_{eq} represents the average noise level on an energy basis for a specific time period. Average noise level is based on the energy content (acoustic energy) of sound. For example, the L_{eq} for one hour is the energy average noise level

during that hour. L_{eq} can be thought of as a continuous noise level of a certain period equivalent in energy content to a fluctuating noise level of that same period.

- Maximum Noise Level (L_{max}): L_{max} represents the maximum instantaneous noise level measured during a given time period.
- Community Noise Equivalent Level (CNEL): CNEL is an adjusted noise measurement scale of average sound level during a 24-hour period. Due to increased noise sensitivities during evening and night hours, human reaction to sound between 7:00 P.M. and 10:00 P.M. is as if it were actually 5 dBA higher than had it occurred between 7:00 A.M. and 7:00 P.M. From 10:00 P.M. to 7:00 A.M., humans perceive sound as if it were 10 dBA higher. To account for these sensitivities, CNEL figures are obtained by adding an additional 5 dBA to evening noise levels between 7:00 P.M. and 10:00 P.M. and 10 dBA to nighttime noise levels between 10:00 P.M. and 7:00 A.M. As such, 24-hour CNEL figures are always higher than their corresponding actual 24-hour averages.

Effects of Noise. The degree to which noise can impact an environment ranges from levels that interfere with speech and sleep to levels that can cause adverse health effects. Most human response to noise is subjective. Factors that influence individual responses include the intensity, frequency, and pattern of noise; the amount of background noise present; and the nature of work or human activity exposed to intruding noise.

According to the National Institute of Health (NIH), extended or repeated exposure to sounds above 85 dB can cause hearing loss. Sounds less than 75 dBA, even after continuous exposure, are unlikely to cause hearing loss.¹ The World Health Organization (WHO) reports that adults should not be exposed to sudden “impulse” noise events of 140 dB or greater. For children, this limit is 120 dB.²

Exposure to elevated nighttime noise levels can disrupt sleep, leading to increased levels of fatigue and decreased work or school performance. For the preservation of healthy sleeping environments, the WHO recommends that continuous interior noise levels not exceed 30 dBA, L_{eq} and that individual noise events of 45 dBA or higher be limited.³ Assuming a conservative exterior to interior sound reduction of 15 dBA, continuous exterior noise levels should therefore not exceed 45 dBA L_{eq} . Individual exterior events of 60 dBA or higher should also be limited. Some epidemiological studies have shown a weak association between long-term exposure to noise levels of 65 to 70 dBA, L_{eq} and cardiovascular effects, including ischaemic heart disease and hypertension. However, at this time, the relationship is largely inconclusive.

People with normal hearing sensitivity can recognize small perceptible changes in sound levels of approximately 3 dBA while changes of 5 dBA can be readily noticeable. Sound level increases

¹ National Institute of Health, National Institute on Deafness and Other Communication, www.nidcd.nih.gov/health/noise-induced-hearing-loss.

² World Health Organization, Guidelines for Community Noise, 1999.

³ Ibid.

of 10 dBA or greater are perceived as a doubling in loudness and can provoke a community response.⁴ However, few people are highly annoyed by noise levels below 55 dBA L_{eq} .⁵

Noise Attenuation. Noise levels decrease as the distance from noise sources to receivers increases. For each doubling of distance, noise from stationary sources can decrease by about 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt and grass). For example, if a point source produces a noise level of 89 dBA at a reference distance of 50 feet and over an asphalt surface, its noise level would be approximately 83 dBA at a distance of 100 feet, 77 dBA at 200 feet, etc. Noises generated by mobile sources such as roadways decrease by about 3 dBA over hard surfaces and 4.5 dBA over soft surfaces for each doubling of distance. It should be noted that because decibels are logarithmic units, they cannot be added or subtracted. For example, two cars each producing 60 dBA of noise would not produce a combined 120 dBA.

Noise is most audible when traveling by direct line of sight, an unobstructed visual path between noise source and receptor. Barriers that break line of sight between sources and receivers, such as walls and buildings, can greatly reduce source noise levels by allowing noise to reach receivers by diffraction only. As a result, sound barriers can generally reduce noise levels by up to 15 dBA.⁶ The effectiveness of barriers can be greatly reduced when they are not high or long enough to completely break line of sight from sources to receivers.

Regulatory Framework

Noise

Federal. Currently, no federal noise standards regulate environmental noise associated with short-term construction activities or long-term operations of development projects. As such, temporary and long-term noise impacts produced by the Project would be largely regulated or evaluated by State and City of Los Angeles standards designed to protect public well-being and health.

State. The State's 2017 General Plan Guidelines establish county and city standards for acceptable exterior noise levels based on land use. These standards are incorporated into land use planning processes to prevent or reduce noise and land use incompatibilities. Table 2 illustrates State compatibility considerations between various land uses and exterior noise levels.

California Government Code Section 65302 also requires each county and city to prepare and adopt a comprehensive long-range general plan for its physical development. Section 65302(f) requires a noise element to be included in the general plan. This noise element must identify and

⁴ Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2018.

⁵ World Health Organization, Guidelines for Community Noise, 1999.

⁶ California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.

appraise noise problems in the community, recognize Office of Noise Control guidelines, and analyze and quantify current and projected noise levels.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels that are subject to relatively high levels of noise from transportation. The noise insulation standards, collectively referred to as the California Noise Insulation Standards (Title 24, California Code of Regulations) set forth an interior standard of 45 dBA CNEL for habitable rooms. The standards require an acoustical analysis which indicates that dwelling units meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Local jurisdictions typically enforce the California Noise Insulation Standards through the building permit application process.

City of Los Angeles General Plan Noise Element. The City of Los Angeles General Plan includes a Noise Element that includes policies and standards in order to guide the control of noise to protect residents, workers, and visitors. Its primary goal is to regulate long-term noise impacts to preserve acceptable noise environments for all types of land uses. There are also references to programs applicable to construction projects that call for protection of noise sensitive uses and use of best practices to minimize short-term noise impacts. However, the Noise Element contains no quantitative or other thresholds of significance for evaluating a project's noise impacts. Instead, it adopts the State's guidance on noise and land use compatibility, shown in Table 2, "to help guide determination of appropriate land use and mitigation measures vis-à-vis existing or anticipated ambient noise levels."

City of Los Angeles Municipal Code. The City of Los Angeles Municipal Code (LAMC) contains regulations that would regulate noise from the Project's temporary construction activities.





Section 41.40(a) would prohibit specific Project construction activities from occurring between the hours of 9:00 P.M. and 7:00 A.M., Monday through Friday. Subdivision (c) would further prohibit such activities from occurring before 8:00 A.M. or after 6:00 P.M. on any Saturday or national holiday, or at any time on any Sunday. These restrictions serve to limit specific Project construction activities to Monday through Friday 7:00 A.M. to 9:00 P.M., and 8:00 A.M. to 6:00 P.M. on Saturdays or national holidays.

SEC.41.40. NOISE DUE TO CONSTRUCTION, EXCAVATION WORK—WHEN PROHIBITED.

(a) No person shall, between the hours of 9:00 P.M. and 7:00 A.M. of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power drive drill, riveting machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling, hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this Code.

**Table 2
State of California Noise/Land Use Compatibility Matrix**

Land Use Category	Community Noise Exposure (dB, L _{dn} or CNEL)					
	55	60	65	70	75	80
Residential - Low Density Single-Family, Duplex, Mobile Homes	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Residential - Multi-Family	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging - Motels Hotels	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable

	Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction 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 system or air conditioning will normally suffice.
	Normally Unacceptable - New construction or development should generally 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 should generally not be undertaken.

Source: California Office of Planning and Research "General Plan Guidelines, Noise Element Guidelines (Appendix D, Figure 2), 2017.

(c) No person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling shall perform any construction or repair work of any kind upon, or any earth grading for, any building or structure located on land developed with residential buildings under the provisions of Chapter I of this Code, or perform such work within 500 feet of land so occupied, before 8:00 A.M. or after 6:00 P.M. on any Saturday or national holiday nor at any time on any Sunday. In addition, the operation, repair, or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited on Saturdays and on Sundays during the hours herein specific...

Section 112.05 of the LAMC establishes noise limits for powered equipment and hand tools operated in a residential zone or within 500 feet of any residential zone. Of particular importance to construction activities is subdivision (a), which institutes a maximum noise limit of 75 dBA as measured at a distance of 50 feet from the activity for the types of construction vehicles and equipment that would likely be used in the construction of the Project. However, the LAMC notes that these limitations would not necessarily apply if it can be proven that the Project's compliance would be technically infeasible despite the use of noise-reducing means or methods.

SEC. 112.05. MAXIMUM NOISE LEVEL OF POWERED EQUIPMENT OR POWERED HAND TOOLS

Between the hours of 7:00 A.M. and 10:00 P.M., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

- (a) 75 dBA for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;
- (b) 75 dBA for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;
- (c) 65 dBA for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors.

Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

In addition, the LAMC regulates long-term operations of land uses, including but not limited to the following regulations.

Section 111.02 discusses the measurement procedure and criteria regarding the sound level of “offending” noise sources. A noise source causing a 5 dBA increase over the existing average ambient noise levels of an adjacent property is considered to create a noise violation. However, Section 111.02(b) provides a 5 dBA allowance for noise sources lasting more than five but less than 15 minutes in any 1-hour period, and a 10 dBA allowance for noise sources causing noise lasting 5 minutes or less in any 1-hour period. In accordance with these regulations, a noise level increase from certain city-regulated noise sources of five dBA over the existing or presumed ambient noise level at an adjacent property is considered a violation.

Section 112.01 of the LAMC would prohibit any amplified noises, especially those from outdoor sources (e.g., outdoor speakers, stereo systems) from exceeding the ambient noise levels of adjacent properties by more than 5 dBA. Any amplified noises would also be prohibited from being audible at any distance greater than 150 feet from the Project’s property line, as the Project is located within 500 feet of residential zones.

SEC.112.01. RADIOS, TELEVISION SETS, AND SIMILAR DEVICES

(a) *It shall be unlawful for any person within any zone of the City to use or operate any radio, musical instrument, phonograph, television receiver, or other machine or device for the producing, reproducing or amplification of the human voice, music, or any other sound, in such a manner, as to disturb the peace, quiet, and comfort of neighbor occupants or any reasonable person residing or working in the area.*

(b) *Any noise level caused by such use or operation which is audible to the human ear at a distance in excess of 150 feet from the property line of the noise source, within any residential zone of the City or within 500 feet thereof, shall be a violation of the provisions of this section.*

(c) *Any noise level caused by such use or operation which exceeds the ambient noise level on the premises of any other occupied property, or if a condominium, apartment house, duplex, or attached business, within any adjoining unit, by more than five (5) decibels shall be a violation of the provisions of this section.*

Section 112.02 would prevent Project heating, ventilation, and air conditioning (HVAC) systems and other mechanical equipment from elevating ambient noise levels by more than 5 dBA.

SEC.112.02. AIR CONDITIONING, REFRIGERATION, HEATING, PLUMBING, FILTERING EQUIPMENT

(a) *It shall be unlawful for any person, within any zone of the city, to operate any air conditioning, refrigeration or heating equipment for any residence or other structure or to operate any pumping, filtering or heating equipment for any pool or reservoir in such manner as to create any noise which would cause the noise level on the premises of any other occupied property ... to exceed the ambient noise level by more than five decibels.*

The LAMC also provides regulations regarding vehicle-related noise, including Sections 114.02, 114.03, and 114.06. Section 114.02 prohibits the operation of any motor driven vehicles upon any property within the City in a manner that would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than 5 dBA. Section 114.03 prohibits loading and unloading causing any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building between the hours of 10 P.M. and 7 A.M. Section 114.06 requires vehicle theft alarm systems to be silenced within five minutes.

Existing Conditions

Noise Sensitive Receptors

The Project Site is located along the Melrose Avenue commercial corridor. Sensitive receptors within 1,000 feet of the Project Site include, but are not limited to, the following representative sampling that are generally located on residential side streets:

- Residences, 727 Lillian Way; five feet north of the Project Site.
- Residences, 658 Lillian Way; 240 feet south of the Project Site.
- Residences, 665 Lillian Way; 165 feet south of the Project Site.
- Cahuenga Lofts, 717 North Cahuenga Boulevard, 200 feet west of the Project Site.
- Moonbug Entertainment Studios, 742 North Cahuenga Boulevard; 170 feet north of the Project Site.

Existing Ambient Noise Levels

The Project Site is vacant and as such, does not generate any noise.

The primary source of noise away from the Project Site is vehicle travel, as transportation noise is the main source of noise in urban environments, largely from the operation of internal combustion engines and frictional contact between the vehicle and the ground and air.⁷ Of note is Melrose Avenue which carries about 2,085 east- and westbound vehicles between 7:30-8:30 A.M. at Vine Street.⁸ Vine Street itself carries 2,308 north- and southbound vehicles during an average A.M. peak hour at Melrose Avenue.

In April 2021, DKA Planning took short-term noise measurements near the Project site to determine the ambient noise conditions of the neighborhood (Figure 1).⁹ As shown in Table 3, noise levels near the Project Site are generally higher along major arterials with more traffic

⁷ World Health Organization, <https://www.who.int/docstore/peh/noise/Comnoise-2.pdf> accessed December 18, 2020.

⁸ City of Los Angeles Department of Transportation, 24 Hours Traffic Volume data https://navigatela.lacity.org/dot/traffic_data/manual_counts/VINE.MELROSE.180516.MAN.pdf adjusted one percent per year to reflect existing 2021 volumes.

⁹ Noise measurements were taken using a Quest Technologies SoundPro Sound Examiner Meter. The SoundPro meter complies with the American National Standards Institute (ANSI) and International Electrotechnical Commission (IEC) for general environmental measurement instrumentation. The meter was equipped with an omni-directional microphone, calibrated before the day's measurements, and set at approximately five feet above the ground.

volume. Transportation noise is the main source of noise, largely from the operation of internal combustion engines and frictional contact between the vehicle and the ground and air.¹⁰



DOUGLASKIM+ASSOCIATES,LLC

Figure 1
Noise Monitoring Locations

Table 3
Existing Noise Levels

Sensitive Receptor Locations	Sound Levels (dBA, L_{eq})
1. Residence – 658 Lillian Way	60.6
2. Residence – 663-665 Lillian Way	67.2
3. Residence – 727 Lillian Way	56.0
4. Cahuenga Lofts	64.1
5. Moonbug Entertainment Studios	64.1
<i>Source: DKA Planning, 2021</i>	

¹⁰ World Health Organization, <https://www.who.int/docstore/peh/noise/Comnoise-2.pdf> accessed April 18, 2020.

Project Impacts

Methodology

On-Site Construction Activities. Construction noise levels at nearby sensitive receptors were modeled employing the ISO 9613-2 sound attenuation methodologies using the SoundPLAN Essential model (version 5.1). This software package considers reference equipment noise levels, noise management techniques, distance to receptors, and any attenuating features to predict noise levels from sources like construction equipment. The distance from construction equipment noise sources (e.g., engines and tailpipes) assume that vehicles would not be capable of operating directly where the Project's property line abuts adjacent structures. These vehicles would retain some setback to preserve maneuverability, in addition to operating at reduced power and intensity to maintain precision at these locations.

Off-Site Construction Noise Activities. The Project's off-site construction noise impact from haul trucks was analyzed by considering the Project's estimated haul truck usage with existing traffic and roadway noise levels along the Project's anticipated haul route. Because it takes a doubling of traffic volumes on a roadway to generate the increased sound energy it takes to elevate ambient noise levels by 3 dBA,¹¹ the analysis focused on whether truck traffic would double traffic volumes on key roadways to be used for hauling soils to and/or from the Project Site during construction activities. Because haul trucks generate more noise than traditional passenger vehicles, a 19.1 passenger car equivalency (PCE) was used to convert haul truck trips to a reference level conversion to an equivalent number of passenger vehicles.¹² It should be noted that because an official haul route has not been approved as of the preparation of this analysis, assumptions were made about logical routes that would minimize haul truck traffic on local streets in favor of major arterials that can access regional-serving freeways.

Similarly, off-site noise impacts from vendors and employees that access the construction site were also analyzed. The analysis focused on whether truck traffic would double traffic volumes on key roadways to be used for hauling soils during construction activities.

On-Site Operational Noise Activities. The Project's potential to result in significant noise impacts from on-site operational noise sources was evaluated by identifying sources of on-site noise sources and considering the impact that they could produce given the nature of the source (i.e., loudness and whether noise would be produced during daytime or more-sensitive nighttime hours), distances to nearby sensitive receptors, surrounding ambient noise levels, the presence of similar noise sources in the vicinity, and maximum allowable noise levels permitted by the LAMC.

Off-Site Operational Noise Activities. The Project's off-site noise impact from Project-related traffic was evaluated based its potential to increase traffic volumes on local roadways that serve the Project site. Because it takes a doubling of traffic volumes on a roadway to generate the increased sound energy it takes to elevate ambient noise levels by 3 dBA, the analysis focused on whether

¹¹ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.

¹² Caltrans, Technical Noise Supplement Table 3-3, 2013.

auto trips generated by the Proposed Project would double traffic volumes on key roadways to be used to access the Project site.

Thresholds of Significance

Construction Noise Thresholds. Based on guidelines from the City of Los Angeles City Department of Planning, the on-site construction noise impact would be considered significant if:

- Construction activities lasting more than one day would exceed existing ambient exterior sound levels by 10 dBA (hourly L_{eq}) 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 (hourly L_{eq}) or more at a noise-sensitive use; or
- Construction activities of any duration would exceed the ambient noise level by 5 dBA (hourly L_{eq}) 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 Thresholds. In addition to applicable City standards and guidelines that would regulate or otherwise moderate the Project's operational noise impacts, the following criteria are adopted to assess the impact of the Project's operational noise sources:

- Project operations would cause ambient noise levels at off-site locations to increase by 3 dBA CNEL or more to or within "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories, as defined by the State's 2017 General Plan Guidelines.
- Project operations would cause any 5 dBA CNEL or greater noise increase.¹³

Analysis of Project Impacts

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Less Than Significant Impact.

¹³ As a 3 dBA increase represents a slightly noticeable change in noise level, this threshold considers any increase in ambient noise levels to or within a land use's "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories to be significant so long as the noise level increase can be considered barely perceptible. In instances where the noise level increase would not necessarily result in "normally unacceptable" or "clearly unacceptable" noise/land use compatibility, a readily noticeable 5 dBA increase is still considered to be significant. Increases less than 3 dBA are unlikely to result in noticeably louder ambient noise conditions and would therefore be considered less than significant.

Construction

On-Site Construction Activities

Construction would generate noise during the construction process that would span 14 months of demolition, grading, building construction, and application of architectural coatings, as shown on Table 4. During all construction phases, noise-generating activities could occur at the Project Site between 7:00 A.M. and 9:00 P.M. Monday through Friday, in accordance with LAMC Section 41.40(a). On Saturdays, construction would be permitted to occur between 8:00 A.M. and 6:00 P.M.

Table 4
Construction Schedule Assumptions

Phase	Duration	Notes
Demolition	Month 1 (two weeks)	Removal of 20,250 square feet of asphalt, concrete, and other materials.
Grading	Months 1-2 (six weeks)	Up to 20,000 cubic yards of soil export hauled over 31 working days up to 40 miles away in 14-cubic yard capacity trucks
Building Construction	Months 3-14	
Architectural Coatings	Months 12-14	Concurrent with completion of building construction

Source: DKA Planning, 2021.

Noise levels would generally peak during the demolition and grading phases, when diesel-fueled heavy-duty equipment like excavators and dozers are used to move large amounts of asphalt/concrete and dirt, respectively. This equipment is mobile in nature and does not always operate at in a steady-state mode full load, but rather powers up and down depending on the duty cycle needed to conduct work. As such, equipment is occasionally idle during which time no noise is generated.

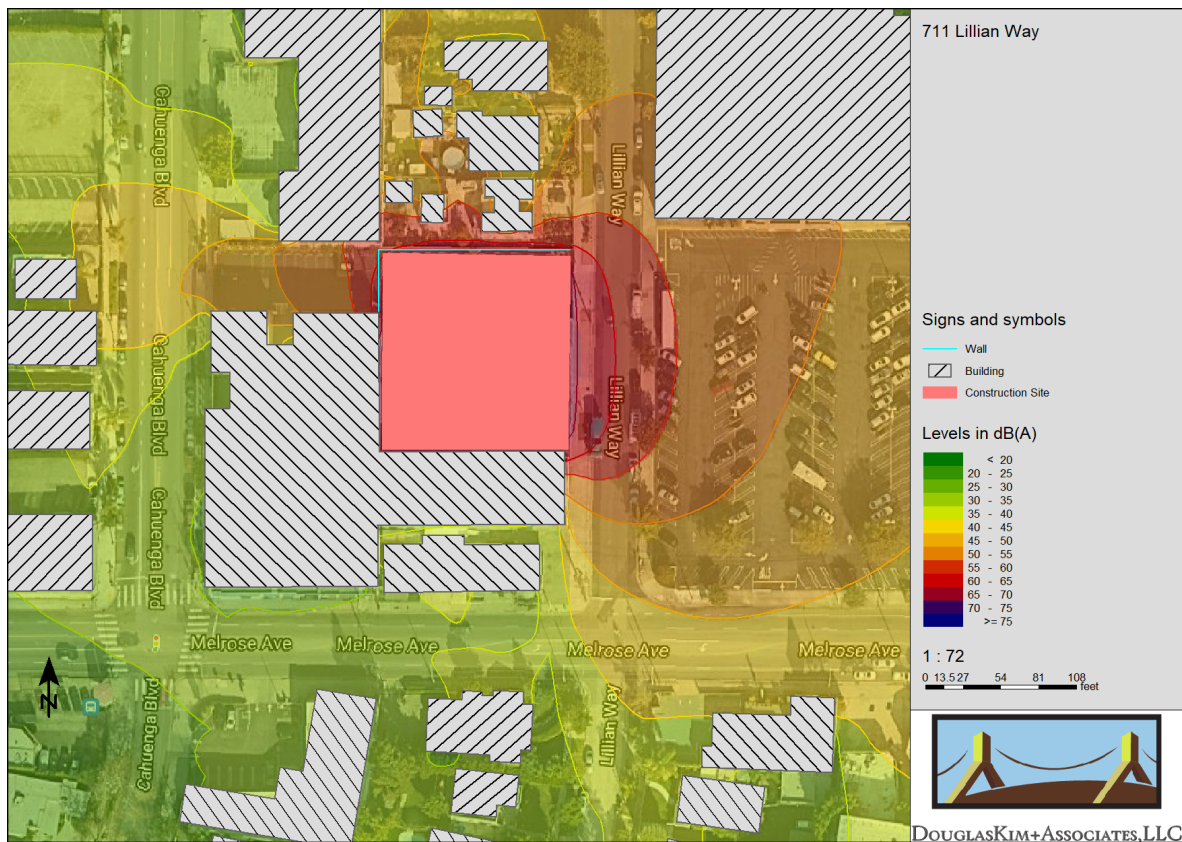
During other phases of construction (e.g., building construction, architectural coatings), noise impacts are lesser than during grading because they are less reliant on using heavy equipment with internal combustion engines. Smaller equipment such as forklifts, generators, and various powered hand tools and pneumatic equipment would generally be utilized. Off-site secondary noises would be generated by construction worker vehicles, vendor deliveries, and haul trucks.

Because the Project's construction phase would occur for more than three months, the applicable City threshold of significance for the Project's construction noise impacts is an increase of 5 dBA over existing ambient noise levels. As shown in Table 5, when considering ambient noise levels, the use of multiple pieces of powered equipment simultaneously would increase ambient noise negligibly (Figure 2). This assumes the use of best practices techniques required by the City's Building and Safety code, such as temporary sound barriers, particularly along the western and southern property line. These construction noise levels would not exceed the City's significance threshold of 5 dBA (see Figure 2 to see how construction noise propagates from Project Site). Therefore, the Project's on-site construction noise impact would be less than significant.

**Table 5
Construction Noise Impacts at Off-Site Sensitive Receptors**

Receptor	Maximum Construction Noise Level (dBA L _{eq})	Existing Ambient Noise Level (dBA L _{eq})	New Ambient Noise Level (dBA L _{eq})	Increase (dBA L _{eq})	Potentially Significant?
1. Residence – 658 Lillian Way	39.5	60.6	60.6	0.0	No
2. Residence – 663-665 Lillian Way	34.2	67.2	67.2	0.0	No
3. Residence – 727 Lillian Way	58.0	56.0	60.1	4.1	No
4. Cahuenga Lofts	40.1	64.1	64.1	0.0	No
5. Moonbug Entertainment Studios	27.3	64.1	64.1	0.0	No

Source: DKA Planning, 2021.



**Figure 2
Construction Noise Impacts at Sensitive Receptors**

Off-Site Construction Activities

The Project would also generate noise at off-site locations from haul trucks moving debris from the Project Site during grading activities; vendor and contractor trips; and worker commute trips. These activities would generate up to an estimated 261 peak hourly PCE vehicle trips, as

summarized in Table 6, during the grading phase, assuming all workers travel to the worksite at the same time, specifically the hour from 7:00 to 8:00 A.M. This includes converting noise from heavy-duty truck trips to an equivalent number of passenger vehicle trips. This would represent about 12.5 percent of traffic volumes on Melrose Avenue, which carries about 2,085 vehicles at Vine Street between 7:30 and 8:30 A.M.¹⁴ Because the Project's construction-related trips would not cause a doubling in traffic volumes on this arterial which is likely to serve as a haul route, the Project's construction-related traffic would not increase existing noise levels by 3 dBA or more. Therefore, the Project's noise impacts from construction-related traffic would be less than significant.

**Table 6
Estimated Hourly Construction Vehicle Trips**

Construction Phase	Worker Trips ^a	Vendor Trips	Haul Trips	Total
Demolition	10	0	12	22
Grading	10	0	252 ^b	261
Building Construction	27	33 ^c	0	60
Architectural Coating	5	0	0	5

^a Assumes all worker trips occur in the peak hour of construction activity.
^b The project would generate 2,857 haul trips over a 31-day period. Because haul trucks emit more noise than passenger vehicles, a 19.1 passenger car equivalency (PCE) was used to convert haul truck trips to a passenger car equivalent.
^c This phase would generate about 12 vendor truck trips daily over a seven-hour work day. Assumes a 19.1 PCE

Source: DKA Planning, 2021

Operation

On-Site Operational Noise

During operation, the Project would produce noise from both on- and off-site sources. As discussed below, the Project would not result in an exposure of persons to or a generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The Project would also not increase surrounding noise levels by more than 5 dBA CNEL, the minimum threshold of significance adopted by this analysis. As a result, the Project's on-site operational noise impacts would be considered less than significant.

¹⁴ City of Los Angeles Department of Transportation, 24 Hours Traffic Volume data https://navigatela.lacity.org/dot/traffic_data/manual_counts/VINE.MELROSE.180516.MAN.pdf adjusted one percent per year to reflect existing 2021 volumes.

Mechanical Equipment

The Project would operate mechanical equipment that would generate incremental long-term noise impacts. This would include HVAC equipment located on the building rooftop 40'6" feet above grade, including RTUs that would service the development. While this equipment could generate a sound pressure level of up to 81.9 dBA at one foot, the presence of a roof edge creates an effective noise barrier that reduces noise levels from rooftop HVAC units by 8 dBA or more.¹⁵ This would be helpful in managing noise, as equipment often operates continuously throughout the day and occasionally during the day, evenings, and weekends. A 4'0" high parapet would further shield sensitive receptors near the Project Site. Ambient noise levels at these receptors would not be elevated by more than 3 dBA L_{eq} and increase would similarly be below the 5 dBA CNEL threshold of significance for operational impacts. Other equipment would be located in a mechanical room and electrical room located in P1 of the parking garage, fully enclosed and shielded from nearby sensitive receptors.

Auto-Related Activities

The majority of vehicle-related noise impacts at the Project Site would come from vehicles entering and exiting the Proposed Project at the garage on Lillian Way. The Project could add up to 347 net vehicle trips to the local roadway network on peak weekdays at the start of operations in 2023.¹⁶ This would equate to a net increase of up to 36 vehicle trips in the A.M. peak hour and 36 in the P.M. peak hour.¹⁷ This level of vehicle activity would not significantly elevate ambient noise levels near the Project Site for two reasons. First, the average of 27 cars entering the parking garage during an average daytime hour (7:00 A.M. to 7:00 P.M.) and two cars during an average nighttime hour (7:00 P.M. to 7:00 A.M.) would increase ambient noise levels by less than 0.1 dBA L_{eq} , far below the 3 dBA threshold that the most sensitive humans can detect changes in noise levels. Second, the garage entrance is oriented to the east where it faces a supermarket parking lot. Because the garage does not face a sensitive receptor, human exposure to sensitive noise levels throughout the day would not occur.

CNEL noise levels over a 24-hour period would be below 0.1 dBA given the low trip generation associated with commercial office uses in the evening and nighttime hours. Parking garage-related noise impacts for other receptors would also be negligible given their more remote locations and/or the lack of a line of sight from the garage. As such, the Project's parking lot activities would have no noticeable effect on the surrounding noise environment.

Outdoor Uses

While most operations would be conducted inside the development, outdoor activities could generate noise that could impact local sensitive receptors. This would include human

¹⁵ City of Moreno Valley, Moreno Valley WalMart Noise Impact Analysis, Table 901; February 10, 2015 and City of Pomona, Pomona Ranch Plaza WalMart Expansion Project, Table 4.4-5; August 2014.

¹⁶ DKA Planning, 2021 based on CalEEMod 2016.3.2 model.

¹⁷ DKA Planning 2021 based on CalEEMod 2016.3.2 model runs. Hourly trip generation based on Institute of Traffic Engineer's hourly trip generation factors for General Office Building (land use code 710).

conversation, trash collection, commercial loading, and landscape maintenance. These are discussed below:

- Human conversation. Noise associated with everyday human activities would largely be contained internally within the Project. Noise could include passive activities such as human conversation and socializing in outdoor spaces. This includes a 5,858 square-foot roof deck in the center of the roof, where seating and tables would provide opportunities for passive recreation. There would be intermittent activities that would produce negligible impacts from human speech, based on the Lombard effect. This phenomenon recognizes that voice noise levels in face-to-face conversations generally increase proportionally to background ambient noise levels, but only up to approximately 67 dBA at a reference distance of one meter. Specifically, vocal intensity increases about 0.38 dB for every 1.0 dB increase in noise levels above 55 dB, meaning people talk slightly above ambient noise levels in order to communicate.¹⁸

Any noise from passive recreation on the roof would attenuate rapidly and would not be capable of elevating surrounding ambient noise levels by more than a nominal degree. The ambient noise levels from Melrose Avenue would render noise from the roof inaudible at nearby sensitive receptors. As a result, the increase in ambient noise levels at nearby receptors would be marginal for sensitive receptors.

- Trash collection. On-site trash and recyclable materials for the office tenants would be managed from the waste collection area in the P1 subterranean parking garage. Haul trucks would access solid waste from Lillian Way, where solid waste activities would include use of trash compactors and hydraulics associated with the refuse trucks themselves. Noise levels of approximately 71 dBA L_{eq} and 66 dBA L_{eq} could be generated by collection trucks and trash compactors, respectively, at 50 feet of distance.¹⁹ Intermittent solid waste management activities would operate during the day and would represent a negligible impact that would not increase CNEL noise levels at off-site locations, as trash would be managed within an enclosed facility.
- Commercial loading. On-site loading and unloading activities would be managed in the garage's ground floor level, which is obscured from any off-site sensitive receptors. As a result, there would be negligible noise impacts on off-site receptors and impacts would not increase CNEL noise levels at off-site locations.
- Landscape maintenance. Noise from gas-powered leaf blowers, lawnmowers, and other landscape equipment can generate substantial bursts of noise during regular maintenance. For example, gas powered leaf blowers and other equipment with two-stroke engines can generate 100 dBA L_{eq} and cause nuisance or potential noise impacts for nearby receptors.²⁰ This would generally represent no change in noise

¹⁸ Acoustical Society of America, Volume 134; Evidence that the Lombard effect is frequency-specific in humans, Stowe and Golob, July 2013.

¹⁹ RK Engineering Group, Inc. Wal-Mart/Sam's Club reference noise level, 2003.

²⁰ Erica Walker et al, Harvard School of Public Health; Characteristics of Lawn and Garden Equipment Sound; 2017

from landscaping maintenance. Any intermittent landscape equipment would operate during the day and would represent a negligible impact that would not increase CNEL noise levels at off-site locations.

Based on an assessment of these on-site sources, the impact of on-site operational noise sources would be considered less than significant.

Off-Site Operational Noise

The majority of the Project's operational noise impacts would be from off-site traffic generated by the office uses. The Project could add up to 347 vehicle trips to the local roadway network on a peak weekday at the start of operations in 2023. This would equate to a net increase of about including up to 36 trips during the A.M. peak hour and 36 during the P.M. peak hour²¹, changes that would represent incremental increases in traffic volumes of 1.7 percent on Melrose Avenue during the morning peak hour. Because it takes a doubling of traffic volumes to increase ambient noise levels by 3 dBA L_{eq} , the Project's traffic would neither increase ambient noise levels 3 dBA or more into "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories, nor increase ambient noise levels 5 dBA or more. Twenty-four hour CNEL impacts would similarly be minimal, far below the LA CEQA Thresholds Guide criteria for significant operational noise impacts, which begin at 3 dBA. As such, this impact would be considered less than significant.

- b. For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two 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.

The Project Site is located about 7.7 miles south of the Hollywood Burbank Airport. As such, the Proposed Project is not within an airport land use plan or within two miles of a public airport and would not expose local workers or residents to excessive noise levels. This would be considered no impact.

Cumulative Impacts

Construction

On-Site Construction Noise

During the construction of the proposed Project, there could be other construction activity in the area that could contribute to cumulative noise impacts. Noise from construction of development projects is typically localized and has the potential to affect noise-sensitive uses within 500 feet from the construction site, based on the City's screening criteria. As such, noise from construction

²¹ DKA Planning 2021 based on CalEEMod 2016.3.2 model runs. Hourly trip generation based on Institute of Traffic Engineer's hourly trip generation factors for General Office Building (land use code 710).

activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located between the two construction sites.

Any cumulative impact from one or more other concurrent construction projects would require a sensitive receptor to have a line-of-sight to two or more construction sites. Further, the impacts would have to be substantial to result in a 5 dBA or more increase in noise levels, given the high ambient noise levels along Melrose Avenue and the density and scale of buildings and structures between any two or more locations. As such, the potential for any significant cumulative noise increases of 5 dBA L_{eq} or more at any sensitive receptor is not considered significant.

Construction-related noise levels from any other related projects would be intermittent and temporary, and it is anticipated that, as with the Project, any related projects would comply with the LAMC's restrictions, including construction hours and noise from powered equipment. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with locally adopted and enforced noise ordinances. Based on this, there would not be cumulative noise impacts at any nearby sensitive uses located near the Project Site and related projects in the event of concurrent construction activities.

As such, there would not be a significant cumulative noise impact at any nearby sensitive receptors located near the Project Site and related projects in the event of concurrent construction activities.

Off-Site Construction Noise

Haul trucks would have a potential to result in cumulative impacts to off-site noise levels if the haul trucks, vendor trucks, or worker trips for any related project(s) near the Project Site were to utilize the same routes. Distributing trips to each potential construction sites substantially reduces the potential that cumulative development could more than double traffic volumes on existing streets, which would be necessary to increase ambient noise levels by 3 dBA. For example, cumulative travel on Melrose Avenue would have to increase by 1,824 vehicles during the peak morning traffic hour to double existing volumes. The Proposed Project would contribute up to 261 net PCE vehicles during a peak, worst-case scenario and any related projects would have to generate almost seven times the amount of construction-related traffic to achieve a doubling of volumes on Melrose Avenue. Therefore, cumulative noise due to construction truck traffic from the Project and related projects do not have the potential to exceed the ambient noise levels along the haul route by 5 dBA. As such, cumulative noise impacts from off-site construction would be less than significant.

Operation

The Project Site and surrounding Melrose Avenue corridor have been developed with commercial and office uses that have previously generated, and will continue to generate, noise from a number of operational noise sources, including mechanical equipment (e.g., HVAC systems), outdoor activity areas, and vehicle travel. Similar to the Project, any related projects in the vicinity of the Project Site would also generate stationary-source and mobile-source noise due to ongoing

day-to-day operations. Given the commercial and institutional zoning of Melrose Avenue, any related projects would not be typically associated with excessive noise generation that could result in increases of 5 dBA or more in ambient noise levels at sensitive receptors when combined with operational noise from the Proposed Project. The presence of intervening multi-story buildings along Melrose Avenue will generally shield noise impacts from one or more projects that may generate operational noise. However, each project would produce traffic volumes that are capable of generating roadway noise impacts. The potential cumulative noise impacts associated with on-site and off-site noise sources are addressed below.

On-Site Stationary Noise Sources

Noise from on-site mechanical equipment (e.g., HVAC units) and any other human activities from related projects would not be typically associated with excessive noise generation that could result in increases of 5 dBA or more in ambient noise levels at sensitive receptors when combined with operational noise from the Proposed Project. The presence of intervening multi-story buildings along Melrose Avenue will generally shield noise impacts from one or more projects that may generate operational noise. Therefore, cumulative stationary source noise impacts associated with operation of the Project and related projects would be less than significant.

Off-Site Mobile Noise Sources

The Project and any related projects within 1,000 feet of the Project Site would produce traffic volumes (off-site mobile sources) that would generate roadway noise. On a typical weekday, the Project would add about add up to 347 net vehicle trips to the local roadway network on peak weekdays at the start of operations in 2023.²² This would equate to a net increase of up to 36 vehicle trips in the A.M. peak hour and 36 in the P.M. peak hour, changes that would not impact traffic noise at the Project Site. These would represent an increase of up to 1.7 percent of vehicles on Melrose Avenue, which carries about 2,085 vehicles between 7:00 and 8:00 A.M.

Because it takes a doubling of traffic volumes to increase ambient noise levels by 3 dBA L_{eq} , related projects would have to add about 2,049 trips during the A.M. peak hour on Melrose Avenue. Therefore, cumulative noise impacts due to off-site traffic noise would be less than significant.

Therefore, cumulative noise impacts due to off-site traffic would not increase ambient noise levels by 3 dBA to or within their respective “Normally Unacceptable” or “Clearly Unacceptable” noise categories, or by 5 dBA or greater overall. Additionally, the Project would not result in an exposure of persons to or a generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

²² DKA Planning, 2021 based on CalEEMod 2016.3.2 model.

TECHNICAL APPENDIX



DOUGLASKIM+ASSOCIATES,LLC

AMBIENT NOISE MEASUREMENTS



- Project Site
- Noise Monitoring Locations**
- 1** 727 - 729 Lillian Way, multi-family residences
- 2** 742 N. Cahuenga Blvd, Moolbug Entertainment LA
- 3** 663 - 665 Lillian Way, multi-family residences
- 4** 658 Lillian Way, single-family residence


 N
 Source: Google Maps
 150 ft.

Figure 1
Noise Monitoring Locations



DOUGLASKIM+ASSOCIATES, LLC

Session Report

4/23/2021

Information Panel

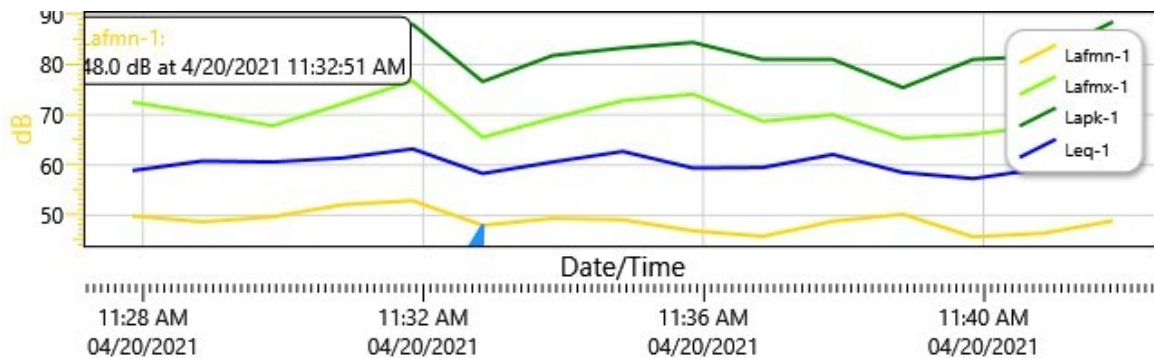
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Comments	
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Stop Time	4/20/2021 11:41:57 AM
Run Time	00:15:06
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	60.6 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF

Logged Data Chart

Residence - 658 Lillian Way: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
-----------	--------	---------	---------	-------

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
4/20/2021 11:27:51 AM	88.5	49.9	72.5	58.9
11:28:51 AM	81.1	48.7	70.3	60.8
11:29:51 AM	79.1	49.7	67.8	60.6
11:30:51 AM	84.6	52.1	72.2	61.4
11:31:51 AM	88	52.9	76.7	63.2
11:32:51 AM	76.6	48	65.5	58.3
11:33:51 AM	81.8	49.4	69.3	60.6
11:34:51 AM	83.3	49.1	72.8	62.7
11:35:51 AM	84.4	46.9	74.1	59.4
11:36:51 AM	81	45.8	68.7	59.5
11:37:51 AM	81	48.8	70	62.1
11:38:51 AM	75.4	50.2	65.3	58.5
11:39:51 AM	81	45.7	66.1	57.3
11:40:51 AM	81.7	46.4	67.8	59.3
11:41:51 AM	88.5	48.9	75.5	62.2

Session Report

4/23/2021

Information Panel

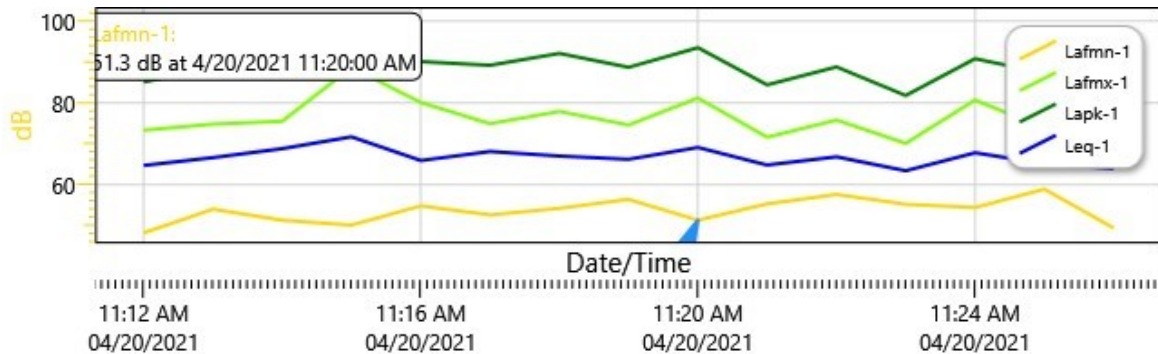
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Comments	
Start Time	4/20/2021 11:11:00 AM
Stop Time	4/20/2021 11:26:10 AM
Run Time	00:15:10
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	67.2 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF

Logged Data Chart

Residences - 663-665 Lillian Way: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
-----------	--------	---------	---------	-------

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
4/20/2021 11:12:00 AM	85.1	48.2	73.3	64.7
11:13:00 AM	88.5	54	74.8	66.6
11:14:00 AM	88	51.3	75.5	68.8
11:15:00 AM	100.8	50.1	88.7	71.7
11:16:00 AM	90.1	54.8	80.1	65.9
11:17:00 AM	89.2	52.6	74.9	68.1
11:18:00 AM	92.1	54.2	77.9	67
11:19:00 AM	88.7	56.4	74.6	66.2
11:20:00 AM	93.5	51.3	81.2	69.1
11:21:00 AM	84.4	55.3	71.6	64.8
11:22:00 AM	88.8	57.6	75.8	66.8
11:23:00 AM	81.8	55.2	70.1	63.4
11:24:00 AM	90.8	54.4	80.7	67.8
11:25:00 AM	87.3	58.9	73.8	65.1
11:26:00 AM	87	49.4	71.8	63.9

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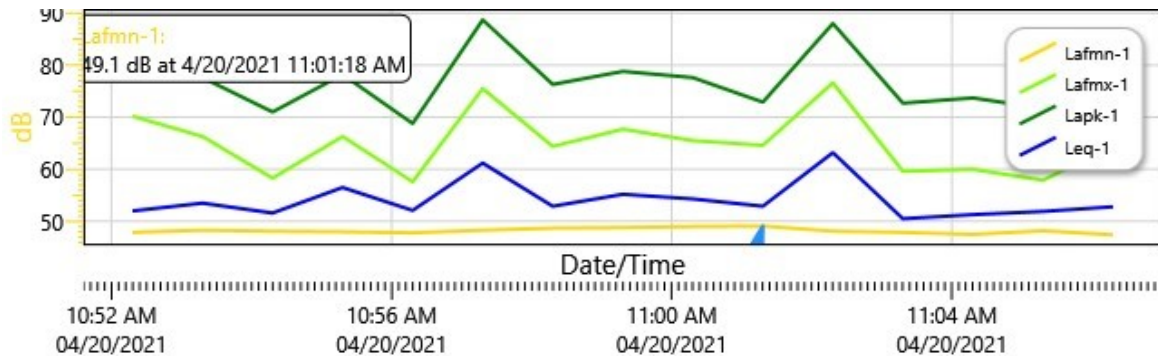
Name	Residences - 727-729 Lillian Way
Comments	Taco truck across the street, City street sweeper
Start Time	4/20/2021 10:51:18 AM
Stop Time	4/20/2021 11:06:43 AM
Run Time	00:15:25
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	56 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF

Logged Data Chart

Residences - 727-729 Lillian Way: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
-----------	--------	---------	---------	-------

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
4/20/2021 10:52:18 AM	82	47.9	70.2	52
10:53:18 AM	77.6	48.3	66.3	53.5
10:54:18 AM	71	48.1	58.3	51.6
10:55:18 AM	78.2	48	66.3	56.5
10:56:18 AM	68.8	47.8	57.6	52.1
10:57:18 AM	88.7	48.3	75.5	61.2
10:58:18 AM	76.3	48.7	64.4	52.9
10:59:18 AM	78.8	48.8	67.7	55.2
11:00:18 AM	77.6	49	65.5	54.3
11:01:18 AM	72.9	49.1	64.6	52.9
11:02:18 AM	88	48.1	76.6	63.2
11:03:18 AM	72.7	47.9	59.6	50.5
11:04:18 AM	73.7	47.5	60	51.3
11:05:18 AM	71.7	48.2	57.9	51.9
11:06:18 AM	75.5	47.4	64.6	52.8

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4/23/2021

Information Panel

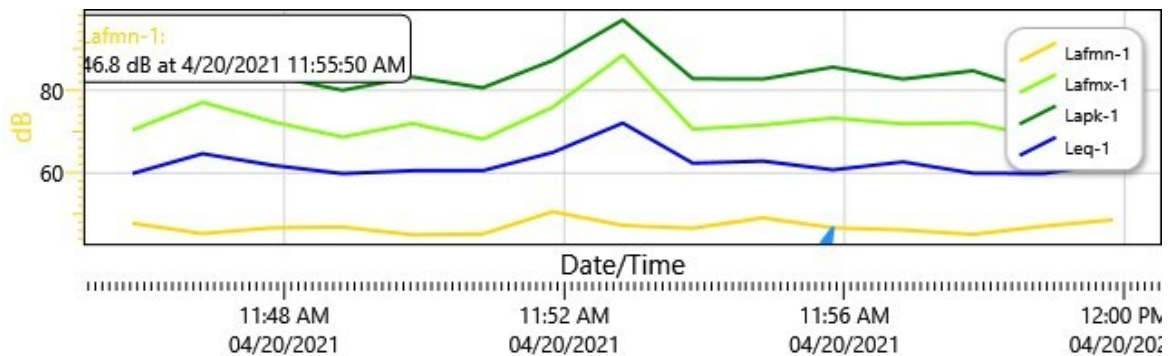
Name	Moonbug Entertainment LA - 742 North Cahuenga Boulevard
Comments	
Start Time	4/20/2021 11:44:50 AM
Stop Time	4/20/2021 12:00:02 PM
Run Time	00:15:12
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	64.1 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	FAST	Bandwidth	1	OFF

Logged Data Chart

Moonbug Entertainment LA - 742 North Cahuenga Boulevard: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
-----------	--------	---------	---------	-------

Date/Time	Lapk-1	Lafmn-1	Lafmx-1	Leq-1
4/20/2021 11:45:50 AM	83	47.9	70.4	59.9
11:46:50 AM	88	45.4	77.1	64.7
11:47:50 AM	83.4	46.8	72.4	61.9
11:48:50 AM	80	47	68.7	59.9
11:49:50 AM	83.2	45.1	72	60.6
11:50:50 AM	80.6	45.3	68.2	60.6
11:51:50 AM	87.2	50.7	75.9	65
11:52:50 AM	97	47.4	88.5	72.1
11:53:50 AM	82.8	46.7	70.6	62.4
11:54:50 AM	82.7	49.2	71.6	62.9
11:55:50 AM	85.6	46.8	73.3	60.8
11:56:50 AM	82.7	46.3	71.9	62.7
11:57:50 AM	84.7	45.2	72.1	60
11:58:50 AM	79.4	47.2	68.6	59.9
11:59:50 AM	85.3	48.7	72	62.4



DOUGLASKIM+ASSOCIATES,LLC

CUMULATIVE CONSTRUCTION NOISE IMPACTS

Noise emissions of industry sources

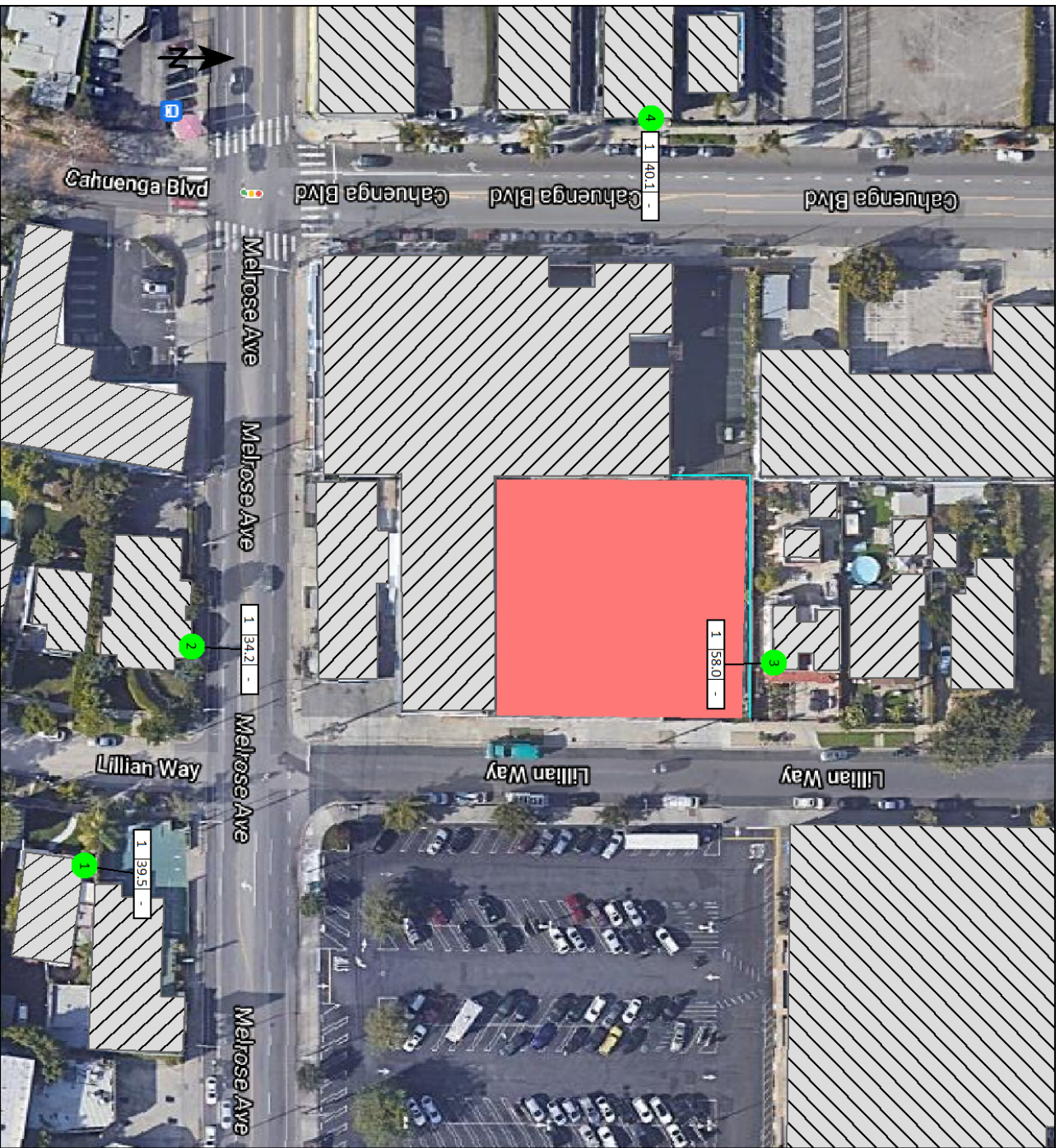
Source name	Size m/m ²	Reference	Level		Corrections		
			Day dB(A)	Night dB(A)	Cwall dB	CI dB	CT dB
Construction Site	1733 m ²	Lw/unit	97.5	-	-	-	-

Receiver list

No.	Receiver name	Coordinates		Building side	Floor	Height abv.grd. m	Limit		Level		Conflict	
		X	Y				Day	Night	Day	Night	Day	Night
		in meter				dB(A)		dB(A)		dB		
1	658 Lillian Way	11377520.03	772180.09	North	GF	86.27	-	-	39.5	0.0	-	-
2	665 Lillian Way	11377482.33	772198.45	North	GF	86.69	-	-	34.2	0.0	-	-
3	727 Lillian Way	11377485.23	772298.50	South	GF	88.20	-	-	58.0	0.0	-	-
4	Cahuenga Lofts	11377391.63	772277.34	East	GF	88.01	-	-	40.1	0.0	-	-
5	Moonbug Entertainment Stud	11377423.73	772356.63	West	GF	88.39	-	-	27.3	0.0	-	-





Contribution levels of the receivers

Source name	Traffic lane	Level	
		Day	Night
		dB(A)	
658 Lillian Way	GF	39.5	0.0
Construction Site	-	39.5	-
665 Lillian Way	GF	34.2	0.0
Construction Site	-	34.2	-
727 Lillian Way	GF	58.0	0.0
Construction Site	-	58.0	-
Cahuenga Lofts	GF	40.1	0.0
Construction Site	-	40.1	-
Moonbug Entertainment Studios	GF	27.3	0.0
Construction Site	-	27.3	-

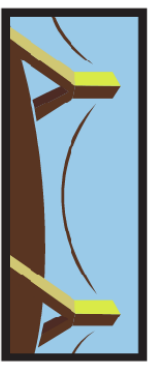


711 Lillian Way

Signs and symbols

-  Wall
-  Building
-  Analyzed Sensitive Receptor
-  Construction Site

1 : 72
 0 13 27 54 81 108
 feet



DOUGLASKIM+ASSOCIATES, LLC

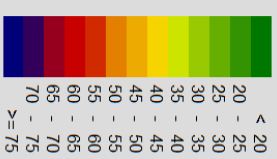


711 Lillian Way

Signs and symbols

-  Wall
-  Building
-  Construction Site

Levels in dB(A)



1 : 72



DOUGLASKIM+ASSOCIATES, LLC

Construction Noise Impacts (without Mitigation)



DOUGLASKIM+ASSOCIATES,LLC

Reference	15.24	meter
Sound Pressure Level	98.7	dBA

Receptor	Existing Leq	Noise	New Leq	Difference Leq	Significant?
Residences - 658 Lillian Way	60.6	39.5	60.6	0.0	No
Residences - 663-665 Lillian Way	67.2	34.2	67.2	0.0	No
Residences - 727 Lillian Way	56.0	58.0	60.1	4.1	No
Cahuenga Lofts	64.1	40.1	64.1	0.0	No
Moonbug Entertainment Studios	64.1	27.3	64.1	0.0	No

OFF-SITE CONSTRUCTION-RELATED TRAVEL VOLUMES



Department of Transportation

Construction Phase	Worker Trips	Vendor Trips	Haul Trips	Total	% of Traffic Volumes
Demolition	10	0	12.0	22	1.1%
Grading	10	0	251.5	261	12.5%
Building Construction	27	32.7		60	2.9%
Architectural Coatings	5	0		5	0.2%
<i>Vendor and Haul trips represent heavy-duty truck trips with a 19.1 Passenger Car Equivalent applied</i>					



DOUGLASKIM+ASSOCIATES,LLC

OPERATIONS NOISE CALCULATIONS

**Hourly Distribution of Entering and Exiting Vehicle Trips
by Land Use**

Source: ITE Trip Generation Manual , 10th Edition

Land Use Code	710	
Land Use	General Office Building	
Setting	General Urban/Suburban	
Time Period	Weekday	
Trip Type	Vehicle	
# Data Sites	16	
	% of 24-Hour Traffic	
Time	Entering	Exiting
12-1 AM	0.2	0.1
1-2 AM	0	0.1
2-3 AM	0	0
3-4 AM	0	0.1
4-5 AM	0.1	0.2
5-6 AM	0.4	0.1
6-7 AM	4.6	0.5
7-8 AM	13.1	1.9
8-9 AM	14.4	3.5
9-10 AM	6.4	4.3
10-11 AM	5.4	5.9
11-12 PM	6.2	10.3
12-1 PM	10.2	10.4
1-2 PM	9.0	6.7
2-3 PM	8.2	6.5
3-4 PM	7.4	8.5
4-5 PM	5.5	15.2
5-6 PM	4.2	15.6
6-7 PM	1.7	2.9
7-8 PM	0.9	2.2
8-9 PM	0.7	1.3
9-10 PM	0.5	1.5
10-11 PM	0.3	2.0
11-12 AM	0.4	0.2

	Hourly Trip	Average Daytime	Average Nighttime
12-1 AM	0.3	0.15	1
1-2 AM	0.1	0.05	0
2-3 AM	0.0	0	0
3-4 AM	0.1	0.05	0
4-5 AM	0.3	0.15	1
5-6 AM	0.5	0.25	1
6-7 AM	5.1	2.55	9
7-8 AM	15.0	7.5	26
8-9 AM	17.9	8.95	31
9-10 AM	10.7	5.35	19
10-11 AM	11.3	5.65	20
11-12 PM	16.5	8.25	29
12-1 PM	20.6	10.3	36
1-2 PM	15.7	7.85	27
2-3 PM	14.7	7.35	26
3-4 PM	15.9	7.95	28
4-5 PM	20.7	10.35	36
5-6 PM	19.8	9.9	34
6-7 PM	4.6	2.3	8
7-8 PM	3.1	1.55	5
8-9 PM	2.0	1	3
9-10 PM	2.0	1	3
10-11 PM	2.3	1.15	4
11-12 AM	0.6	0.3	1
ADT	347		
		27	2



DOUGLASKIM+ASSOCIATES,LLC

TRAFFIC NOISE CALCULATIONS

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vine St & Melrose Ave
City: Hollywood
Control: Signalized

Project ID: 18-05272-063
Date: 5/16/2018

Total

NS/EW Streets:	Vine St				Vine St				Melrose Ave				Melrose Ave				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	27	144	8	0	22	211	43	0	15	111	9	0	7	193	10	0					800
7:15 AM	37	149	11	0	24	181	28	0	19	132	11	0	11	266	10	0					879
7:30 AM	49	181	12	0	18	215	42	0	16	166	22	0	16	284	7	0					1028
7:45 AM	59	188	19	0	44	229	39	0	19	192	17	0	27	206	9	0					1048
8:00 AM	38	214	11	0	28	232	41	0	23	234	21	0	35	220	14	0					1111
8:15 AM	40	207	10	0	55	236	33	0	19	200	18	0	28	214	17	0					1077
8:30 AM	43	182	9	0	49	220	32	0	29	181	12	0	16	199	14	0					986
8:45 AM	29	238	8	0	44	206	42	0	28	178	11	0	14	198	20	0					1016
9:00 AM	34	236	8	0	34	205	68	0	30	151	19	0	13	189	22	0					1009
9:15 AM	26	202	4	0	29	185	71	0	40	162	22	0	19	243	14	0					1017
9:30 AM	29	229	6	1	35	178	66	0	23	142	17	0	17	184	13	0					940
9:45 AM	41	224	13	0	36	217	58	0	30	135	9	0	14	188	11	0					976
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	452	2394	119	1	418	2515	563	0	291	1984	188	0	217	2584	161	0					11887
	15.24%	80.71%	4.01%	0.03%	11.96%	71.94%	16.10%	0.00%	11.81%	80.55%	7.63%	0.00%	7.33%	87.24%	5.44%	0.00%					
PEAK HR :	07:30 AM - 08:30 AM																TOTAL				
PEAK HR VOL :	186	790	52	0	145	912	155	0	77	792	78	0	106	924	47	0					4264
PEAK HR FACTOR :	0.788	0.923	0.684	0.000	0.659	0.966	0.923	0.000	0.837	0.846	0.886	0.000	0.757	0.813	0.691	0.000					0.959
			0.966				0.935				0.852				0.877						
PM	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	TOTAL				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	26	298	9	0	42	222	29	0	29	224	12	0	12	171	20	0	1094				
4:15 PM	18	217	7	0	56	192	24	0	14	227	15	0	18	198	28	0	1014				
4:30 PM	32	253	17	0	59	273	30	0	17	225	12	0	22	164	33	0	1137				
4:45 PM	34	204	11	0	66	204	37	0	14	257	11	0	16	202	33	0	1089				
5:00 PM	28	261	18	0	49	248	32	0	20	205	9	0	14	189	22	0	1095				
5:15 PM	47	241	11	0	55	235	30	0	29	250	12	0	14	197	19	0	1140				
5:30 PM	32	232	14	0	57	230	32	0	21	243	6	0	23	199	28	0	1117				
5:45 PM	37	201	21	0	63	208	25	0	31	258	14	0	16	186	28	0	1088				
6:00 PM	19	288	9	0	57	264	30	0	24	233	18	0	17	208	20	0	1187				
6:15 PM	24	209	15	0	51	262	34	0	16	262	17	0	22	239	26	0	1177				
6:30 PM	29	237	20	0	61	237	24	0	23	235	10	0	18	204	26	0	1124				
6:45 PM	32	228	11	0	66	164	33	0	20	253	14	0	20	224	17	0	1082				
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	358	2869	163	0	682	2739	360	0	258	2872	150	0	212	2381	300	0					13344
	10.56%	84.63%	4.81%	0.00%	18.04%	72.44%	9.52%	0.00%	7.87%	87.56%	4.57%	0.00%	7.33%	82.30%	10.37%	0.00%					
PEAK HR :	05:45 PM - 06:45 PM																TOTAL				
PEAK HR VOL :	109	935	65	0	232	971	113	0	94	988	59	0	73	837	100	0					4576
PEAK HR FACTOR :	0.736	0.812	0.774	0.000	0.921	0.920	0.831	0.000	0.758	0.943	0.819	0.000	0.830	0.876	0.893	0.000					0.964
			0.877				0.937				0.941				0.880						

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vine St & Melrose Ave
City: Hollywood
Control: Signalized

Project ID: 18-05272-063
Date: 5/16/2018

Bikes

NS/EW Streets:	Vine St				Vine St				Melrose Ave				Melrose Ave				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	4
7:30 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4
7:45 AM	1	2	0	0	0	0	0	0	0	0	1	0	0	2	0	0	6
8:00 AM	1	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	4
8:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	5	1	0	8
8:45 AM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
9:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
9:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	3
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	22.22%	72.22%	5.56%	0.00%	16.67%	50.00%	33.33%	0.00%	0.00%	75.00%	25.00%	0.00%	0.00%	92.86%	7.14%	0.00%	42
PEAK HR:	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL:	3	7	0	0	0	1	1	0	0	0	1	0	0	4	0	0	17
PEAK HR FACTOR:	0.750	0.875	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.708
			0.833			0.500				0.250				0.500			
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3
4:15 PM	0	0	0	0	1	3	0	0	1	1	0	0	0	1	0	0	7
4:30 PM	0	2	0	0	0	1	0	0	0	1	0	0	0	1	1	0	6
4:45 PM	0	0	0	0	0	1	1	0	1	3	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	2	6
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	5
6:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:30 PM	1	0	0	0	0	1	0	0	0	2	0	0	0	0	1	0	5
6:45 PM	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	37.50%	62.50%	0.00%	0.00%	30.77%	61.54%	7.69%	0.00%	20.00%	66.67%	13.33%	0.00%	0.00%	55.56%	22.22%	22.22%	45
PEAK HR:	05:45 PM - 06:45 PM																TOTAL
PEAK HR VOL:	1	2	0	0	0	3	0	0	0	2	1	0	0	2	1	0	12
PEAK HR FACTOR:	0.25	0.500	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.250	0.250	0.000	0.600
		0.750				0.375				0.375				0.375			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vine St & Melrose Ave
City: Hollywood

Project ID: 18-05272-063
Date: 5/16/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Vine St		Vine St		Melrose Ave		Melrose Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	2	6	1	1	4	1	4	0	19
7:15 AM	4	7	0	2	4	5	0	1	23
7:30 AM	9	9	1	0	11	9	4	1	44
7:45 AM	4	7	3	5	2	5	6	9	41
8:00 AM	9	10	3	6	6	8	6	2	50
8:15 AM	6	6	1	4	4	4	8	1	34
8:30 AM	12	7	1	4	6	2	2	0	34
8:45 AM	1	6	1	1	5	5	2	5	26
9:00 AM	5	4	1	0	2	1	0	2	15
9:15 AM	1	7	1	1	4	2	2	1	19
9:30 AM	5	14	1	0	2	3	4	0	29
9:45 AM	7	8	5	3	2	2	5	7	39
TOTAL VOLUMES :	EB 65	WB 91	EB 19	WB 27	NB 52	SB 47	NB 43	SB 29	TOTAL 373
APPROACH %'s :	41.67%	58.33%	41.30%	58.70%	52.53%	47.47%	59.72%	40.28%	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	28	32	8	15	23	26	24	13	169
PEAK HR FACTOR :	0.778	0.800	0.667	0.625	0.523	0.722	0.750	0.361	0.845
	0.789		0.639		0.613		0.617		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	12	7	5	1	6	5	6	4	46
4:15 PM	6	10	6	8	9	0	7	7	53
4:30 PM	5	5	8	5	10	10	4	7	54
4:45 PM	7	8	6	10	11	8	11	2	63
5:00 PM	10	8	8	7	12	14	3	5	67
5:15 PM	4	1	4	6	3	2	2	3	25
5:30 PM	4	5	2	1	8	2	4	4	30
5:45 PM	8	11	5	3	12	4	0	3	46
6:00 PM	7	10	4	3	5	3	4	9	45
6:15 PM	9	3	3	7	5	4	3	4	38
6:30 PM	5	8	7	1	6	2	5	4	38
6:45 PM	5	7	2	6	3	3	5	8	39
TOTAL VOLUMES :	EB 82	WB 83	EB 60	WB 58	NB 90	SB 57	NB 54	SB 60	TOTAL 544
APPROACH %'s :	49.70%	50.30%	50.85%	49.15%	61.22%	38.78%	47.37%	52.63%	
PEAK HR :	05:45 PM - 06:45 PM								TOTAL
PEAK HR VOL :	29	32	19	14	28	13	12	20	167
PEAK HR FACTOR :	0.806	0.727	0.679	0.500	0.583	0.813	0.600	0.556	0.908
	0.803		0.825		0.641		0.615		

TRAFFIC VOLUME ADJUSTMENTS

North/South Vine Street
 East/West Melrose Avenue
 Year 2018
 Hour 7-8 AM
 Source https://navigatela.lacity.org/dot/traffic_data/manual_counts/VINE.MELROSE.180516.MAN.pdf



	NB Approach	SB Approach	EB Approach	WB Approach
LT				
TH				
RT				
Total	1028	1212	947	1077

2018	1,028	1,212	947	1,077
2019	1,038	1,224	956	1,088
2020	1,049	1,236	966	1,099
2021	1,059	1,249	976	1,110

	NB Approach	SB Approach	EB Approach	WB Approach		
Auto	891	1,051	821	934	6,048,810	82.5%
MDT	138	163	128	145	940,092	12.8%
HDT	4	4	3	4	25,348	0.3%
Buses	1	2	1	1	9,386	0.1%
MCY	25	29	23	26	167,287	2.3%
Aux	21	25	19	22	142,856	1.9%
Total	1,080	1,274	995	1,132	7,333,779	100.0%

711 LILLIAN WAY PROJECT

Air Quality Technical Report



Prepared by DKA Planning
20445 Prospect Road, Suite C
San Jose, CA 95129
April 2021

AIR QUALITY TECHNICAL REPORT

Introduction

This technical report addresses the air emissions generated by construction and operation of the Proposed Project at 711 Lillian Way in the City of Los Angeles. The analysis evaluates the consistency of the Project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP) and the City's General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are included in the Technical Appendix to this analysis.

Regulatory Framework

Federal

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies. In California, the CCAA is administered by the California Air Resources Board (CARB) at the state level and by the air quality management districts and air pollution control districts at the regional and local levels.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the National Ambient Air Quality Standard (NAAQS). These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

NAAQS have been established for seven major air pollutants: CO (carbon monoxide), NO₂ (nitrogen dioxide), O₃ (ozone), PM_{2.5} (particulate matter, 2.5 microns), PM₁₀ (particulate matter, 10 microns), SO₂ (sulfur dioxide), and Pb (lead).

The Clean Air Act (CAA) requires the USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Title I provisions are implemented for the purpose of attaining NAAQS. The federal standards are summarized in Table 1. The USEPA has classified the Los Angeles County portion of the South Coast Air Basin (Basin) as a nonattainment area for O₃, PM_{2.5}, and Pb.

Table 1
State and National Ambient Air Quality Standards and Attainment Status for LA County

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O ₃)	1-hour	0.09 ppm (180 µg/m ³)	Non-attainment	--	--
	8-hour	0.070 ppm (137 µg/m ³)	N/A ¹	0.070 ppm (137 µg/m ³)	Non-attainment
Respirable Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	Non-attainment	150 µg/m ³	Maintenance
	Annual Arithmetic Mean	20 µg/m ³	Non-attainment	--	--
Fine Particulate Matter (PM _{2.5})	24-hour	--	--	35 µg/m ³	Non-attainment
	Annual Arithmetic Mean	12 µg/m ³	Non-attainment	12 µg/m ³	Non-attainment
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	Attainment	35 ppm (40 mg/m ³)	Maintenance
	8-hour	9.0 ppm (10 mg/m ³)	Attainment	9 ppm (10 mg/m ³)	Maintenance
Nitrogen Dioxide (NO ₂)	1-hour	0.18 ppm (338 µg/m ³)	Attainment	100 ppb (188 µg/m ³)	Maintenance
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Attainment	53 ppb (100 µg/m ³)	Maintenance
Sulfur Dioxide (SO ₂)	1-hour	0.25 ppm (655 µg/m ³)	Attainment	75 ppb (196 µg/m ³)	Attainment
	24-hour	0.04 ppm (105 µg/m ³)	Attainment	--	--
Lead (Pb)	30-day average	1.5 µg/m ³	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m ³	Non-attainment
Visibility Reducing Particles	8-hour	Extinction of 0.07 per kilometer	N/A	No Federal Standards	
Sulfates	24-hour	25 µg/m ³	Attainment	No Federal Standards	
Hydrogen Sulfide (H ₂ S)	1-hour	0.03 ppm (42 µg/m ³)	Unclassified	No Federal Standards	
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m ³)	N/A	No Federal Standards	

¹N/A = not available

Source: CARB, Ambient Air Quality Standards, and attainment status, 2020 (www.arb.ca.gov/desig/adm/adm.htm).

CAA Title II pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet stricter emission standards established by CARB. USEPA adopted multiple tiers of emission standards to reduce emissions from non-road diesel engines (e.g., diesel-powered construction equipment) by integrating engine and fuel controls as a system to gain the greatest emission reductions. The first federal standards (Tier 1) for new non-road (or off-road) diesel engines were adopted in 1994 for engines over 50 horsepower, to be phased-in from 1996 to 2000. On August 27, 1998, USEPA introduced Tier 1 standards for equipment under 37 kW (50 horsepower) and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. The Tier 1 through 3 standards were met through advanced engine design, with no or only limited use of exhaust gas after-treatment (oxidation catalysts). Tier 3 standards for NO_x and hydrocarbon are similar in stringency to the 2004 standards for highway engines. However, Tier 3 standards for particulate matter were never adopted. On May 11, 2004, USEPA signed the final rule introducing Tier 4 emission standards, which were phased-in between 2008 and 2015. The Tier 4 standards require that emissions of particulate matter and NO_x be further reduced by about 90 percent. Such emission reductions are achieved through the use of control technologies—including advanced exhaust gas after-treatment.

State

California Clean Air Act. In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). In California, CCAA is administered by CARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the state requirements of the CAA, administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The State standards are summarized in Table 1.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS thresholds have been achieved. Under the CCAA,

areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the non-desert Los Angeles County portion of the Basin is designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5}.

Toxic Air Contaminant Identification and Control Act. The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. 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, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, 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" [Health and Safety Code Section 39666(f)].

The Toxic Air Contaminant Identification and Control Act also requires CARB to use available information gathered from the Air Toxics "Hot Spots" Information and Assessment Act program to include in the prioritization of compounds. CARB identified particulate emissions from diesel-fueled engines (diesel PM) TACs in August 1998. Following the identification process, CARB was required by law to determine if there is a need for further control, which led to the risk management phase of the program. For the risk management phase, CARB formed the Diesel Advisory Committee to assist in the development of a risk management guidance document and a risk reduction plan. With the assistance of the Diesel Advisory Committee and its subcommittees, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. The Board approved these documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase. During the control measure phase, specific Statewide regulations designed to further reduce diesel PM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions. Breathing H₂S at levels above the state standard could result in exposure to a disagreeable rotten eggs odor. The State does not regulate other odors.

California Air Toxics Program. The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air.¹ In the risk identification step, CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. Since inception of the program, a number of such substances have been listed, including benzene, chloroform, formaldehyde, and particulate emissions from diesel-fueled engines, among

¹ CARB, California Air Toxics Program, www.arb.ca.gov/toxics/toxics.htm, last reviewed by CARB September 24, 2015.

others.² In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants as TACs.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of airborne toxic control measures (ATCMs), both for mobile and stationary sources. In 2004, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In addition to limiting exhaust from idling trucks, CARB adopted regulations on July 26, 2007 for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles to reduce emissions by installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission-controlled models. Implementation is staggered based on fleet size, with the largest operators having begun compliance in 2014.³

Assembly Bill 2588 Air Toxics “Hot Spots” Program. The AB 1807 program is supplemented by the AB 2588 Air Toxics “Hot Spots” program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

Air Quality and Land Use Handbook: A Community Health Perspective. The *Air Quality and Land Use Handbook: A Community Health Perspective* provides important air quality information about certain types of facilities (e.g., freeways, refineries, rail yards, ports) that should be considered when siting sensitive land uses such as residences.⁴ CARB provides recommended site distances from certain types of facilities when considering siting new sensitive land uses. The recommendations are advisory and should not be interpreted as defined “buffer zones.” If a project is within the siting distance, CARB recommends further analysis. Where possible, CARB recommends a minimum separation between new sensitive land uses and existing sources.

Air Quality and Land Use Handbook. CARB published the *Air Quality and Land Use Handbook* (CARB Handbook) on April 28, 2005 to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of

² CARB, Toxic Air Contaminant Identification List, www.arb.ca.gov/toxics/id/taclist.htm, last reviewed by CARB July 18, 2011.

³ CARB, In-Use Off-Road Diesel-Fueled Fleets Regulation, www.arb.ca.gov/msprog/ordiesel/ordiesel.htm, last reviewed by CARB July 28, 2016.

⁴ CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.

CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

California Code of Regulations. The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended or repealed by the state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in CCR Title 13 states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) used during construction shall be limited to five minutes at any location. In addition, Section 93115 in CCR Title 17 states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

Regional (South Coast Air Quality Management District)

The SCAQMD was created in 1977 to coordinate air quality planning efforts throughout Southern California. SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain the CAAQS and NAAQS in the district. SCAQMD has jurisdiction over an area of 10,743 square miles consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The Basin portion of SCAQMD's jurisdiction covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles (including the Project Area), Riverside, and San Bernardino counties. The Basin is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east; and the San Diego County line to the south.

Programs that were developed by SCAQMD to attain and maintain the CAAQS and NAAQS include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases. All projects in the SCAQMD jurisdiction are subject to SCAQMD rules and regulations, including, but not limited to the following:

- Rule 401 Visible Emissions – This rule prohibits an air discharge that results in a plume that is as dark or darker than what is designated as No. 1 Ringelmann Chart by the United States Bureau of Mines for an aggregate of three minutes in any one hour.
- Rule 402 Nuisance – This rule prohibits the discharge of “such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of people or 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 – This rule requires that future projects reduce the amount of particulate matter entrained in the ambient air as a result of fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions from any active operation, open storage pile, or disturbed surface area.

Air Quality Management Plan. The 2016 Air Quality Management Plan (AQMP) was adopted in April 2017 and represents the most updated regional blueprint for achieving federal air quality standards. The 2016 AQMP adapts previously conducted regional air quality analyses to account for the recent unexpected drought conditions and presents a revised approach to demonstrated attainment of the 2006 24-hour PM_{2.5} NAAQS for the Basin. Additionally, the 2016 AQMP relied upon a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures to evaluate strategies for reducing NO_x emissions sufficiently to meet the upcoming ozone deadline standards.

Multiple Air Toxics Exposure Study IV. To date, the most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study IV (MATES-IV).⁵ The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which the SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-IV found that the cancer risk in the region from carcinogenic air pollutants ranges from about 320 to 480 in a million, though OEHHA methodologies place average basinwide risk at 897 in a million. About 90 percent of the risk is attributed to emissions associated with mobile sources, with the remainder attributed to toxics emitted from stationary sources, which include large industrial operations, such as refineries and metal processing facilities, as well as smaller businesses such as gas stations and chrome plating. The results indicate that diesel PM is the major contributor to air toxics risk, accounting on average for about 68 percent of the total risk.

Regional (Southern California Association of Governments)

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements, including the Transportation Conformity Rule and other applicable federal, state, and air district laws and regulations. As the federally designated Metropolitan Planning Organization (MPO) for the six-county Southern California region, SCAG is required by law to ensure that transportation activities “conform” to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. In addition, SCAG is a co-producer, with the SCAQMD, of the transportation strategy and transportation control measure sections of the AQMP for the Air Basin.

SCAG adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) on September 23, 2020.⁶ The RTP/SCS is the transportation and land use component of the region’s air quality plan and aims to address the transportation and air quality impacts of 3.7 million

⁵ The SCAQMD is updating the monitoring, modeling, and analysis for the pending MATES-V study.

⁶ CARB, Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination, June 2016.

additional residents, 1.6 additional households, and 1.6 million additional jobs from 2016 to 2045. The Plan calls for \$639 billion in transportation investments and reducing VMT by 19 percent per capita from 2005 to 2035. The updated plan accommodates 21.3 percent growth in population from 2016 (3,933,800) to 2045 (4,771,300) and a 15.6 percent growth in jobs from 2016 (1,848,300) to 2045 (2,135,900). The regional plan projects several benefits:

- Decreasing drive-along work commutes by three percent
- Reducing per capita VMT by five percent and vehicle hours traveled per capita by nine percent
- Increasing transit commuting by two percent
- Reducing travel delay per capita by 26 percent
- Creating 264,500 new jobs annually
- Reducing greenfield development by 29 percent by focusing on smart growth
- Locating six more percent household growth in High Quality Transit Areas (HQTAs), which concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.
- Locating 15 percent more jobs in HQTAs
- Reducing PM_{2.5} emissions by 4.1 percent
- Reducing GHG emissions by 19 percent by 2035

Local (City of Los Angeles)

City of Los Angeles General Plan Air Quality Element. The Air Quality Element of the City's General Plan was adopted on November 24, 1992, and sets forth the goals, objectives, and policies, which guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals.

The Air Quality Element includes six key goals:

- Goal 1:** Good air quality in an environment of continued population growth and healthy economic structure.
- Goal 2:** Less reliance on single-occupant vehicles with fewer commute and non-work trips.
- Goal 3:** Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand management techniques.
- Goal 4:** Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.
- Goal 5:** Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting.
- Goal 6:** Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

Clean Up Green Up Ordinance. The City of Los Angeles adopted a Clean Up Green Up Ordinance (Ordinance Number 184,245) on April 13, 2016, which among other provisions, includes provisions related to ventilation system filter efficiency in mechanically ventilated buildings. This ordinance added Sections 95.314.3 and 99.04.504.6 to the Los Angeles Municipal Code (LAMC) and amended Section 99.05.504.5.3 to implement building standards and requirements to address cumulative health impacts resulting from incompatible land use patterns.

California Environmental Quality Act. In accordance with CEQA requirements, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses the SCAQMD's *CEQA Air Quality Handbook* and SCAQMD's supplemental online guidance/information for the environmental review of plans and development proposals within its jurisdiction.

Land Use Compatibility. In November 2012, the Los Angeles City Planning Commission (CPC) issued an advisory notice (Zoning Information 2427) regarding the siting of sensitive land uses within 1,000 feet of freeways. The CPC deemed 1,000 feet to be a conservative distance to evaluate projects that house populations considered to be more at-risk from the negative effects of air pollution caused by freeway proximity. The CPC advised that applicants of projects requiring discretionary approval, located within 1,000 feet of a freeway and contemplating residential units and other sensitive uses (e.g., hospitals, schools, retirement homes) perform a Health Risk Assessment (HRA). The Project Site is 1.2 miles southwest of the eastbound mainline of the Hollywood Freeway (US-101).

On April 12, 2018, the City updated its guidance on siting land uses near freeways, resulting in an updated Advisory Notice effective September 17, 2018 requiring all proposed projects within 1,000 feet of a freeway adhere to the Citywide Design Guidelines, including those that address freeway proximity. It also recommended that projects consider avoiding location of sensitive uses like schools, day care facilities, and senior care centers in such projects, locate open space areas as far from the freeway, locate non-habitable uses (e.g., parking structures) nearest the freeway, and screen project sites with substantial vegetation and/or a wall barrier. Requirements for preparing HRAs were removed.

Existing Conditions

Pollutants and Effects

Air quality is defined by ambient air concentrations of seven specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. These specific pollutants, known as "criteria air pollutants," are defined as pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants include carbon monoxide (CO), ground-level ozone (O₃), nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter ten microns or less in diameter (PM₁₀), 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.⁷

Carbon Monoxide (CO). CO is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower

⁷ SCAQMD, Final Program Environmental Impact Report for the 2012 AQMP, December 7, 2012.

the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Ozone (O₃). O₃ is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_x)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. O₃ concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O₃ irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

Nitrogen Dioxide (NO₂). NO₂ is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO₂ also contributes to the formation of PM₁₀. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_x is as a precursor to the formation of ozone.

Sulfur Dioxide (SO₂). Sulfur oxides (SO_x) are compounds of sulfur and oxygen molecules. SO₂ is the pre-dominant form found in the lower atmosphere and is a product of burning sulfur or burning materials that contain sulfur. Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO₂ potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM₁₀ and PM_{2.5}). The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (PM₁₀), and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (PM_{2.5}), can enter the body and become trapped in the nose, throat, and upper respiratory tract. These small particulates can potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀ and PM_{2.5}. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates can become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb). Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

State-Only Criteria Pollutants

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 (SO₄²⁻). Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H₂S). H₂S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. Breathing H₂S at levels above the state standard could result in exposure to a very disagreeable odor.

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. It 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. Billions of pounds of PVC are sold on the global market each year. 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 emissions are historically associated primarily with landfills.

Toxic Air Contaminants (TACs)

TACs refer to a diverse group of “non-criteria” air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular). CARB and OEHHA determine if a substance should be formally identified, or “listed,” as a TAC in California. A complete list of these substances is maintained on CARB's website.⁸

⁸ CARB, Toxic Air Contaminant Identification List, www.arb.ca.gov/toxics/id/taclist.htm, last reviewed by CARB July 18, 2011.

Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the state as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 micrometer (μm)), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 μm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.^{9,10}

Project Site

The Project Site is located within the South Coast Air Basin (the Basin); named so because of its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys or basins below. The 6,745-square-mile Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. It is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east; and the San Diego County line to the south. Ambient pollution concentrations recorded in Los Angeles County portion of the Basin are among the highest in the four counties comprising the Basin. USEPA has classified Los Angeles County as nonattainment areas for O_3 , $\text{PM}_{2.5}$, and lead. This classification denotes that the Basin does not meet the NAAQS for these pollutants. In addition, under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O_3 , PM_{10} , and $\text{PM}_{2.5}$. The air quality within the Basin is primarily influenced by a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, industry, and meteorology.

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial activity, space and water heating, landscaping maintenance, consumer products, and mobile sources primarily consisting of automobile traffic.

Air Pollution Climatology. The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean’s surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cooler surface layer which inhibits the pollutants from dispersing upward. Light winds during the summer further limit ventilation. Additionally, abundant sunlight triggers photochemical reactions which produce O_3 and the majority of particulate matter.

⁹ CARB, Overview: Diesel Exhaust and Health, www.arb.ca.gov/research/diesel/diesel-health.htm, last reviewed by CARB April 12, 2016.

¹⁰ CARB, Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, March 2008.

Air Monitoring Data. The SCAQMD monitors air quality conditions at 38 source receptor areas (SRA) throughout the Basin. The Project Site is located in SCAQMD's Central Los Angeles receptor area. Historical data from the area was used to characterize existing conditions in the vicinity of the Project area. Table 2 shows pollutant levels, State and federal standards, and the number of exceedances recorded in the area from 2017 through 2019. The one-hour State standard for O₃ was exceeded eight times during this three-year period while the federal standard was exceeded 20 times in that period. In addition, the daily State standard for PM₁₀ was exceeded 75 times, with a substantial reduction in exceedances in 2019. The daily federal standard for PM_{2.5} was nine times. CO, NO₂, and SO₂ levels did not exceed the CAAQS from 2017 to 2019 for 1-hour (and 8-hour for CO).

**Table 2
Ambient Air Quality Data**

Pollutants and State and Federal Standards	Maximum Concentrations and Frequencies of Exceedance Standards		
	2017	2018	2019
Ozone (O₃)			
Maximum 1-hour Concentration (ppm)	0.116	0.098	0.080
Days > 0.09 ppm (State 1-hour standard)	6	2	0
Days > 0.070 ppm (Federal 8-hour standard)	14	4	2
Carbon Monoxide (CO₂)			
Maximum 1-hour Concentration (ppm)	1.9	2.0	2.0
Days > 20 ppm (State 1-hour standard)	0	0	0
Maximum 8-hour Concentration (ppm)	1.6	1.7	1.6
Days > 9.0 ppm (State 8-hour standard)	0	0	0
Nitrogen Dioxide (NO₂)			
Maximum 1-hour Concentration (ppm)	0.0806	0.0701	0.0697
Days > 0.18 ppm (State 1-hour standard)	0	0	0
PM₁₀			
Maximum 24-hour Concentration (µg/m ³)	96	81	62
Days > 50 µg/m ³ (State 24-hour standard)	41	31	3
PM_{2.5}			
Maximum 24-hour Concentration (µg/m ³)	44.4	49.2	43.5
Days > 35 µg/m ³ (Federal 24-hour standard)	5	3	1
Sulfur Dioxide (SO₂)			
Maximum 24-hour Concentration (ppb)	5.7	17.9	10.0
Days > 0.04 ppm (State 24-hour standard)	0	0	0
ppm = parts by volume per million of air. µg/m ³ = micrograms per cubic meter. N/A = not available at this monitoring station. Source: SCAQMD annual monitoring data at Central LA subregion (http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year) accessed April 20, 2021.			

Existing Health Risk in the Surrounding Area. Based on the MATES-IV model, the calculated cancer risk in the Project area is approximately 1,245 in a million.¹¹ The cancer risk in this area is predominately related to nearby sources of diesel particulate matter (e.g., diesel trucks and traffic on the Hollywood Freeway 1.2 miles to the northeast). In general, the risk at the Project Site is higher than the average across the South Coast Air Basin.

The Office of Environmental Health Hazard Assessment, on behalf of the California Environmental Protection Agency (CalEPA), provides a screening tool called CalEnviroScreen that can be used to help identify California communities disproportionately burdened by multiple sources of pollution. According to CalEnviroScreen, the Project Site is located in the 85-90th percentile, which means the Project Site has an overall environmental pollution burden higher than 85 percent of other communities within California.¹²

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 California Air Resources Board (CARB) has identified the following groups who are most likely to be affected by 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, sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The Project Site is located along a commercial corridor. Sensitive receptors within 1,000 feet of the Project Site include, but are not limited to, the following representative sampling that are generally located on residential side streets:

- Residences, 727 Lillian Way; five feet north of the Project Site.
- Residences, 658 Lillian Way; 240 feet south of the Project Site.
- Residences, 665 Lillian Way; 165 feet south of the Project Site.
- Cahuenga Lofts, 717 North Cahuenga Boulevard, 200 feet west of the Project Site.

Existing Project Site Emissions. The Project Site is a vacant lot and as such, does not generate any anthropogenic emissions.

Project Impacts

Methodology

The air quality analysis conducted for the 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 2016.3.2) as a tool for quantifying emissions of air

¹¹ SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV), MATES IV Interactive Carcinogenicity Map, 2015, <https://scaqmd-online.maps.arcgis.com/apps/webappviewer/index.html?id=470c30bc6daf4ef6a43f0082973ff45f>, accessed April 20, 2021.

¹² Office of Environmental Health Hazard Assessment, CalEnviroScreen 3.0 MAP, <https://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=4560cfbce7c745c299b2d0cbb07044f5>, accessed April 20, 2021.

pollutants that will be generated by constructing and operating development projects. The analyses focuses on the potential change in air quality conditions due to Project implementation. Air pollutant emissions would result from both construction and operation of the Project. Specific methodologies used to evaluate these emissions are discussed below.

Construction. Sources of air pollutant emissions associated with construction activities include heavy-duty off-road diesel equipment and vehicular traffic to and from the Project construction site. Project-specific information was provided describing the schedule of construction activities and the equipment inventory required from the Applicant. Details pertaining to the schedule and equipment can be found in the Technical Appendix to this analysis. The CalEEMod model provides default values for daily equipment usage rates and worker trip lengths, as well as emission factors for heavy-duty equipment, passenger vehicles, and haul trucks that have been derived by the CARB. Maximum daily emissions were quantified for each construction activity based on the number of equipment and daily hours of use, in addition to vehicle trips to and from the Project Site.

The SCAQMD recommends that air pollutant emissions be assessed for both regional scale and localized impacts. The regional emissions analysis includes both on-site and off-site sources of emissions, while the localized emissions analysis focuses only on sources of emissions that would be located on the Project Site.

Localized impacts were analyzed in accordance with the SCAQMD Localized Significance Threshold (LST) methodology.¹³ The localized effects from on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to the SCAQMD's localized significance thresholds (LST) methodology, which uses on-site mass emission look-up tables and Project-specific modeling, where appropriate.¹⁴ SCAQMD provides LSTs applicable to the following criteria pollutants: NO_x, CO, PM₁₀, and PM_{2.5}. SCAQMD does not provide an LST for SO₂ since land use development projects typically result in negligible construction and long-term operation emissions of this pollutant. Since VOCs are not a criteria pollutant, there is no ambient standard or SCAQMD LST for VOCs. Due to the role VOCs play in O₃ formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to 5 acres. If the project exceeds the LST look-up values, then the SCAQMD recommends that project-specific air quality modeling must be performed. Please refer to **Threshold b** below, for the analysis of localized impacts from on-site construction activities. In accordance with SCAQMD guidance, maximum daily emissions of NO_x, CO, PM₁₀, and PM_{2.5} from on-site sources during each construction activity were compared to LST values for a one-acre site having sensitive receptors within 25 meters (82 feet).¹⁵

¹³ SCAQMD, Final Localized Significance Methodology, revised July 2008.

¹⁴ SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-Up Table, October 2009.

¹⁵ SCAQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, 2008.

The Basin is divided into 38 SRAs, each with its own set of maximum allowable LST values for on-site emissions sources during construction and operations based on locally monitored air quality. Maximum on-site emissions resulting from construction activities were quantified and assessed against the applicable LST values.

The significance criteria and analysis methodologies in the SCAQMD's CEQA Air Quality Handbook were used in evaluating impacts in the context of the CEQA significance criteria listed below. The SCAQMD localized significance thresholds (LSTs) for NO₂, CO, and PM₁₀ were initially published in June 2003 and revised in July 2008.¹⁶ The LSTs for PM_{2.5} were established in October 2006.¹⁷ Updated LSTs were published on the SCAQMD website on October 21, 2009.¹⁸ Table 3 presents the significance criteria for both construction and operational emissions.

**Table 3
SCAQMD Emissions Thresholds**

Criteria Pollutant	Construction Emissions		Operation Emissions
	Regional	Localized /a/	
Volatile Organic Compounds (VOC)	75	--	55
Nitrogen Oxides (NO _x)	100	74	55
Carbon Monoxide (CO)	550	680	550
Sulfur Oxides (SO _x)	150	--	150
Respirable Particulates (PM ₁₀)	150	5	150
Fine Particulates (PM _{2.5})	55	3	55
<i>/a/ Localized significance thresholds assumed a 1-acre and 25-meter (82-foot) receptor distance in the Central LA source receptor area. The SCAQMD has not developed LST values for VOC or SO_x. Pursuant to SCAQMD guidance, sensitive receptors closer than 25 meters to a construction site are to use the LSTs for receptors at 25 meters (SCAQMD Final Localized Significance Threshold Methodology, June 2008).</i> Source: SCAQMD.			

Operations. CalEEMod also generates estimates of daily and annual emissions of air pollutants resulting from future operation of a project. Operational emissions of air pollutants are produced by mobile sources (vehicular travel) and stationary sources (utilities demand). The Project Site is serviced by the Los Angeles Department of Water and Power (LADWP), for which CalEEMod has derived default emissions factors for electricity and natural gas usage that are applied to the size and land use type of the Project in question. CalEEMod also generates estimated operational emissions associated water use, wastewater generation, and solid waste disposal.

Similar to construction, SCAQMD's CalEEMod software was used for the evaluation of Project emissions during operation. CalEEMod was used to calculate on-road fugitive dust, architectural coatings, landscape equipment, energy use, mobile source, and stationary source emissions. To determine if a significant air quality impact would occur, the net increase in regional and local operational emissions

¹⁶ SCAQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, 2008.

¹⁷ SCAQMD, Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds, October 2006.

¹⁸ SCAQMD, Final Localized Significance Threshold Methodology Appendix C – Mass Rate LST Look-Up Tables, October 21, 2009.

generated by the Project was compared against the SCAQMD's significance thresholds.¹⁹ Details describing the operational emissions of the Project can be found in in the Technical Appendix.

Toxic Air Contaminants Impacts (Construction and Operations). Potential TAC impacts are evaluated by conducting a qualitative analysis consistent with the CARB Handbook followed by a more detailed analysis (i.e., dispersion modeling), as necessary. The qualitative analysis consists of reviewing the Project to identify any new or modified TAC emissions sources. If the qualitative evaluation does not rule out significant impacts from a new source, or modification of an existing TAC emissions source, a more detailed analysis is conducted.

Thresholds of Significance

State CEQA Guidelines Appendix G

Would the Project:

- a) *Conflict with or obstruct implementation of the applicable air quality plan;*
- b) *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;*
- c) *Expose sensitive receptors to substantial pollutant concentrations; or*
- d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

City and SCAQMD Thresholds

For this analysis the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations recommended by the City of Los Angeles and SCAQMD Thresholds, as appropriate, to assist in answering the Appendix G Threshold questions.

(a) Construction

The City recommends that determination of significance be made on a case-by-case basis, considering the following criteria to evaluate construction-related air emissions:

(i) Combustion Emissions from Construction Equipment

- Type, number of pieces and usage for each type of construction equipment;
- Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
- Emission factors for each type of equipment.

(ii) Fugitive Dust—Grading, Excavation and Hauling

¹⁹ SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015. SCAQMD based these thresholds, in part on the federal Clean Air Act and, to enable defining "significant" for CEQA purposes, defined the setting as the South Coast Air Basin. (See SCAQMD, CEQA Air Quality Handbook, April 1993, pp. 6-1-6-2).

- Amount of soil to be disturbed on-site or moved off-site;
- Emission factors for disturbed soil;
- Duration of grading, excavation and hauling activities;
- Type and number of pieces of equipment to be used; and
- Projected haul route.

(iii) *Fugitive Dust—Heavy-Duty Equipment Travel on Unpaved Road*

- Length and type of road;
- Type, number of pieces, weight and usage of equipment; and
- Type of soil.

(iv) *Other Mobile Source Emissions*

- Number and average length of construction worker trips to Project Site, per day; and
- Duration of construction activities.

In addition, the following criteria set forth in the SCAQMD's *CEQA Air Quality Handbook* serve as quantitative air quality standards to be used to evaluate project impacts under the Appendix G Thresholds. Under these thresholds, a significant threshold would occur when:²⁰

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 100 pounds per day for NO_x; (2) 75 pounds a day for VOC; (3) 150 pounds per day for PM₁₀ or SO_x; (4) 55 pounds per day for PM_{2.5}; and (5) 550 pounds per day for CO.
- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm [23,000 µg/m³] over a 1-hour period or 9.0 ppm [10,350 µg/m³] averaged over an 8-hour period) and NO₂ (0.18 ppm [339 µg/m³] over a 1-hour period, 0.1 ppm [188 µg/m³] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [57 µg/m³] averaged over an annual period).
- Maximum on-site localized PM₁₀ or PM_{2.5} emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed the incremental 24-hour threshold of 10.4 µg/m³ or 1.0 µg/m³ PM₁₀ averaged over an annual period.

(b) *Operation*

The City bases the determination of significance of operational air quality impacts on criteria set forth in the SCAQMD's *CEQA Air Quality Handbook*.²¹ As discussed above, the City uses Appendix G as the thresholds of significance for this analysis. Accordingly, the following serve as quantitative air quality

²⁰ SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015.

²¹ SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015.

standards to be used to evaluate project impacts under the Appendix G thresholds. Under these thresholds, a significant threshold would occur when:

- Operational emissions exceed 10 tons per year of volatile organic gases or any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for VOC;²² (2) 55 pounds per day for NO_x; (3) 550 pounds per day for CO; (4) 150 pounds per day for SO_x; (5) 150 pounds per day for PM₁₀; and (6) 55 pounds per day for PM_{2.5}.²³
- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 parts per million (ppm) over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO₂ (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period).²⁴
- Maximum on-site localized operational PM₁₀ and PM_{2.5} emissions exceed the incremental 24-hour threshold of 2.5 µg/m³ or 1.0 µg/m³ PM₁₀ averaged over an annual period.²⁵
- The Project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively; or
- The Project creates an odor nuisance pursuant to SCAQMD Rule 402.

(c) *Toxic Air Contaminants*

The City recommends that the determination of significance shall be made on a case-by-case basis, considering the following criteria to evaluate TACs:

- Would the project use, store, or process carcinogenic or non-carcinogenic toxic air contaminants which could result in airborne emissions?

In assessing impacts related to TACs in this section, the City uses Appendix G as the thresholds of significance. The criteria identified above will be used where applicable and relevant to assist in analyzing the Appendix G thresholds. In addition, the following criteria set forth in the SCAQMD's *CEQA Air Quality Handbook* serve as quantitative air quality standards to be used to evaluate project impacts under Appendix G thresholds. Under these thresholds, a significant threshold would occur when:²⁶

²² For purposes of this analysis, emissions of VOC and reactive organic compounds (ROG) are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.

²³ SCAQMD Air Quality Significance Thresholds, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf, last updated March 2015.

²⁴ SCAQMD, Final Localized Significance Threshold Methodology, revised July 2008.

²⁵ SCAQMD, Final—Methodology to Calculate Particulate Matter (PM) 2.5 and PM_{2.5} Significance Thresholds, October 2006.

²⁶ SCAQMD, *CEQA Air Quality Handbook*, April 1993, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants).

- The Project results in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0.²⁷ For projects with a maximum incremental cancer risk between 1 in one million and 10 in one million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

(d) *Consistency with Applicable Air Quality Plans*

CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. This analysis is conducted to assess potential project impacts against Threshold (a) from the Appendix G thresholds. In accordance with the SCAQMD's *CEQA Air Quality Handbook*, the following criteria are used to evaluate a project's consistency with the AQMP.²⁸

- Will the Project result in any of the following:
 - An increase in the frequency or severity of existing air quality violations;
 - Cause or contribute to new air quality violations; or
 - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Will the Project exceed the assumptions utilized in preparing the AQMP?
 - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
 - Does the Project include air quality mitigation measures; or
 - To what extent is Project development consistent with the AQMP land use policies?

The Project's impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's AQMP and SCAG regional plans and policies. In addition, the Project's consistency with the City of Los Angeles General Plan Air Quality Element is discussed.

Project Design Features. The Project would comply with the 2019 Los Angeles Green Building Code (LAGBC),²⁹ which builds upon and sets higher standards than those in the 2019 California Green Building Standards Code (CalGreen, effective January 1, 2020).³⁰ Further energy efficiency and sustainability features would include native plants and drip/subsurface irrigation systems, individual metering or sub metering for water use, leak detection systems, and electric vehicle charging capacity.

The Project's infill location would promote the concentration of development in an urban location with extensive infrastructure and access to public transit service on Melrose Avenue and La Brea Avenue, 220 feet to the west. The Project's proximity to public transportation would reduce vehicle miles traveled

²⁷ Hazard index is the ratio of a toxic air contaminant's concentration divided by its Reference Concentration, or safe exposure level. If the hazard index exceeds one, people are exposed to levels of TACs that may pose noncancer health risks.

²⁸ SCAQMD, *CEQA Air Quality Handbook*, April 1993, p. 12-3.

²⁹ LA Department of Building and Safety: <http://ladbs.org/forms-publications/forms/green-building>

³⁰ California Building Codes: <http://www.bsc.ca.gov/Codes.aspx>

for workers and visitors. The Project would also promote bicycling by replacing ten percent of the required vehicle parking with bicycle parking spaces pursuant to LAMC section 12.21 A.4.

Analysis of Project Impacts

a. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The Project's air quality emissions would not exceed any state or federal standards. Therefore, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any of the state and federal standards, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.

With respect to the determination of consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016–2040 RTP/SCS regarding population, housing, and growth trends. Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with applicable population, housing, and employment growth projections; (2) project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis with respect to each of these three criteria.

- Is the project consistent with the population, housing, and employment growth projections upon which AQMP forecasted emission levels are based?

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City of Los Angeles General Plan and SCAG's RTP. The General Plan serves as a comprehensive, long-term plan for future development of the City.

The 2020–2045 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review.

The Project would include 31,419 square feet of general office uses that would generate about 98 on-site jobs.³¹ This would represent less than 0.05 percent of jobs accommodated in the 2016-2040 RTP/SCS and 0.03 percent of jobs projected in the 2020-2045 RTP/SCS. As such, this de minimis increase in employment would contribute negligibly to regional job growth and would be consistent with the region's assumptions about incremental growth.

- Does the project implement feasible air quality mitigation measures?

As discussed below under Thresholds (b), (c), and (d), the Project would not result in any significant air quality impacts and therefore would not require mitigation. In addition, the Project would comply with all applicable regulatory standards as required by SCAQMD. Furthermore, with compliance with the

³¹ Southern California Association of Governments, Employment Density Study; October 31, 2001. Assumes 319 square feet per employee for low-rise office uses.

regulatory requirements identified above, no significant air quality impacts would occur. As such, the proposed Project meets this AQMP consistency criterion.

- To what extent is project development consistent with the land use policies set forth in the AQMP?

With regard to land use developments such as the Project, the AQMP's air quality policies focus on the reduction of vehicle trips and vehicle miles traveled (VMT). The Project would serve to implement a number of land use policies of the City of Los Angeles, SCAQMD, and SCAG. The Project would be designed and constructed to support and promote environmental sustainability. The Project represents an infill development within an existing urbanized area that would concentrate more jobs within a high quality transit area (HQTA). "Green" principles are incorporated throughout the Project to comply with the City of Los Angeles Green Building Code and the California Green Building Standards Code (CALGreen) through energy conservation, water conservation, and waste reduction features.

The air quality plan applicable to the Project area is the 2016 AQMP. The 2016 AQMP is the SCAQMD plan for improving regional air quality in the Basin. The 2016 AQMP is the current management plan for continued progression toward clean air and compliance with State and federal requirements. It includes a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources, and area sources. The 2016 AQMP also incorporates current scientific information and meteorological air quality models. It also updates the federally approved 8-hour O₃ control plan with new commitments for short-term NO_x and VOC reductions. The 2016 AQMP includes short-term control measures related to facility modernization, energy efficiency, good management practices, market incentives, and emissions growth management.

As demonstrated in the following analyses, the Project would not result in significant regional emissions. The 2016 AQMP adapts previously conducted regional air quality analyses to account for the recent unexpected drought conditions and presents a revised approach to demonstrated attainment of the 2006 24-hour PM_{2.5} NAAQS for the Basin. Directly applicable to the Project, the 2016 AQMP proposes robust NO_x reductions from residential appliances. The Project would be required to comply with all new and existing regulatory measures set forth by the SCAQMD. Implementation of the Project would not interfere with air pollution control measures listed in the 2016 AQMP.

The Project Site is classified as "Medium Residential" in the General Plan Framework and the Community Plan, a classification that allows general office uses such as those proposed by the Project. As such, the RTP/SCS' assumptions about growth in the City accommodate job growth on the Project Site. As a result, the Project would be consistent with the growth assumptions in the City's General Plan. Because the AQMP accommodates growth forecasts from local General Plans, the emissions associated with this Project are accounted for and mitigated in the region's air quality attainment plans. The air quality impacts of development on the Project Site are accommodated in the region's emissions inventory for the 2020 RTP/SCS and 2016 AQMP. Therefore, Project impacts with respect to AQMP consistency would be less than significant.

City of Los Angeles Policies

The Project would offer convenient access to public transit and opportunities for walking and biking (including the provision of bicycle parking), thereby facilitating a reduction in VMT. In addition, the Project would be consistent with the existing land use pattern in the vicinity that concentrates urban density along major arterials and near transit options based on the following:

- The Project Site is considered a Transit Oriented Communities (TOC) Tier 1 location based on the shortest distance between any point on the lot and a qualified Major Transit Stop at the intersection of Melrose Avenue and Cahuenga Boulevard, one block northwest of the Project Site.³²
- Transit services include bus stops at Melrose Avenue and La Brea that provide access to Los Angeles County Metropolitan Transportation Authority (Metro) bus line 10.
- The Project Site is considered a “Walker’s Paradise”, scoring 94 of 100 points.³³
- The Project would also promote bicycle transportation by providing six long-term bicycle parking spaces and three short-term bicycle parking spaces. Bicyclists could also use the Class II sharrows on Vine Street one block to the east.

The City’s General Plan Air Quality Element identifies 30 policies with specific strategies for advancing the City’s clean air goals. As illustrated in Table 4, the Project is consistent with the applicable policies in the Air Quality Element, as the Project would implement sustainability features that would reduce vehicular trips, reduce VMT, and encourage the use of alternative modes of transportation. Therefore, the Project would result in a less than significant impact related to consistency with the Air Quality Element.

Table 4
Project Consistency with City of Los Angeles General Plan Air Quality Element

Strategy	Project Consistency
Policy 1.3.1. Minimize particulate emissions from construction sites.	Consistent. The Project would minimize particulate emissions during construction through best practices and/or SCAQMD rules (e.g., Rule 403, Fugitive Dust).
Policy 1.3.2. Minimize particulate emissions from unpaved roads and parking lots associated with vehicular traffic.	Consistent. The Project would minimize particulate emissions from unpaved facilities through best practices and/or SCAQMD rules.
Policy 2.1.1. Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling related facilities in order to reduce vehicle trips and/or VMT as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.	Consistent. Workers would have access to Metro local bus line 10 served by a bus stops at Melrose Avenue and Cahuenga Boulevard. The Project Site is considered a “Walker’s Paradise”, scoring 94 of 100 points. The Project would also promote bicycle transportation by providing six long-term bicycle parking spaces and three short-term bicycle parking spaces, with access to Vine Street one block east that has bike sharrows for cyclists.
Policy 2.1.2. Facilitate and encourage the use of telecommunications (i.e., telecommuting) in both the public and private sectors, in order to reduce work trips.	Consistent. Office workers are among the most likely to use telecommuting in place of commuting to the workplace. A June 2020 study by the National Bureau of Economic Research found that 37 percent of jobs can be performed entirely from home (https://www.nber.org/papers/w26948).

³² Major Transit Stop is a site containing a rail station or the intersection of two or more bus routes with a service interval of 15 minutes or less during the morning and afternoon peak commute periods. The stations or bus routes may be existing, under construction or included in the most recent Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP).

³³ Walk Score website, <https://www.walkscore.com/score/711-lillian-way-los-angeles-ca-90038>

**Table 4
Project Consistency with City of Los Angeles General Plan Air Quality Element**

Strategy	Project Consistency
Policy 2.2.1. Discourage single-occupant vehicle use through a variety of measures such as market incentive strategies, mode-shift incentives, trip reduction plans and ridesharing subsidies.	Consistent. The Project Site will provide incentives for workers to use alternatives to driving. Metro local bus line 10 served by a bus stops at Melrose Avenue and Cahuenga Boulevard. The Project Site is considered a “Walker’s Paradise”, scoring 94 of 100 points. The Project would also promote bicycle transportation by providing six long-term bicycle parking spaces and three short-term bicycle parking spaces, with access to Vine Street one block east that has bike sharrows for cyclists.
Policy 2.2.2. Encourage multi-occupant vehicle travel and discourage single-occupant vehicle travel by instituting parking management practices.	Consistent. As a TOC Tier 1 location, the Project is allowed reduced parking for the proposed office uses. This will discourage vehicle use and car ownership by definition and promote use of public transit and active transportation (i.e., walking or bicycling).
Policy 2.2.3. Minimize the use of single-occupant vehicles associated with special events or in areas and times of high levels of pedestrian activities.	Not Applicable. The Project would not include facilities for special events.
Policy 3.2.1. Manage traffic congestion during peak hours.	Consistent. The Project Site will provide incentives for workers to use alternatives to driving. Metro local bus line 10 served by a bus stops at Melrose Avenue and Cahuenga Boulevard. The Project Site is considered a “Walker’s Paradise”, scoring 94 of 100 points. The Project would also promote bicycle transportation by providing six long-term bicycle parking spaces and three short-term bicycle parking spaces, with access to Vine Street one block east that has bike sharrows for cyclists.
Policy 4.1.1. Coordinate with all appropriate regional agencies on the implementation of strategies for the integration of land use, transportation, and air quality policies.	Consistent. The Project is being entitled through the City of Los Angeles, which coordinates with SCAG, Metro, and other regional agencies on the coordination of land use, air quality, and transportation policies.
Policy 4.1.2. Ensure that project level review and approval of land use development remains at the local level.	Consistent. The Project would be entitled and environmentally cleared at the local level.
Policy 4.2.1. Revise the City’s General Plan/Community Plans to achieve a more compact, efficient urban form and to promote more transit-oriented development and mixed-use development.	Not Applicable. This policy calls for City updates to its General Plan.
Policy 4.2.2. Improve accessibility for the City’s residents to places of employment, shopping centers and other establishments.	Consistent. The Project would be infill development that would provide the City’s residents with proximate access to jobs and services at this Project Site.
Policy 4.2.3. Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.	Consistent. The Project Site will provide incentives for workers to use alternatives to driving. Metro local bus line 10 served by a bus stops at Melrose Avenue and

**Table 4
Project Consistency with City of Los Angeles General Plan Air Quality Element**

Strategy	Project Consistency
	Cahuenga Boulevard. The Project Site is considered a “Walker’s Paradise”, scoring 94 of 100 points. The Project would also promote bicycle transportation by providing six long-term bicycle parking spaces and three short-term bicycle parking spaces, with access to Vine Street one block east that has bike sharrows for cyclists.
Policy 4.2.4. Require that air quality impacts be a consideration in the review and approval of all discretionary projects.	Consistent. The Project’s air quality impacts are analyzed in this document, and as discussed herein, all impacts with respect to air quality would be less than significant.
Policy 4.2.5. Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.	Consistent. The Project Site will provide incentives for workers to use alternatives to driving. Metro local bus line 10 served by a bus stops at Melrose Avenue and Cahuenga Boulevard. The Project Site is considered a “Walker’s Paradise”, scoring 94 of 100 points. The Project would also promote bicycle transportation by providing six long-term bicycle parking spaces and three short-term bicycle parking spaces, with access to Vine Street one block east that has bike sharrows for cyclists.
Policy 4.3.1. Revise the City’s General Plan/Community Plans to ensure that new or relocated sensitive receptors are located to minimize significant health risks posed by air pollution sources.	Not Applicable. This policy calls for City updates to its General Plan.
Policy 4.3.2. Revise the City’s General Plan/Community Plans to ensure that new or relocated major air pollution sources are located to minimize significant health risks to sensitive receptors.	Not Applicable. This policy calls for City updates to its General Plan.
Policy 5.1.1. Make improvements in Harbor and airport operations and facilities in order to reduce air emissions.	Not Applicable. This policy calls for cleaner operations of the City’s water port and airport facilities.
Policy 5.1.2. Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations.	Not Applicable. This policy calls for cleaner operations of the City’s buildings and operations.
Policy 5.1.3. Have the Department of Water and Power make improvements at its in-basin power plants in order to reduce air emissions.	Not Applicable. This policy calls for cleaner operations of the City’s Water and Power energy plants.
Policy 5.1.4. Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.	Consistent. The Project would be consistent with this policy by complying with Title 24, CALGreen, and other requirements to reduce solid waste and energy consumption.
Policy 5.2.1. Reduce emissions from its own vehicles by continuing scheduled maintenance, inspection and vehicle replacement programs;	Not Applicable. This policy calls for the City to gradually reduce the fleet emissions inventory from its vehicles through use of alternative fuels, improved

Table 4
Project Consistency with City of Los Angeles General Plan Air Quality Element

Strategy	Project Consistency
by adhering to the State of California’s emissions testing and monitoring programs; by using alternative fuel vehicles wherever feasible, in accordance with regulatory agencies and City Council policies.	maintenance practices, and related operational improvements.
Policy 5.3.1. Support the development and use of equipment powered by electric or low-emitting fuels.	Consistent. The Project would be designed to meet the applicable requirements of the State Green Building Standards Code and the City of Los Angeles’ Green Building Code.
Policy 6.1.1. Raise awareness through public-information and education programs of the actions that individuals can take to reduce air emissions.	Not Applicable. This policy calls for the City to promote clean air awareness through its public awareness programs.
Source: DKA Planning, 2021.	

b. 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?

Less Than Significant Impact.

Construction

A cumulatively considerable net increase would occur if the project’s construction impacts substantially contribute to air quality violations when considering other projects that may undertake construction activities at the same time. Projects that do not exceed SCAQMD’s significance thresholds would not contribute considerably to any potential cumulative impact. SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions.

Construction-related emissions were estimated using the SCAQMD’s CalEEMod 2016.3.2 model and a projected construction schedule of approximately 14 months (Table 5).

Table 5
Construction Schedule Assumptions

Phase	Duration	Notes
Demolition	Month 1 (two weeks)	Removal of 20,250 square feet of asphalt, concrete, and other materials.
Grading	Months 1-2 (six weeks)	Up to 20,000 cubic yards of soil export hauled over 31 working days up to 40 miles away in 14-cubic yard capacity trucks
Building Construction	Months 3-14	
Architectural Coatings	Months 12-14	Concurrent with completion of building construction
Source: DKA Planning, 2021.		

The Project would be required to comply with the following regulations, as applicable:

- SCAQMD Rule 403, would reduce the amount of particulate matter entrained in ambient air as a result of anthropogenic fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.
- SCAQMD Rule 1113, which limits the VOC content of architectural coatings.
- SCAQMD Rule 402, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials 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.
- In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (with gross vehicle weight over 10,000 pounds) during construction would be limited to five minutes at any location.
- In accordance with Section 93115 in Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines would meet specific fuel and fuel additive requirements and emissions standards.

Regional Emissions

Construction activity creates air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the Project Site. Fugitive dust emissions would primarily result from grading activities. NO_x emissions would primarily result from the use of construction equipment and truck trips. During the building finishing phase, paving and the application of architectural coatings (e.g., paints) would potentially release VOCs (regulated by SCAQMD Rule 1113). The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

All construction projects in the Basin must comply with SCAQMD Rule 403 for fugitive dust. Rule 403 control requirements include measures to prevent the generation of visible dust plumes. Measures include, but are not limited to, applying water and/or soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce regional PM_{2.5} and PM₁₀ emissions associated with construction activities by approximately 61 percent.

In the absence of an approved haul route as of the date of this report, this analysis conservatively assumes a single-trip haul distance of up to 40 miles to an off-site landfill. However, if a closer location is found, haul-related emissions during the demolition and grading phases would be lower for the Project.

As shown in Table 6, construction of the Project would produce VOC, NO_x, CO, SO_x, PM₁₀ and PM_{2.5} emissions that do not exceed the SCAQMD's regional thresholds. As a result, construction of the Project

would not contribute substantially to an existing violation of air quality standards for regional pollutants (e.g., ozone). This impact is considered less than significant.

**Table 6
Estimated Daily Construction Emissions - Unmitigated**

Construction Phase Year	Daily Emissions (Pounds Per Day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2022	6	44	18	<1	3	1
2023	6	9	10	<1	1	<1
Maximum Regional Total	6	44	18	<1	3	1
Regional Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	6	8	9	<1	1	<1
Localized Threshold	N/A	74	680	N/A	5	3
Exceed Threshold?	N/A	No	No	N/A	No	No
<i>The construction dates are used for the modeling of air quality emissions in the CalEEMod software. If construction activities commence later than what is assumed in the environmental analysis, the actual emissions would be lower than analyzed because of the increasing penetration of newer equipment with lower certified emission levels. Assumes implementation of SCAQMD Rule 403 (Fugitive Dust Emissions)</i>						
<i>Source: DKA Planning, 2021 based on CalEEMod 2016.3.2 model runs. LST analyses based on 1-acre site with 25-meter distances to receptors in Central LA source receptor area. Modeling sheets included in the Technical Appendix.</i>						

Localized Emissions

In addition to maximum daily regional emissions, maximum localized (on-site) emissions were quantified for each construction activity. The localized construction air quality analysis was conducted using the methodology promulgated by the SCAQMD. Look-up tables provided by the SCAQMD were used to determine localized construction emissions thresholds for the Project.³⁴ LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are based on the most recent background ambient air quality monitoring data (2017-2019) for the Project area.

Maximum on-site daily construction emissions for NO_x, CO, PM₁₀, and PM_{2.5} were calculated using CalEEMod and compared to the applicable SCAQMD LSTs for the Central LA SRA based on construction site acreage that is less than or equal to one acre. Potential impacts were evaluated at the closest off-site sensitive receptor, which are the residences five feet to the north of the Project Site on Lillian Way. The closest receptor distance on the SCAQMD mass rate LST look-up tables is 25 meters.

As shown in Table 6, above, the Project would produce emissions that do not exceed the SCAQMD's recommended localized standards of significance for NO₂ and CO during the construction phase. Similarly, construction activities would not produce PM₁₀ and PM_{2.5} emissions that exceed localized thresholds recommended by the SCAQMD. These estimates assume the use of Best Available Control

³⁴ SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-up Table, revised October 2009.

Measures (BACMs) that address fugitive dust emissions of PM₁₀ and PM_{2.5} through SCAQMD Rule 403. This would include watering portions of the site that are disturbed during grading activities and minimizing tracking of dirt onto local streets. Therefore, construction impacts on localized air quality are considered less than significant.

A cumulatively considerable net increase would occur if the Project's construction impacts substantially contribute to air quality violations when considering other projects that may undertake construction activities at the same time. Construction of the Project would not contribute significantly to cumulative emissions of any non-attainment regional pollutants. For regional ozone precursors, the Project would not exceed SCAQMD mass emission thresholds for ozone precursors during construction. Similarly, regional emissions of PM₁₀ and PM_{2.5} would not exceed mass thresholds established by the SCAQMD. Therefore, construction emissions impact on regional criteria pollutant emissions would be considered less than significant.

Construction of the Project itself would not produce cumulative considerable emissions of localized nonattainment pollutants PM₁₀ and PM_{2.5}, as the anticipated emissions would not exceed LST thresholds set by the SCAQMD. Therefore, construction emissions impact on localized criteria pollutant emissions would be considered less than significant.

If any related projects were to undertake construction concurrently with the Project, localized CO, PM_{2.5}, PM₁₀, and NO₂ concentrations would be further increased. However, the application of LST thresholds to this Project would help ensure that it does not produce localized hotspots of CO, PM_{2.5}, PM₁₀, and NO₂. This and any related projects that would exceed LST thresholds (after mitigation) could perform dispersion modeling to confirm whether health-based air quality standards would be violated. The SCAQMD's LST thresholds recognize the influence of a receptor's proximity, setting mass emissions thresholds for PM₁₀ and PM_{2.5} that generally double with every doubling of distance.

There is an existing regional cumulative impact associated with O₃, NO₂, PM₁₀, and PM_{2.5} because the Basin is designated as a State and/or federal nonattainment air basin for these pollutants. However, an individual Project can emit these pollutants without significantly contributing to this cumulative impact depending on the magnitude of emissions. As discussed above, construction and operational emissions would not exceed any applicable SCAQMD thresholds of significance.

Operation

Operational emissions of criteria pollutants would come from area sources and mobile sources. Area sources include natural gas for space heating and water heating, gasoline-powered landscaping and maintenance equipment, consumer products such as household cleaners, and architectural coatings for routine maintenance. The CalEEMod program generates estimates of emissions from energy use based on the land use type and size. The Project would also produce long-term air quality impacts to the region primarily from motor vehicles that access the Project Site. The Project could add up to 347 vehicle trips to the local roadway network on a peak weekday at the start of operations in 2023.³⁵

As shown in Table 7, the Project's net emissions would not exceed the SCAQMD's regional or localized significance thresholds. The Project's operational impacts on long-term air pollution would be considered

³⁵ DKA Planning, 2021 based on CalEEMod 2016.3.2 model.

less than significant. Therefore, the operational impacts of the Project on regional and localized air quality are considered less than significant.

**Table 7
Estimated Daily Operations Emissions - Unmitigated**

Emissions Source	Daily Emissions (Pounds Per Day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources	1	<1	<1	<1	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Mobile Sources	1	2	8	<1	2	1
Regional Total	1	2	8	<1	2	1
Regional Significance Threshold	55	55	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Net Localized Total	1	<1	5	<1	<1	<1
Localized Significance Threshold	N/A	74	680	N/A	2	1
Exceed Threshold?	N/A	No	No	N/A	No	No
<i>LST analyses based on 1-acre site with 25-meter distances to receptors in Central LA SRA Source: DKA Planning, 2010 based on CalEEMod 2016.3.2 model runs (included in the Technical Appendix).</i>						

As for cumulative operational impacts, the proposed land uses would not produce cumulatively considerable emissions of nonattainment pollutants at the regional or local level. The Project would not include major sources of combustion or fugitive dust. As a result, its localized emissions of PM₁₀ and PM_{2.5} would be minimal. Likewise, existing land uses in the area include land uses that do not produce substantial emissions of localized nonattainment pollutants. As shown in Table 7, Project operational daily emissions would not exceed any of the SCAQMD’s regional or localized thresholds. Because the Project’s air quality impacts would not exceed the SCAQMD’s operational thresholds of significance, the Project’s contribution to cumulative operation-related regional or localized emissions would not be cumulatively considerable and, thus, would be less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. There are several sensitive receptors within 1,000 feet of the Project Site that could be exposed to air pollution from construction and operation of the Project, including, but are not limited to, the following representative sampling:

- Residences, 727 Lillian Way; five feet north of the Project Site.
- Residences, 658 Lillian Way; 240 feet south of the Project Site.
- Residences, 665 Lillian Way; 165 feet south of the Project Site.
- Cahuenga Lofts, 717 North Cahuenga Boulevard, 200 feet west of the Project Site.

Construction

Construction of the Project could expose sensitive receptors to substantial pollutant concentrations if maximum daily emissions of regulated pollutants generated by sources located on and/or near the Project

Site exceeded the applicable LST values presented in Table 3, or if construction activities generated significant emissions of TACs that could result in carcinogenic risks or non-carcinogenic hazards exceeding the SCAQMD Air Quality Significance Thresholds of 10 excess cancers per million or non-carcinogenic Hazard Index greater than 1.0, respectively. As discussed above, the LST values were derived by the SCAQMD for the criteria pollutants NO_x, CO, PM₁₀, and PM_{2.5} to prevent the occurrence of concentrations exceeding the air quality standards at sensitive receptor locations based on proximity and construction site size.

As shown in Table 6, above, during construction of the Project, maximum daily localized unmitigated emissions of NO₂, CO, PM₁₀, and PM_{2.5} from sources on the Project Site would remain below each of the respective LST values. Unmitigated maximum daily localized emissions would not exceed any of the localized standards for receptors that are within 25 meters of the Project's construction activities. Therefore, based on SCAQMD guidance, localized emissions of criteria pollutants would not have the potential to expose sensitive receptors to substantial concentrations that would present a public health concern.

The primary TAC that would be generated by construction activities is diesel PM, which would be released from the exhaust stacks of construction equipment. The construction emissions modeling conservatively assumed that all equipment present on the Project Site would be operating simultaneously throughout most of the day, while in all likelihood this would rarely be the case. Average daily emissions of diesel PM would be less than one pound per day throughout the course of Project construction. Therefore, the magnitude of daily diesel PM emissions, would not be sufficient to result in substantial pollutant concentrations at off-site locations nearby.

Furthermore, according to SCAQMD methodology, health risks from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 30-year period will contract cancer based on the use of standard risk-assessment methodology. The entire duration of construction activities associated with implementation of the Project is anticipated to be approximately 14 months, and the magnitude of daily diesel PM emissions will vary over this time period. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period, construction TAC emissions would result in a less than significant impact. Therefore, construction of the Project would not expose sensitive receptors to substantial diesel PM concentrations, and this impact would be less than significant.

Operation

The Project Site would be redeveloped with a general office building, a land use that is not typically associated with TAC emissions. Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides) for the types of proposed land uses would be below thresholds warranting further study under California Accidental Release Program. The Project would remove existing auto repair facilities that store and use toxic materials. As such, the Proposed Project would likely reduce any minor emissions of TACs from the existing site.

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the Air Quality and Land Use Handbook: A Community Health Perspective, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).³⁶ The SCAQMD adopted similar recommendations in its Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.³⁷ Together, the CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

The primary sources of potential air toxics associated with Project operations include DPM from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets) and to a lesser extent, facility operations (e.g., natural gas fired boilers). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions. It should be noted that the SCAQMD recommends that health risk assessments (HRAs) be conducted for substantial individual sources of DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.³⁸ Based on this guidance, the Project would not include these types of land uses and is not considered to be a substantial source of DPM warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. In addition, the CARB-mandated airborne toxic control measures (ATCM) limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than five minutes at any given time, which would further limit diesel particulate emissions.

As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure of off-site sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

The Project would generate long-term emissions on-site from area and energy sources that would generate negligible pollutant concentrations of CO, NO₂, PM_{2.5}, or PM₁₀ at nearby sensitive receptors. While long-term operations of the Project would generate traffic that produces off-site emissions, these would not result in exceedances of CO air quality standards at roadways in the area due to three key factors. First, CO hotspots are extremely rare and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to this Project area. Second, auto-related emissions of CO continue to decline because of advances in fuel combustion technology in the vehicle fleet. Finally, the Project would not contribute to the levels of congestion that would be needed to produce the amount of emissions needed to trigger a potential CO hotspot, generating 347 vehicle trips to the local roadway network on a peak weekday at the start of operations in 2023, including up to

³⁶ CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.

³⁷ SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.

³⁸ SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2002.

36 trips during the A.M. peak hour and 36 during the P.M. peak hour.³⁹ A maximum of 36 vehicle trips over a 60-minute hour added to the local roadway network would not significantly increase congestion on local roadways.

Finally, the Project would not result in any substantial emissions of TACs during the construction or operations phase. During the construction phase, the primary air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by CARB based on chronic exposure to these emissions.⁴⁰ However, construction activities would not produce chronic, long-term exposure to diesel particulate matter. During long-term project operations, the Project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities. As a result, the Project would not create substantial concentrations of TACs.

In addition, the SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.⁴¹ The Project would not generate a substantial number of truck trips. Based on the limited activity of TAC sources, the Project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, the Project's operational impacts on local sensitive receptors would be less than significant.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The Project would not result in activities that create objectionable odors. The Project is a commercial office development that would not include any activities typically associated with unpleasant odors and local nuisances (e.g., rendering facilities, dry cleaners). SCAQMD regulations that govern nuisances (i.e., Rule 402, Nuisances) would regulate any occasional odors associated with commercial office uses. As a result, any odor impacts from the Project would be considered less than significant.

Cumulative Impacts

SCAQMD recommends that any construction-related emissions and operational emissions from individual development projects that exceed the project-specific mass daily emissions thresholds identified above also be considered cumulatively considerable.⁴² Individual projects that generate emissions not in excess of SCAQMD's significance thresholds would not contribute considerably to any potential cumulative impact. SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions.

³⁹ DKA Planning 2021 based on CalEEMod 2016.3.2 model runs. Hourly trip generation based on Institute of Traffic Engineer's hourly trip generation factors for General Office Building (land use code 710).

⁴⁰ California Office of Environmental Health Hazard Assessment. Health Effects of Diesel Exhaust. [www. http://oehha.ca.gov/public_info/facts/dieselfacts.html](http://oehha.ca.gov/public_info/facts/dieselfacts.html)

⁴¹ SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.

⁴² White Paper on Regulatory Options for Addressing Cumulative Impacts from Air Pollution Emissions, SCAQMD Board Meeting, September 5, 2003, Agenda No. 29, Appendix D, p. D-3.

If any related project were projected to exceed LST thresholds (after mitigation), it could perform dispersion modeling to confirm whether health-based air quality standards would be violated. The SCAQMD's LST thresholds recognize the influence of a receptor's proximity, setting mass emissions thresholds for PM₁₀ and PM_{2.5} that generally double with every doubling of distance. However, given the limited scope of the potential development, it is unlikely that this related project could not mitigate its own construction impacts.

There is an existing regional cumulative impact associated with O₃, NO₂, PM₁₀, and PM_{2.5} because the Basin is designated as a State and/or federal nonattainment air basin for these pollutants. However, an individual Project can emit these pollutants without significantly contributing to this cumulative impact depending on the magnitude of emissions. As discussed above, construction and operational emissions would not exceed any applicable SCAQMD thresholds of significance.

With respect to the Project's construction-related air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies (e.g., SCAQMD Rule 403) to reduce criteria pollutant emissions outlined in the AQMP pursuant to Federal CAA mandates. As stated above, the Project would comply with applicable regulatory requirements, including the SCAQMD Rule 403 requirements. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, all construction projects Basin-wide would comply with these same regulatory requirements and would implement all feasible mitigation measures when significant impacts are identified.

AQMP Consistency

Cumulative development is not expected to result in a significant impact in terms of conflicting with, or obstructing implementation of the 2016 AQMP. As discussed previously, growth considered to be consistent with the AQMP would not interfere with attainment because this growth is included in the projections utilized in the formulation of the AQMP. Consequently, as long as growth in the Basin is within the projections for growth identified in the 2016 RTP/SCS, implementation of the AQMP will not be obstructed by such growth. In addition, as discussed previously, the job growth resulting from the Project would be consistent with the growth projections of the AQMP. Any related project would implement feasible air quality mitigation measures to reduce the criteria air pollutants, if required due to any significant emissions impacts. In addition, each related project would be evaluated for its consistency with the land use policies set forth in the AQMP. Therefore, the Project's contribution to the cumulative impact would not be cumulatively considerable and, therefore, would be less than significant.

Construction

As discussed above, the Project's construction-related air quality emissions and cumulative impacts would be less than significant. Individual projects that generate emissions that do not exceed SCAQMD's significance thresholds would not contribute considerably to any potential cumulative impact. SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions.

The Project would comply with regulatory requirements, including the SCAQMD Rule 403 requirements listed above. Based on SCAQMD guidance, individual construction projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. As shown above,

construction-related daily emissions at the Project Site would not exceed any of the SCAQMD's regional or localized significance thresholds. Therefore, the Project's contribution to cumulative air quality impacts would not be cumulatively considerable and, therefore, would be less than significant.

Similar to the Project, the greatest potential for TAC emissions at each related project would generally involve diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 30-year period will contract cancer, based on the use of standard risk-assessment methodology. Construction activities are temporary and short-term events, thus construction activities at each related project would not result in a long-term substantial source of TAC emissions. Additionally, the SCAQMD CEQA guidance does not require a health risk assessment for short-term construction emissions. It is therefore not meaningful to evaluate long-term cancer impacts from construction activities, which occur over relatively short durations. As such, given the short-term nature of these activities, cumulative toxic emission impacts during construction would be less than significant.

Operation

As discussed above, the Project's operational air quality emissions and cumulative impacts would be less than significant. According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. As operational emissions would not exceed any of the SCAQMD's regional or localized significance thresholds, the emissions of non-attainment pollutants and precursors generated by Project operations would not be cumulatively considerable.

With respect to TAC emissions, neither the Project nor any likely related projects (which are largely residential, retail/commercial in nature), would represent a substantial source of TAC emissions, which are typically associated with large-scale industrial, manufacturing, and transportation hub facilities. The Project and related projects would be consistent with the recommended screening level siting distances for TAC sources, as set forth in CARB's Land Use Guidelines, and the Project and related projects would not result in a cumulative impact requiring further evaluation. However, any related projects could generate minimal TAC emissions related to the use of consumer products and landscape maintenance activities, among other things. Pursuant to AB 1807, which directs the CARB to identify substances as TACs and adopt airborne toxic control measures to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. These SCAQMD rules have resulted in and will continue to result in substantial Basin-wide TAC emissions reductions. As such, cumulative TAC emissions during long-term operations would be less than significant. Therefore, the Project would not result in any substantial sources of TACs that have been identified by the CARB's Land Use Guidelines, and thus, would not contribute to a cumulative impact.

TECHNICAL APPENDIX



DOUGLASKIM+ASSOCIATES,LLC

FUTURE EMISSIONS

711 Lillian Way Future - Los Angeles-South Coast County, Summer
711 Lillian Way Future
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	31.42	1000sqft	0.47	31,419.00	0
Enclosed Parking with Elevator	80.00	Space	0.00	39,562.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			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
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1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Developer information
- Construction Phase - Developer information
- Grading - Consultant assumptions for excavating two levels of soil
- Demolition - 20,250 sf of surface area at 6" depth = 375 CY @ 2,400 lb/CY = 450 tons
- Trips and VMT - Assumes 40 cubic yard capacity per haul truck
- Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 control efficiencies

Table Name	Column Name	Default Value	New Value

tblConstrDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstructionPhase	NumDays	5.00	64.00
tblConstructionPhase	NumDays	100.00	261.00
tblConstructionPhase	NumDays	2.00	31.00
tblGrading	AcresOfGrading	0.00	0.93
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	32,000.00	39,562.00
tblLandUse	LotAcreage	0.72	0.47
tblLandUse	LotAcreage	0.72	0.00
tblTripsAndVMT	HaulingTriplength	20.00	40.00
tblTripsAndVMT	HaulingTriplength	20.00	40.00
tblTripsAndVMT	HaulingTriplength	2,500.00	2,857.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	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
2022	5.7764	44.0536	18.2913	0.1454	4.1905	0.4676	4.6580	1.3407	0.4469	1.7876	0.0000	15,630.105	15,630.105	1.1225	0.0000	15,658.167
2023	5.6928	8.6394	10.2635	0.0207	0.4345	0.3948	0.8293	0.1170	0.3689	0.4859	0.0000	2,041.4601	2,041.4601	0.3995	0.0000	2,051.4468
Maximum	5.7764	44.0536	18.2913	0.1454	4.1905	0.4676	4.6580	1.3407	0.4469	1.7876	0.0000	15,630.105	15,630.105	1.1225	0.0000	15,658.167

Mitigated Construction

Year	ROG	NOK	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
2022	5.7764	44.0536	18.2913	0.1454	2.4850	0.4676	2.9525	0.7850	0.4469	1.2319	0.0000	15,630.105	15,630.105	1.1225	0.0000	15,658.167
2023	5.6928	8.6394	10.2635	0.0207	0.2663	0.3948	0.6611	0.0757	0.3689	0.4446	0.0000	2,041.4601	2,041.4601	0.3995	0.0000	2,051.4468
Maximum	5.7764	44.0536	18.2913	0.1454	2.4850	0.4676	2.9525	0.7850	0.4469	1.2319	0.0000	15,630.105	15,630.105	1.1225	0.0000	15,658.167
Percent Reduction	0.00	0.00	0.00	0.00	40.51	0.00	34.15	40.96	0.00	26.26	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOK	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
Area	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0244	0.0244	0.0244	6.0000e-005		0.0260
Energy	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485
Mobile	0.5567	2.2944	7.5058	0.0283	2.3740	0.0207	2.3947	0.6353	0.0193	0.6545	2.883.2991	2.883.2991	0.1377			2.886.7414
Total	1.2864	2.3824	7.5909	0.0288	2.3740	0.0274	2.4014	0.6353	0.0260	0.6613		2,988.7455	2,988.7455	0.1398	1.9300e-003	2,992.8159

Mitigated Operational

Category	ROG	NOK	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
Area	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0244	0.0244	0.0244	6.0000e-005		0.0260
Energy	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485
Mobile	0.5567	2.2944	7.5058	0.0283	2.3740	0.0207	2.3947	0.6353	0.0193	0.6545	2.883.2991	2.883.2991	0.1377			2.886.7414
Total	1.2864	2.3824	7.5909	0.0288	2.3740	0.0274	2.4014	0.6353	0.0260	0.6613		2,988.7455	2,988.7455	0.1398	1.9300e-003	2,992.8159

Category	lb/day										lb/day									
Area	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0244	0.0244	6.0000e-005	0.0260						
Energy	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485					
Mobile	0.5567	2.2944	7.5058	0.0283	2.3740	0.0207	2.3947	0.6353	0.0193	0.6545	2.883,2991	2.883,2991	0.1377	2.886,7474						
Total	1.2864	2.3824	7.5909	0.0288	2.3740	0.0274	2.4014	0.6353	0.0260	0.6613	2,988,7455	2,988,7455	0.1398	1,9300e-003	2,992,8159					

Percent Reduction	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
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	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	Grading	Grading	1/17/2022	2/28/2022	5	31	Up to 20,000 CY of soil export
2	Building Construction	Building Construction	3/1/2022	2/28/2023	5	261	
3	Architectural Coating	Architectural Coating	12/1/2022	2/28/2023	5	64	
4	Demolition	Demolition	1/3/2022	1/14/2022	5	10	Removing 20,250 sf of asphalt.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.93

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 47,129; Non-Residential Outdoor: 15,710; Striped Parking Area: 2,374

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73

Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

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	10.00	0.00	44.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	27.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
Fugitive Dust					0.8575	0.0000	0.8575	0.4283	0.0000	0.4283			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120	0.3375	0.3375	0.3375	0.3225	0.3325	0.3225	1,147.9025	1,147.9025	1,147.9025	0.2119		1,153.2001
lb/day																

Total	0.7094	6.4138	7.4693	0.0120	0.8575	0.3375	1.1951	0.4283	0.3225	0.7508		1,147.9025	1,147.9025	0.2119		1,153.2001
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Unmitigated Construction Off-Site

Category	ROG	NOK	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
lb/day																
Hauling	1.3253	37.6132	10.4504	0.1323	3.2212	0.1292	3.3503	0.8828	0.1236	1.0064		14,372.3313	14,372.3313	0.9076		14,395.0200
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	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	1.3654	37.6398	10.8220	0.1334	3.3329	0.1300	3.4630	0.9125	0.1244	1.0368		14,482.2026	14,482.2026	0.9106		14,504.9671

Mitigated Construction On-Site

Category	ROG	NOK	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
lb/day																
Fugitive Dust					0.3177	0.0000	0.3177	0.1587	0.0000	0.1587			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120	0.3375	0.3375	0.3375	0.3225	0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	0.3177	0.3375	0.6552	0.1587	0.3225	0.4812	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

Mitigated Construction Off-Site

Category	ROG	NOK	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
lb/day																
Hauling	1.3253	37.6132	10.4504	0.1323	2.1002	0.1292	2.2293	0.6077	0.1236	0.7312		14,372.3313	14,372.3313	0.9076		14,395,020.0
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	0.0402	0.0266	0.3716	1.1000e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		109.8712	109.8712	3.0300e-003		109,947.0
Total	1.3654	37.6398	10.8220	0.1334	2.1672	0.1300	2.2973	0.6263	0.1244	0.7507		14,482,202.6	14,482,202.6	0.9106		14,504,967.1

3.3 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
lb/day																
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112,865.2
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112,865.2

Unmitigated Construction Off-Site

Category	ROG	NOK	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
lb/day																

3.3 Building Construction - 2023

Unmitigated Construction On-Site

Category	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
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104,6089	1,104,6089	0.3573		1,113,5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104,6089	1,104,6089	0.3573		1,113,5402

Unmitigated Construction Off-Site

Category	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
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	0.0254	0.8407	0.2603	2.9600e-003	0.0768	9.7000e-004	0.0778	0.0221	9.3000e-004	0.0231		316.6889	316.6889	0.0166		317.1046
Worker	0.1018	0.0650	0.9240	2.8700e-003	0.3018	2.3000e-003	0.3041	0.0800	2.1100e-003	0.0822		285.7901	285.7901	7.3800e-003		285.9747
Total	0.1272	0.9057	1.1842	5.8300e-003	0.3786	3.2700e-003	0.3819	0.1022	3.0400e-003	0.1052		602.4791	602.4791	0.0240		603.0793

Mitigated Construction On-Site

Category	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
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

Mitigated Construction Off-Site

Category	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
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
Vendor	0.0254	0.8407	0.2603	2.9600e-003	0.0517	9.7000e-004	0.0526	0.0159	9.3000e-004	0.0169		316.6889	316.6889	0.0166		317.1046
Worker	0.1018	0.0650	0.9240	2.8700e-003	0.1811	2.3000e-003	0.1834	0.0504	2.1100e-003	0.0525		285.7901	285.7901	7.3800e-003		285.9747
Total	0.1272	0.9057	1.1842	5.8300e-003	0.2328	3.2700e-003	0.2360	0.0664	3.0400e-003	0.0694		602.4791	602.4791	0.0240		603.0793

3.4 Architectural Coating - 2022

Unmitigated Construction On-Site

Category	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
Archit. Coating	4.7229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	4.9274	1.4085	1.8136	2.9700e-003	0.0817	0.0817	0.0817	0.0817	0.0817	0.0817	0.0000	281.4481	281.4481	0.0183	0.0000	281.9062

Total	4.9274	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
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Unmitigated Construction Off-Site

Category	ROG	NOK	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
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	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735
Total	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735

Mitigated Construction On-Site

Category	ROG	NOK	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
lb/day																
Archit. Coating	4.7229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	4.9274	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Mitigated Construction Off-Site

Category	ROG	NOK	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
	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	0.0201	0.0133	0.1858	5.5000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		54.9356	54.9356	1.5200e-003		54.9735
Total	0.0201	0.0133	0.1858	5.5000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		54.9356	54.9356	1.5200e-003		54.9735

3.4 Architectural Coating - 2023

Unmitigated Construction On-Site

Category	ROG	NOK	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
	lb/day															
Archit. Coating	4.7229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	4.9145	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

Category	ROG	NOK	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
	lb/day															

3.5 Demolition - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
	lb/day															
Fugitive Dust					0.9630	0.0000	0.9630	0.1458	0.0000	0.1458			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	0.9630	0.3375	1.3005	0.1458	0.3225	0.4683		1,147.9025	1,147.9025	0.2119		1,153.2001

Unmitigated Construction Off-Site

Category	ROG	NOK	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
	lb/day															
Hauling	0.0633	1.7957	0.4989	6.3100e-003	0.1538	6.1700e-003	0.1600	0.0422	5.9000e-003	0.0481		686.1694	686.1694	0.0433		687.2526
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	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	0.1034	1.8224	0.8705	7.4100e-003	0.2656	7.0400e-003	0.2726	0.0718	6.7100e-003	0.0785		796.0406	796.0406	0.0464		797.1997

Mitigated Construction On-Site

Category	lb/day										lb/day				
Mitigated	0.5567	2.2944	7.5058	0.0283	2.3740	0.0207	2.3947	0.6353	0.0193	0.6545		12,883,2991	2,883,2991	0.1377	2,886,7414
Unmitigated	0.5567	2.2944	7.5058	0.0283	2.3740	0.0207	2.3947	0.6353	0.0193	0.6545		12,883,2991	2,883,2991	0.1377	2,886,7414

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	346.35	77.29	32.99	848,182	848,182
Total	346.55	77.29	32.99	848,182	848,182

4.3 Trip Type Information

Land Use	Miles						Trip %						Trip Purpose %		
	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						
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0						
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4						

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	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
General Office Building	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

Category	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
Natural Gas	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
Mitigated Natural Gas	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
Unmitigated																
lb/day																

5.2 Energy by Land Use - Natural Gas

Unmitigated

Land Use	Natural Gas 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
Enclosed Parking with Elevator	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	0.0000	0.0000
General Office Building	896.087	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
Total		9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
lb/day																	

Mitigated

Land Use	Natural Gas 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
Enclosed Parking with Elevator	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	0.0000	0.0000
Land Use	kBTU/yr																
lb/day																	

General Office Building	0.896087	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485
Total		9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOK	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
Mitigated	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0280
Unmitigated	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOK	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
Architectural Coating	0.0828				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6361				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	1.0500e-003	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260

Total	0.7200	1.0000e-004	0.0114	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260
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Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bi-o-CO2	NBi-o-CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural	0.0828				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Coating						0.0000	0.0000						0.0000			0.0000
Consumer Products	0.6361				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	1.0500e-003	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260
Total	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

711 Lillian Way Future - Los Angeles-South Coast County, Annual
711 Lillian Way Future
 Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	31.42	1000sqft	0.47	31,419.00	0
Enclosed Parking with Elevator	80.00	Space	0.00	39,562.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			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
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -
 Land Use - Developer information
 Construction Phase - Developer information
 Grading - Consultant assumptions for excavating two levels of soil
 Demolition - 20,250 sf of surface area at 6" depth = 375 CY @ 2,400 lb/CY = 450 tons
 Trips and VMT - Assumes 40 cubic yard capacity per haul truck
 Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 control efficiencies

Table Name	Column Name	Default Value	New Value

tblConstrDustMitigation	CleanPavedRoadPer centReduction	0	46
tblConstructionPhase	NumDays	5.00	64.00
tblConstructionPhase	NumDays	100.00	261.00
tblConstructionPhase	NumDays	2.00	31.00
tblGrading	AcresOfGrading	0.00	0.93
tblGrading	MaterialExported	0.00	20,000.00
tblLanduse	LandUseSquareFeet	32,000.00	39,562.00
tblLanduse	LotAcreage	0.72	0.47
tblLanduse	LotAcreage	0.72	0.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,857.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Year	ROG	NOK	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
t/yr																
2022	0.1817	1.6657	1.2680	4.2700e-003	0.1115	0.0511	0.1626	0.0328	0.0474	0.0802	0.0000	401.0128	401.0128	0.0554	0.0000	402.3983
2023	0.1196	0.1818	0.2143	4.3000e-004	8.9500e-003	8.2900e-003	0.0172	2.4100e-003	7.7500e-003	0.0102	0.0000	38.5473	38.5473	7.6100e-003	0.0000	38.7376
Maximum	0.1817	1.6657	1.2680	4.2700e-003	0.1115	0.0511	0.1626	0.0328	0.0474	0.0802	0.0000	401.0128	401.0128	0.0554	0.0000	402.3983

Mitigated Construction

Year	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
2022	0.1817	1.6657	1.2680	4.2700e-003	0.0661	0.0511	0.1172	0.0198	0.0474	0.0672	0.0000	401.0127	401.0127	0.0554	0.0000	402.3981
2023	0.1196	0.1818	0.2143	4.3000e-004	5.5000e-003	8.2900e-003	0.0138	1.5700e-003	7.7500e-003	9.3100e-003	0.0000	38.5473	38.5473	7.6100e-003	0.0000	38.7375
Maximum	0.1817	1.6657	1.2680	4.2700e-003	0.0661	0.0511	0.1172	0.0198	0.0474	0.0672	0.0000	401.0127	401.0127	0.0554	0.0000	402.3981
Percent Reduction	0.00	0.00	0.00	0.00	40.56	0.00	27.16	39.25	0.00	15.30	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	1-3-2022	4-2-2022	0.8673	0.8673
2	4-3-2022	7-2-2022	0.2936	0.2936
3	7-3-2022	10-2-2022	0.2969	0.2969
4	10-3-2022	1-2-2023	0.3718	0.3718
5	1-3-2023	4-2-2023	0.2922	0.2922
		Highest	0.8673	0.8673

2.2 Overall Operational Unmitigated Operational

Category	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
Avea	0.1313	1.0000e-005	1.4200e-003	0.0000	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
Energy	1.7600e-003	0.0160	0.0133	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	0.0000	37.38903	37.38903	8.7500e-003	2.0600e-003	374.7235
Mobile	0.0728	0.3307	0.9982	3.7800e-003	0.3219	2.8600e-003	0.3248	0.0863	2.6600e-003	0.0890	0.0000	349.1686	349.1686	0.0172	0.0000	349.5973
							tons/yr						MTYr			

3	Architectural Coating	Architectural Coating	12/1/2022	2/28/2023	5	64
4	Demolition	Demolition	1/3/2022	1/14/2022	5	10 Removing 20,250 sf of asphalt.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.93

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 47,129; Non-Residential Outdoor: 15,710; Striped Parking Area: 2,374

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractor/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractor/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractor/Loaders/Backhoes	2	6.00	97	0.37

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	10.00	0.00	44.00	14.70	6.90	40.00	LD_MIX	HDT_MIX	HHDT
Grading	4	10.00	0.00	2857.00	14.70	6.90	40.00	LD_MIX	HDT_MIX	HHDT
Building Construction	3	27.00	12.00	0.00	14.70	6.90	20.00	LD_MIX	HDT_MIX	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_MIX	HDT_MIX	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover
 Water Exposed Area
 Clean Paved Roads

3.2 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
tons/yr																
Fugitive Dust					0.0133	0.0000	0.0133	6.6400e-003	0.0000	6.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0994	0.1158	1.9000e-004		5.2300e-003	5.2300e-003	5.0000e-003	5.0000e-003	5.0000e-003	0.0000	16.1411	16.1411	2.9800e-003	0.0000	16.2156
Total	0.0110	0.0994	0.1158	1.9000e-004	0.0133	5.2300e-003	0.0185	6.6400e-003	5.0000e-003	0.0116	0.0000	16.1411	16.1411	2.9800e-003	0.0000	16.2156
MTYr																

Unmitigated Construction Off-Site

Category	ROG	NOK	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
tons/yr																
Hauling	0.0207	0.6071	0.1638	2.0400e-003	0.0491	2.0100e-003	0.0511	0.0135	1.9200e-003	0.0154	0.0000	201.2989	201.2989	0.0129	0.0000	201.6206
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	6.3000e-004	4.7000e-004	5.4000e-003	2.0000e-005	1.7000e-003	1.0000e-005	1.7100e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.4789	1.4789	4.0000e-005	0.0000	1.4800
Total	0.0213	0.6076	0.1692	2.0600e-003	0.0508	2.0200e-003	0.0528	0.0139	1.9300e-003	0.0159	0.0000	202.7779	202.7779	0.0129	0.0000	203.1006
MTYr																

Mitigated Construction On-Site

Category	ROG	NOK	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
tons/yr																
Fugitive Dust					4.9200e-003	0.0000	4.9200e-003	2.4600e-003	0.0000	2.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0994	0.1158	1.9000e-004		5.2300e-003	5.2300e-003	5.0000e-003	5.0000e-003	5.0000e-003	0.0000	16.1411	16.1411	2.9800e-003	0.0000	16.2156
Total	0.0110	0.0994	0.1158	1.9000e-004	4.9200e-003	5.2300e-003	0.0102	2.4600e-003	5.0000e-003	7.4600e-003	0.0000	16.1411	16.1411	2.9800e-003	0.0000	16.2156

Mitigated Construction Off-Site

Category	ROG	NOK	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
tons/yr																
Hauling	0.0207	0.6071	0.1638	2.0400e-003	0.0321	2.0100e-003	0.0341	9.3100e-003	1.9200e-003	0.0112	0.0000	201.2989	201.2989	0.0129	0.0000	201.6206
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	6.3000e-004	4.7000e-004	5.4000e-003	2.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.8000e-004	1.0000e-005	3.0000e-004	0.0000	1.4789	1.4789	4.0000e-005	0.0000	1.4800
Total	0.0213	0.6076	0.1692	2.0600e-003	0.0331	2.0200e-003	0.0351	9.5900e-003	1.9300e-003	0.0115	0.0000	202.7779	202.7779	0.0129	0.0000	203.1006

3.3 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
tons/yr																

Category	tons/yr											MTYr				
Off-Road	0.0752	0.7693	0.7832	1.2500e-003		0.0407	0.0407		0.0375	0.0375	0.0000	109.6617	109.6617	0.0355	0.0000	110.5484
Total	0.0752	0.7693	0.7832	1.2500e-003		0.0407	0.0407		0.0375	0.0375	0.0000	109.6617	109.6617	0.0355	0.0000	110.5484

Unmitigated Construction Off-Site

Category	ROG	NOK	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
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	3.8300e-003	0.1232	0.0333	3.3000e-004	8.2800e-003	2.3000e-004	8.5100e-003	2.3900e-003	2.2000e-004	2.6100e-003	0.0000	32.1052	32.1052	1.9200e-003	0.0000	32.1531
Worker	0.0119	8.9500e-003	0.1030	3.1000e-004	0.0324	2.6000e-004	0.0327	8.6000e-003	2.4000e-004	8.8400e-003	0.0000	28.2096	28.2096	7.8000e-004	0.0000	28.2290
Total	0.0158	0.1322	0.1363	6.4000e-004	0.0407	4.9000e-004	0.0412	0.0110	4.6000e-004	0.0115	0.0000	60.3148	60.3148	2.7000e-003	0.0000	60.3821

Mitigated Construction On-Site

Category	ROG	NOK	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
Off-Road	0.0752	0.7693	0.7832	1.2500e-003		0.0407	0.0407		0.0375	0.0375	0.0000	109.6616	109.6616	0.0355	0.0000	110.5483
Total	0.0752	0.7693	0.7832	1.2500e-003		0.0407	0.0407		0.0375	0.0375	0.0000	109.6616	109.6616	0.0355	0.0000	110.5483

Mitigated Construction Off-Site

Category	ROG	NOK	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
tons/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	3.8300e-003	0.1232	0.0333	3.3000e-004	5.5800e-003	2.3000e-004	5.8100e-003	1.7300e-003	2.2000e-004	1.9500e-003	0.0000	32.1052	32.1052	1.9200e-003	0.0000	32.1531
Worker	0.0119	8.9500e-003	0.1030	3.1000e-004	0.0195	2.6000e-004	0.0197	5.4300e-003	2.4000e-004	5.6700e-003	0.0000	28.2096	28.2096	7.8000e-004	0.0000	28.2290
Total	0.0158	0.1322	0.1363	6.4000e-004	0.0251	4.9000e-004	0.0256	7.1600e-003	4.6000e-004	7.6200e-003	0.0000	60.3148	60.3148	2.7000e-003	0.0000	60.3821
MTYr																

3.3 Building Construction - 2023

Unmitigated Construction On-Site

Category	ROG	NOK	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
tons/yr																
Off-Road	0.0133	0.1348	0.1490	2.4000e-004		6.7300e-003	6.7300e-003		6.1900e-003	6.1900e-003	0.0000	21.0438	21.0438	6.8100e-003	0.0000	21.2139
Total	0.0133	0.1348	0.1490	2.4000e-004		6.7300e-003	6.7300e-003		6.1900e-003	6.1900e-003	0.0000	21.0438	21.0438	6.8100e-003	0.0000	21.2139
MTYr																

Unmitigated Construction Off-Site

Category	ROG	NOK	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
tons/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	5.5000e-004	0.0179	5.7200e-003	6.0000e-005	1.5900e-003	2.0000e-005	1.6100e-003	4.6000e-004	2.0000e-005	4.8000e-004	0.0000	5.9644	5.9644	3.2000e-004	0.0000	5.9725
Worker	2.1500e-003	1.5500e-003	0.0182	6.0000e-005	6.2100e-003	5.0000e-005	6.2600e-003	1.6500e-003	4.0000e-005	1.6900e-003	0.0000	5.2121	5.2121	1.3000e-004	0.0000	5.2154
Total	2.7000e-003	0.0194	0.0239	1.2000e-004	7.8000e-003	7.0000e-005	7.8700e-003	2.1100e-003	6.0000e-005	2.1700e-003	0.0000	11.1765	11.1765	4.5000e-004	0.0000	11.1880
MT/yr																

Mitigated Construction On-Site

Category	ROG	NOK	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
tons/yr																
Off-Road	0.0133	0.1348	0.1490	2.4000e-004	6.7300e-003	6.7300e-003	6.7300e-003	6.1900e-003	6.1900e-003	6.1900e-003	0.0000	21.0438	21.0438	6.8100e-003	0.0000	21.2139
Total	0.0133	0.1348	0.1490	2.4000e-004	6.7300e-003	6.7300e-003	6.7300e-003	6.1900e-003	6.1900e-003	6.1900e-003	0.0000	21.0438	21.0438	6.8100e-003	0.0000	21.2139
MT/yr																

Mitigated Construction Off-Site

Category	ROG	NOK	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
tons/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	5.5000e-004	0.0179	5.7200e-003	6.0000e-005	1.0700e-003	2.0000e-005	1.0900e-003	3.3000e-004	2.0000e-005	3.5000e-004	0.0000	5.9644	5.9644	3.2000e-004	0.0000	5.9725
MT/yr																

Worker	2.1500e-003	1.5500e-003	0.0182	6.0000e-005	3.7400e-003	5.0000e-005	3.7800e-003	1.0400e-003	4.0000e-005	1.0900e-003	0.0000	5.2121	5.2121	1.3000e-004	0.0000	5.2154
Total	2.7000e-003	0.0194	0.0239	1.2000e-004	4.8100e-003	7.0000e-005	4.8700e-003	1.3700e-003	6.0000e-005	1.4400e-003	0.0000	11.1765	11.1765	4.5000e-004	0.0000	11.1880

3.4 Architectural Coating - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
Archit. Coating	0.0520					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Off-Road	2.2500e-003	0.0155	0.0200	3.0000e-005	9.0000e-004	9.0000e-004	9.0000e-004	9.0000e-004	9.0000e-004	9.0000e-004	0.0000	2.8086	2.8086	1.8000e-004	0.0000	2.8132
Total	0.0542	0.0155	0.0200	3.0000e-005	9.0000e-004	9.0000e-004	9.0000e-004	9.0000e-004	9.0000e-004	9.0000e-004	0.0000	2.8086	2.8086	1.8000e-004	0.0000	2.8132

Unmitigated Construction Off-Site

Category	ROG	NOK	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
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
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
Worker	2.2000e-004	1.7000e-004	1.9200e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5248	0.5248	1.0000e-005	0.0000	0.5252
Total	2.2000e-004	1.7000e-004	1.9200e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5248	0.5248	1.0000e-005	0.0000	0.5252

Mitigated Construction On-Site

Mitigated Construction Off-Site

Category	ROG	NOK	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
tons/yr																
MTYr																
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	4.0000e-004	2.9000e-004	3.3600e-003	1.0000e-005	6.9000e-004	1.0000e-005	7.0000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.9652	0.9652	2.0000e-005	0.0000	0.9658
Total	4.0000e-004	2.9000e-004	3.3600e-003	1.0000e-005	6.9000e-004	1.0000e-005	7.0000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.9652	0.9652	2.0000e-005	0.0000	0.9658

3.5 Demolition - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
tons/yr																
MTYr																
Fugitive Dust					4.8100e-003	0.0000	4.8100e-003	7.3000e-004	0.0000	7.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005	1.6900e-003	1.6900e-003	1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	4.8100e-003	1.6900e-003	6.5000e-003	7.3000e-004	1.6100e-003	2.3400e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

Unmitigated Construction Off-Site

Category	ROG	NOK	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
tons/yr																
MTYr																

Category	tons/yr														MT/yr			
Hauling	3.2000e-004	9.3500e-003	2.5200e-003	3.0000e-005	7.6000e-004	3.0000e-005	7.9000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	3.1002	3.1002	2.0000e-004	0.0000	3.1051		
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	2.0000e-004	1.3000e-004	1.7400e-003	1.0000e-005	5.3000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4771	0.4771	1.0000e-005	0.0000	0.4774		
Total	5.2000e-004	9.5000e-003	4.2600e-003	4.0000e-005	1.3100e-003	3.0000e-005	1.3400e-003	3.6000e-004	3.0000e-005	3.9000e-004	0.0000	3.5772	3.5772	2.1000e-004	0.0000	3.5825		

Mitigated Construction On-Site

Category	ROG	NOK	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
Fugitive Dust					1.7800e-003	0.0000	1.7800e-003	2.7000e-004	0.0000	2.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005	1.6900e-003	1.6900e-003	1.6900e-003	1.6100e-003	1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	1.7800e-003	1.6900e-003	3.4700e-003	2.7000e-004	1.6100e-003	1.8800e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

Mitigated Construction Off-Site

Category	ROG	NOK	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
Hauling	3.2000e-004	9.3500e-003	2.5200e-003	3.0000e-005	4.9000e-004	3.0000e-005	5.3000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	3.1002	3.1002	2.0000e-004	0.0000	3.1051
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	2.0000e-004	1.5000e-004	1.7400e-003	1.0000e-005	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.4771	0.4771	1.0000e-005	0.0000	0.4774
Total	5.2000e-004	9.5000e-003	4.2600e-003	4.0000e-005	1.3100e-003	3.0000e-005	1.3400e-003	3.6000e-004	3.0000e-005	3.9000e-004	0.0000	3.5772	3.5772	2.1000e-004	0.0000	3.5825

Total	5.2000e-004	9.5000e-003	4.2600e-003	4.0000e-005	8.2000e-004	3.0000e-005	8.6000e-004	2.3000e-004	3.0000e-005	2.7000e-004	0.0000	3.5772	3.5772	2.1000e-004	0.0000	3.5825
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOK	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
Mitigated	0.0728	0.3307	0.9982	3.7800e-003	0.3219	2.8600e-003	0.3248	0.0863	2.6600e-003	0.0890	0.0000	349.1686	349.1686	0.0172	0.0000	349.5973
Unmitigated	0.0728	0.3307	0.9982	3.7800e-003	0.3219	2.8600e-003	0.3248	0.0863	2.6600e-003	0.0890	0.0000	349.1686	349.1686	0.0172	0.0000	349.5973
tons/yr																
MT/yr																

4.2 Trip Summary Information

Land Use	Weekday	Saturday	Sunday	Unmitigated Annual VMT	Mitigated Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	346.55	77.29	32.99	848,182	848,182
Total	346.55	77.29	32.99	848,182	848,182

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
	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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	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
General Office Building	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

Category	ROG	NOK	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
Electricity Mitigated					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	356.4365	356.4365	8.4200e-003	1.7400e-003		357.1660
Electricity					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	356.4365	356.4365	8.4200e-003	1.7400e-003		357.1660
Unmitigated																
NaturalGas	1.7600e-003	0.0160	0.0135	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	17.4538	17.4538	3.3000e-004	3.2000e-004		17.5575
Mitigated																
NaturalGas	1.7600e-003	0.0160	0.0135	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	17.4538	17.4538	3.3000e-004	3.2000e-004		17.5575
Unmitigated																
Category	tons/yr															
	MT/yr															

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	ROG	NOK	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
NaturalGas Use																
Enclosed Parking with Elevator	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	0.0000
Land Use	kBTU/yr															
	tons/yr															
	MT/yr															

General Office Building	327072	1.7600e-003	0.0160	0.0135	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	0.0000	17.4538	17.4538	3.3000e-004	3.2000e-004	17.5575
Total		1.7600e-003	0.0160	0.0135	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	0.0000	17.4538	17.4538	3.3000e-004	3.2000e-004	17.5575

Mitigated

Land Use	Natural Gas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive Exhaust PM10						Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e				
						PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total										
Enclosed Parking with Elevator	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	0.0000	0.0000	0.0000	0.0000	0.0000	
General Office Building	327072	1.7600e-003	0.0160	0.0135	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	0.0000	17.4538	17.4538	3.3000e-004	3.2000e-004	17.5575
Total		1.7600e-003	0.0160	0.0135	1.0000e-004	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	1.2200e-003	0.0000	17.4538	17.4538	3.3000e-004	3.2000e-004	17.5575

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2	MTT/yr			
			CH4	N2O	CO2e	
Enclosed Parking with Elevator	231833	129.1222	3.0500e-003	6.3000e-004	129.3865	
General Office Building	408133	227.3143	5.3700e-003	1.1100e-003	227.7795	
Total		356.4365	8.4200e-003	1.7400e-003	357.1660	

Mitigated

SubCategory	tons/yr										MT/yr				
Architectural	0.0151						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Coating															
Consumer	0.1161						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Products															
Landscaping	1.3000e-004	1.0000e-005	1.4200e-003	0.0000			1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
Total	0.1313	1.0000e-005	1.4200e-003	0.0000			1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	2.7700e-003	1.0000e-005	0.0000	2.9500e-003

Mitigated

SubCategory	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
Architectural	0.0151					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Coating																
Consumer	0.1161					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Products																
Landscaping	1.3000e-004	1.0000e-005	1.4200e-003	0.0000							0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
Total	0.1313	1.0000e-005	1.4200e-003	0.0000							0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Category	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	63.4499	0.1834	4.6000e-003	69.4057
Unmitigated	63.4499	0.1834	4.6000e-003	69.4057

7.2 Water by Land Use

Unmitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Enclosed Parking	0 / 0	0.0000	0.0000	0.0000	0.0000
with Elevator					
General Office Building	5.58439 / 3.42269	63.4499	0.1834	4.6000e-003	69.4057
Total		63.4499	0.1834	4.6000e-003	69.4057

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Enclosed Parking	0 / 0	0.0000	0.0000	0.0000	0.0000
with Elevator					
General Office Building	5.58439 / 3.42269	63.4499	0.1834	4.6000e-003	69.4057
Total		63.4499	0.1834	4.6000e-003	69.4057

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MTYr			
Mitigated	5.9314	0.3505	0.0000	14.6948
Unmitigated	5.9314	0.3505	0.0000	14.6948

8.2 Waste by Land Use

Unmitigated

	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Land Use		MTYr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	29.22	5.9314	0.3505	0.0000	14.6948
Total		5.9314	0.3505	0.0000	14.6948

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr		
Enclosed Parking	0	0.0000	0.0000	0.0000
With Elevator				
General Office Building	29.22	5.9314	0.3505	0.0000
				14.6948
Total		5.9314	0.3505	0.0000
				14.6948

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

711 Lillian Way Future - Los Angeles-South Coast County, Winter
711 Lillian Way Future
 Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	31.42	1000sqft	0.47	31,419.00	0
Enclosed Parking with Elevator	80.00	Space	0.00	39,562.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			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
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -
 Land Use - Developer information
 Construction Phase - Developer information
 Grading - Consultant assumptions for excavating two levels of soil
 Demolition - 20,250 sf of surface area at 6" depth = 375 CY @ 2,400 lb/CY = 450 tons
 Trips and VMT - Assumes 40 cubic yard capacity per haul truck
 Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 control efficiencies

Table Name	Column Name	Default Value	New Value

tblConstrDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstructionPhase	NumDays	5.00	64.00
tblConstructionPhase	NumDays	100.00	261.00
tblConstructionPhase	NumDays	2.00	31.00
tblGrading	AcresOfGrading	0.00	0.93
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	32,000.00	39,562.00
tblLandUse	LotAcreage	0.72	0.47
tblLandUse	LotAcreage	0.72	0.00
tblTripsAndVMT	HaulingTriplength	20.00	40.00
tblTripsAndVMT	HaulingTriplength	20.00	40.00
tblTripsAndVMT	HaulingTriplength	2,500.00	2,857.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	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
2022	5.7930	44.8923	18.5596	0.1441	4.1905	0.4686	4.6591	1.3407	0.4479	1.7886	0.0000	15,488.967	15,488.967	1.1399	0.0000	15,517.465
2023	5.7085	8.6437	10.1892	0.0205	0.4345	0.3948	0.8293	0.1170	0.3689	0.4859	0.0000	2,013.0971	2,013.0971	0.3999	0.0000	2,023.0943
Maximum	5.7930	44.8923	18.5596	0.1441	4.1905	0.4686	4.6591	1.3407	0.4479	1.7886	0.0000	15,488.967	15,488.967	1.1399	0.0000	15,517.465

Mitigated Construction

Year	ROG	NOK	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
2022	5.7930	44.8923	18.5596	0.1441	2.4850	0.4686	2.9535	0.7850	0.4479	1.2329	0.0000	15,488.9673	15,488.9673	1.1399	0.0000	15,517.4651
2023	5.7085	8.6437	10.1892	0.0205	0.2663	0.3948	0.6611	0.0757	0.3689	0.4446	0.0000	2,013.0971	2,013.0971	0.3999	0.0000	2,023.0943
Maximum	5.7930	44.8923	18.5596	0.1441	2.4850	0.4686	2.9535	0.7850	0.4479	1.2329	0.0000	15,488.9673	15,488.9673	1.1399	0.0000	15,517.4651
Percent Reduction	0.00	0.00	0.00	0.00	40.51	0.00	34.14	40.96	0.00	26.25	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational Unmitigated Operational

Category	ROG	NOK	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
Area	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0244	0.0244	0.0244	6.0000e-005		0.0260
Energy	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485
Mobile	0.5392	2.3512	7.1122	0.0269	2.3740	0.0208	2.3947	0.6353	0.0193	0.6546	2,744.9272	2,744.9272	2,744.9272	0.1372		2,748.3565
Total	1.2688	2.4391	7.1973	0.0275	2.3740	0.0275	2.4015	0.6353	0.0261	0.6613		2,850.3736	2,850.3736	0.1393	1.9300e-003	2,854.4310

Mitigated Operational

Category	ROG	NOK	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
Area	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0244	0.0244	0.0244	6.0000e-005		0.0260
Energy	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485
Mobile	0.5392	2.3512	7.1122	0.0269	2.3740	0.0208	2.3947	0.6353	0.0193	0.6546	2,744.9272	2,744.9272	2,744.9272	0.1372		2,748.3565
Total	1.2688	2.4391	7.1973	0.0275	2.3740	0.0275	2.4015	0.6353	0.0261	0.6613		2,850.3736	2,850.3736	0.1393	1.9300e-003	2,854.4310

Category	lb/day										lb/day									
Area	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0244	0.0244	6.0000e-005	0.0260						
Energy	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485					
Mobile	0.5392	2.3512	7.1122	0.0269	2.3740	0.0208	2.3947	0.6353	0.0193	0.6546	2,744.9272	2,744.9272	0.1372		2,748.3565					
Total	1.2688	2.4391	7.1973	0.0275	2.3740	0.0275	2.4015	0.6353	0.0261	0.6613	2,850.3736	2,850.3736	0.1393	1.9300e-003	2,854.4310					

Percent Reduction	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
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	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	Grading	Grading	1/17/2022	2/28/2022	5	31	Up to 20,000 CY of soil export
2	Building Construction	Building Construction	3/1/2022	2/28/2023	5	261	
3	Architectural Coating	Architectural Coating	12/1/2022	2/28/2023	5	64	
4	Demolition	Demolition	1/3/2022	1/14/2022	5	10	Removing 20,250 sf of asphalt.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.93

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 47,129; Non-Residential Outdoor: 15,710; Striped Parking Area: 2,374

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73

Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

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	10.00	0.00	44.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,857.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	27.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
Fugitive Dust					0.8575	0.0000	0.8575	0.4283	0.0000	0.4283			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120	0.3375	0.3375	0.3375	0.3225	0.3325	0.3225	1,147.9025	1,147.9025	1,147.9025	0.2119		1,153.2001
lb/day																

Total	0.7094	6.4138	7.4693	0.0120	0.8575	0.3375	1.1951	0.4283	0.3225	0.7508		1,147.9025	1,147.9025	0.2119		1,153.2001
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Unmitigated Construction Off-Site

Category	ROG	NOK	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
lb/day																
Hauling	1.3427	38.4490	10.7510	0.1310	3.2212	0.1302	3.3513	0.8828	0.1246	1.0074		14,237.6079	14,237.6079	0.9252		14,260.7368
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	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	1.3874	38.4785	11.0902	0.1321	3.3329	0.1311	3.4640	0.9125	0.1254	1.0378		14,341.0648	14,341.0648	0.9280		14,364.2650

Mitigated Construction On-Site

Category	ROG	NOK	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
lb/day																
Fugitive Dust					0.3177	0.0000	0.3177	0.1587	0.0000	0.1587			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120	0.3375	0.3375	0.3375	0.3225	0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	0.3177	0.3375	0.6552	0.1587	0.3225	0.4812	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001

Mitigated Construction Off-Site

Category	ROG	NOK	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
	lb/day															
Hauling	1.3427	38.4490	10.7510	0.1310	2.1002	0.1302	2.2303	0.6077	0.1246	0.7322		14,237.6079	14,237.6079	0.9252		14,260.7368
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	0.0448	0.0295	0.3392	1.0400e-003	0.0671	8.7000e-004	0.0680	0.0187	8.1000e-004	0.0195		103.4570	103.4570	2.8500e-003		103.5282
Total	1.3874	38.4785	11.0902	0.1321	2.1672	0.1311	2.2983	0.6263	0.1254	0.7517		14,341.0648	14,341.0648	0.9280		14,364.2650

3.3 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
	lb/day															
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652

Unmitigated Construction Off-Site

Category	ROG	NOK	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
	lb/day															

3.3 Building Construction - 2023

Unmitigated Construction On-Site

Category	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
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402

Unmitigated Construction Off-Site

Category	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
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	0.0267	0.8369	0.2834	2.8800e-003	0.0768	1.0200e-003	0.0779	0.0221	9.8000e-004	0.0231		308.0896	308.0896	0.0176		308.5294
Worker	0.1139	0.0719	0.8418	2.7000e-003	0.3018	2.3000e-003	0.3041	0.0800	2.1100e-003	0.0822		269.1146	269.1146	6.9300e-003		269.2877
Total	0.1406	0.9088	1.1252	5.5800e-003	0.3786	3.3200e-003	0.3819	0.1022	3.0900e-003	0.1053		577.2041	577.2041	0.0245		577.8171

Mitigated Construction On-Site

Category	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
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

Mitigated Construction Off-Site

Category	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
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
Vendor	0.0267	0.8369	0.2834	2.8800e-003	0.0517	1.0200e-003	0.0527	0.0159	9.8000e-004	0.0169		308.0896	308.0896	0.0176		308.5294
Worker	0.1139	0.0719	0.8418	2.7000e-003	0.1811	2.3000e-003	0.1834	0.0504	2.1100e-003	0.0525		269.1146	269.1146	6.9300e-003		269.2817
Total	0.1406	0.9088	1.1252	5.5800e-003	0.2328	3.3200e-003	0.2361	0.0664	3.0900e-003	0.0695		577.2041	577.2041	0.0245		577.8171

3.4 Architectural Coating - 2022

Unmitigated Construction On-Site

Category	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
Archit. Coating	4.7229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	4.9274	1.4085	1.8136	2.9700e-003	0.0817	0.0817	0.0817	0.0817	0.0817	0.0817	0.0000	281.4481	281.4481	0.0183	0.0000	281.9062

Category	ROG	NOK	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
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	0.0224	0.0147	0.1696	5.2000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		51.7285	51.7285	1.4200e-003		51.7641
Total	0.0224	0.0147	0.1696	5.2000e-004	0.0335	4.4000e-004	0.0340	9.3400e-003	4.0000e-004	9.7400e-003		51.7285	51.7285	1.4200e-003		51.7641

3.4 Architectural Coating - 2023

Unmitigated Construction On-Site

Category	ROG	NOK	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
lb/day																
Archit. Coating	4.7229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	4.9145	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

Category	ROG	NOK	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
lb/day																

3.5 Demolition - 2022

Unmitigated Construction On-Site

Category	ROG	NOK	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
lb/day																
Fugitive Dust					0.9630	0.0000	0.9630	0.1458	0.0000	0.1458			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	0.7094	6.4138	7.4693	0.0120	0.9630	0.3375	1.3005	0.1458	0.3225	0.4683		1,147.9025	1,147.9025	0.2119		1,153.2001

Unmitigated Construction Off-Site

Category	ROG	NOK	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
lb/day																
Hauling	0.0641	1.8357	0.5133	6.2600e-003	0.1538	6.2200e-003	0.1600	0.0422	5.9500e-003	0.0481		679.7374	679.7374	0.0442		680.8416
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	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	0.11089	1.8651	0.8525	7.3000e-003	0.2656	7.0900e-003	0.2727	0.0718	6.7600e-003	0.0785		783.1943	783.1943	0.0470		784.3698

Mitigated Construction On-Site

Category	lb/day										lb/day				
Mitigated	0.5392	2.3512	7.1122	0.0269	2.3740	0.0208	2.3947	0.6353	0.0193	0.6546		12,744.9272	2,744.9272	0.1372	2,748.3565
Unmitigated	0.5392	2.3512	7.1122	0.0269	2.3740	0.0208	2.3947	0.6353	0.0193	0.6546		12,744.9272	2,744.9272	0.1372	2,748.3565

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	346.35	77.29	32.99	848,182	848,182
Total	346.55	77.29	32.99	848,182	848,182

4.3 Trip Type Information

Land Use	Miles	Trip %						Trip Purpose %		
		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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0	
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4	

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	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
General Office Building	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

Category	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
Natural Gas	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
Mitigated Natural Gas	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
Unmitigated																
lb/day																

5.2 Energy by Land Use - Natural Gas

Unmitigated

Land Use	Natural Gas 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
Enclosed Parking with Elevator	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	0.0000	0.0000
General Office Building	896.087	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
Total		9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485	
lb/day																	

Mitigated

Land Use	Natural Gas 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
Enclosed Parking with Elevator	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	0.0000	0.0000
Land Use	KBTL/yr																
lb/day																	

General Office Building	0.896087	9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485
Total		9.6600e-003	0.0879	0.0738	5.3000e-004	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	6.6800e-003	105.4220	105.4220	2.0200e-003	1.9300e-003	106.0485

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOK	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
Mitigated	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0280
Unmitigated	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOK	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
Architectural Coating	0.0828				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6361				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	1.0500e-003	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260

Total	0.7200	1.0000e-004	0.0114	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260
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Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bi-o-CO2	NBi-o-CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural	0.0828				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Coating						0.0000	0.0000						0.0000			0.0000
Consumer Products	0.6361				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	1.0500e-003	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260
Total	0.7200	1.0000e-004	0.0114	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005		0.0244	0.0244	6.0000e-005		0.0260

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
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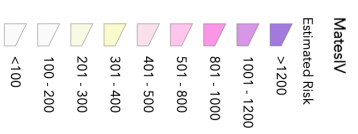
DOUGLASKIM+ASSOCIATES,LLC

MATES V TOXIC EMISSIONS OVERVIEW

711 Lillian Way, Los Angeles, CA X

Show search results for 711 Lillian W...

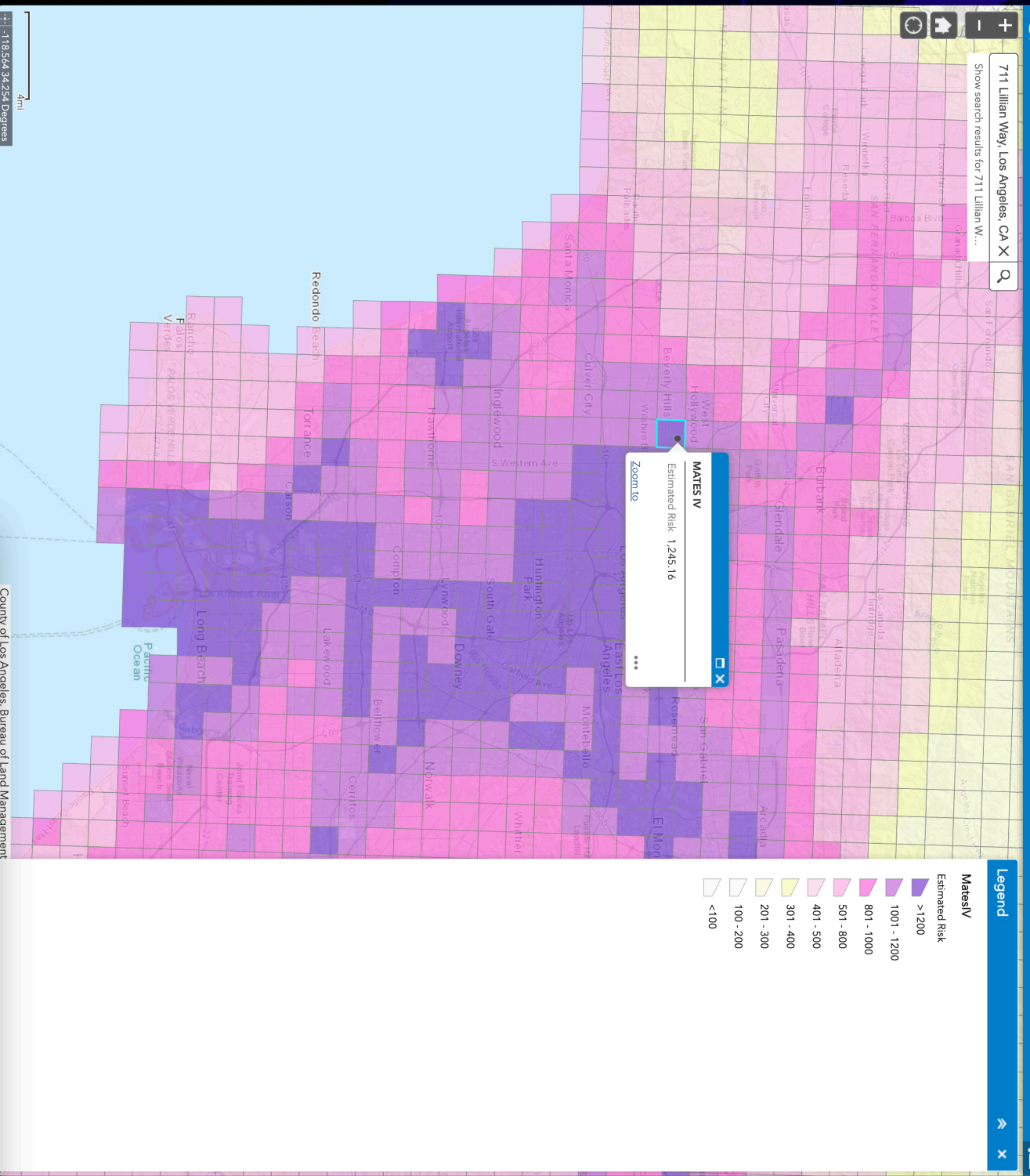
Legend



MATES IV

Estimated Risk 1,245.16

Zoom to



4mi

+-118.564 34.254 Degrees

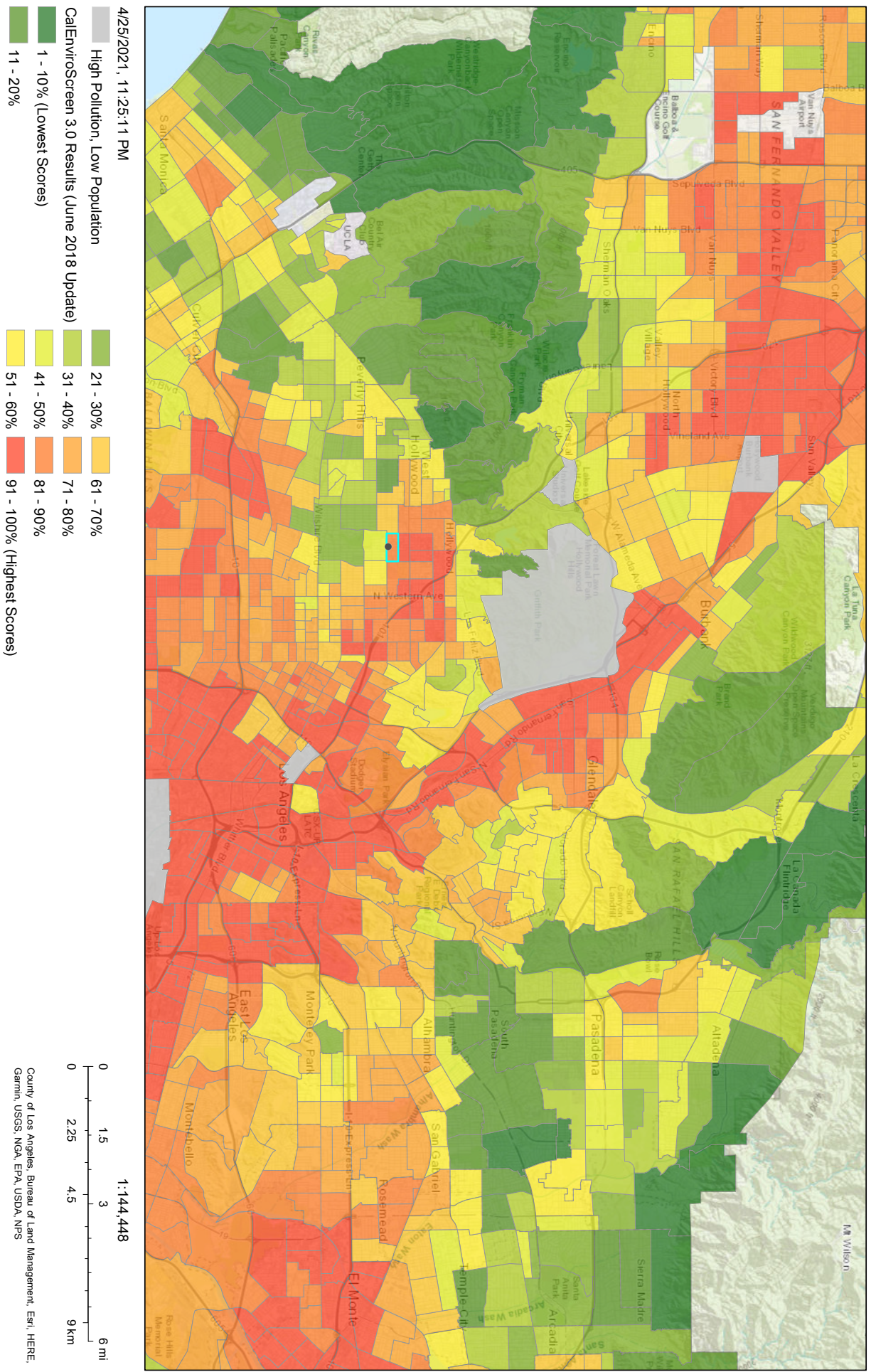
County of Los Angeles, Bureau of Land Management



DOUGLASKIM+ASSOCIATES,LLC

CALENVIROSCREEN 3.0 OUTPUT

CalEnviroScreen 3.0 Results (June 2018 Update)



GEOTECHNICAL INVESTIGATION

**PROPOSED COMMERCIAL
DEVELOPMENT
711-723 NORTH LILLIAN WAY
LOS ANGELES, CALIFORNIA
TRACT: SENECA HEIGHTS; BLOCK: L; LOTS: 15-17**



GEOCON
W E S T, I N C.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

**717 LILLIAN WAY, LLC
LOS ANGELES, CALIFORNIA**

PROJECT NO. W1399-06-01

AUGUST 11, 2021



Project No. W1399-06-01
August 11, 2021

Mr. Robert Herscu
717 Lillian Way, LLC
1801 Century Park East, Suite 1560
Los Angeles, California 90067

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED COMMERCIAL DEVELOPMENT
711-723 NORTH LILLIAN WAY
LOS ANGELES, CALIFORNIA
TRACT: SENECA HEIGHTS; BLOCK: L; LOTS: 15-17

Dear Mr. Herscu:

In accordance with your authorization of our proposal dated May 27, 2021, we have performed a geotechnical investigation for the proposed commercial development located at 711-723 North Lillian Way in the City of Los Angeles, California. The accompanying report presents the findings of our study and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

John Stapleton
Staff Engineer



Harry Derkalousdian
PE 79694



Susan F. Kirkgard
CEG 1754

(EMAIL) Addressee

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GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for the proposed commercial development located at 711-723 North Lillian Way in the City of Los Angeles, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate subsurface soil and geologic conditions underlying the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on July 12, 2021, by excavating four 8-inch diameter borings to depths between 9½ and 50½ feet below the existing ground surface using a truck-mounted hollow-stem auger drilling machine. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2A). A detailed discussion of the field investigation, including the boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is located at 711-723 North Lillian Way in the City of Los Angeles, California. The southern portion of the site is currently a vacant lot and the northern portion of the site is an asphalt parking lot. The area of proposed construction is bounded by a two-story residential structure with detached garage to the north, a one-story commercial structure to the south, North Lillian Way to the east, and a two-story commercial structure with associated asphalt parking lot to the west. The site is relatively level, with no pronounced highs or lows. Surface water drainage in at the site appears to drain from west to east towards North Lillian Way. Vegetation onsite consists of small trees and plants confined to planter areas in the parking lot in the northern portion of the site.

Based on the information provided by the Client, it is our understanding that the proposed development will consist of a three-story office structure with a roof deck underlain by two levels of subterranean parking. The depth of the subterranean level is anticipated to range from 23 to 33 feet below the ground surface, including foundation depths. The proposed structure is illustrated on the Site Plan and Cross Section (see Figures 2A and 2B).

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed structure will be up to 750 kips, and wall loads will be up to 7.5 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located in the north-central portion of the Los Angeles Basin, a coastal plain bounded by the Santa Monica Mountains on the north, the Elysian Hills and Repetto Hills on the northeast, the Puente Hills and Whittier Fault on the east, the Palos Verdes Peninsula and Pacific Ocean on the west and south, and the Santa Ana Mountains and San Joaquin Hills on the southeast. The basin is underlain by a deep structural depression which has been filled by both marine and continental sedimentary deposits underlain by a basement complex of igneous and metamorphic composition. Regionally, the site is located within the northern portion of the Peninsular Ranges geomorphic province. This geomorphic province is characterized by northwest-trending physiographic and geologic features such as the nearby Newport-Inglewood Fault Zone.

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and Pleistocene old alluvial fan deposits consisting of interbedded sand, silt and clay (California Geological Survey [CGS], 2012). Detailed stratigraphic profiles of the materials encountered at the site are provided on the boring logs in Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in our field explorations to a maximum depth of 4 feet below existing ground surface. The artificial fill consists of dark brown clay with some fine-grained sand and is characterized as slightly moist to moist and firm. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Older Alluvium

The fill soils are underlain by Pleistocene age old alluvial fan deposits that consist of gray, light brown, yellowish brown, and olive brown interbedded clay and silt with lesser amounts of sand, clayey sand, silty sand, and poorly graded sand with some well-graded sand lenses. The alluvial soils can be characterized as moist to wet and medium dense to dense or firm to hard.

5. GROUNDWATER

Review of the Seismic Hazard Zone Report for the Hollywood Quadrangle (California Division of Mines and Geology [CDMG], 1998) indicates the historically highest groundwater level in the area is approximately 20 feet beneath the ground surface. Groundwater information presented in this document is generated from data collected in the early 1900's to the late 1990s.

Perched groundwater was encountered in borings B1 and B2 at depths of approximately 17¾ feet and 17 feet below the ground surface respectively. Static groundwater was encountered at a depth of 23 feet below the ground surface in boring B3. Based on the historic high groundwater level in the site vicinity and the depth to perched and static groundwater encountered in the borings, static groundwater may be encountered during construction. Also, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the region. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the *Surface Drainage* Section of this report (see Section 7.25).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include Holocene-active, pre-Holocene, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, a Holocene-active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A pre-Holocene fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2021a; 2021b; 2014) nor a city-designated Preliminary Fault Rupture Study Area (City of Los Angeles, 2021) for surface fault rupture hazards. No Holocene-active or pre-Holocene faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest active fault to the site is the Hollywood Fault located approximately 1.3 miles to the north (CGS, 2014). Other nearby active faults are the Newport-Inglewood Fault Zone, the Santa Monica Fault, the Raymond Fault, and the Verdugo Fault located approximately 3.7 miles southwest, 3.9 miles west, 5.6 miles northeast, and 7.0 miles northeast of the site, respectively (CGS, 2018b; USGS, 2006). The active San Andreas Fault Zone is located approximately 33 miles northeast of the site (USGS, 2006).

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987, M_w 5.9 Whittier Narrows earthquake and the January 17, 1994, M_w 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These thrust faults and others in the Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	62	E
Long Beach	March 10, 1933	6.4	38	SE
Tehachapi	July 21, 1952	7.5	74	NW
San Fernando	February 9, 1971	6.6	23	NNW
Whittier Narrows	October 1, 1987	5.9	14	E
Sierra Madre	June 28, 1991	5.8	22	ENE
Landers	June 28, 1992	7.3	108	E
Big Bear	June 28, 1992	6.4	86	E
Northridge	January 17, 1994	6.7	15	NW
Hector Mine	October 16, 1999	7.1	123	ENE
Ridgecrest	July 5, 2019	7.1	123	NNE

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes the site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2019 CBC and Table 20.3-1 of ASCE 7-16. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	D	Section 1613.2.2
MCE _R Ground Motion Spectral Response Acceleration – Class B (short), S _S	2.071g	Figure 1613.2.1(1)
MCE _R Ground Motion Spectral Response Acceleration – Class B (1 sec), S ₁	0.741g	Figure 1613.2.1(2)
Site Coefficient, F _A	1	Table 1613.2.3(1)
Site Coefficient, F _V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE _R Spectral Response Acceleration (short), S _{MS}	2.071g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE _R Spectral Response Acceleration – (1 sec), S _{M1}	1.26g*	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S _{DS}	1.381g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S _{D1}	0.84g*	Section 1613.2.4 (Eqn 16-39)
<p>Note: *Per Section 11.4.8 of ASCE/SEI 7-16, a ground motion hazard analysis shall be performed for projects for Site Class “E” sites with S_S greater than or equal to 1.0g and for Site Class “D” and “E” sites with S₁ greater than 0.2g. Section 11.4.8 also provides exceptions which indicates that the ground motion hazard analysis may be waived provided the exceptions are followed. Using the code-based values presented in the table above, in lieu of a performing a ground motion hazard analysis, requires the exceptions outlined in ASCE 7-16 Section 11.4.8 be followed.</p>		

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE _G Peak Ground Acceleration, PGA	0.887g	Figure 22-7
Site Coefficient, F _{PGA}	1.1	Table 11.8-1
Site Class Modified MCE _G Peak Ground Acceleration, PGAM	0.976g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2019 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the building code is to maintain “Life Safety” during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.79 magnitude event occurring at a hypocentral distance of 8.12 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.68 magnitude occurring at a hypocentral distance of 11.74 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the “Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California” and “Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California” requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Hollywood Quadrangle (CDMG, 1999) indicates that the site is not located within an area designated as having a potential for liquefaction. In addition, a review of the County of Los Angeles Safety Element (Leighton, 1990) indicates that the site is not located within an area identified as having a potential for liquefaction. The site is underlain by Pleistocene age alluvial fan deposits that are primarily stiff to hard or medium dense to dense and are not prone to liquefaction. Based on these considerations, it is our opinion that the potential for liquefaction and associated ground deformations beneath the site is very low

6.5 Slope Stability

The topography at the site is relatively level and the topography in the immediate site vicinity slopes gently to the south-southwest. The site is not located within a City of Los Angeles Hillside Grading Area or a Hillside Ordinance Area (City of Los Angeles, 2021). Also, the site is not located within an area identified as having a potential for seismic slope instability (CDMG, 1999). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. The Los Angeles County Safety Element (Leighton, 1990) indicates that the site is located within the Mulholland Dam inundation area. However, this reservoir, as well as others in California, are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. Current design, construction practices, and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum considered earthquake (MCE) for the site. Therefore, the potential for inundation at the site as a result of an earthquake-induced dam failure is considered low.

6.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically induced seiche is considered unlikely.

The site is within an area of minimal flooding (Zone X, 0.2%) as defined by the Federal Emergency Management Agency (LACDPW, 2021; FEMA, 2021).

6.8 Oil Fields & Methane Potential

Based on a review of the California Geologic Energy Management Division (CalGEM) Well Finder website, the site is located immediately north of the northern border of the Salt Lake Oil Field. The nearest well to the site is the Rancho La Brea Oil Company Well No. 52, an idle oil/gas well located approximately 0.4 mile to the west-southwest (CalGEM, 2021). However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered will need to be properly abandoned in accordance with the current requirements of the CalGEM.

The site is located within the boundaries of a city-designated Methane Zone (City of Los Angeles, 2021). Prior to approval of the proposed project, the City of Los Angeles will require a site-specific methane study be performed to evaluate the potential for methane and other volatile gases to impact the proposed development. We recommend that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed development provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Up to 4 feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. Future demolition of the existing structures and improvements which occupy the site will likely disturb the upper few feet of existing site soils. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.5).

- 7.1.3 Excavations for the subterranean levels is anticipated to penetrate through the existing artificial fill and expose competent alluvium throughout the excavation bottom. Depending on the season, the soils at the excavation bottom may be moist and may require stabilization measures. Recommendations for stabilization procedures are provided in the *Grading* section of this report (see Section 7.5).
- 7.1.4 Perched Groundwater was encountered between depths of 17 and 23 feet below existing ground surface. Excavation for the construction of the lowest subterranean level is anticipated to extend to depths between 24 and of 33 feet below ground surface, including foundation excavations and temporary dewatering systems. Based on these considerations, groundwater may be encountered near the excavation bottom. Due to the depth of the proposed excavation and the potential for seasonal fluctuation in the groundwater level, temporary dewatering measures may be required to mitigate groundwater during excavation and construction. Recommendations for temporary dewatering are discussed in Section 7.4 of this report.
- 7.1.5 Based on a historic high groundwater depth of 20 feet below the existing ground surface, the proposed structure must be designed for hydrostatic pressure for any portion of the structure below a depth of 20 feet. The hydrostatic design will result in uplift forces on the structure that must be resisted by counterweight or structural design measures. The recommended floor slab uplift pressure to be used in design would be $62.4(H)$ in units of pounds per square foot (psf), where “H” is the height of the water above the bottom of the foundation in feet. If the proposed structure does not provide sufficient dead load to resist the buoyant forces then uplift mitigation will be required.
- 7.1.6 Based on these considerations, it is recommended that the proposed structure be supported on a reinforced concrete mat foundation system deriving support in undisturbed alluvial soils found at or below a depth of 20 feet. A mat foundation is more accommodating to subgrade stabilization, waterproofing, hydrostatic design, and allows for more efficient construction when performed in conjunction with a methane mitigation system. In addition, the bottom of the mat can be shaped to channel the methane simplifying the passive mitigation system. A qualified methane consultant should be retained for the design of the mitigation system. Recommendations for the design of a mat foundation system are provided in Section 7.7 of this report.
- 7.1.7 The concrete ramp for the subterranean level may bear directly on the undisturbed alluvium at the excavation bottom. Any soils that are disturbed should be properly compacted for ramp support. Where necessary, the existing artificial fill and undisturbed alluvium are suitable for re-use as an engineered fill beneath the ramp provided the procedures outlined in the *Grading* section of this report are followed (see Section 7.5).

- 7.1.8 Due to the nature of the proposed design and intent for subterranean levels, waterproofing of subterranean walls and slabs is suggested. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.
- 7.1.9 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).
- 7.1.10 Excavations up to 33 feet in vertical height are anticipated for construction of the subterranean level, including foundation depths and temporary dewatering system. Due to the depth of the excavation and the proximity to the property lines, city streets and adjacent offsite structures and improvements, excavation of the proposed subterranean level will require shoring in order to provide a stable excavation. Where shoring is required, it is recommended that a soldier pile shoring system be utilized. In addition, where the proposed excavation will be deeper than and adjacent to an offsite structure, the proposed shoring should be designed to resist the surcharge imposed by the adjacent offsite structure. Recommendations for shoring are provided in Section 7.20 of this report.
- 7.1.11 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at or below a depth of 24 inches and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

- 7.1.12 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Paving Design* section of this report (see Section 7.13).
- 7.1.13 Based on the current groundwater levels, as well as the fine-grained nature of the underlying site soils, stormwater infiltration is not recommended for this project. It is suggested that stormwater be retained, filtered and discharged in accordance with the requirements of the local governing agency.
- 7.1.14 Once the design and foundation loading configuration for the proposed structure proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be reevaluated by this office.
- 7.1.15 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.
- 7.1.16 The most recent ASTM standards apply to this project and must be utilized, even if older ASTM standards are indicated in this report.

7.2 Soil and Excavation Characteristics

- 7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.
- 7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.
- 7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping and shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.19).

7.2.4 The upper 5 feet of existing site soils encountered during the investigation are considered to have a “high” expansive potential (EI = 96) and are classified as “expansive” in accordance with the 2019 California Building Code (CBC) Section 1803.5.3. The recommendations presented herein assume that miscellaneous foundations and slabs-on-grade near the existing ground surface will derive support in these materials.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered “severely corrosive” with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B18) and should be considered for design of underground structures. Due to the corrosive potential of the soils, it is recommended that PVC, ABS or other approved plastic piping be utilized in lieu of cast-iron when in direct contact with the site soils.

7.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figures B18 and B19) and indicate that the on-site materials possess a sulfate exposure class of “S0” to concrete structures as defined by 2019 CBC Section 1904 and ACI 318-14 Table 19.3.1.1.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Temporary Dewatering

7.4.1 Groundwater was encountered during site exploration at depths between approximately 17 and 23 feet below ground surface. Based on the conditions encountered at the time of exploration, groundwater may be encountered during construction activities. The depth to groundwater at the time of construction can be further verified with a test well or during initial shoring pile installation. If groundwater is present above the depth of the subterranean level, temporary dewatering will be necessary to maintain a safe working environment during excavation and construction activities.

7.4.2 It is recommended that a qualified dewatering consultant be retained to design the dewatering system. Recommendations for design flow rates for the temporary dewatering system should be determined by a qualified contractor or dewatering consultant. Temporary dewatering may consist of perimeter wells with interior well points as well as gravel filled trenches (French drains) placed adjacent to the shoring system and interior of the site. The number and locations of the wells or French drains can be adjusted during excavation activities as necessary to collect and control any encountered seepage. The French drains will then direct the collected seepage to a sump where it will be pumped out of the excavation.

7.4.3 The embedment of perimeter shoring piles should be deepened as necessary to consider any required excavations necessary to place an adjacent French drain system, or sub-slab drainage system, should it be deemed necessary. It is not anticipated that a perimeter French drain will be more than 24 inches in depth below the proposed excavation bottom. If a French drain is to remain on a permanent basis, it must be lined with filter fabric to prevent soil migration into the gravel.

7.5 Grading

7.5.1 Grading is anticipated to include excavation of site soils for the subterranean levels, foundations, and utility trenches, as well as placement of backfill for walls and trenches.

7.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.

7.5.3 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and alluvium encountered during exploration are suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed.

7.5.4 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.) and the City of Los Angeles Inspector.

- 7.5.5 The proposed structure may be supported on a reinforced concrete mat foundation system deriving support in undisturbed alluvial soils found at and below a depth of 20 feet.
- 7.5.6 Due to the potential for high-moisture content soils at the excavation bottom, or if construction is performed during the rainy season and the excavation bottom becomes saturated, stabilization measures may have to be implemented to prevent excessive disturbance the excavation bottom. Should this condition exist, rubber tire equipment should not be allowed in the excavation bottom until it is stabilized or extensive soil disturbance could result. Track mounted equipment should be considered to minimize disturbance to the soils.
- 7.5.7 One method of subgrade stabilization would consist of introducing a thin lift of 3- to 6-inch diameter crushed angular rock into the soft excavation bottom. The use of crushed concrete will also be acceptable. The crushed rock should be spread thinly across the excavation bottom and pressed into the soils by track rolling or wheel rolling with heavy equipment. It is very important that voids between the rock fragments are not created so the rock must be thoroughly pressed or blended into the soils. All subgrade soils must be properly compacted and proof-rolled in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).
- 7.5.8 The City of Los Angeles Department of Building and Safety requires a minimum compactive effort of 95 percent of the laboratory maximum dry density in accordance with ASTM D 1557 (latest edition) where the soils to be utilized in the fill have less than 15 percent finer than 0.005 millimeters. Soils with more than 15 percent finer than 0.005 millimeters may be compacted to 90 percent of the laboratory maximum dry density in accordance with ASTM D 1557 (latest edition). All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to two percent above optimum moisture content, and properly compacted to the required degree of compaction in accordance with ASTM D 1557 (latest edition). The grading contractor should be aware if the soils are in excess of 3 percent above optimum moisture content at the time of construction the soils will likely require some spreading and drying activities in order to achieve proper compaction.
- 7.5.9 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed alluvium at and below a depth of 24 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

- 7.5.10 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to two percent above optimum moisture content, and compacted to at least 92 percent relative compaction (95 percent for granular soils) for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.13).
- 7.5.11 Although not anticipated for this project, all imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. Import soils should have any expansion index of less than 50 and corrosivity properties that are less than or equal to that of existing site soils (see Figure B18 and B19).
- 7.5.12 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. If gravel is used for trench bedding and shading (typical when seepage is present) it must be 3/16-inch rounded birds-eye rock in accordance with the City of LA plumbing department requirements. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable (see Section 7.6). Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).
- 7.5.13 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

7.6 Controlled Low Strength Material (CLSM)

- 7.6.1 Controlled Low Strength Material (CLSM) may be utilized in lieu of compacted soil as engineered fill where approved in writing by the Geotechnical Engineer. Where utilized within the City of Los Angeles use of CLSM is subject to the following requirements:

Standard Requirements

1. CLSM shall be ready-mixed by a City of Los Angeles approved batch plant;
2. CLSM shall not be placed on uncertified fill, on incompetent natural soil, nor below water;
3. CLSM shall not be placed on a sloping surface with a gradient steeper than 5:1 (horizontal to vertical);
4. Placement of the CLSM shall be under the continuous inspection of a concrete deputy inspector;
5. The excavation bottom shall be accepted by the soil engineer and the City Inspector prior to placing CLSM.

Requirements for CLSM that will be used for support of footings

1. The cement content of the CLSM shall not be less than 188 pounds per cubic yard (min. 2 sacks);
2. The excavation bottom must be level, cleaned of loose soils and approved in writing by Geocon prior to placement of the CLSM;
3. The ultimate compressive strength of the CLSM shall be no less than 100 psi when tested on the 28th day per ASTM D4832 (latest edition), Standard Test Method for Preparation and Testing of Controlled Low Strength Material Test Cylinders. Compression testing will be performed in accordance with ASTM C39 and City of Los Angeles requirements;
4. Samples of the CLSM will be collected during placement, a minimum of one test (two cylinders) for each 50 cubic yards or fraction thereof;
5. Overexcavation for CLSM placement shall extend laterally beyond the footprint of any proposed footings as required for placement of compacted fill, unless justified otherwise by the soil engineer that footings will have adequate vertical and horizontal bearing capacity.

7.7 Mat Foundation Design

- 7.7.1 The proposed structure may be supported on a reinforced concrete mat foundation system deriving support in undisturbed alluvial soils found at or below a depth of 20 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable soils at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete.

- 7.7.2 The recommended maximum allowable bearing value is 4,000 psf. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.
- 7.7.3 It is recommended that a modulus of subgrade reaction of 150 pounds per cubic inch (pci) be utilized for the design of the mat foundation bearing in the undisturbed alluvial soils found at and below a depth of 20 feet. If the subgrade is stabilized in accordance with the recommendation of this report a modulus of subgrade reaction of 250 pci may be utilized. These values are unit values for use with a one-foot square footing. The modulus should be reduced in accordance with the following equation when used with larger foundations:

$$K_R = K \left[\frac{B+1}{2B} \right]^2$$

where: K_R = reduced subgrade modulus
 K = unit subgrade modulus
 B = foundation width (in feet)

- 7.7.4 The thickness of and reinforcement for the mat foundation should be designed by the project structural engineer.
- 7.7.5 The City of Los Angeles Building Code requires that the structure be designed for the historically high groundwater level, which is approximately 20 feet below the existing ground surface. The proposed structure must be designed for hydrostatic pressure for any portion of the structure below a depth of 20 feet below the ground surface. The hydrostatic design will result in uplift forces on the slab that that must be resisted by structural design. The recommended floor slab uplift pressure to be used in design would be 62.4(H) in units of pounds per square foot (psf), where “H” is the height of the water above the bottom of the foundation in feet. If the proposed structure does not provide sufficient dead load to resist the buoyant forces then uplift mitigation will be required. Considerations for uplift resistance are provided in Section 7.9 of this report.
- 7.7.6 For seismic design purposes, a coefficient of friction of 0.35 may be utilized between the concrete mat and alluvium without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier or methane barrier.
- 7.7.7 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

- 7.7.8 Waterproofing of subterranean walls and slabs is suggested for this project. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer.
- 7.7.9 The client should be aware that if a methane barrier is installed to envelope the structure, the installation of a waterproofing barrier should not be necessary since it is a redundant system. A waterproofing consultant should be retained in order to recommend a product or method which would provide protection to subterranean walls, floor slabs and foundations.
- 7.7.10 This office should be provided a copy of the mat foundation pressure diagram, as well as information relating to the dewatering system, and the final construction plans so that the recommendations presented herein could be properly reviewed and revised if necessary.

7.8 Foundation Settlement

- 7.8.1 The maximum expected settlement for the structure supported on a mat foundation system deriving support in alluvium with a maximum allowable bearing pressure of 4,000 psf is estimated to be less than 1 inch and occur below the heaviest loaded structural element. Differential settlement is not expected to exceed $\frac{3}{4}$ inch between the center and corner of the mat.
- 7.8.2 Once the design and foundation loading configurations for the proposed structure proceed to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.9 Uplift Resistance

- 7.9.1 Foundation uplift may be resisted by the weight of structure, as well as friction along the sides of foundations. If additional uplift resistance is required, the perimeter shoring piles may be utilized provided the toes of the piles are poured with structural concrete and are designed as permanent piles. Recommendations for the design of shoring piles are provided in Section 7.20.
- 7.9.2 Uplift resistance may also be generated by additional piles constructed within the interior of the structure. It is recommended that post-grouted friction piles be utilized. The uplift capacity may be determined using a frictional resistance of 200 psf ($\frac{2}{3}$ the downward capacity, adjusted for buoyancy).

- 7.9.3 Post-grouted friction piles should be a minimum of 12 inches in diameter and should be uniformly spaced at least three times the diameter on-center. If so spaced, no reduction for group effects will be necessary. The allowable uplift capacity may be increased by one-third when considering transient wind or seismic loads.
- 7.9.4 Pile testing should be considered and performed as required by the building official to verify the uplift resistance prior to finalizing pile lengths or commencement of permanent pile installation.

7.10 Miscellaneous Foundations

- 7.10.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the alluvial soils at and below a depth of 24 inches and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials.
- 7.10.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 30 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.
- 7.10.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.11 Lateral Design

- 7.11.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.35 may be used with the dead load forces in the competent alluvial soils.

7.11.2 Passive earth pressure for the sides of foundations and slabs poured against the alluvial soils above the groundwater table may be computed as an equivalent fluid having a density of 230 pcf with a maximum earth pressure of 2,300 pcf. Passive earth pressure for the sides of foundations and slabs poured against the alluvial soils below the groundwater table may be computed as an equivalent fluid having a density of 110 pcf with a maximum earth pressure of 1,100 pcf (these values have been adjusted for buoyant forces). When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.12 Exterior Concrete Slabs-on-Grade

7.12.1 Exterior concrete slabs-on-grade at the ground surface subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.13).

7.12.2 Exterior slabs, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to two percent above optimum moisture content and properly compacted to at least 92 percent relative compaction (95 percent for granular soils), as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of 1/4 the slab thickness. The project structural engineer should design construction joints as necessary.

7.12.3 The moisture content of the slab subgrade should be maintained and sprinkled as necessary to maintain a moist condition as would be expected in any concrete placement.

7.12.4 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.13 Preliminary Pavement Recommendations

- 7.13.1 Where new paving is to be placed, it is recommended that all existing fill and soft alluvium materials be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft alluvium in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvium material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to two percent above optimum moisture content, and properly compacted to at least 92 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).
- 7.13.2 The following pavement sections are based on an assumed R-Value of 20. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.
- 7.13.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking and Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes	7.0	4.0	12.0

- 7.13.4 Asphalt concrete should conform to Section 203-6 of the “*Standard Specifications for Public Works Construction*” (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the “*Standard Specifications of the State of California, Department of Transportation*” (Caltrans). The use of Crushed Miscellaneous Base (CMB) in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the “*Standard Specifications for Public Works Construction*” (Green Book).

- 7.13.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 6 inches of concrete reinforced with No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 92 and 95 percent relative compaction, respectively, as determined by ASTM Test Method D 1557 (latest edition).
- 7.13.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.14 Retaining Wall Design

- 7.14.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 30 feet. In the event that walls higher than 30 feet are planned, Geocon should be contacted for additional recommendations.
- 7.14.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Mat Foundation Design* section of this report (see Section 7.7).
- 7.14.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure). Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure). The table below presents recommended pressures to be used in retaining wall design, assuming that proper drainage will be maintained. A retaining wall calculation is provided on Figure 5.

RETAINING WALL WITH LEVEL BACKFILL SURFACE

HEIGHT OF RETAINING WALL (Feet)	ACTIVE PRESSURE EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot)	AT-REST PRESSURE EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot)
Up to 30	52	66

- 7.14.4 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of cantilever and restrained undrained walls is 95 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.
- 7.14.5 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed soils. If sloping techniques are to be utilized for construction of proposed walls, which would result in a wedge of engineered fill behind the retaining walls, revised earth pressures may be required, especially if the wall backfill does not consist of the existing onsite soils. This should be evaluated once the use of sloping measures is established and once the geotechnical characteristics of the engineered backfill soils can be further evaluated.
- 7.14.6 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.
- 7.14.7 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$\text{For } x/H \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$\text{For } x/H > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z .

- 7.14.8 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$\text{For } x/H \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$\text{For } x/H > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) \cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_P is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z , θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z .

- 7.14.9 In addition to the recommended earth pressure, the upper 10 feet of the subterranean wall adjacent to the street and parking lot should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the walls due to normal street traffic. If the traffic is kept back at least 10 feet from the subterranean walls, the traffic surcharge may be neglected.
- 7.14.10 Seismic lateral forces should be incorporated into the design as necessary, and recommendations for seismic lateral forces are presented below.

7.15 Dynamic (Seismic) Lateral Forces

- 7.15.1 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2019 CBC).

- 7.15.2 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2019 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two-thirds of $PGAM$ calculated from ASCE 7-16 Section 11.8.3.

7.16 Retaining Wall Drainage

- 7.16.1 Retaining walls not designed for hydrostatic pressure should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 6). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.
- 7.16.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot-wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 7). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.
- 7.16.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures.
- 7.16.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.17 Elevator Pit Design

- 7.17.1 The elevator pit slab and retaining wall should be designed by the project structural engineer. Elevator pits may be designed in accordance with the recommendations in the *Mat Foundation Design* and *Retaining Wall Design* section of this report (see Sections 7.7 and 7.14).

- 7.17.2 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent foundations and should be designed for each condition as the project progresses.
- 7.17.3 The City of Los Angeles Building Code requires that the structure be designed for the historically high groundwater level, which is approximately 20 feet below the existing ground surface. The proposed structure must be designed for hydrostatic pressure for any portion of the structure below a depth of 20 feet below the ground surface. The hydrostatic design will result in uplift forces on the slab that must be resisted by structural design. The recommended floor slab uplift pressure to be used in design would be $62.4(H)$ in units of pounds per square foot (psf), where “H” is the height of the water above the bottom of the foundation in feet.
- 7.17.4 If retaining wall drainage is to be provided, the drainage system should be designed in accordance with the *Retaining Wall Drainage* section of this report (see Section 7.16).
- 7.17.5 It is suggested that the exterior walls and slab be waterproofed to prevent excessive moisture inside of the elevator pit. Waterproofing design and installation is not the responsibility of the geotechnical engineer.

7.18 Elevator Piston

- 7.18.1 If a plunger-type elevator piston is installed for this project, a deep drilled excavation will be required. It is important to verify that the drilled excavation is not situated immediately adjacent to a foundation or the drilled excavation could compromise the existing foundation support, especially if the drilling is performed subsequent to the foundation construction.
- 7.18.2 Caving is anticipated especially where granular soils are encountered. The contractor should be prepared to use casing and should have it readily available at the commencement of drilling activities. Continuous observation of the drilling and installation of the elevator piston by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.
- 7.18.3 The annular space between the piston casing and drilled excavation wall should be filled with a minimum of 1½-sack slurry pumped from the bottom up. As an alternative, pea gravel may be utilized. The use of soil to backfill the annular space is not acceptable.

7.19 Temporary Excavations

- 7.19.1 Excavations on the order of 33 feet in height may be required for excavation and construction of the proposed subterranean levels, including foundation depth and temporary dewatering system. The excavations are expected to expose artificial fill and alluvial soils, which are suitable for vertical excavations up to 5 feet in height where loose soils or caving sands are not present, and where not surcharged by adjacent traffic or structures.

- 7.19.2 If excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures such as shoring may be necessary in order to maintain lateral support of offsite improvements. Recommendations for shoring are provided in the following section.
- 7.19.3 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter up to maximum height of 10 feet. A uniform slope does not have a vertical portion. Where space is limited, shoring measures will be required. Recommendations for shoring are provided in the following section.
- 7.19.4 Where temporary construction slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.20 Shoring – Soldier Pile Design and Installation

- 7.20.1 The following information on the design and installation of shoring is preliminary. Review of the final shoring plans and specifications should be made by this office prior to bidding or negotiating with a shoring contractor.
- 7.20.2 One method of shoring would consist of steel soldier piles, placed in drilled holes and backfilled with concrete. Where maximum excavation heights are less than 12 feet the soldier piles are typically designed as cantilevers. Where excavations exceed 12 feet or are surcharged, soldier piles may require lateral bracing utilizing drilled tie-back anchors or raker braces to maintain an economical steel beam size and prevent excessive deflection. The size of the steel beam, the need for lateral bracing, and the acceptable shoring deflection should be determined by the project shoring engineer.
- 7.20.3 Due to the assumed proximity of the shoring to the existing structures and improvements along the property lines, installation of shoring piles using vibratory techniques is not recommended. Shoring piles should be installed using methods that minimize disturbance to the existing structures and improvements.

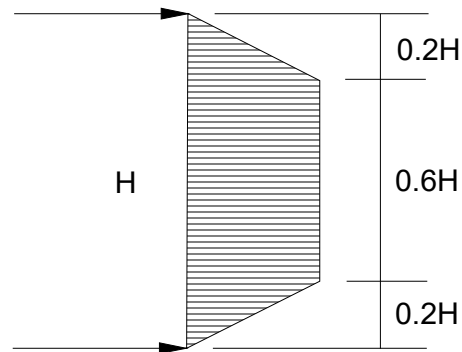
- 7.20.4 The design embedment of the shoring pile toes must be maintained during excavation activities. The toes of the perimeter shoring piles should be deepened to take into account any required excavations necessary for foundations and/or subgrade stabilization activities, foundations and/or adjacent drainage systems.
- 7.20.5 The proposed soldier piles may be utilized to provide a component of uplift resistance. If required to provide uplift resistance, the shoring piles must be designed as permanent piles. The uplift capacity may be taken as $\frac{2}{3}$ of the downward frictional capacity. The required pile depths, dimensions, and spacing should be determined and designed by the project structural and shoring engineers. All piles utilized for shoring can also be incorporated into a permanent retaining wall system (shotcrete wall) and should be designed in accordance with the earth pressure provided in the *Retaining Wall Design* section of this report (see Section 7.14).
- 7.20.6 Drilled cast-in-place soldier piles should be placed no closer than 3 diameters on center. The minimum diameter of the piles is 18 inches. Structural concrete should be used for the soldier piles below the excavation; lean-mix concrete may be employed above that level. As an alternative, lean-mix concrete may be used throughout the pile where the reinforcing consists of a wideflange section. The slurry must be of sufficient strength to impart the lateral bearing pressure developed by the wideflange section to the soil. For design purposes, an allowable passive value for the soils below the bottom plane of excavation may be assumed to be 220 psf per foot above the groundwater elevation, and 110 psf per foot (value reduced for buoyant forces) below the groundwater elevation. Where piles are installed by vibration techniques, the passive pressure may be assumed to mobilize across a width equal to the two times the dimension of the beam flange. The allowable passive value may be doubled for isolated piles spaced a minimum of three times the pile diameter. To develop the full lateral value, provisions should be implemented to assure firm contact between the soldier piles and the undisturbed alluvium.

- 7.20.7 Perched groundwater was encountered at depths between 17 and 23 feet below the existing ground surface. If more than 6 inches of water is present in the bottom of the excavation, a tremie is required to place the concrete into the bottom of the hole. A tremie should consist of a rigid, water-tight tube having a diameter of not less than 6 inches with a hopper at the top. The tube should be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie should be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end should be closed at the start of the work to prevent water entering the tube and should be entirely sealed at all times, except when the concrete is being placed. The tremie tube should be kept full of concrete. The flow should be continuous until the work is completed, and the resulting concrete seal should be monolithic and homogeneous. The tip of the tremie tube should always be kept about 5 feet below the surface of the concrete and definite steps and safeguards should be taken to ensure that the tip of the tremie tube is never raised above the surface of the concrete.
- 7.20.8 A special concrete mix should be used for concrete to be placed below water. The design should provide for concrete with an unconfined compressive strength pounds per square inch (psi) of 1,000 psi over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste should be included. The slump should be commensurate to any research report for the admixture, provided that it should also be the minimum for a reasonable consistency for placing when water is present.
- 7.20.9 Casing may be required if caving is experienced, and the contractor should have casing available prior to commencement of drilling activities. When casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet. As an alternative, piles may be vibrated into place; however, there is always a risk that excessive vibrations in sandy soils could induce settlements and distress to adjacent offsite improvements. Continuous observation of the drilling and pouring of the piles by the Geotechnical Engineer (a representative of Geocon West, Inc.), is required.
- 7.20.10 Continuous observation of the drilling and pouring of the piles by the Geotechnical Engineer (a representative of Geocon West, Inc.), is required.

- 7.20.11 The frictional resistance between the soldier piles and retained soil may be used to resist the vertical component of the load. The coefficient of friction may be taken as 0.35 based on uniform contact between the steel beam and lean-mix concrete and retained earth. The portion of soldier piles below the plane of excavation may also be employed to resist the downward loads. The downward capacity may be determined using a frictional resistance of 300 psf per foot (value has been reduced for buoyant forces).
- 7.20.12 Due to the nature of the site soils, it is expected that continuous lagging between soldier piles will be required. However, it is recommended that the exposed soils be observed by the Geotechnical Engineer (a representative of Geocon West, Inc.), to verify the presence of any competent, cohesive soils and the areas where lagging may be omitted.
- 7.20.13 The time between lagging excavation and lagging placement should be as short as possible soldier piles should be designed for the full-anticipated pressures. Due to arching in the soils, the pressure on the lagging will be less. It is recommended that the lagging be designed for the full design pressure but be limited to a maximum of 400 psf.
- 7.20.14 For the design of unbraced shoring, it is recommended that an equivalent fluid pressure based on the following table, be utilized for design. A trapezoidal distribution of lateral earth pressure may be used where shoring will be restrained by bracing or tie-backs. The recommended active and trapezoidal pressure are provided in the following table. A diagram depicting the trapezoidal pressure distribution of lateral earth pressure is provided below the table and a calculation of shoring pressure is provided on Figure 8.

HEIGHT OF SHORING (FEET)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (ACTIVE PRESSURE)	EQUIVALENT FLUID PRESSURE Trapezoidal (Where H is the height of the shoring in feet)
Up to 33	44	28H

Trapezoidal Distribution of Pressure



7.20.15 Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for each combination. Additional active pressure should be added for a surcharge condition due to slopes, vehicular traffic or adjacent structures and should be designed for each condition. Surcharges may be evaluated using Section 7.14 of this report. Once the design becomes more finalized, an addendum letter can be prepared revising recommendations and addressing specific surcharge conditions throughout the project, if necessary.

7.20.16 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$\text{For } x/H \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$\text{For } x/H > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z .

- 7.20.17 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$\text{For } x/H \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$\text{For } x/H > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) \cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_p is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z , θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z .

- 7.20.18 In addition to the recommended earth pressure, the upper 10 feet of the shoring adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least ten feet from the shoring, the traffic surcharge may be neglected.
- 7.20.19 It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. It is recommended that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where public right-of-ways are present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area it is recommended that the beam deflection be limited to less than ½ inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment, and will be assessed and designed by the project shoring engineer.

7.20.20 Because of the depth of the excavation, some means of monitoring the performance of the shoring system is suggested. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles and the lateral movement along the entire lengths of selected soldier piles.

7.20.21 Due to the depth of the excavation and proximity to adjacent structures, it is suggested that prior to excavation the existing improvements be inspected and their present condition be documented. For documentation purposes, photographs should be taken of preconstruction distress conditions and level surveys of adjacent grade and pavement should be considered. During excavation activities, the adjacent structures and pavement should be periodically inspected for signs of distress. In the event that distress or settlement is observed, an investigation should be performed and corrective measures taken so that continued or worsened distress or settlement is mitigated. Documentation and monitoring of the offsite structures and improvements is not the responsibility of the geotechnical engineer.

7.21 Temporary Tie-Back Anchors

7.21.1 Temporary tie-back anchors may be used with the soldier pile wall system to resist lateral loads. Post-grouted friction anchors are recommended. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn 35 degrees with the vertical through the bottom plane of the excavation. Friction anchors should extend a minimum of 20 feet beyond the potentially active wedge and to greater lengths if necessary to develop the desired capacities. The locations and depths of all offsite utilities should be thoroughly checked and incorporated into the drilling angle design for the tie-back anchors.

7.21.2 The capacities of the anchors should be determined by testing of the initial anchors as outlined in a following section. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. Anchors should be placed at least 6 feet on center to be considered isolated. For preliminary design purposes, it is estimated that drilled friction anchors constructed without utilizing post-grouting techniques will develop average skin frictions as follows:

- 7 feet below the top of the excavation – 1,000 pounds per square foot
- 15 feet below the top of the excavation – 700 pounds per square foot (reduced for buoyancy)
- 25 feet below the top of the excavation – 900 pounds per square foot (reduced for buoyancy)

7.21.3 Depending on the techniques utilized, and the experience of the contractor performing the installation, a maximum allowable friction capacity of 1.2 kips per linear foot (reduced for buoyancy) for post-grouted anchors (for a minimum 20-foot length beyond the active wedge) may be assumed for design purposes. Only the frictional resistance developed beyond the active wedge should be utilized in resisting lateral loads.

7.22 Anchor Installation

7.22.1 Tied-back anchors are typically installed between 20 and 40 degrees below the horizontal; however, occasionally alternative angles are necessary to avoid existing improvements and utilities. The locations and depths of all offsite utilities should be thoroughly checked prior to design and installation of the tie-back anchors. Caving of the anchor shafts, particularly within sand and gravel deposits or seepage zones, should be anticipated during installation and provisions should be implemented in order to minimize such caving. It is suggested that hollow-stem auger drilling equipment be used to install the anchors. The anchor shafts should be filled with concrete by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. In order to minimize the chances of caving, it is recommended that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill should be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

7.23 Anchor Testing

7.23.1 All of the anchors should be tested to at least 150 percent of design load. The total deflection during this test should not exceed 12 inches. The rate of creep under the 150 percent test load should not exceed 0.1 inch over a 15-minute period in order for the anchor to be approved for the design loading.

7.23.2 At least 10 percent of the anchors should be selected for "quick" 200 percent tests and three additional anchors should be selected for 24-hour 200 percent tests. The purpose of the 200 percent tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. These tests should be performed prior to installation of additional tiebacks. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

7.23.3 The total deflection during the 24-hour 200 percent test should not exceed 12 inches. During the 24-hour tests, the anchor deflection should not exceed 0.75 inches measured after the 200 percent test load is applied.

7.23.4 For the "quick" 200 percent tests, the 200 percent test load should be maintained for 30 minutes. The total deflection of the anchor during the 200 percent quick tests should not exceed 12 inches; the deflection after the 200 percent load has been applied should not exceed 0.25 inch during the 30-minute period.

7.23.5 After a satisfactory test, each anchor should be locked-off at the design load. This should be verified by rechecking the load in the anchor. The load should be within 10 percent of the design load. A representative of this firm should observe the installation and testing of the anchors.

7.24 Internal Bracing

7.24.1 Rakers may be utilized to brace the soldier piles in lieu of tieback anchors. The raker bracing could be supported laterally by temporary concrete footings (deadmen) or by the permanent, interior footings. For design of such temporary footings or deadmen, poured with the bearing surface normal to rakers inclined at 45 degrees, a bearing value of 2,000 psf may be used, provided the shallowest point of the footing is at least one foot below the lowest adjacent grade. The structural engineer should review the shoring plans to determine if raker footings conflict with the structural foundation system. The client should be aware that the utilization of rakers could significantly impact the construction schedule due to their intrusion into the construction site and potential interference with equipment.

7.25 Surface Drainage

7.25.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.25.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2019 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within five feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within five feet of the building perimeter footings except when enclosed in protected planters.

7.25.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures.

7.25.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.26 Plan Review

7.26.1 Grading, shoring and foundation plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.
2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

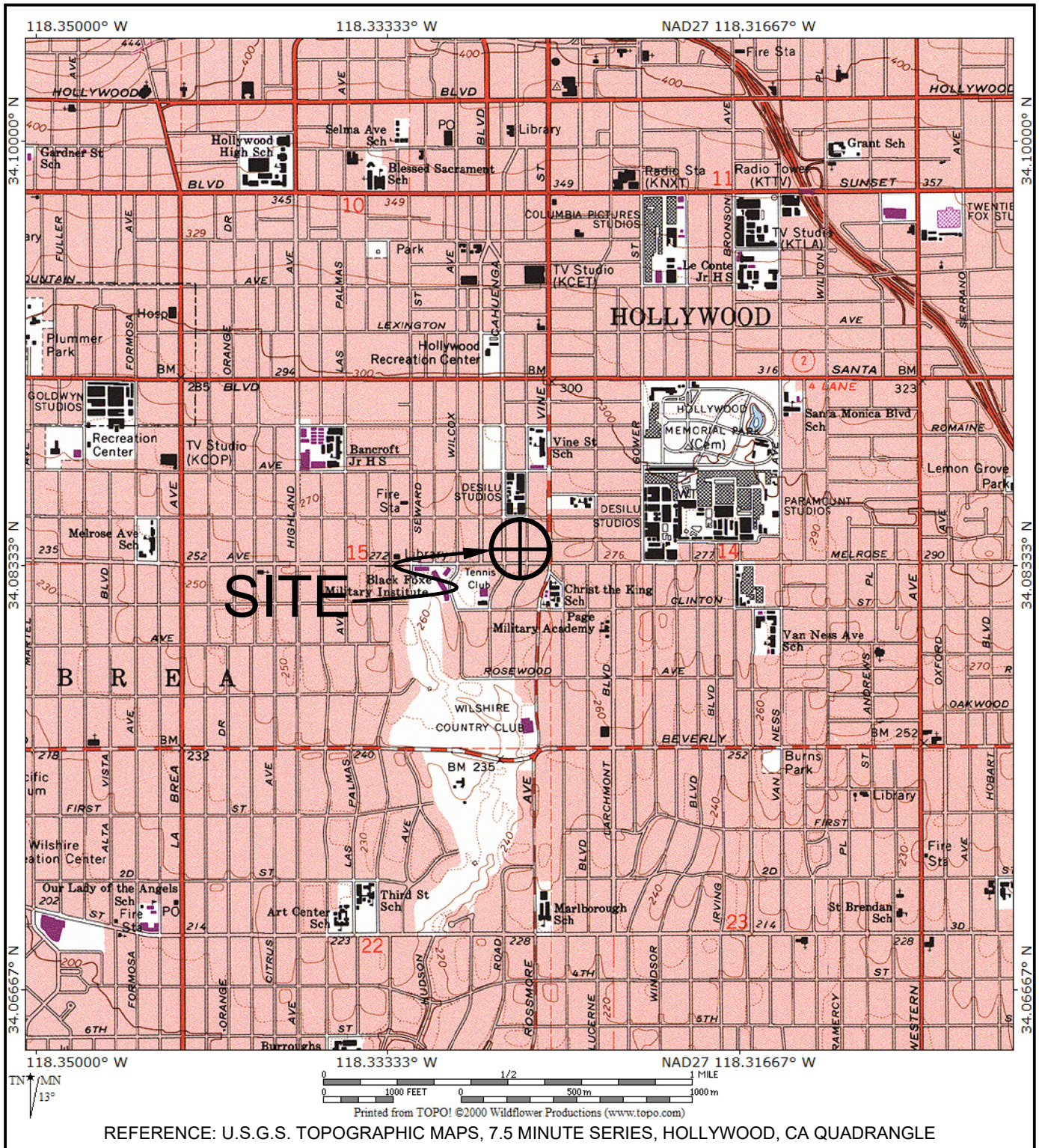
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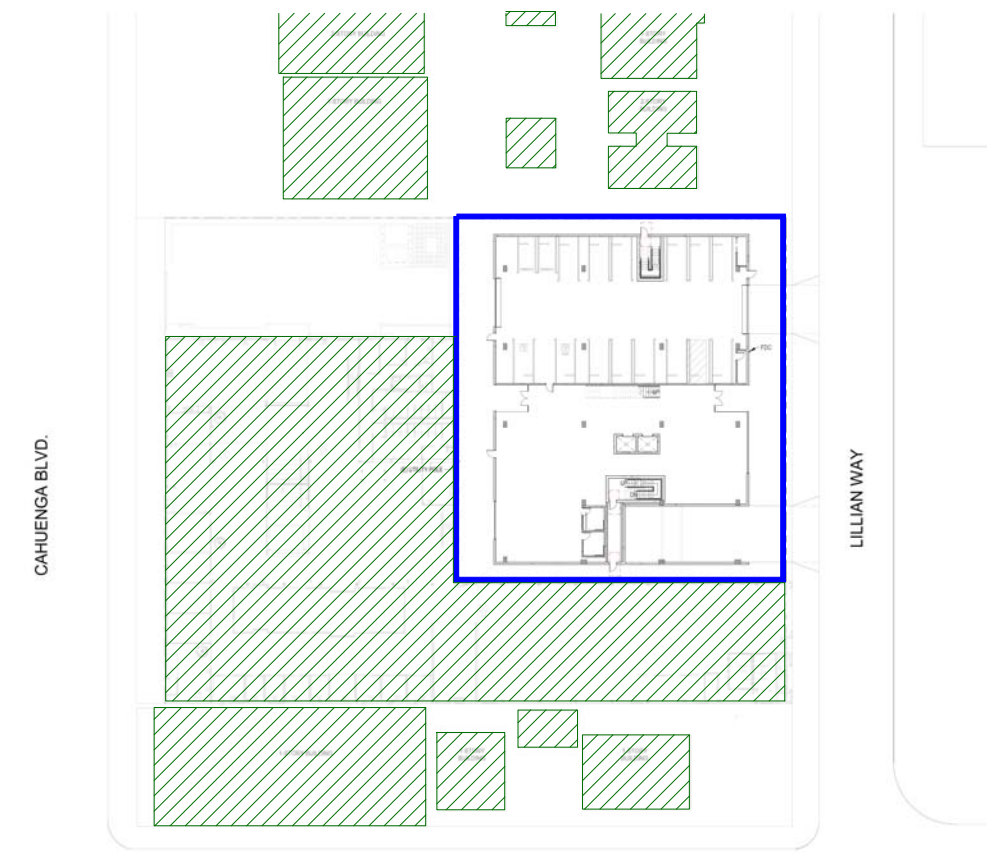
VICINITY MAP

711-723 NORTH LILLIAN WAY
LOS ANGELES, CALIFORNIA

AUGUST 2021	PROJECT NO. W1399-06-01	FIG. 1
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LEGEND

-  Boring Location and Number
-  Approximate Limits of Proposed Development
-  Approximate Limits of Subterranean Level
-  Approximate Location of Offsite Structures



Vicinity Map (Not to Scale)

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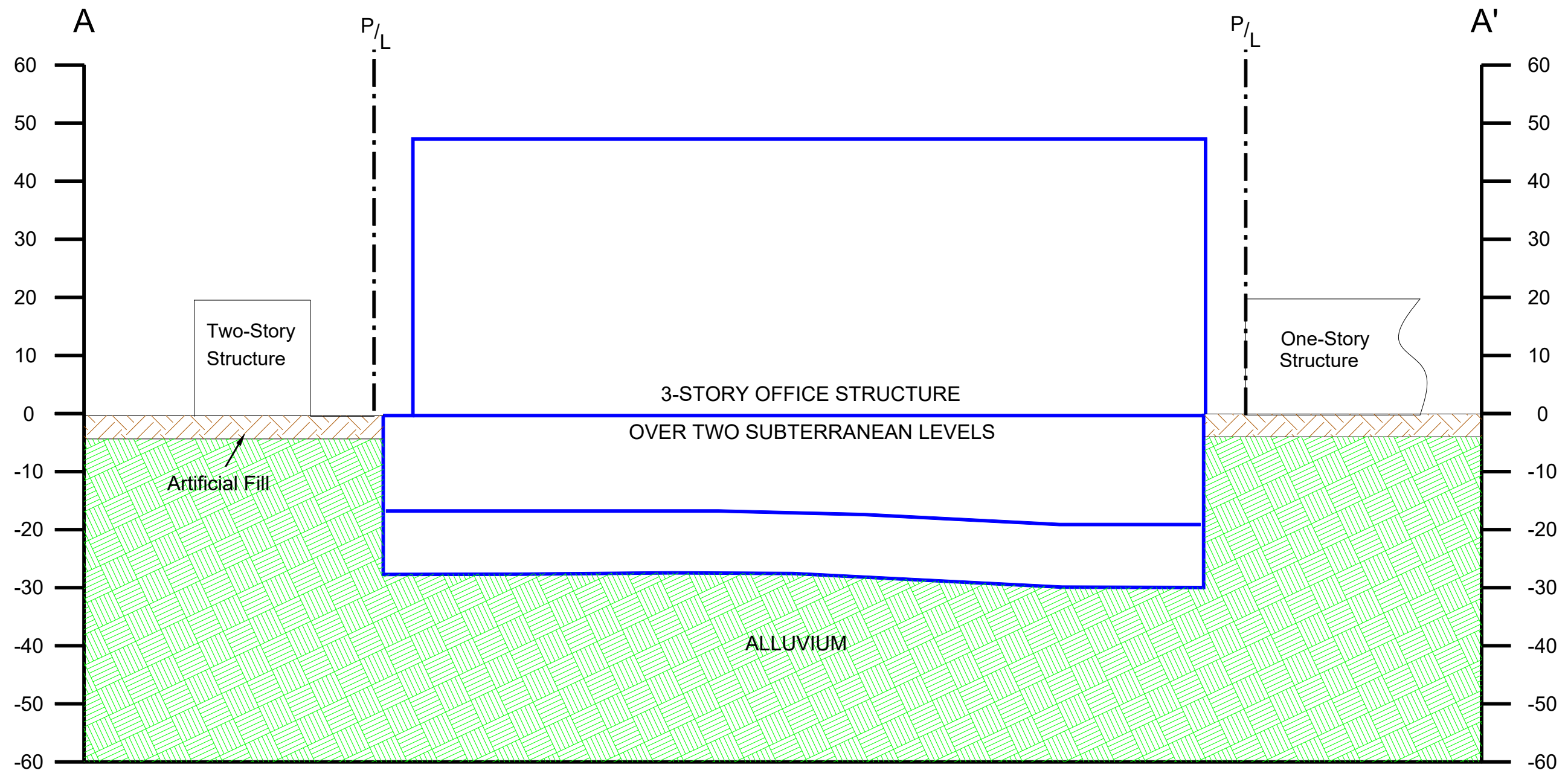
SITE PLAN

711-723 NORTH LILLIAN WAY
LOS ANGELES, CALIFORNIA

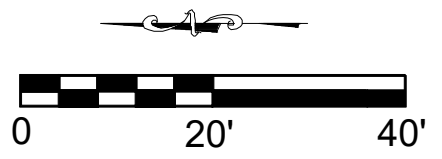
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FIG. 2A

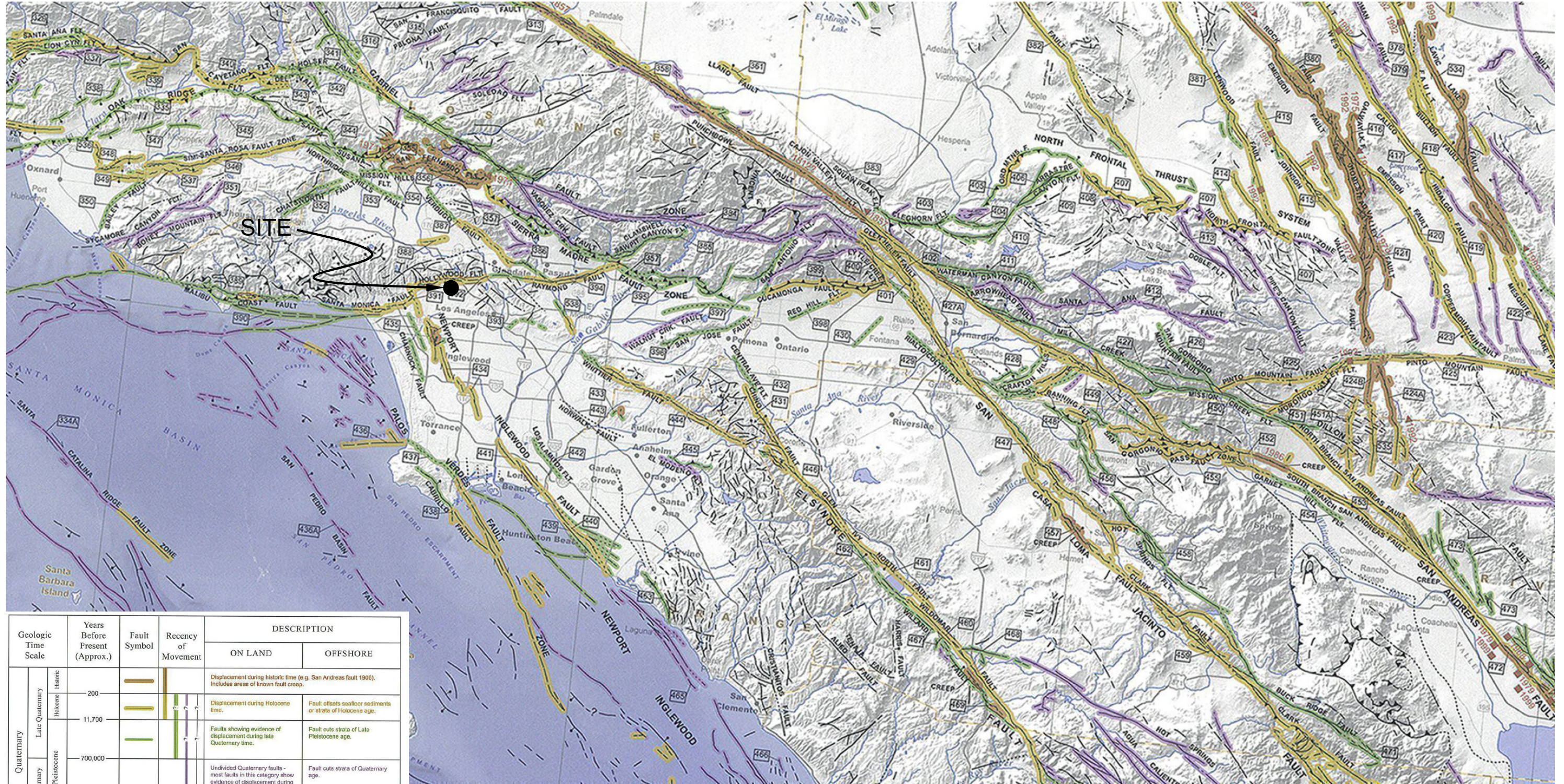


Section A-A'



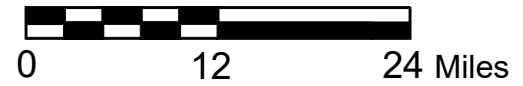
 <p>GEOCON WEST, INC.</p> <p>ENVIRONMENTAL GEOTECHNICAL MATERIALS 3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504 PHONE (818) 841-8388 - FAX (818) 841-1704</p>		CROSS SECTION		
		711-723 NORTH LILLIAN WAY LOS ANGELES, CALIFORNIA		
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Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale	Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
				ON LAND	OFFSHORE
Quaternary	Late Quaternary Holocene 0 - 11,700			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	Fault offsets surficial sediments or strata of Holocene age.
	Pleistocene 11,700 - 700,000			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
Early Quaternary	700,000 - 1,600,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary	1,600,000 - 4.5 billion (Age of Earth)			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.



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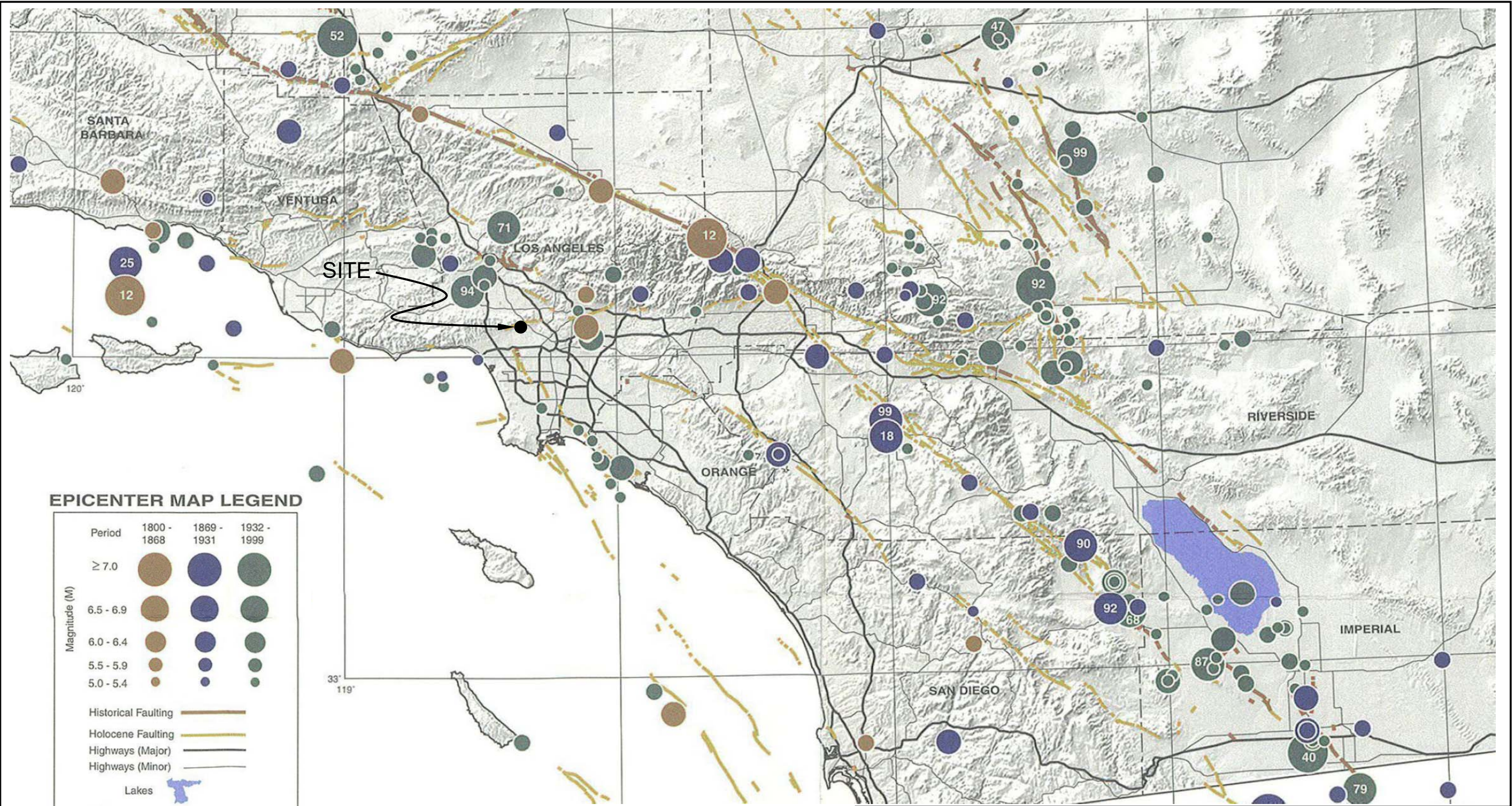
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REGIONAL FAULT MAP

711-723 NORTH LILLIAN WAY
LOS ANGELES, CALIFORNIA

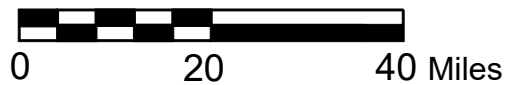
AUGUST 2021 PROJECT NO. W1399-06-01 FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M)			
≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			
Historical Faulting			
Holocene Faulting			
Highways (Major)			
Highways (Minor)			
Lakes			
	Last two digits of M ≥ 6.5 earthquake year		

Reference: Topozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.



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DRAFTED BY: RA

CHECKED BY: SFK

REGIONAL SEISMICITY MAP

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LOS ANGELES, CALIFORNIA

AUGUST 2021

PROJECT NO. W1399-06-01

FIG.4

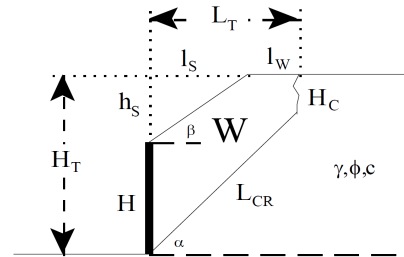
Retaining Wall Design with Transitioned Backfill (Vector Analysis)

Input:

Retaining Wall Height (H) 30.00 feet
 Slope Angle of Backfill (b) 0.0 degrees
 Height of Slope above Wall (h_s) 0.0 feet
 Horizontal Length of Slope (l_s) 0.0 feet
 Total Height (Wall + Slope) (H_T) 30.0 feet

Unit Weight of Retained Soils (g) 120.0 pcf
 Friction Angle of Retained Soils (f) 26.9 degrees
 Cohesion of Retained Soils (c) 199.0 psf
 Factor of Safety (F_S) 1.50

Factored Parameters: (f_{FS}) 18.7 degrees
 (c_{FS}) 132.7 psf



Failure Angle (a) degrees	Height of Tension Crack (H _c) feet	Area of Wedge (A) feet ²	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L _{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P _A) lbs/lineal foot
45	3.3	444	53330.2	37.7	10688.6	42641.6	21087.3
46	3.3	429	51521.7	37.1	10171.3	41350.4	21354.9
47	3.2	415	49769.3	36.6	9696.0	40073.4	21589.4
48	3.2	401	48069.7	36.1	9258.2	38811.5	21792.0
49	3.2	387	46419.8	35.6	8854.1	37565.7	21963.5
50	3.1	373	44816.6	35.1	8480.2	36336.4	22104.6
51	3.1	360	43257.4	34.6	8133.8	35123.7	22215.8
52	3.1	348	41739.7	34.1	7812.0	33927.7	22297.8
53	3.1	336	40261.1	33.7	7512.6	32748.4	22350.7
54	3.1	323	38819.1	33.3	7233.7	31585.5	22374.9
55	3.1	312	37411.8	32.9	6973.2	30438.6	22370.4
56	3.1	300	36037.1	32.5	6729.6	29307.5	22337.2
57	3.1	289	34693.2	32.1	6501.5	28191.7	22275.2
58	3.1	278	33378.1	31.7	6287.4	27090.7	22184.1
59	3.1	267	32090.3	31.3	6086.3	26004.1	22063.6
60	3.2	257	30828.2	31.0	5897.0	24931.3	21913.0
61	3.2	247	29590.2	30.6	5718.5	23871.8	21731.9
62	3.3	236	28374.9	30.3	5549.9	22825.1	21519.4
63	3.3	227	27181.0	30.0	5390.4	21790.6	21274.6
64	3.4	217	26007.1	29.6	5239.2	20767.9	20996.4
65	3.4	207	24852.1	29.3	5095.6	19756.5	20683.7
66	3.5	198	23714.6	29.0	4958.9	18755.7	20335.0
67	3.6	188	22593.6	28.7	4828.4	17765.2	19948.7
68	3.7	179	21487.9	28.4	4703.4	16784.5	19523.0
69	3.8	170	20396.5	28.1	4583.5	15813.0	19056.0
70	3.9	161	19318.3	27.8	4467.9	14850.5	18545.3

Design Equations (Vector Analysis):
 $a = c_{FS} * L_{CR} * \sin(90 + f_{FS}) / \sin(a - f_{FS})$
 $b = W - a$
 $P_A = b * \tan(a - f_{FS})$
 $EFP = 2 * P_A / H^2$

Maximum Active Pressure Resultant

$P_{A, max}$

22374.9 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of wall)

$EFP = 2 * P_A / H^2$

EFP

49.7 pcf

65.7 pcf

Design Wall for an Equivalent Fluid Pressure:

52 pcf

66 pcf

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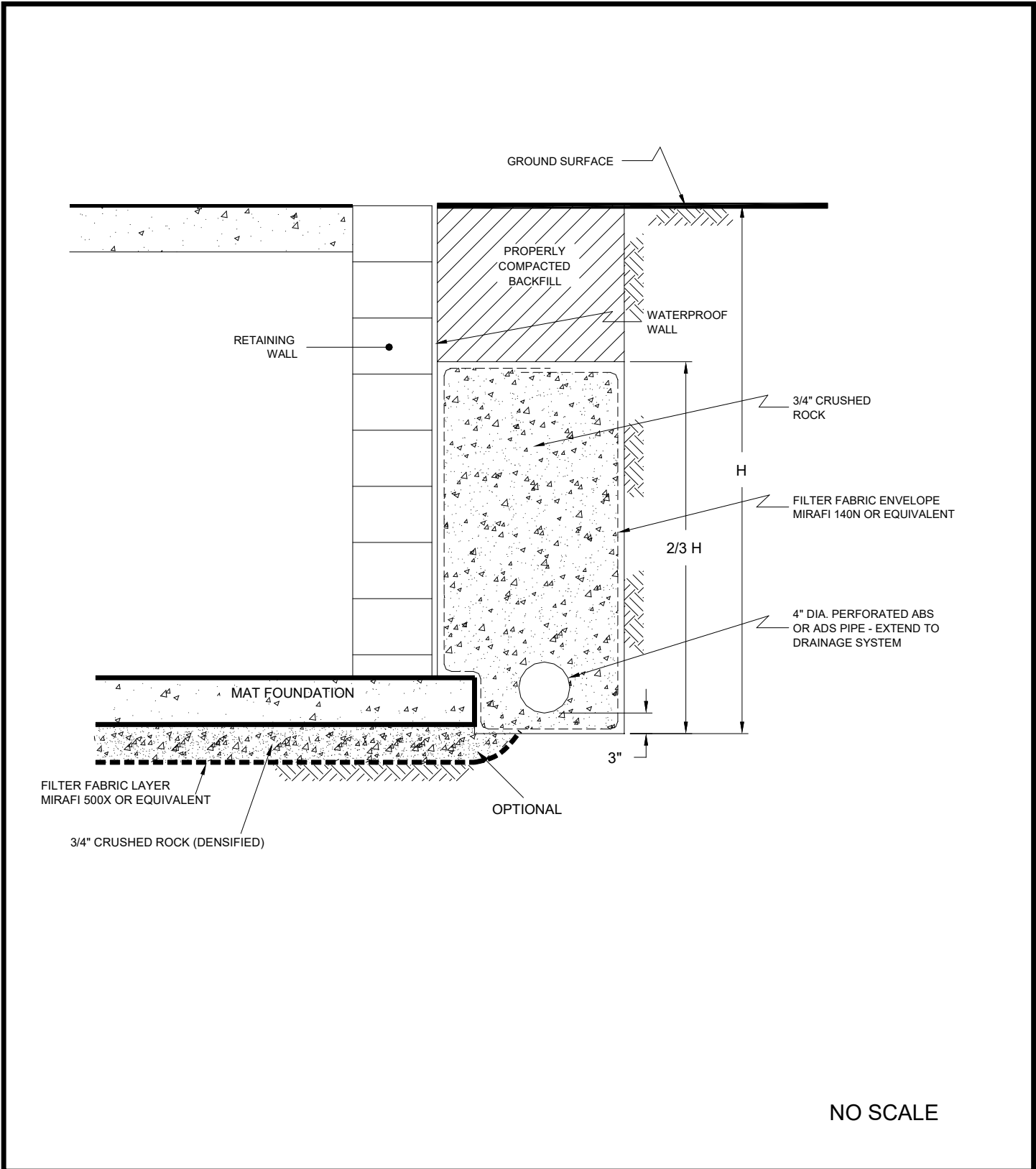
RETAINING WALL PRESSURE CALCULATION

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FIG. 5



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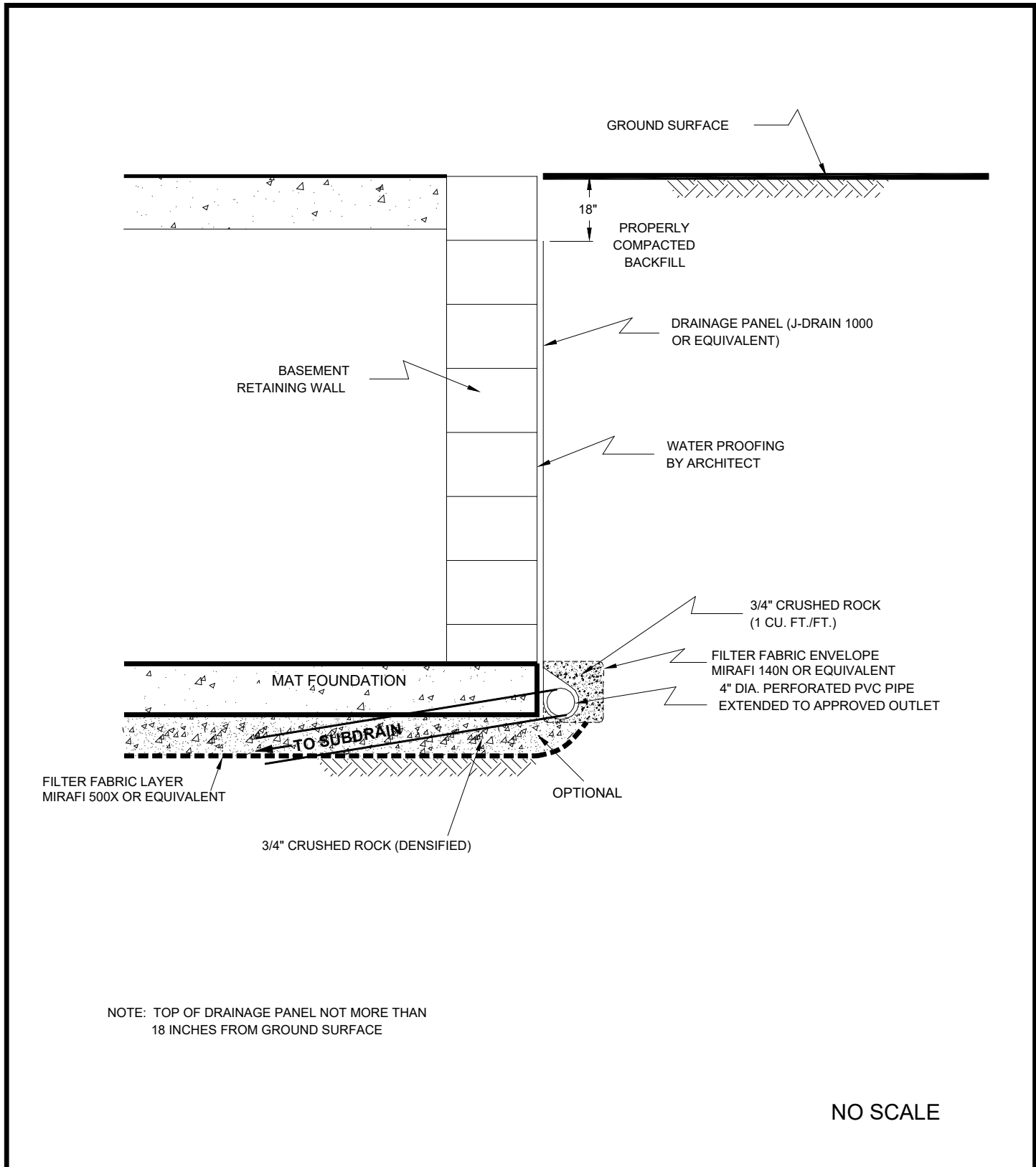
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RETAINING WALL DRAIN DETAIL

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NOTE: TOP OF DRAINAGE PANEL NOT MORE THAN 18 INCHES FROM GROUND SURFACE

NO SCALE

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RETAINING WALL DRAIN DETAIL

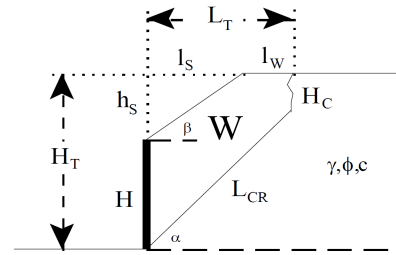
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AUGUST 2021	PROJECT NO. W1399-06-01	FIG. 7
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Shoring Design with Transitioned Backfill (Vector Analysis)

Input:

Shoring Height	(H)	33.00	feet
Slope Angle of Backfill	(b)	0.0	degrees
Height of Slope above Shoring	(h _s)	0.0	feet
Horizontal Length of Slope	(l _s)	0.0	feet
Total Height (Shoring + Slope)	(H _T)	33.0	feet
Unit Weight of Retained Soils	(g)	120.0	pcf
Friction Angle of Retained Soils	(f)	28.4	degrees
Cohesion of Retained Soils	(c)	130.0	psf
Factor of Safety	(FS)	1.25	



Factored Parameters:

(f _{FS})	23.4	degrees
(c _{FS})	104.0	psf

Failure Angle (a) degrees	Height of Tension Crack (H _c) feet	Area of Wedge (A) feet ²	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L _{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P _A) lbs/lineal foot
45	3.1	540	64780.1	42.3	10976.7	53803.5	21311.7
46	3.0	522	62584.0	41.7	10362.4	52221.6	21747.1
47	2.9	504	60456.0	41.1	9805.3	50650.7	22137.9
48	2.9	487	58392.1	40.6	9298.3	49093.8	22485.9
49	2.8	470	56388.8	40.0	8835.6	47553.2	22792.6
50	2.8	454	54442.5	39.5	8412.0	46030.5	23059.1
51	2.7	438	52549.9	39.0	8023.3	44526.6	23286.6
52	2.7	423	50707.9	38.5	7665.6	43042.3	23475.9
53	2.7	408	48913.7	38.0	7335.8	41577.9	23627.9
54	2.7	393	47164.4	37.5	7030.9	40133.4	23743.1
55	2.6	379	45457.4	37.1	6748.6	38708.8	23821.9
56	2.6	365	43790.4	36.6	6486.6	37303.8	23864.8
57	2.6	351	42161.0	36.2	6242.9	35918.1	23871.8
58	2.6	338	40567.1	35.8	6016.0	34551.1	23843.0
59	2.7	325	39006.6	35.4	5804.1	33202.4	23778.2
60	2.7	312	37477.5	35.0	5606.1	31871.4	23677.3
61	2.7	300	35978.2	34.7	5420.7	30557.4	23539.8
62	2.7	288	34506.7	34.3	5246.8	29259.9	23365.1
63	2.7	276	33061.5	34.0	5083.4	27978.1	23152.7
64	2.8	264	31641.0	33.6	4929.5	26711.5	22901.6
65	2.8	252	30243.8	33.3	4784.4	25459.3	22610.8
66	2.9	241	28868.3	33.0	4644.2	24221.0	22279.1
67	3.0	229	27513.3	32.6	4517.6	22995.7	21905.2
68	3.0	218	26177.4	32.3	4394.4	21783.0	21487.5
69	3.1	207	24859.5	32.0	4277.3	20582.2	21024.2
70	3.2	196	23558.1	31.7	4165.5	19392.6	20513.3

Design Equations (Vector Analysis):

a = c_{FS} * L_{CR} * sin(90 + f_{FS}) / sin(alpha - f_{FS})

b = W - a

P_A = b * tan(alpha - f_{FS})

EFP = 2 * P_A / H²

Maximum Active Pressure Resultant

P_{A, max} 23871.8 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of shoring)

EFP = 2 * P_A / H²
EFP 43.8 pcf

Design Shoring for an Equivalent Fluid Pressure:

44 pcf

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SHORING PRESSURE CALCULATION

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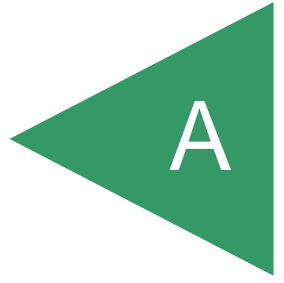
AUGUST 2021

PROJECT NO. W1399-06-01

FIG. 8

APPENDIX

A



APPENDIX A

FIELD INVESTIGATION







The site was explored on July 12, 2021, by excavating four 8-inch diameter borings to depths between 9½ and 50½ feet below the existing ground surface using a truck-mounted hollow-stem auger drilling machine. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the “undisturbed” soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch by 2¾-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 through A4. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The location of the borings are shown on Figure 2A.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>7/12/2021</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JS</u>				
MATERIAL DESCRIPTION									
0	BULK 0-5'				ARTIFICIAL FILL Clay, firm, moist, very dark brown, trace fine-grained sand.				
2									
4					ALLUVIUM Sandy Clay, firm, moist, dark yellowish brown, fine- to medium-grained.				
6	B1@5'			CL			20	119.2	14.2
8					Clayey Sand, medium dense, moist, yellowish brown, medium- to coarse-grained.				
10	B1@10'			SC			41	121.6	9.8
12				CL	Sandy Clay, stiff, moist, olive brown, fine- to medium-grained.				
14					Sand, poorly graded, medium dense, moist, olive brown, fine- to medium-grained, some clay.				
16	B1@15' BULK 15-20'				- moist to wet		47	118.6	14.5
18									
20	B1@20'			SP	- light olive, decrease in medium-grained		43	105.9	21.9
22									
24	B1@22.5'				- yellowish brown, some coarse-grained pockets, trace clay		49	107.9	19.7
26	B1@25'				- dense		59	109.6	21.4
28	B1@27.5'			SP	Sand, poorly graded, dense, moist, light brown, fine-grained. - moist, light brown, fine-grained - oxidation staining		54	99.8	25.4

Figure A1,
Log of Boring 1, Page 1 of 2

W1399-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	
					ELEV. (MSL.) --	DATE COMPLETED <u>7/12/2021</u>				
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JS</u>					
MATERIAL DESCRIPTION										
30	B1@30'			SP	Sandy Silt, hard, moist, olive brown, fine-grained.		65	108.2	19.5	
32	B1@32.5'							64	99.2	27.8
34	B1@35'							63	93.9	29.4
36						- olive, oxidation staining, decrease in sand content - bluish gray				
38				ML						
40	B1@40'				- sand lens, fine- to medium-grained		54	99.0	23.0	
42										
44										
46	B1@45'				- dark brown with olive mottles		50 (6")	89.9	31.8	
48										
50	B1@50'				- very dark brown, some purplish brown		50 (6")	95.1	29.7	
					Total depth of boring: 50.5 feet Fill to 3.5 feet. Groundwater encountered at 17'8". Backfilled with soil cuttings and tamped.					
					*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.					

**Figure A1,
Log of Boring 1, Page 2 of 2**

W1399-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1A		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>7/12/2021</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JS</u>				
MATERIAL DESCRIPTION									
0					ARTIFICIAL FILL Clay, firm, moist, very dark brown.				
2									
4					ALLUVIUM Clayey Sand, medium dense, moist, dark yellowish brown, fine- to medium-grained.				
6				SC					
8									
					Total depth of boring: 9.5 feet Fill to 4 feet. No groundwater encountered. Percolation testing performed. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.				

Figure A2,
Log of Boring 1A, Page 1 of 1

W1399-06-01 BORING LOGS.GPJ







SAMPLE SYMBOLS	<input type="checkbox"/> ... SAMPLING UNSUCCESSFUL	<input type="checkbox"/> ... STANDARD PENETRATION TEST	<input type="checkbox"/> ... DRIVE SAMPLE (UNDISTURBED)
	<input checked="" type="checkbox"/> ... DISTURBED OR BAG SAMPLE	<input checked="" type="checkbox"/> ... CHUNK SAMPLE	<input checked="" type="checkbox"/> ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 2		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>7/12/2021</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JS</u>				
MATERIAL DESCRIPTION									
0					ARTIFICIAL FILL Clay, firm, slightly moist, dark brown.				
2									
4					ALLUVIUM Sandy Clay, firm, moist, dark yellowish brown, fine- to medium-grained.				
6	B2@5'						19	110.7	11.2
8				CL	- some medium- to coarse-grained				
10	B2@10'				- stiff, olive brown		34	107.9	21.1
12									
14					Clay, firm, moist, olive brown, some fine- to medium-grained sand.				
16	B2@15'						20	105.9	24.5
18				CL					
20	B2@20'				- stiff		42	118.0	14.5
22	BULK 20-25'								
24	B2@22.5'						41	111.7	17.4
26	B2@25'			SW	Sand, well-graded, medium dense, moist to wet, olive, fine- to coarse-grained.				
28	B2@27.5'			CL	Clay, stiff, moist, olive brown, some fine- to medium-grained sand.		41	120.1	15.9
				ML	Sandy Silt, hard, moist, olive brown.		57	120.5	10.6

Figure A3,
Log of Boring 2, Page 1 of 2

W1399-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 2			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)		
					ELEV. (MSL.) --	DATE COMPLETED						
					ELEV. (MSL.) --	DATE COMPLETED	7/12/2021					
					EQUIPMENT	HOLLOW STEM AUGER	BY: JS					
					MATERIAL DESCRIPTION							
30	B2@30'			ML	- bluish gray			43	114.8	18.4		
32	B2@32.5'			CL	Sandy Clay, stiff, moist, gray, fine- to medium-grained.			32	114.4	18.7		
34	B2@35'							71	108.0	20.2		
38				ML	Silt, hard, moist, bluish gray.							
40	B2@40'							58	97.1	28.5		
42												
44	B2@45'			ML	- very dark brown			50 (6")	100.5	20.1		
46												
48				ML								
50	B2@50'							50 (4")	103.4	22.7		
					Total depth of boring: 50.5 feet Fill to 4 feet. Groundwater encountered at 17 feet. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.							

**Figure A3,
Log of Boring 2, Page 2 of 2**

W1399-06-01 BORING LOGS.GPJ







SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)		
					ELEV. (MSL.) --	DATE COMPLETED						
					ELEV. (MSL.) --	DATE COMPLETED						
					EQUIPMENT		BY:					
					MATERIAL DESCRIPTION							
0	BULK 0-5'				AC: 3" BASE: 9" ARTIFICIAL FILL Clay, firm, moist, dark brown.							
2												
4	B3@5'			SC	ALLUVIUM Clayey Sand, medium dense, moist, yellowish brown, medium- to coarse-grained.					36	116.3	15.4
6												
8					Sandy Clay, hard, moist, olive, fine- to medium-grained.							
10	B3@10'									45	111.5	18.7
12												
14	B3@15'			CL	- stiff, olive to yellowish brown					41	112.7	17.4
16												
18												
20	B3@20'									58	117.9	9.2
22	BULK 20-25'											
24				SP-SC	Sand with Clay, medium dense, moist to wet, yellowish brown, medium- to coarse-grained.							
26	B3@25'									46	107.2	16.4
28				SP	Sand, poorly graded, medium dense, wet, pale olive, fine- to medium-grained.							

Figure A4,
Log of Boring 3, Page 1 of 2

W1399-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>7/12/2021</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JS</u>				
MATERIAL DESCRIPTION									
30	B3@30'			ML	Silt with Sand, hard, moist, olive to yellowish brown, fine-grained.		51	95.5	24.2
32									
34	B3@35'				Total depth of boring: 35.5 feet Fill to 3.5 feet. Groundwater encountered at 23 feet. Backfilled with soil cuttings and tamped. AC patched. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.		49	93.3	33.1

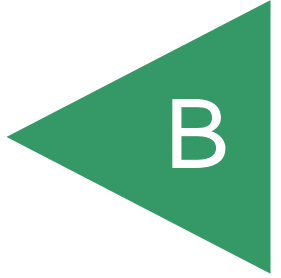
Figure A4,
Log of Boring 3, Page 2 of 2

W1399-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS	... SAMPLING UNSUCCESSFUL	... STANDARD PENETRATION TEST	... DRIVE SAMPLE (UNDISTURBED)
	... DISTURBED OR BAG SAMPLE	... CHUNK SAMPLE	... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
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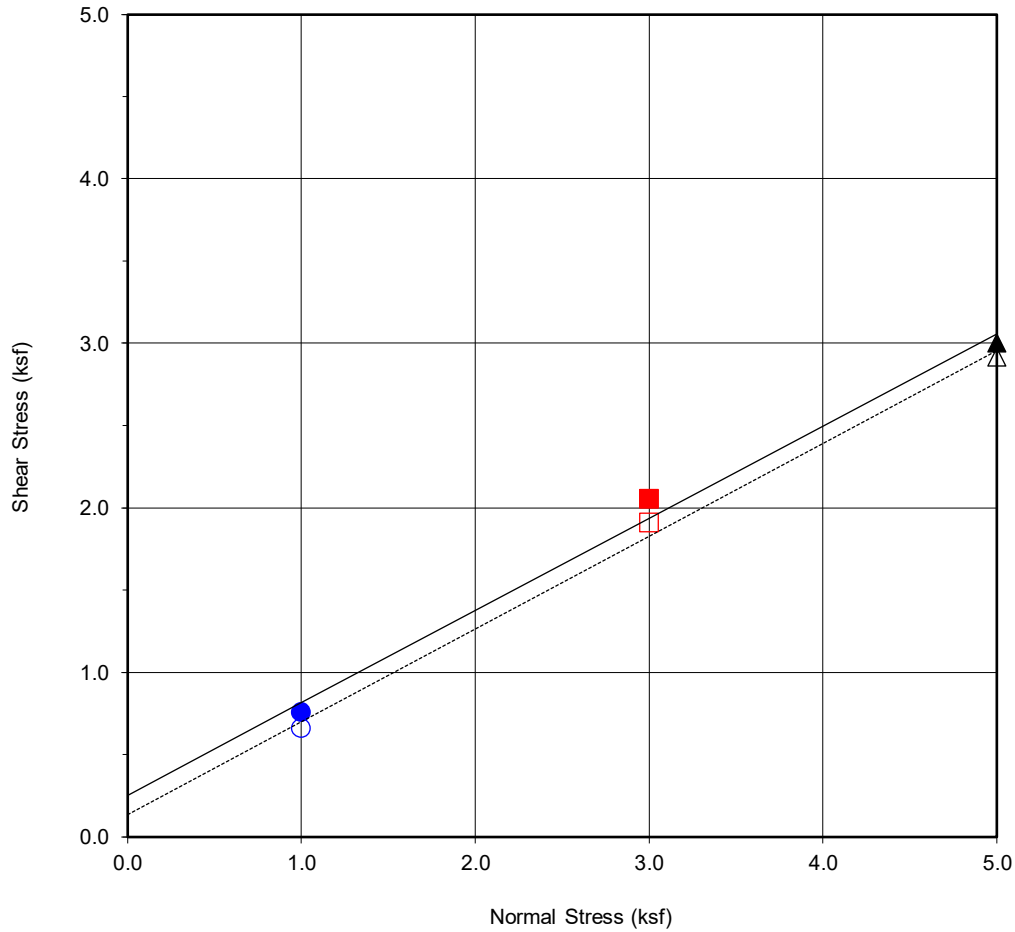
APPENDIX



APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the International ASTM, or other suggested procedures. Selected samples were tested for direct shear strength, consolidation and expansion characteristics, corrosivity, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B19. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



Boring No.	B-1
Sample No.	B1@5'
Depth (ft)	5'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Sandy Clay (CL), dark yellowish brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	253	29.3
Ultimate	136	29.4

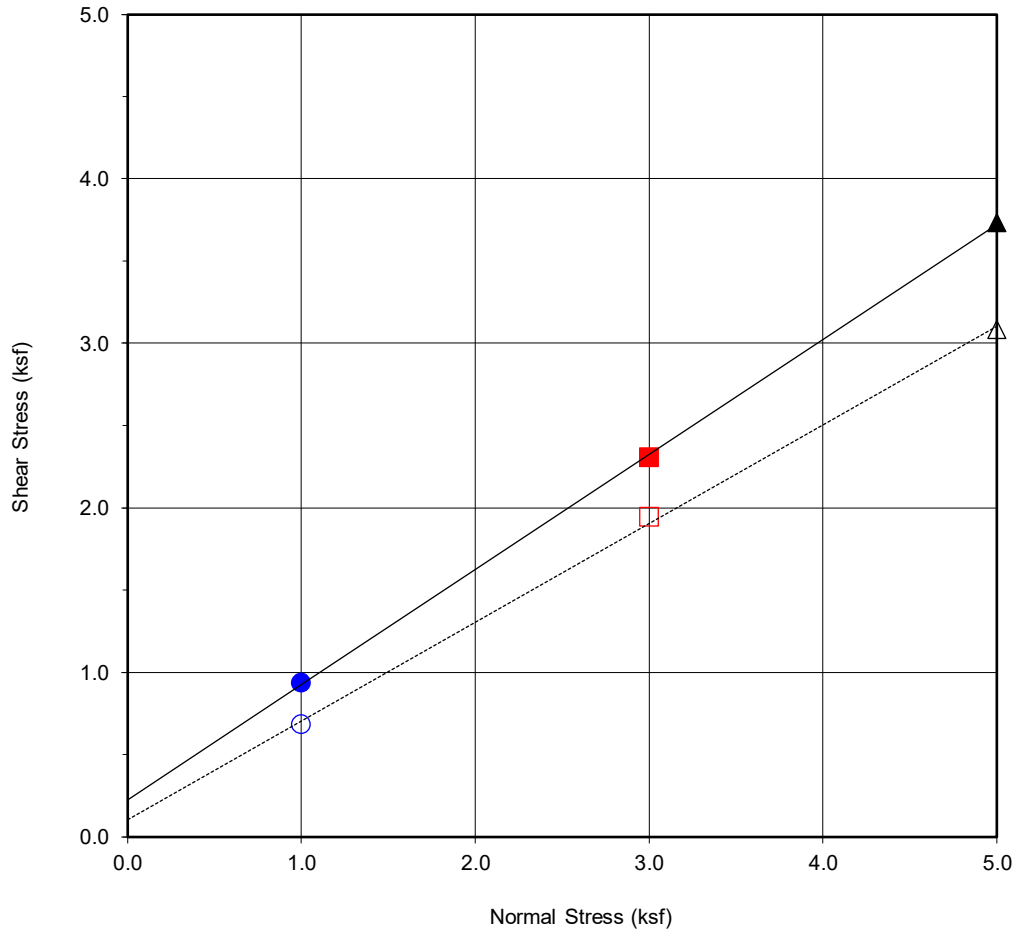
Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 0.76	■ 2.05	▲ 3.00
Shear Stress @ End of Test (ksf)	○ 0.66	□ 1.91	△ 2.92
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	18.2	18.6	17.6
Initial Dry Density (pcf)	112.2	111.5	113.4
Initial Degree of Saturation (%)	97.8	98.2	97.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	22.0	20.4	18.6



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

Checked by: JS

Project No.: W1399-06-01
711-723 North Lillian Way
Los Angeles, California
August 2021 Figure B1



Boring No.	B-1
Sample No.	B1@20'
Depth (ft)	20'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Poorly Graded Sand (SP), pale brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	227	35.0
Ultimate	104	31.0

Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 0.94	■ 2.30	▲ 3.73
Shear Stress @ End of Test (ksf)	○ 0.68	□ 1.94	△ 3.08
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	25.7	23.6	23.5
Initial Dry Density (pcf)	102.2	105.2	104.3
Initial Degree of Saturation (%)	106.9	106.0	102.9
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	23.8	21.4	22.5



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

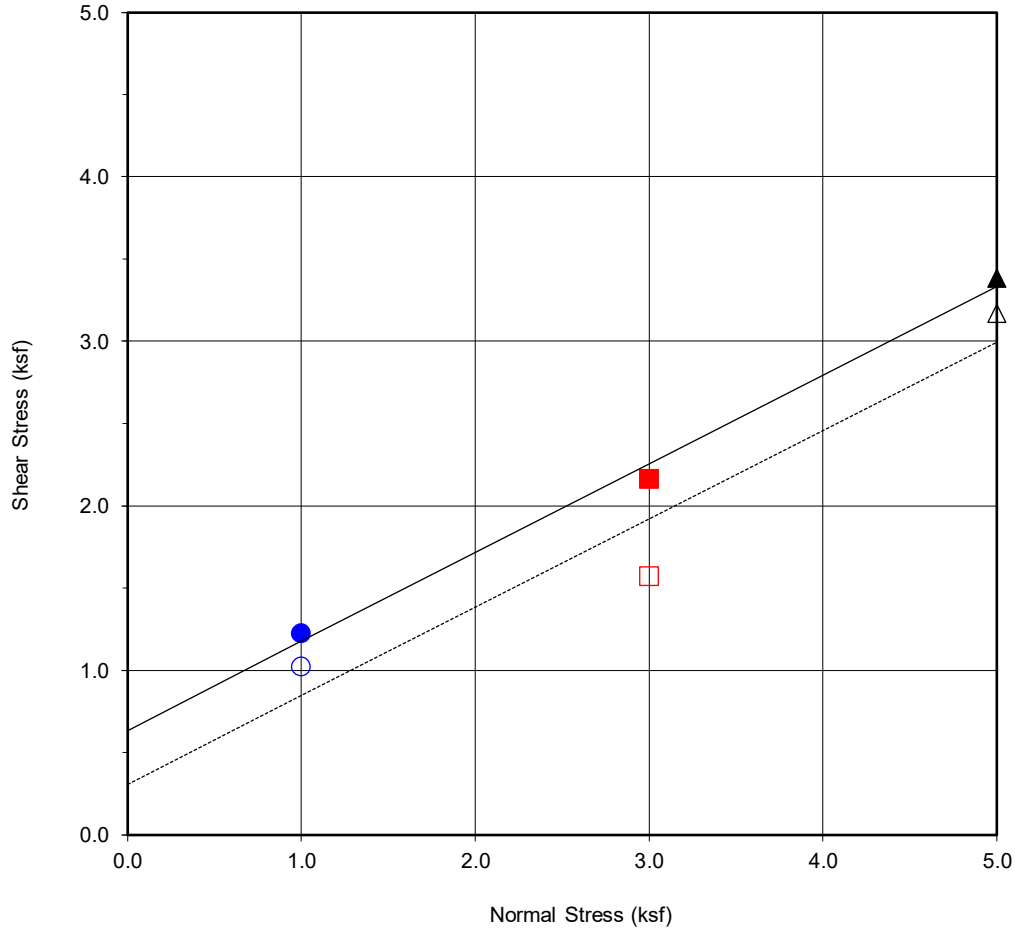
Checked by: JS

Project No.: W1399-06-01

711-723 North Lillian Way
Los Angeles, California

August 2021

Figure B2



Boring No.	B-1
Sample No.	B1@40'
Depth (ft)	RING
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Sandy Silt (ML), olive brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	636	28.4
Ultimate	309	28.2

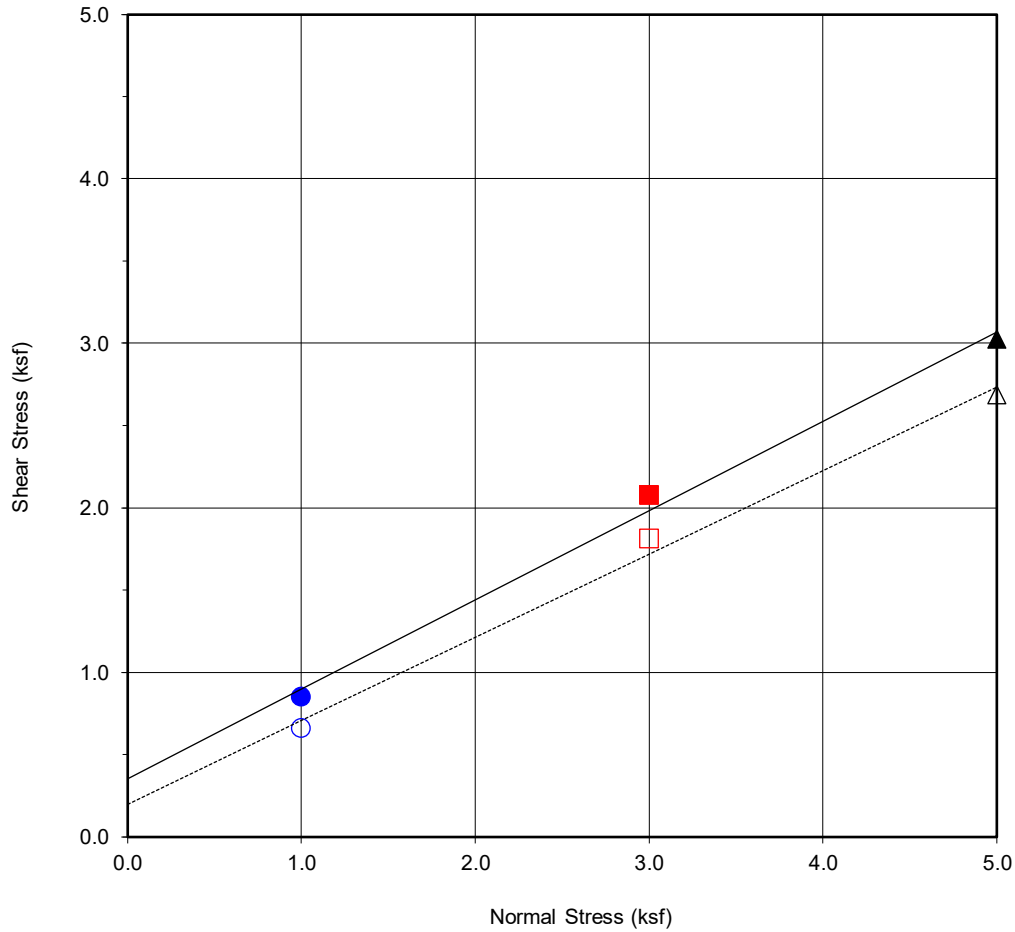
Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 1.22	■ 2.16	▲ 3.38
Shear Stress @ End of Test (ksf)	○ 1.02	□ 1.57	△ 3.17
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	35.5	42.2	37.7
Initial Dry Density (pcf)	86.5	79.1	84.5
Initial Degree of Saturation (%)	101.2	101.0	102.3
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	40.4	44.1	38.0



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

Checked by: JS

Project No.: W1399-06-01
711-723 North Lillian Way
Los Angeles, California
August 2021 Figure B3



Boring No.	B-2
Sample No.	B2@10'
Depth (ft)	10'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Sandy Clay (CL), olive brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	355	28.5
Ultimate	199	26.9

Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 0.85	■ 2.08	▲ 3.02
Shear Stress @ End of Test (ksf)	○ 0.66	□ 1.81	△ 2.69
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	24.1	22.7	24.0
Initial Dry Density (pcf)	102.3	104.5	102.5
Initial Degree of Saturation (%)	100.5	99.8	100.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	26.1	24.0	25.4



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

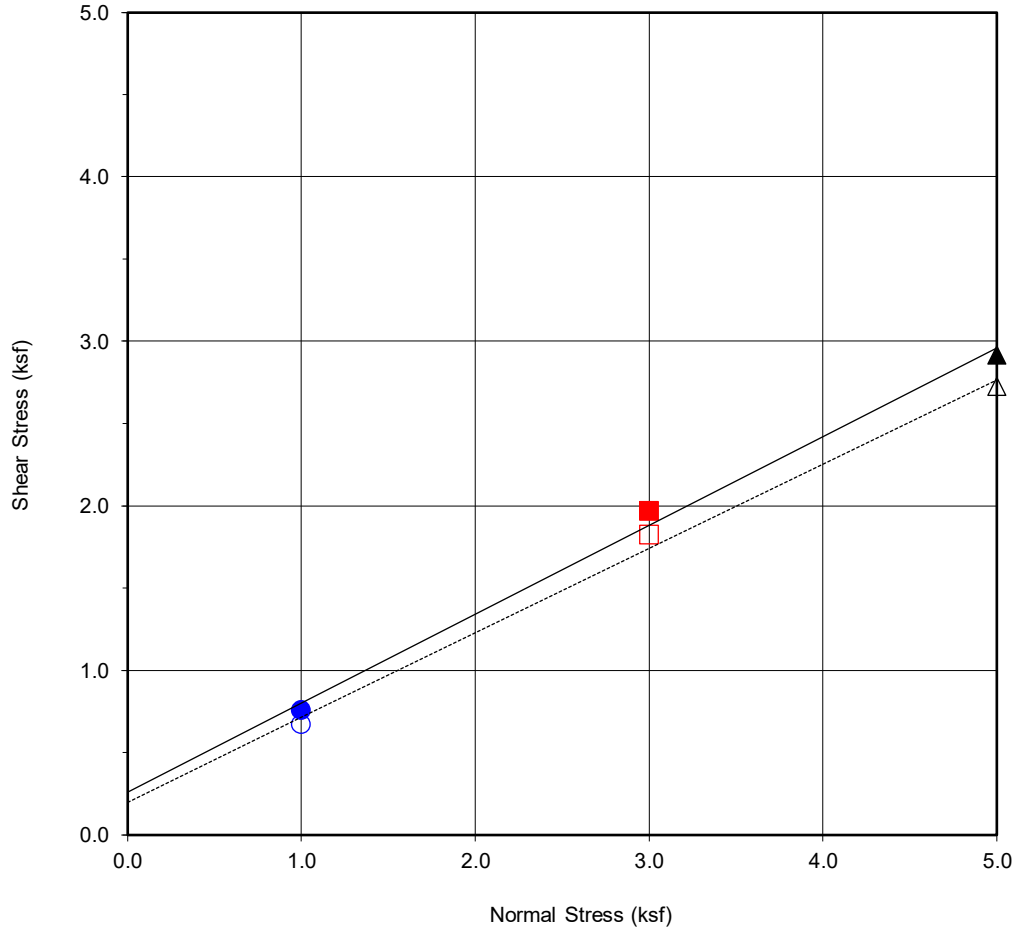
Checked by: JS

Project No.: W1399-06-01

711-723 North Lillian Way
Los Angeles, California

August 2021

Figure B4



Boring No.	B-2
Sample No.	B2@15'
Depth (ft)	15'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Clay (CL), olive brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	260	28.4
Ultimate	201	27.2

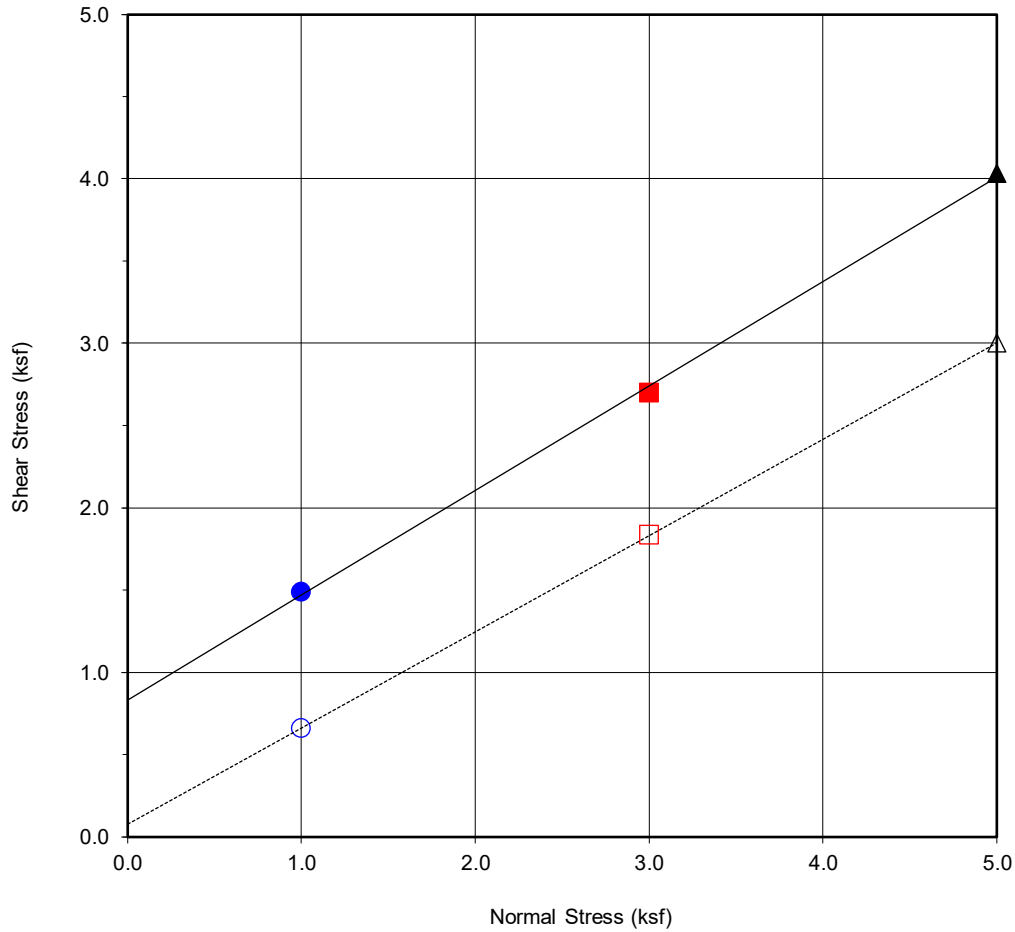
Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 0.76	■ 1.97	▲ 2.92
Shear Stress @ End of Test (ksf)	○ 0.67	□ 1.82	△ 2.72
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	24.1	21.3	19.5
Initial Dry Density (pcf)	100.4	106.4	108.7
Initial Degree of Saturation (%)	96.0	98.3	95.9
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	25.0	22.2	19.4



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

Checked by: JS

Project No.: W1399-06-01
711-723 North Lillian Way
Los Angeles, California
August 2021 Figure B5



Boring No.	B-2
Sample No.	B2@25'
Depth (ft)	25'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Clay (CL), olive brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	832	32.5
Ultimate	77	30.3

Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 1.49	■ 2.70	▲ 4.03
Shear Stress @ End of Test (ksf)	○ 0.66	□ 1.84	△ 3.00
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	16.1	17.0	15.7
Initial Dry Density (pcf)	115.9	114.3	116.4
Initial Degree of Saturation (%)	95.7	96.9	94.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	18.8	19.7	17.6



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

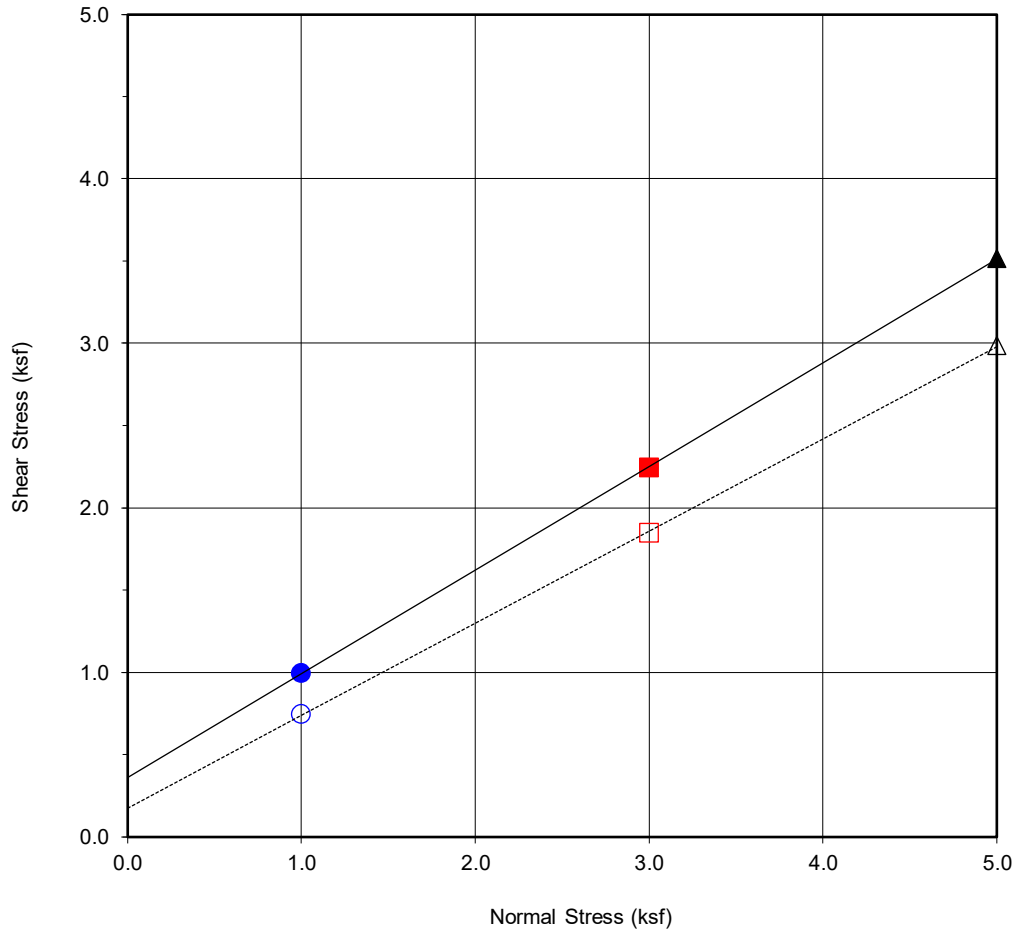
Checked by: JS

Project No.: W1399-06-01

711-723 North Lillian Way
Los Angeles, California

August 2021

Figure B6



Boring No.	B-2
Sample No.	B2@32.5'
Depth (ft)	32.5'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Sandy Clay (CL), gray		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	362	32.2
Ultimate	177	29.3

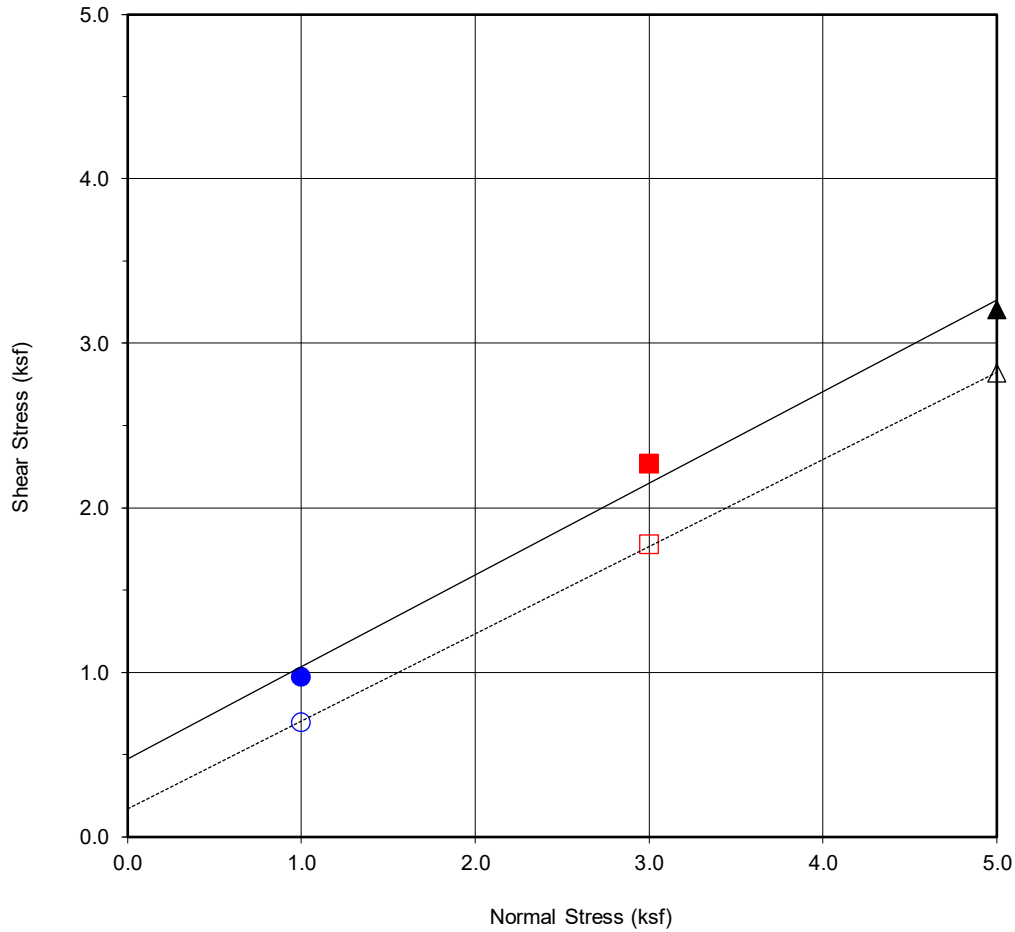
Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 1.00	■ 2.24	▲ 3.52
Shear Stress @ End of Test (ksf)	○ 0.74	□ 1.85	△ 2.99
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	19.7	21.0	20.8
Initial Dry Density (pcf)	110.1	107.7	108.8
Initial Degree of Saturation (%)	100.2	100.3	102.3
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	20.9	21.4	20.6



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

Checked by: JS

Project No.: W1399-06-01
711-723 North Lillian Way
Los Angeles, California
August 2021 Figure B7



Boring No.	B-3
Sample No.	B3@15'
Depth (ft)	15'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Sandy Clay (CL), olive brown		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	474	29.2
Ultimate	171	28.0

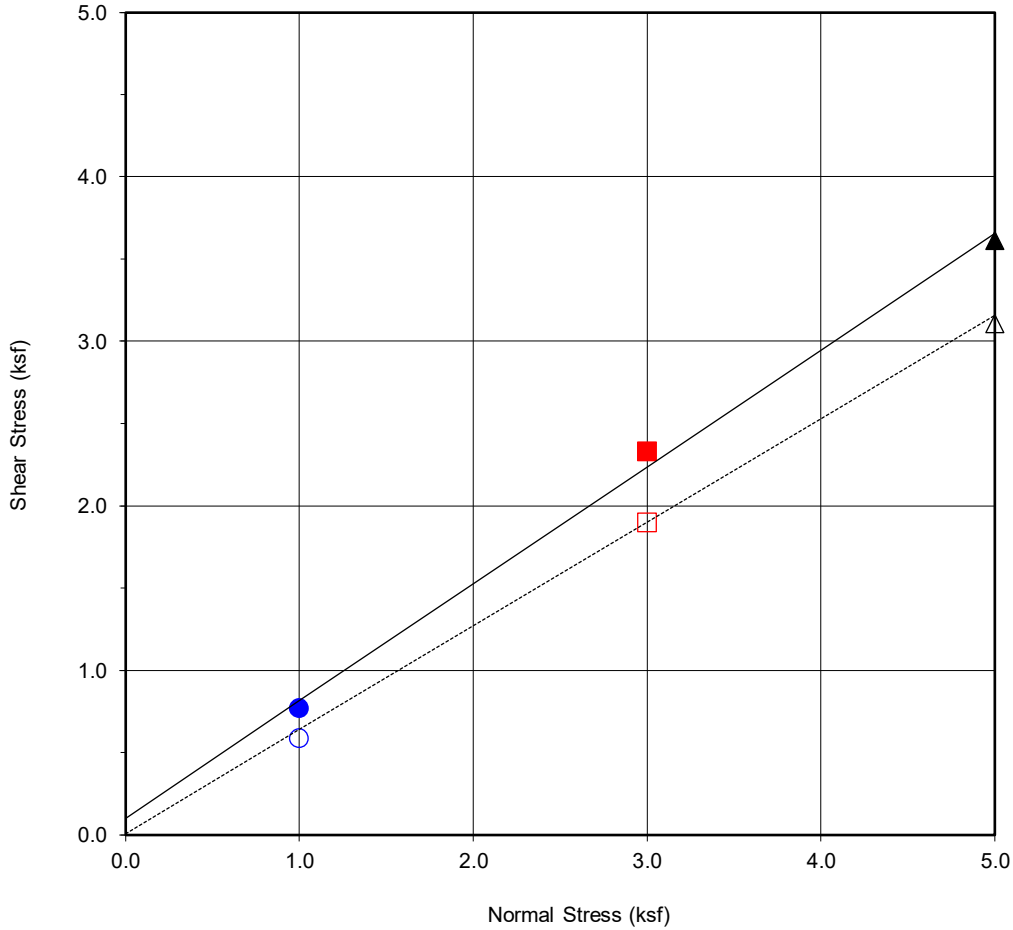
Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 0.97	■ 2.27	▲ 3.20
Shear Stress @ End of Test (ksf)	○ 0.70	□ 1.78	△ 2.82
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	17.3	17.4	17.8
Initial Dry Density (pcf)	113.5	112.4	111.0
Initial Degree of Saturation (%)	96.6	94.1	92.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	20.3	19.1	19.1



DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080

Checked by: JS

Project No.: W1399-06-01
711-723 North Lillian Way
Los Angeles, California
August 2021 Figure B8



Boring No.	B-3
Sample No.	B3@25'
Depth (ft)	25'
<u>Sample Type:</u>	Ring

<u>Soil Identification:</u>		
Sand with Clay (SP-SC), pale olive		
Strength Parameters		
	C (psf)	ϕ ($^{\circ}$)
Peak	103	35.4
Ultimate	10	32.2

Normal Stress (kip/ft ²)	1	3	5
Peak Shear Stress (kip/ft ²)	● 0.77	■ 2.33	▲ 3.61
Shear Stress @ End of Test (ksf)	○ 0.59	□ 1.90	△ 3.11
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	22.9	23.4	24.3
Initial Dry Density (pcf)	106.3	107.7	106.7
Initial Degree of Saturation (%)	105.4	111.8	113.3
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	20.7	20.6	20.8

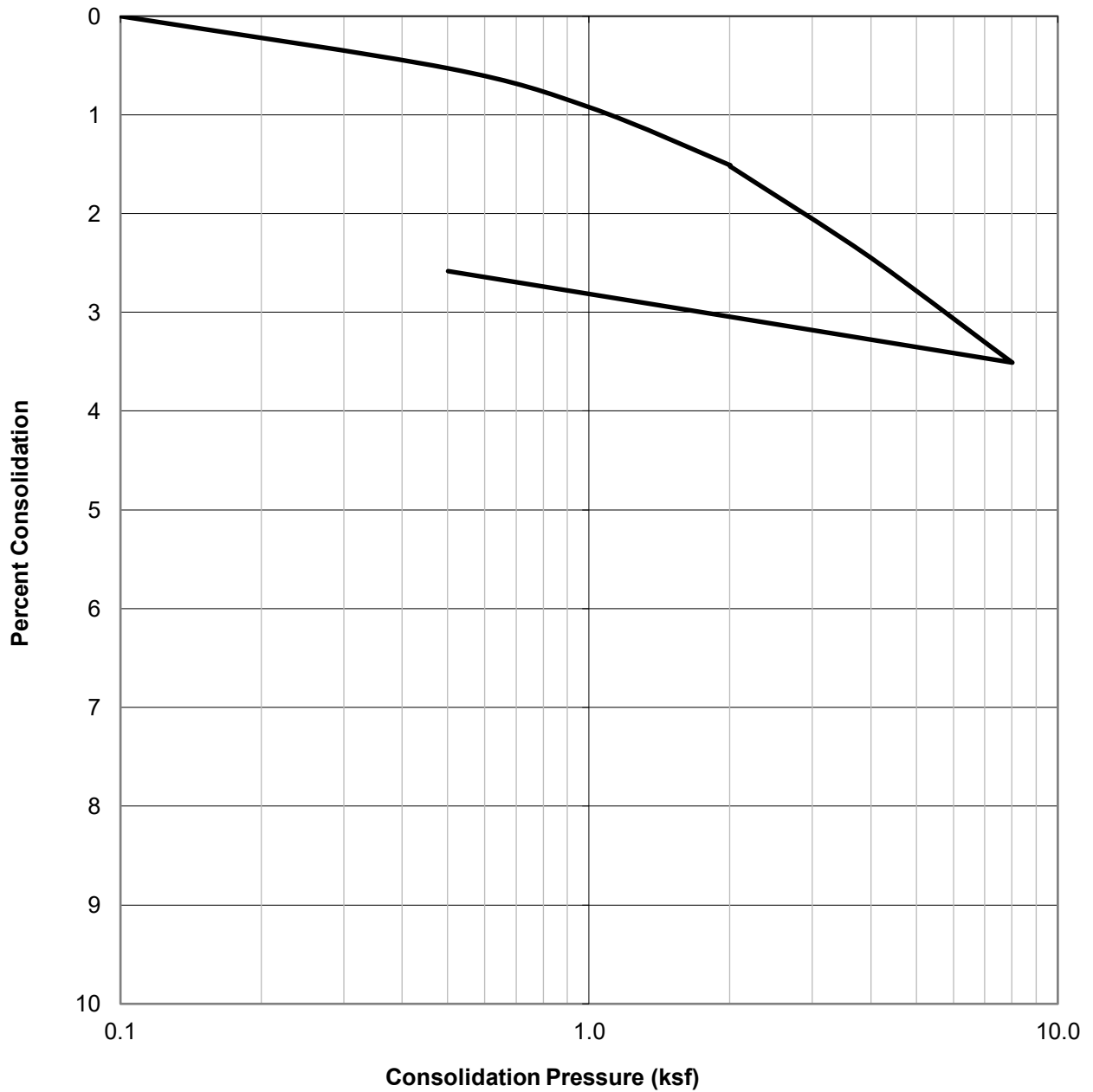


DIRECT SHEAR TEST RESULTS
Consolidated Drained ASTM D-3080


Checked by: JS

Project No.: W1399-06-01
711-723 North Lillian Way
Los Angeles, California
August 2021 Figure B9

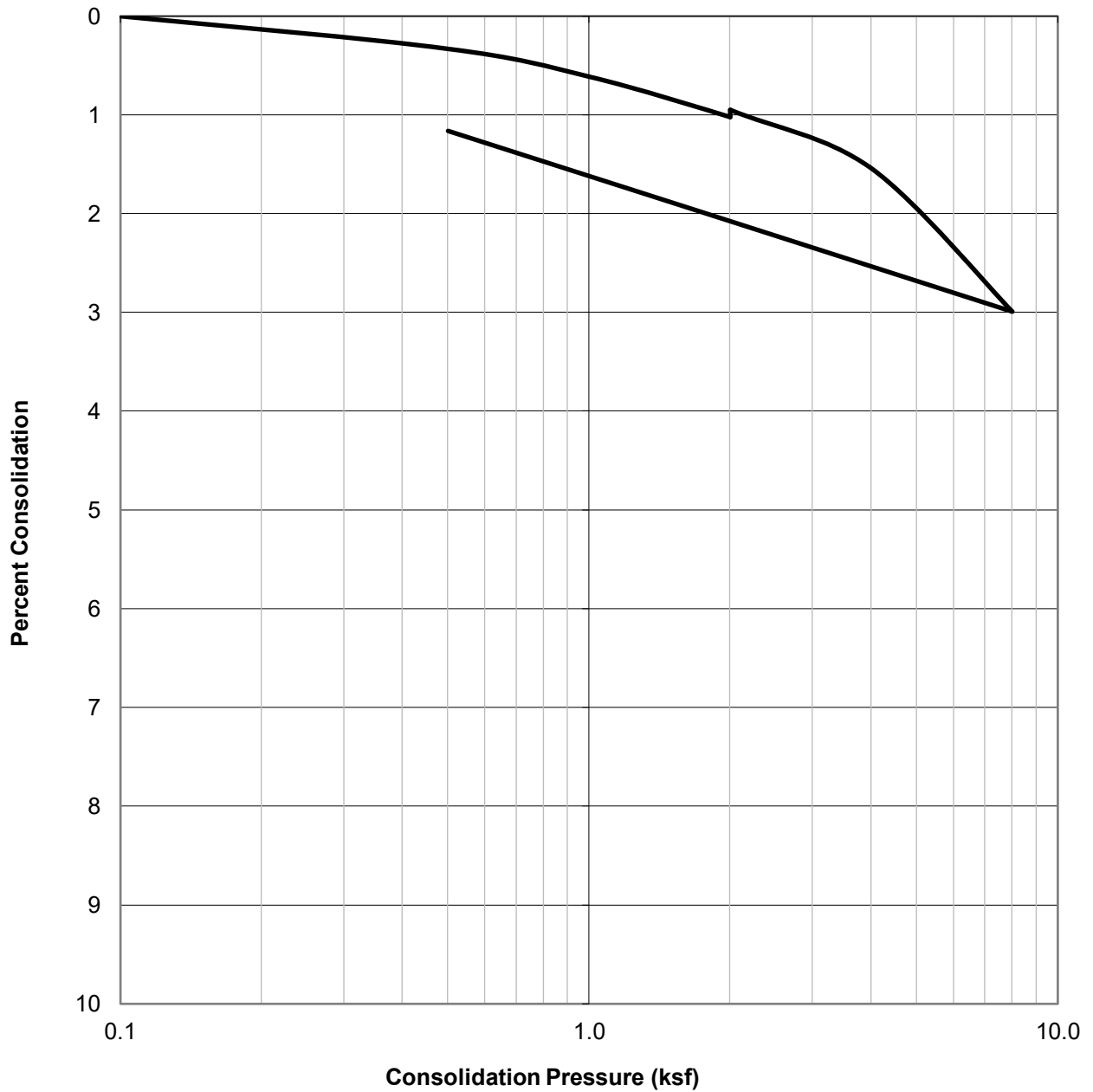
WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@27.5'	Poorly Graded Sand (SP), light brown	100.5	26.7	25.1

 GEOCON	CONSOLIDATION TEST RESULTS ASTM D-2435	Project No.: W1399-06-01
		711-723 North Lillian Way Los Angeles, California
	Checked by: JS	August 2021

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@40'	Sandy Silt (ML), olive brown	84.2	36.2	38.7



CONSOLIDATION TEST RESULTS
ASTM D-2435

Checked by: JS

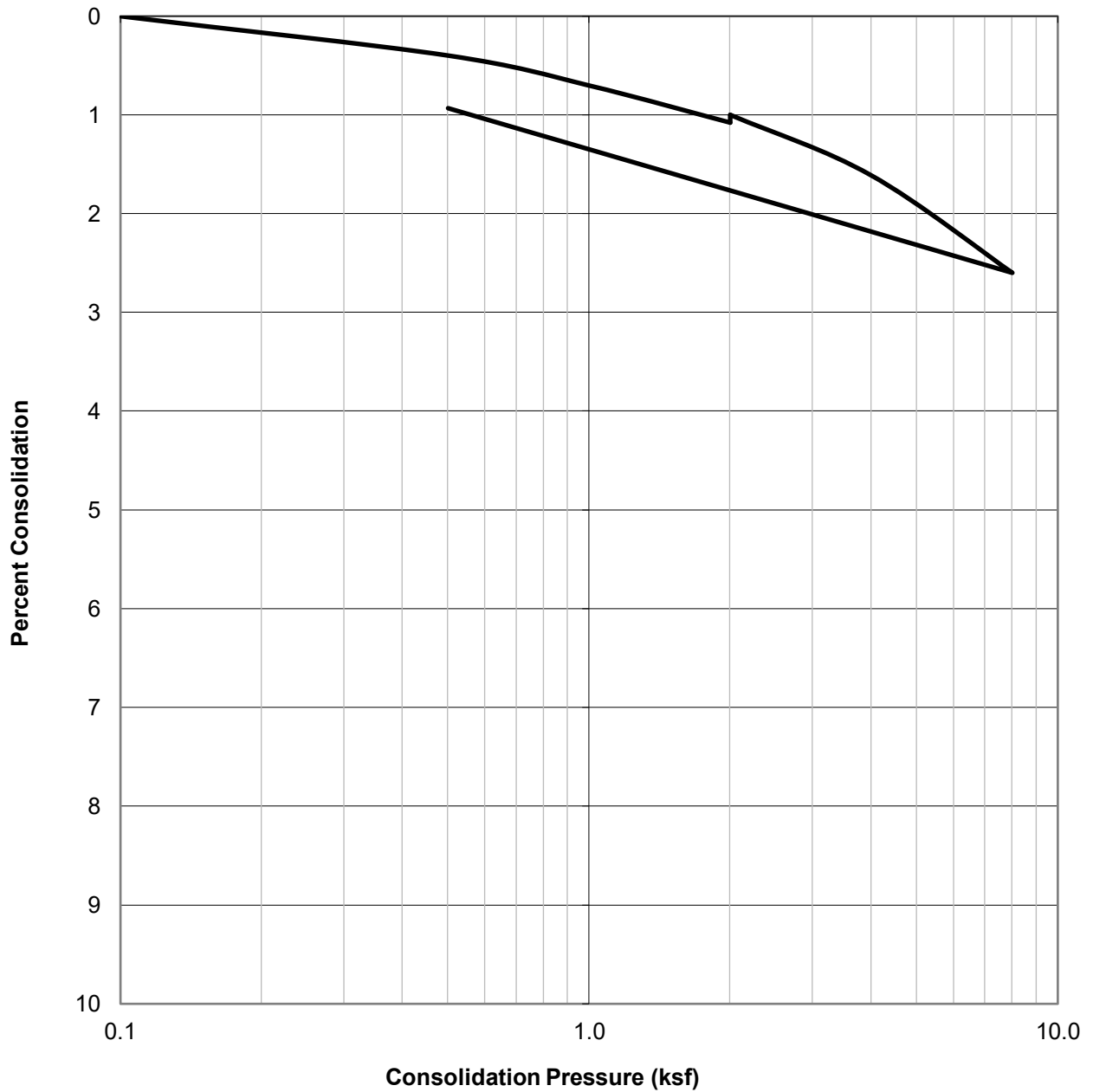
Project No.: W1399-06-01

711-723 North Lillian Way
Los Angeles, California


August 2021

Figure B11

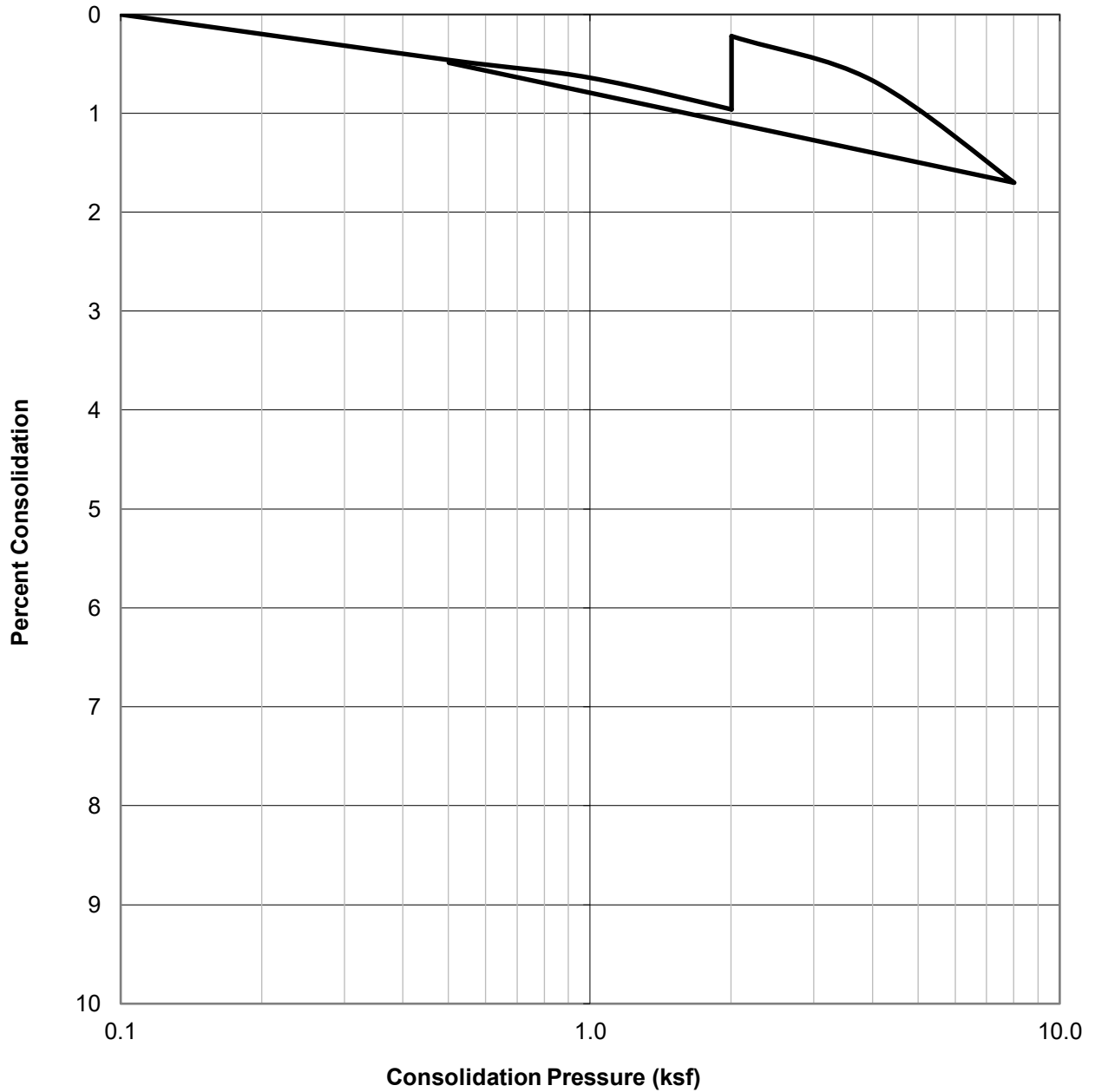
WATER ADDED AT 2.0 KSF




SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@45'	Sandy Silt (ML), dark olive brown	90.4	30.6	32.8

	CONSOLIDATION TEST RESULTS ASTM D-2435	Project No.: W1399-06-01
		711-723 North Lillian Way Los Angeles, California
	Checked by: JS	August 2021

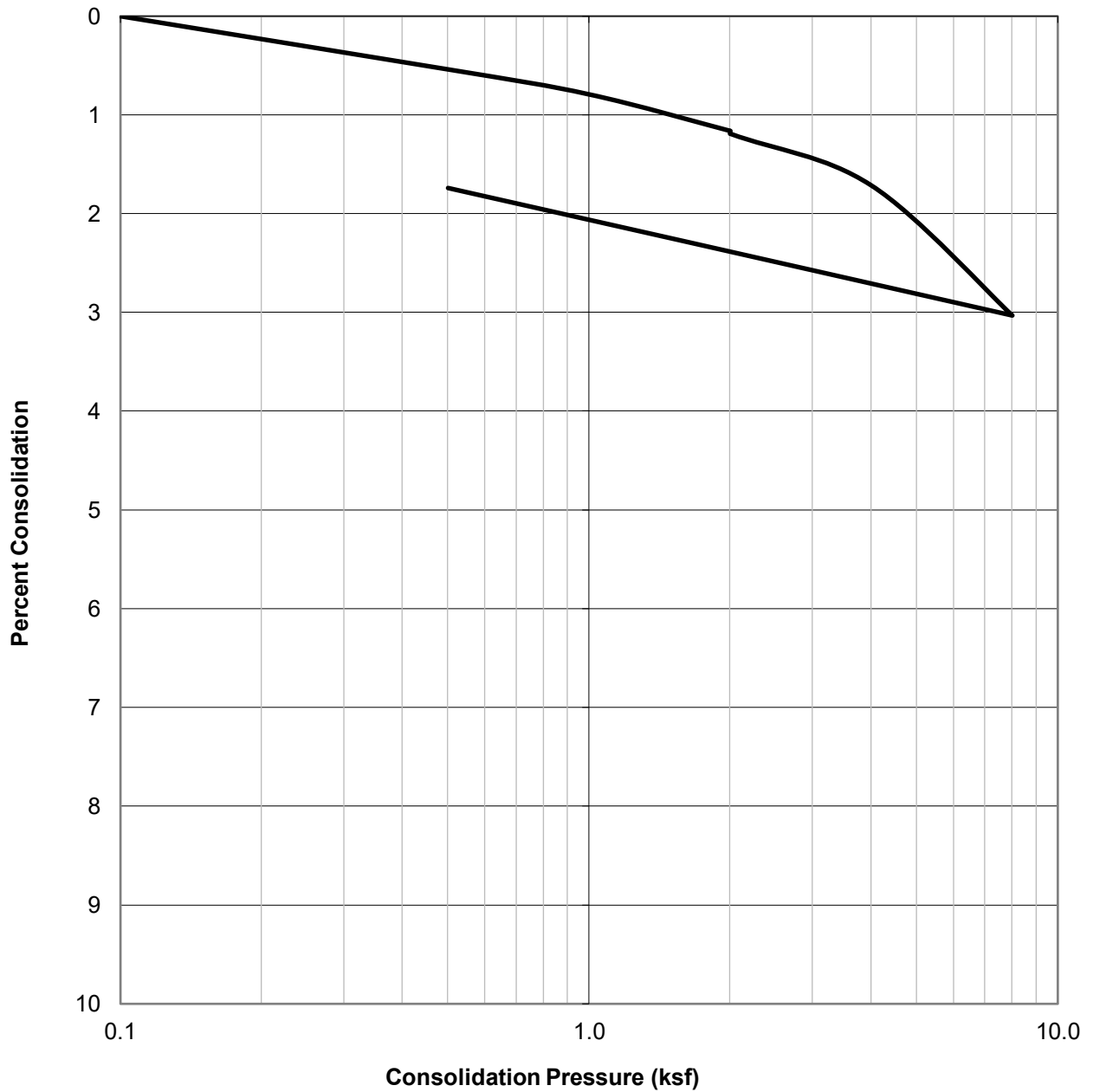
WATER ADDED AT 2.0 KSF




SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@27.5'	Sandy Silt (ML), olive brown	110.4	18.9	22.2

 GEOCON	CONSOLIDATION TEST RESULTS ASTM D-2435	Project No.: W1399-06-01
		711-723 North Lillian Way Los Angeles, California
	Checked by: JS	August 2021

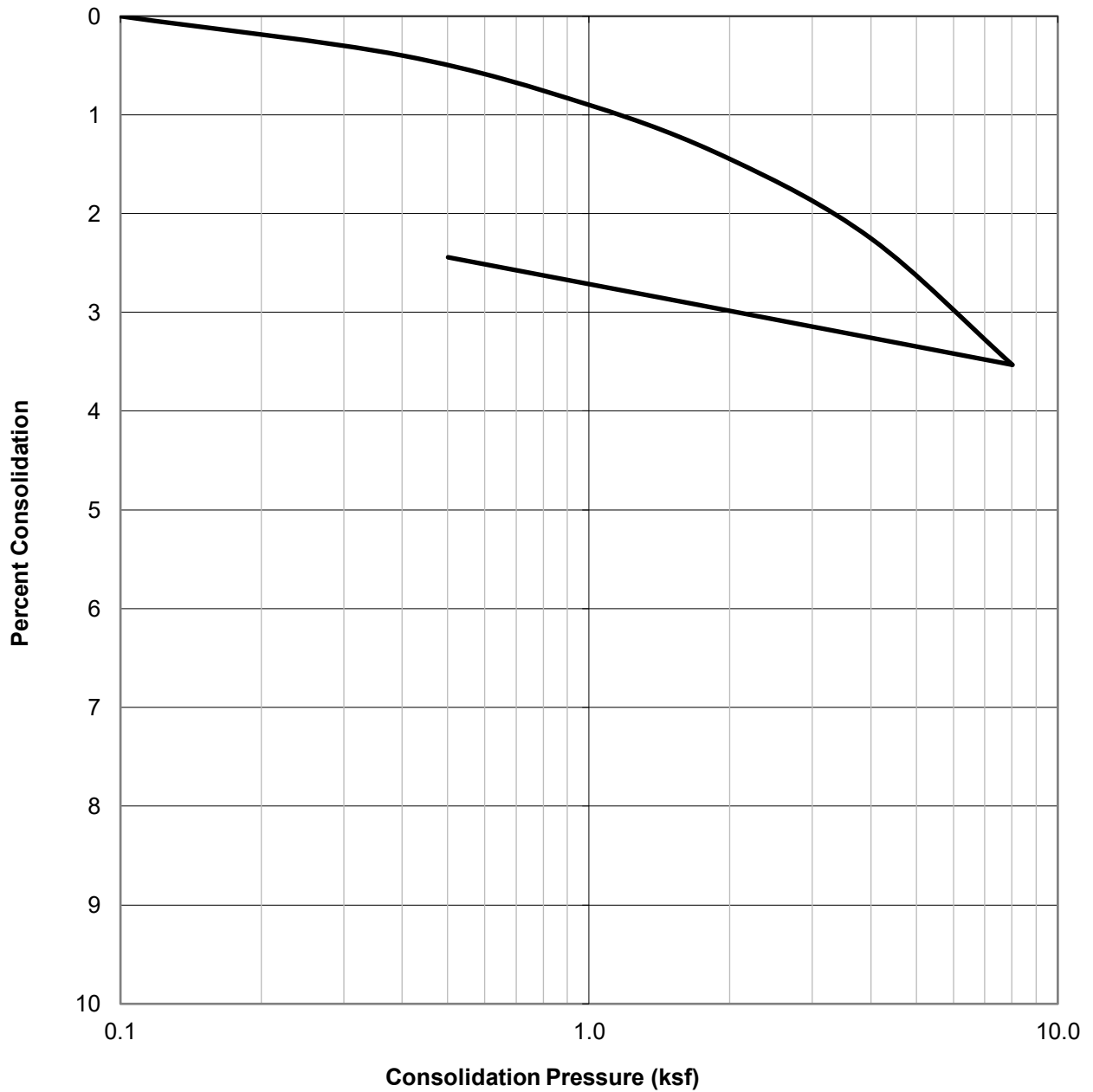
WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@30'	Sandy Silt (ML), gray	111.2	20.7	19.4

	CONSOLIDATION TEST RESULTS ASTM D-2435	Project No.: W1399-06-01
	Checked by: JS	711-723 North Lillian Way Los Angeles, California
		August 2021

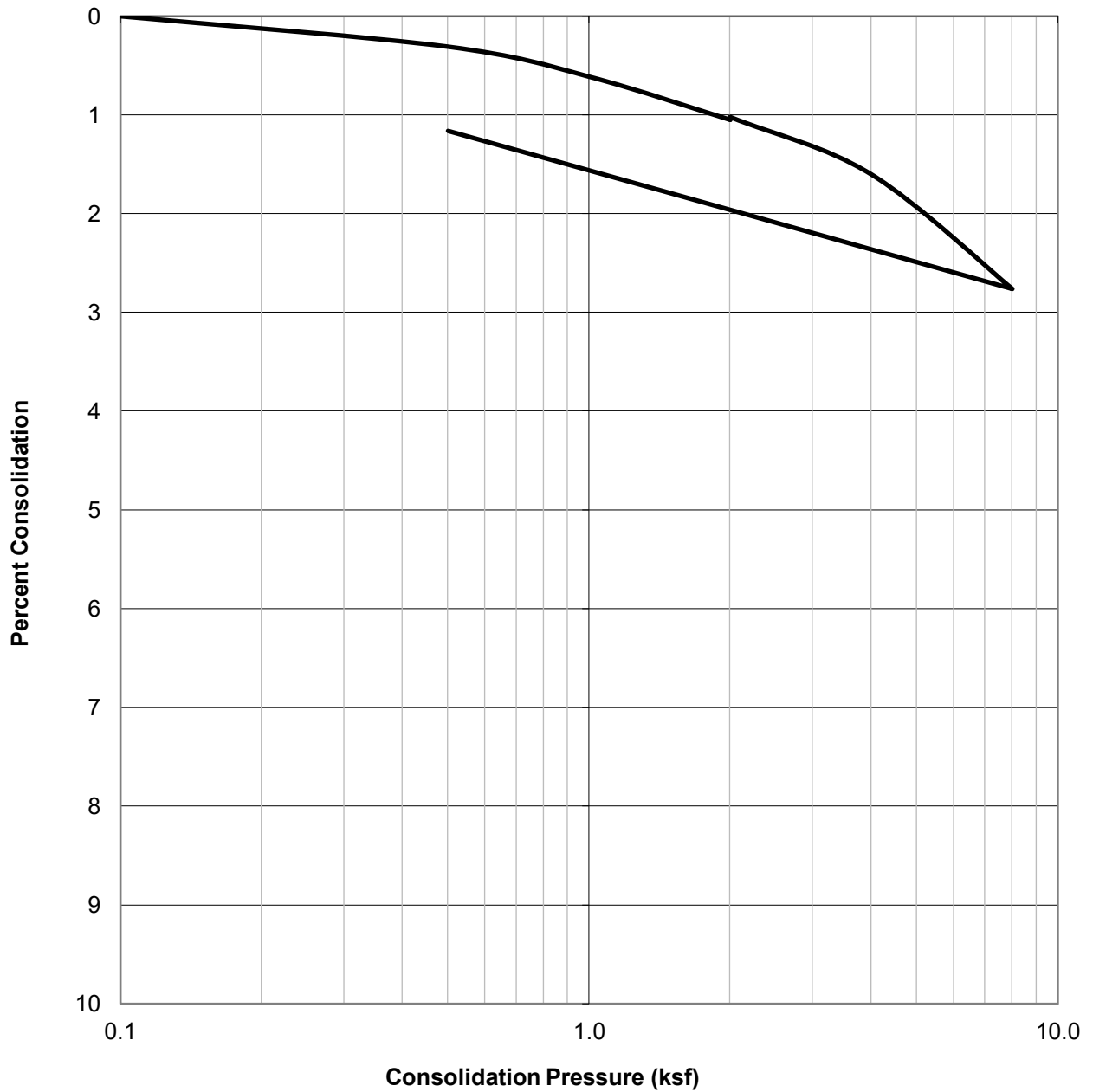
WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@32.5'	Sandy Clay (CL), gray	108.4	19.7	20.5

 GEOCON	CONSOLIDATION TEST RESULTS ASTM D-2435	Project No.: W1399-06-01
		711-723 North Lillian Way Los Angeles, California
	Checked by: JS	August 2021

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@35'	Silt with Sand (ML), olive brown	94.7	26.6	29.9



CONSOLIDATION TEST RESULTS
ASTM D-2435

Checked by: JS

Project No.: W1399-06-01

711-723 North Lillian Way
Los Angeles, California

August 2021

Figure B16

B1@0-5'

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.1
Wt. Comp. Soil + Mold	(gm)	564.9	609.7
Wt. of Mold	(gm)	176.4	176.4
Specific Gravity	(Assumed)	2.7	2.7
Wet Wt. of Soil + Cont.	(gm)	678.9	609.7
Dry Wt. of Soil + Cont.	(gm)	650.1	351.3
Wt. of Container	(gm)	378.9	176.4
Moisture Content	(%)	10.6	23.4
Wet Density	(pcf)	117.2	130.5
Dry Density	(pcf)	106.0	105.8
Void Ratio		0.6	0.7
Total Porosity		0.4	0.4
Pore Volume	(cc)	76.9	96.7
Degree of Saturation	(%) [S_{meas}]	48.8	84.8

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
7/26/2021	10:00	1.0	0	0.4073
7/26/2021	10:10	1.0	10	0.4067
Add Distilled Water to the Specimen				
7/27/2021	10:00	1.0	1430	0.5023
7/27/2021	11:00	1.0	1490	0.5023

Expansion Index (EI meas) =	95.6
Expansion Index (Report) =	96

Expansion Index, EI_{50}	CBC CLASSIFICATION *	UBC CLASSIFICATION **
0-20	Non-Expansive	Very Low
21-50	Expansive	Low
51-90	Expansive	Medium
91-130	Expansive	High
>130	Expansive	Very High

* Reference: 2019 California Building Code, Section 1803.5.3

** Reference: 1997 Uniform Building Code, Table 18-I-B.

	EXPANSION INDEX TEST RESULTS	Project No.: W1399-06-01
	ASTM D-4829	711-723 North Lillian Way Los Angeles, California
	Checked by: JS	August 2021 Figure B17

SUMMARY OF LABORATORY POTENTIAL
OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643


Sample No.	pH	Resistivity (ohm centimeters)
B1@0-5'	8.5	710 (Severely Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3

Sample No.	Chloride Ion Content (%)
B1@0-5'	0.000

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SQ ₄)	Sulfate Exposure*
B1@0-5'	0.000	S0

 GEOCON	CORROSIVITY TEST RESULTS	Project No.: W1399-06-01
	Checked by: JS	711-723 North Lillian Way Los Angeles, California
		August 2021 Figure B18

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SQ ₄)	Sulfate Exposure*
B2@22.5'	0.001	S0
B3@30'	0.001	S0
B3@20-25'	0.001	S0



McKinley & Associates (818) 240-1358

Certification Letter

July 28, 2021

717 Lillian LLC
1801 Century Park East Ste. 1560
Los Angeles, CA 90067

Dear 717 Lillian LLC:

Recently I was contacted by Gary Benjamin, Alchemy Planning + Land Use on your behalf regarding an Arborist Certification Letter concerning the trees located on the property located at 711-723 Lillian Way, Los Angeles. This letter is in reference to the City of Los Angeles Native Tree Ordinance No. 186873 as required by Public Works, Urban Forestry.

Background/Observations:

On Wednesday, July 28, 2021 at approximately 11:00 a.m. I arrived at the property located at 711-723 Lillian Way, Los Angeles, California. The following trees were observed growing on or near the subject property:

Tree Inspection Data:

Tree #1 *Cupaniopsis anacardioides* or Carrotwood 2"DBH;12'Sp.;10'Ht.; Rating: C
Tree #2 *Cupaniopsis anacardioides* or Carrotwood 2"DBH;16'Sp.;14'Ht.; Rating: C+
Tree #3 *Cupaniopsis anacardioides* or Carrotwood 2"DBH;12'Sp.;12'Ht.; Rating: B-
Tree #4 *Cupaniopsis anacardioides* or Carrotwood 4"DBH;16'Sp.;15'Ht.; Rating: B
Tree #5 *Cupaniopsis anacardioides* or Carrotwood 2"DBH;10'Sp.;10'Ht.; Rating: C-
Tree #6 *Cupaniopsis anacardioides* or Carrotwood 2"DBH;12'Sp.;12'Ht.; Rating: C+
Tree #7 *Cupaniopsis anacardioides* or Carrotwood 4"DBH;14'Sp.;25'Ht.; Rating: C

Recommendation

The above stated trees are located on private property in a relatively new parking area at the northern end of the subject property area. These trees are all less than 8 inches in diameter. No permit is necessary to remove them and no replacement tree planting is required. I would recommend that trees be planted as part of any future development of the site.

Certification

As an I.S.A Certified Arborist and ASCA Consulting Arborist I further certify that there are no native, protected species of Oak, California Bay, California Sycamore, Southern California Black Walnut tree, Elderberry or Toyon trees growing on or near the subject property. No native, protected Oak, Bay, Sycamore, Southern California Black Walnut, Elderberry or Toyon trees will be impacted on the subject property or neighboring, adjoining properties by any future development of this property.

Arborists and Environmental Consultants



McKinley & Associates (818) 240-1358

Thank you for the opportunity to serve you. If you have questions, please feel free to contact me on my business cell phone at (818) 426-2432 or you may call my office (818) 240-1358.

Yours truly,

William R. McKinley

William R. McKinley, Consulting Arborist
American Society of Consulting Arborists
Certified Arborist #WE-4578A
International Society of Arboriculture

