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17534 - 17540 W. Sherman Way

Case Number: ENV-2018-2185-MND

Project Location: 17534 – 17540 W. Sherman Way

Community Plan Area: Reseda – West Van Nuys

Council District: 6

Project Description: The proposed project is a three-story (two-story of residential over a ground level parking garage), 43 foot in height, 25,214 square foot, nine unit multi-family residential building all on two lots totaling 16,645 square feet. The project is providing a total of 18 automobile parking spaces and 11 bicycle parking spaces. A total of 1,560 square feet of open space and 3,084 square feet of landscaping is proposed.

To achieve the proposed project, the applicant is proposing the demolition of one, one-story, 1,135 square foot single-family dwelling and 380 square foot detached two-car garage on one lot (17534 W. Sherman Way) and one, one-story, 1,572 square foot single-family dwelling and 380 square foot detached garage on the second lot (17540 W. Sherman Way). Furthermore, the Project will require 456 cubic yards of grading, including 302 cubic yards of cut, 154 cubic yards of fill, 147 cubic yards of export, and no import.

There are 17 trees on site, including one dead tree, and seven street trees on Sherman Way and Calvus Avenue. None of the 17 trees on site are protected species. It is expected that the majority, if not all of the trees on site will need to be removed to allow the development of the property. SurveyLA identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place.

PREPARED BY:

The City of Los Angeles
Department of City Planning

APPLICANT:

Shahe K. Boyadjian and Maral H. Boyadjian

August 2023

INITIAL STUDY

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- A. Eric Gorsuch, V & E Tree Service, Inc. (dated April 3, 2019, updated September 1, 2021, updated October 27, 2022
- B. A.G.E. Engineering, Report of Geotechnical Investigation, April 22, 2019
- C. Soils Report Approval Letter, Log #108421-01 dated January 21, 2020 and Soils Report Review Letter dated June 11, 2019
- D. South Central Coastal Information Center (SCCIC), California Historical Resources Information System (CHRIS), California State University, Fullerton, Department of Anthropology dated June 29, 2020
- E. Native American Heritage Commission (NAHC) Sacred Lands File (SLF) Search dated April 21, 2022

INITIAL STUDY

1 INTRODUCTION

This Initial Study (IS) document evaluates potential environmental effects resulting from construction and operation of the proposed 17534 - 17540 Sherman Way project ("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 may not result in significant impacts on the environment. This Initial Study and Mitigated 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	17534 – 17540 W. SHERMAN WAY
ENVIRONMENTAL CASE NO.	ENV-2018-2185-MND
RELATED CASES	APCSV-2018-2184-ZC-BL

PROJECT LOCATION	17534 - 17540 W. SHERMAN WAY, 91406
COMMUNITY PLAN AREA	RESEDA – WEST VAN NUYS
GENERAL PLAN DESIGNATION	LOW MEDIUM II RESIDENTIAL
ZONING	R1-1
COUNCIL DISTRICT	6

LEAD AGENCY	City of Los Angeles
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APPLICANT	SHAHE K. BOYADJIAN AND MARAL H. BOYADJIAN
ADDRESS	17662 MAHONEY PLACE, GRANADA HILLS, CA 91344
PHONE NUMBER	(818) 517-4706

PROJECT DESCRIPTION

The proposed project is a three-story (two-story of residential over a ground level parking garage), 43 foot in height, 25,214 square foot, nine unit multi-family residential building all on two lots totaling 16,645 square feet. The project is providing a total of 18 automobile parking spaces and 11 bicycle parking spaces. A total of 1,560 square feet of open space and 3,084 square feet of landscaping is proposed.

To achieve the proposed project, the applicant is proposing the demolition of one, one-story, 1,135 square foot single-family dwelling and 380 square foot detached two-car garage on one lot (17534 W. Sherman Way) and one, one-story, 1,572 square foot single-family dwelling and 380 square foot detached garage on the second lot (17540 W. Sherman Way). Furthermore, the Project will require 456 cubic yards of grading, including 302 cubic yards of cut, 154 cubic yards of fill, 147 cubic yards of export, and no import.

There are 17 trees on site, including one dead tree, and seven street trees on Sherman Way and Calvus Avenue. None of the 17 trees on site are protected species. It is expected that the majority, if not all of the trees on site will need to be removed to allow the development of the property. SurveyLA identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place.

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

ENVIRONMENTAL SETTING

The subject site consists of two flat contiguous lots totaling 16,645 square feet at the southeast corner of Sherman Way and Calvus Avenue in the Reseda – West Van Nuys Community Plan (Community Plan) area. Both lots are zoned R1-1 and designated Low Medium II Residential by the Community Plan. The approximately 7,863 square foot lot at the corner of Sherman Way and Calvus Avenue is improved with a one-story, 1,572 square foot single-family dwelling and 380 square foot two-car garage. The abutting approximately 8,781 square foot lot located directly to the east is improved with a one-story 1,135 square foot single-family dwelling and 380 square foot detached two-car garage. All structures are proposed for demolition. A 30 foot building line is located along the Sherman Way frontage. A 20 foot alley abuts the rear property line of the subject site.

Properties to the north across Sherman Way and to the south across the alley are improved with one-story single-family dwellings on sites that are zoned R1-1 and designated for Low Residential land use by the Community Plan. To the east, properties are improved with three-story multi-family residential buildings (one story of parking over two stories of residential use). These sites are zoned (Q)RD1.5-1 with an underlying zone of R1-1 and designated for Low Medium II Residential land use. To the west, properties are improved with one-story single-family dwellings on sites zoned R1-1 and designated for Low Medium II and Low Residential land use.

Commercial uses, including automotive repair, market, fast-food restaurant, office, and associated surface parking are located approximately 0.5 mile to the west of the subject site at the intersection of Sherman Way and White Oak Avenue. These sites are zoned C2-1VL, P-1VL, and R1 and designated for Neighborhood Office Commercial land use.

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

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

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

None

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 checked="" 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 checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use / Planning | <input checked="" 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.

Laura Frazin Steele

PRINTED NAME

City Planner

TITLE

Laura Frazin Steele

SIGNATURE

July 25, 2023

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 proposed project is a three-story (two-story of residential over a ground level parking garage), 43 foot in height, 25,214 square foot, nine unit multi-family residential building all on two lots totaling 16,645 square feet. The project is providing a total of 18 automobile parking spaces and 11 bicycle parking spaces. A total of 1,560 square feet of open space and 3,084 square feet of landscaping is proposed.

To achieve the proposed project, the applicant is proposing the demolition of one, one-story, 1,135 square foot single-family dwelling and 380 square foot detached two-car garage on one lot and one, one-story, 1,572 square foot single-family dwelling and 380 square foot detached garage on the second lot. Furthermore, the project will require 456 cubic yards of grading, including 302 cubic yards of cut, 154 cubic yards of fill, 147 cubic yards of export, and no import.

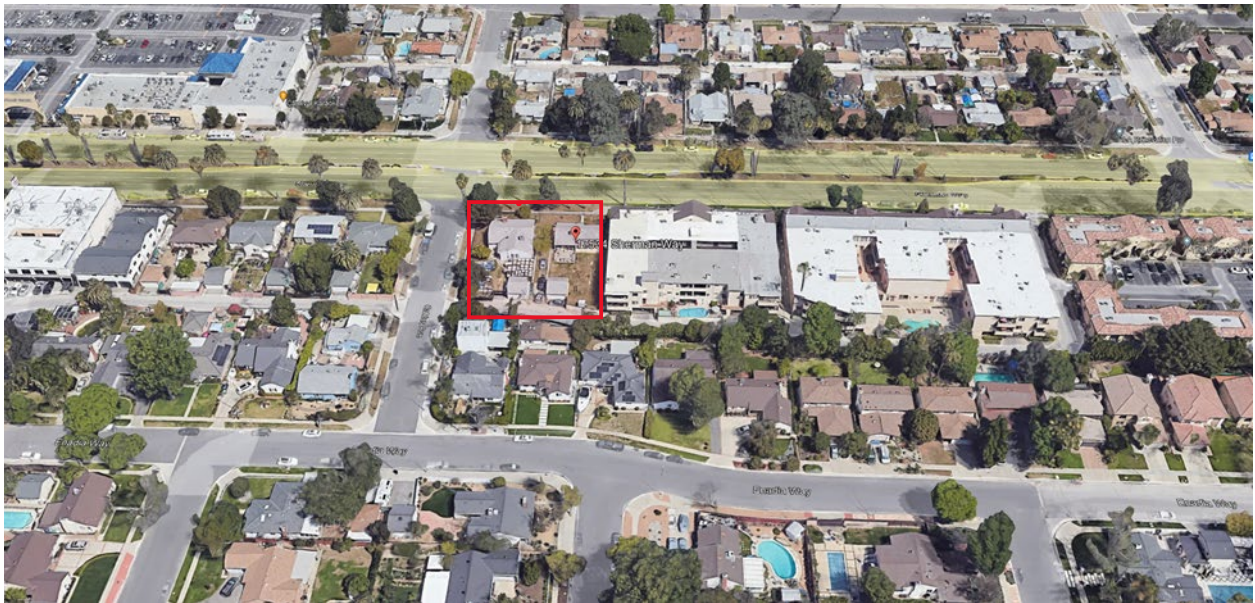


Figure A-1. Aerial Photograph of Project Site and Vicinity

3.2 ENVIRONMENTAL SETTING

3.2.1 Project Location

The project is located at 17534 – 17540 Sherman Way at the southeast corner of Sherman Way and Caldas Avenue in the Reseda – West Van Nuys Community Plan area. The project is not located within a specific plan or any other geographic overlay area.

3.2.2 Existing Conditions

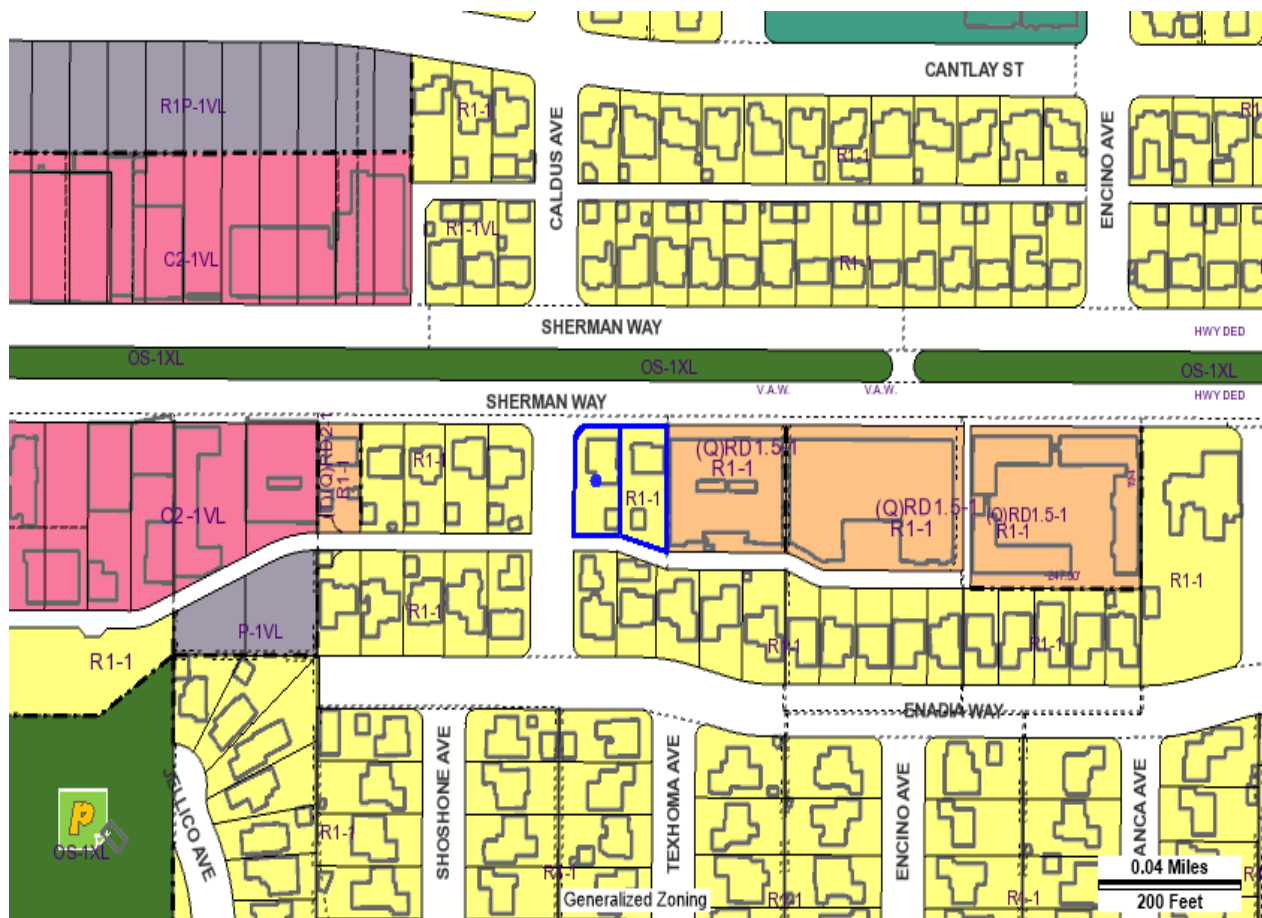


Figure A-2. ZIMAS Zoning Map

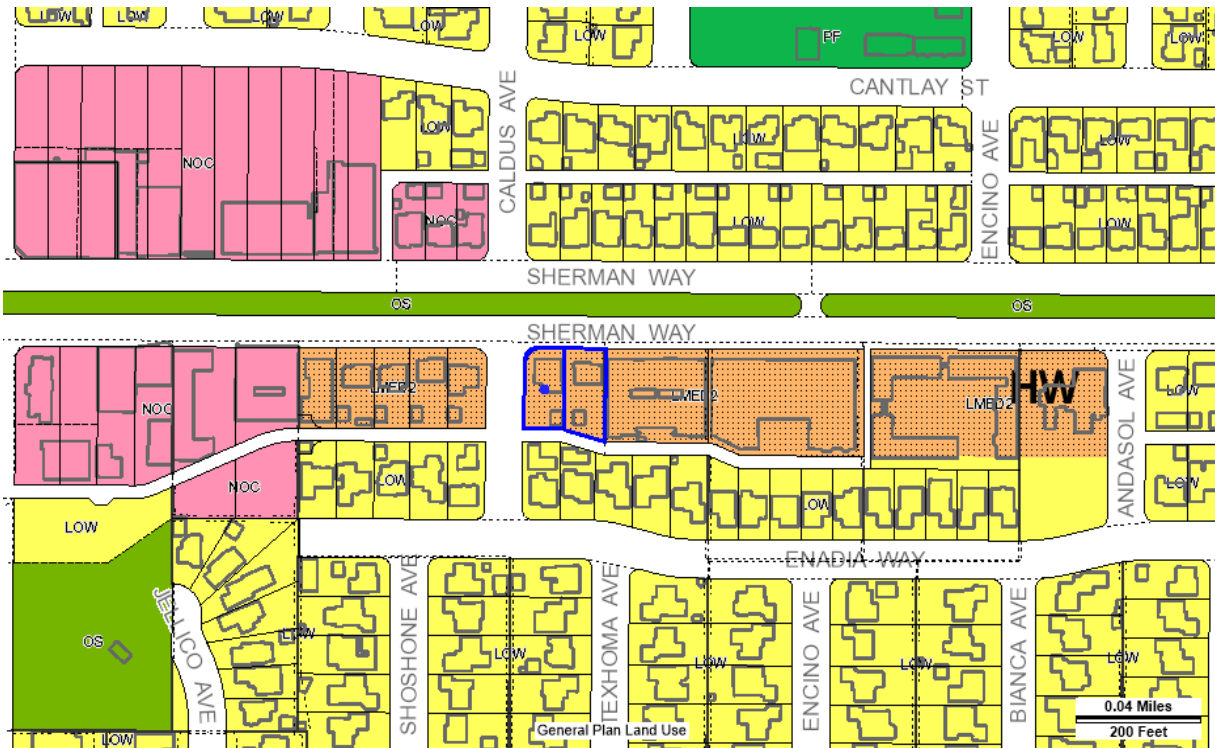


Figure A-3. ZIMAS General Plan Land Use Map

The subject site consists of two flat contiguous lots totaling 16,645 square feet. Both lots are zoned R1-1 and designated Low Medium II Residential by the Reseda – West Van Nuys Community Plan. The Low Medium II Residential land use designation corresponds to the RD1.5, RD2, RW2, and RZ2.5 Zones. The approximately 7,863 square foot lot at the corner of Sherman Way and Caldus Avenue is improved with a one-story, 1,572 square foot single-family dwelling and 380 square foot detached two-car garage. The abutting approximately 8,781 square foot lot located directly to the east is improved with a one-story 1,135 square foot single-family dwelling and 380 square foot detached two-car garage. All structures are proposed for demolition. A 30 foot building line is located along the Sherman Way frontage (Ordinance No. 130,484). A 20 foot alley abuts the rear property line of the subject site.

The subject site fronts along Sherman Way for approximately 108 linear feet and extends along Caldus Avenue for approximately 106 linear feet. The approximately 7,863 square foot lot at the corner of Sherman Way and Caldus Avenue is generally rectangular in shape with a lot depth of 126 feet. The abutting approximately 8,781 square foot lot located directly to the east is irregular-shaped with a maximum lot depth of approximately 145 feet.

There are 17 trees on site, including one dead tree, and seven street trees on Sherman Way and Caldus Avenue. None of the 17 trees on site are protected species. It is expected that the majority, if not all of the trees on site will need to be removed to allow the development of the property. SurveyLA for the Reseda – West Van Nuys Community Plan area (Historic Resources

Survey Report, Non-Parcel Resources) identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place.

The subject site is located approximately 2.2 miles southwest of the Van Nuys Airport. The City of Los Angeles ZIMAS records show that the site is located within an Airport Hazard Horizontal Surface Area. Any structure, tree, or use of land that obstructs the airspace required for the flight of aircraft in landing or taking off at an airport or is otherwise hazardous to the landing or taking off of aircraft is an Airport Hazard as codified in LAMC Section 12.50. The subject site is also located within an Urban Agriculture Incentive Zone and a Liquefaction area.

According to ZIMAS records, the subject site is not located within a Coastal Zone, Very High Fire Hazard Severity Zone, Flood Zone, Watercourse, Hazardous Waste/Border Zone, High Wind Velocity Area, or Special Grading Area (BOE Basic Grid Map A-13372). ZIMAS does not identify Methane Hazards or oil wells on site. The subject site is located approximately 9.5 kilometers from the nearest fault (Northridge) and is not located within an Alquist-Priolo Fault Zone, Landslide area, Preliminary Fault Rupture Study Area, or Tsunami Inundation Zone.

3.2.3 Surrounding Land Uses

Properties to the north across Sherman Way and to the south across the alley are improved with one-story single-family dwellings on sites that are zoned R1-1 and designated for Low Residential land use by the Community Plan. To the east, properties are improved with three-story multi-family residential buildings (one story of parking over two stories of residential use). These sites are zoned (Q)RD1.5-1 with an underlying zone of R1-1 and designated for Low Medium II Residential land use. To the west, properties are improved with one-story single-family dwellings on sites zoned R1-1 and designated for Low Medium II and Low Residential land use. Commercial uses, including automotive repair, market, fast-food restaurant, office, and associated surface parking are located approximately 0.5 mile to the west of the subject site at the intersection of Sherman Way and White Oak Avenue. These sites are zoned C2-1VL, P-1VL, and R1 and designated for Neighborhood Office Commercial land use.

A private school (Waldorf) is located at 17426 Sherman Way, approximately 0.2 miles east of the subject site at the southwest corner of Andasol Avenue and Sherman Way. The school site is zoned R1-1 and designated Low Medium II Residential. An LAUSD school (Anatola Elementary School) is located approximately 0.5 miles north of the subject site at 7364 Anatola Avenue. The site is zoned [Q]PF-1XL and designated Public Facilities by the Community Plan. A City of Los Angeles park (Jesse Owens Mini Park) is located at 7111 White Oak Avenue, approximately 0.5 miles southwest of the subject site on property zoned OS-1XL and designated Open Space by the Community Plan.

3.3 DESCRIPTION OF PROJECT

3.3.1 Project Overview

As previously discussed, the proposed project is a three-story (two-story of residential over a ground level parking garage), 43 foot in height, 25,214 square foot, nine unit multi-family residential building all on two lots totaling 16,645 square feet. The project is providing a total of 18 automobile parking spaces and 11 bicycle parking spaces. A total of 1,560 square feet of open space and 3,084 square feet of landscaping is proposed.

To achieve the proposed project, the applicant is proposing the demolition of one, one-story, 1,135 square foot single-family dwelling and 380 square foot detached two-car garage on one lot (17534 W. Sherman Way) and one, one-story, 1,572 square foot single-family dwelling and 380 square foot detached garage on the second lot (17540 W. Sherman Way). Furthermore, the Project will require 456 cubic yards of grading, including 302 cubic yards of cut, 154 cubic yards of fill, 147 cubic yards of export, and no import.

There are 17 trees on site, including one dead tree, and seven street trees on Sherman Way and Calvus Avenue. None of the 17 trees on site are protected species. It is expected that the majority, if not all of the trees on site will need to be removed to allow the development of the property. SurveyLA identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place.

3.3.2 Design and Architecture

The proposed three-story, 43 foot in height, 25,214 square foot, nine unit multi-family residential building is designed with five units along the northerly property line fronting on Sherman Way and four units along the southerly alley facing property line with a shared driveway in the center. A lobby with mailboxes, a chair lift, and stairwell abut Calvus Avenue at the west side of the site. Short-term bicycle parking is available directly outside of the lobby. A trash/recycling area, electrical room, long-term bicycle parking area, and stairwell adjoin the shared driveway and dwelling unit located at the southeastern portion of the site.

The project is designed with six unit types; one unit is a Type A design, three units are a Type B design, one unit is a Type C design, one unit is a Type D design, two units are a Type E design, and one unit is a Type F design. The three Type B units are designed with 2 bedrooms, and the remaining six units are 3 bedroom units. The unit sizes range between 1,584 and 2,373 square feet. The ground floor of each unit includes an attached two-car garage, long-term bicycle racks, storage areas, and a washer/dryer. Individual stairwells within each unit lead to the second and third floors. The second floor of each unit includes a dining room/living room, kitchen, and powder room. The third floor of unit Type B is designed with two bathrooms and two bedrooms. The third floor of unit Types A, C, D, E, and F is designed with three bedrooms and two bathrooms.

The main pedestrian entrance to each unit is from the courtyard via the lobby and stairs on Calvus Avenue. Other entrances to units (e.g., Sherman Way facing entrances are secondary). Each unit is designed with balconies on the second and third floors. The structure is proposed to be constructed of smooth exterior plaster painted sandstone, crystal white, and precious neutral. Travertine tile colored stone marble yellowish beige will be used at the base of the structure. Fascia painted cocoa trim and chocolate colored vinyl casement windows and doors will accent the neutral colors of the structure.

3.3.3. Open Space and Landscaping

LAMC Section 12.21 G regulates open space and landscaping requirements for six or more residential dwelling units. At a minimum, the project is required to provide 100 square feet of open space each unit having less than three habitable rooms; 125 square feet of open space for each unit having three habitable rooms; and 175 square feet of open space for each unit having more than three habitable rooms. For the purpose of determining open space requirements under this section, the kitchen does not count as a habitable room. As such, for the three two-bedroom units, 125 square feet of open space per unit is required, and for the six three-bedroom units, 175 square feet of open space per unit is required (the living/dining room combination counts as one room). Therefore, the project requires 375 square feet of open space for the two bedroom units ($3 \times 125 = 375$) and 1,050 square feet of open space for the three bedroom units ($6 \times 175 = 1,050$) for a total Code requirement of 1,425 square feet of open space ($375 + 1,050 = 1,425$).

The Code further requires that common open space areas shall incorporate recreational amenities such as swimming pools, spas, picnic tables, benches, children's play areas, ball courts, barbecue areas and sitting areas. Common open space is required to be a minimum area of 400 square feet with no horizontal dimension less than 15 feet when measured perpendicular from any point on each of the boundaries of the open space area. The applicant's plans show 1,560 square feet (15 x 104 feet) of open space on the second floor that includes benches for seating.

LAMC Section 12.21 G.2 also requires a minimum of 25 percent of the required common open space area to be landscaped with ground cover, shrubs, or trees, including one 24-inch box tree for every four dwelling units. Street trees can be used to meet this requirement. For the nine unit project, a minimum of three 24-inch box trees must be provided to meet Code requirements. As previously discussed, there are seven street trees on Sherman Way and Calvus Avenue, and SurveyLA identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place. Furthermore, the applicant's plans show an additional 15 trees to be planted on site, including five 48-inch box *Melaleuca leucadendra* (Cajepit) and 10 24-inch box *Heteromeles arbutifolia* (Toyon). Therefore, the project exceeds Code requirements for the provision of trees. Furthermore, for the project, the applicant is required to provide a minimum total of 390 square feet of landscaping for the common open space areas (25 percent of 1,560). The applicant's plans show 2,690 square feet of landscaping on the ground level and 394 square feet of landscaping on the second floor level for a total of 3,084 square feet of landscaping. The project design also includes balconies adjoining each unit.

3.3.4 Access, Circulation, and Parking

LAMC Section 12.21 A.4 requires the project to provide at least one automobile parking space for each dwelling unit of less than three habitable rooms, one and one-half parking spaces for each dwelling unit of three habitable rooms, and two parking spaces for each dwelling unit of more than three habitable rooms. The applicant's plans show two automobile parking spaces per unit for a total of 18 automobile parking spaces per Code requirements. Automobile parking for each unit is provided in an enclosed two-car garage on the ground floor.

Pursuant to LAMC Section 12.21 A.16, a minimum of nine long-term and two short-term bicycle parking spaces would be required for a nine unit residential project. The project is providing 11 bicycle parking spaces. Bicycle racks are available in each of the nine garages and within the ground level parking area. Two short-term bicycle parking spaces are available directly outside of the building lobby along Caldas Avenue.

Automobile access to the project site is taken from the 20 foot alley at the rear of the property via two gated driveways. At the garage level, an approximately 26.7 foot common driveway is located at the center of the site and runs horizontally in an east-west direction.

The main pedestrian entrance to each unit is from the courtyard via the lobby and stairs on Caldas Avenue. Other entrances to units (e.g., Sherman Way facing entrances are secondary).

The Mobility Plan 2035 and NavigateLA designate W. Sherman Way as a Scenic Highway. As discussed in the Mobility Plan 2035, Scenic Highways have special controls for the protection and enhancement of scenic resources. The Mobility Plan specifically designates the portion of Sherman Way between Variel Avenue to Kester Avenue as a Scenic Highway, because it is a wide street with a landscaped median. The Mobility Plan/NavigateLA also designate W. Sherman Way as a Boulevard II with a designated right-of-way width of 110 feet and a designated roadway width of 80 feet. ZIMAS shows the Sherman Way median is zoned OS-1XL and designated for Open Space by the Community Plan. Sherman Way is not designated a Scenic Highway by the State of California.

NavigateLA shows that Caldas Avenue, which borders the subject site on the west, is designated as a Collector with a designated right-of-way width of 66 feet and a designated roadway width of 40 feet. As shown on NavigateLA and ZIMAS, a 20 foot alley borders the rear of the subject site.

Enadia Way intersects with Caldas Avenue approximately 0.1 mile south of the subject site. Enadia Way is designated as a Collector with a designated right-of-way width of 66 feet and a roadway width of 40 feet. In proximity to the subject site, Enadia Way intersects with Shoshone Avenue and Texhoma Avenue, which are designated Local Street - Standard with a designated right-of-way width of 60 feet and a designated roadway width of 36 feet. Enadia Way also intersects with Encino Avenue, which is designated a Collector with a designated right-of-way width of 66 feet and a designated roadway width of 40 feet. The subject site is approximately 0.2

miles from White Oak Avenue, which NavigateLA designates as a Boulevard II with a designated right-of-way width of 110 feet and a designated roadway width of 80 feet.

The subject site is in close proximity to public transit. The Metro Bus 162 runs in an east-west direction along Sherman Way and stops at the intersection of Sherman Way and Andasol Avenue (approximately 0.2 miles to the east) and the intersection of Sherman Way and White Oak Avenue (approximately 0.5 miles to the west). The Metro Bus 162 is a 24-hour bus with a frequency of every 15 minutes or better. The Metro Bus 237 runs in a north-south direction along White Oak Avenue (approximately 0.5 miles from the subject site). The Metro Bus 235 and 236 run north-south along Balboa Boulevard (approximately 0.9 miles from the subject site). The Metro Bus 237, 235, and 236 all connect with the Metro Bus 162 at Sherman Way. Finally, the Metro Rail and Busway G Line (Orange Line) is located approximately 2.1 miles to the southeast of the subject site at Balboa Boulevard.

3.3.5 Sustainability Features

The Green Code and Title 24 apply to the project. The project's roof plan shows 1,228 square feet of solar panels.

3.4 REQUESTED PERMITS AND APPROVALS

The list below includes the anticipated requests for approval of the project. The Mitigated 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 LAMC Section 12.32 F, a Zone Change from R1-1 to (T)(Q)RD1.5-1 across the entire site; and
- Pursuant to LAMC Section 12.32 R, removal of a 30 foot building line on Sherman Way as established under Ordinance No. 130,484.
- Other discretionary and ministerial permits and approvals that may be deemed necessary, including, but not limited to, temporary street closure permits, grading permits, excavation permits, foundation permits, building permits, and sign permits.

INITIAL STUDY

4 ENVIRONMENTAL IMPACT ANALYSIS

I. AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099 would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Less Than Significant 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. An impact on 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 is located on a flat lot in a fully

developed area on the southeast corner of Sherman Way and Calvus Avenue within the Reseda – West Van Nuys Community Plan area.

As discussed in the Mobility Plan 2035, Scenic Highways have special controls for the protection and enhancement of scenic resources. The Mobility Plan specifically designates the portion of Sherman Way between Variel Avenue to Kester Avenue as a Scenic Highway because it is a wide street with a landscaped median. (This portion of Sherman Way is not a State designated Scenic Highway.) The project will not encroach into the landscaped median along Sherman Way, and no construction activities will take place within the landscaped median. Additionally, SurveyLA for the Reseda – West Van Nuys Community Plan area (Historic Resources Survey Report, Non-Parcel Resources) identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). These street trees have scenic value. As mitigated elsewhere herein, all of the seven street trees will be protected in place (see Sections IV. Biological Resources and V. Historic Resources).

Although the proposed project involves the demolition of two single-family dwellings and would increase height and massing on the site, the project would not obstruct any views of the historic street trees and/or landscaped median. Therefore, any impacts related to scenic vistas will be less than significant as mitigated elsewhere herein.

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 project would substantially damage scenic resources within a State Scenic Highway. The project site is proposed to be located on the southeast corner of Sherman Way and Calvus Avenue. As previously discussed, the Mobility Plan 2035 designates the portion of Sherman Way between Variel Avenue to Kester Avenue as a Scenic Highway, because it is a wide street with a landscaped median. The project proposes the removal of a 30 foot building line along Sherman Way but will not encroach into the landscaped median along Sherman Way. No construction activities will take place within the landscaped median.

Caltrans' State Scenic Highway Mapping System does not identify Sherman Way or Calvus Avenue as a State Scenic Highway. The project site is located approximately 5 miles east of the closest state designated scenic highway (State Route 27). Therefore, no impacts related to state designated 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 With Mitigation. A significant impact would occur if the project would substantially degrade the existing visual character or quality of the project site and its surroundings. Significant impacts to the visual character of a 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 area is developed with residential and commercial land uses. As previously discussed, the historic street trees along Sherman Way will be preserved in place as mitigated elsewhere herein, and the project will not encroach into the Sherman Way landscaped median.

Furthermore, the project includes design features and landscaping improvements to enhance the visual quality of the area. LAMC Section 12.21 G.2 requires a minimum of 25 percent of the project's required common open space area to be landscaped with ground cover, shrubs, or trees, including one 24-inch box tree for every four dwelling units. Street trees can be used to meet this requirement. For the nine unit project, a minimum of three 24-inch box trees must be provided to meet Code requirements. There are seven street trees on Sherman Way and Calvus Avenue, and SurveyLA identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place. Furthermore, the applicant's plans show an additional 15 trees to be planted on site, including five 48-inch box *Melaleuca leucadendra* (Cajeput) and 10 24-inch box *Heteromeles arbutifolia* (Toyon). Therefore, the project exceeds Code requirements for the provision of trees. Furthermore, for the project, the applicant is required to provide a minimum total of 390 square feet of landscaping for the common open space areas (25 percent of 1,560 square feet of open space). The applicant's plans show 2,690 square feet of landscaping on the ground floor, and 394 square feet of additional landscaping is provided on the second floor within the common open space area. The total amount of landscaping provided is 3,084 square feet. Therefore, as mitigated herein for landscaping, the project will not conflict with applicable zoning and other regulations governing scenic quality.

Mitigation Measure AES-1: Landscape Plan. Environmental impacts to the character and aesthetics of the neighborhood may result from project implementation. However, the potential impacts will be mitigated to a less than significant impact with the following measure:

- All landscaped areas shall be maintained in accordance with a landscape plan, including an automatic irrigation plan, prepared by a licensed landscape architect in accordance with LAMC Sections 12.40 and 12.41. The final landscape plan shall be reviewed and approved by the City of Los Angeles Department of City Planning during the building permit process.

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

Less Than Significant With Mitigation. 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 sun light 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 façades largely or entirely comprised of highly reflective glass or mirror-like materials. Night time glare is primarily associated with bright point-source lighting that contrasts with existing low ambient light conditions, including vehicle headlight and interior and exterior building illumination. The proposed project involves the demolition of two single-family dwellings and the construction of a three-story, nine unit residential structure. As mitigated herein, any impacts to light and glare would be less than significant.

Mitigation Measure AES-2: Light. Environmental Impacts to the adjacent residential properties may result in excessive illumination on the project site. However, the potential impacts will be mitigated to a less than significant level by the following measure.

- Outdoor lighting shall be designed and installed with shielding and directed downward to illuminate only the subject property, such that the light source cannot be seen from adjacent residential properties, the public right-of-way, nor from above. Uplighting shall be prohibited.

Mitigation Measure AES-3: Glare. Environmental impacts to the adjacent residential properties may result from glare from the proposed project. However, the potential impacts will be mitigated to a less than significant level by the following measure.

- The exterior of the proposed structure shall be constructed of materials such as, but not limited to, high-performance and/or non-reflective tinted glass (no mirror-like tints or films) and pre-cast concrete or fabricated wall surfaces to minimize glare and reflected heat.
- All exterior windows shall be low-reflective, non-glare glass.
- All exterior lighting fixtures shall be shielded and directed downward to illuminate only the Project property. Uplighting shall be prohibited.

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. A significant impact would occur if the proposed project would convert valued farmland to non-agricultural uses. The project site is not designated as farmland and is currently improved with two single-family dwellings. No farmland, agricultural uses, or related operations are present within the project site or surrounding area. Due to its setting, the subject site and surrounding area are not included in the Farmland Mapping and Monitoring Program of the California Department of Conservation. Therefore, the project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and no impact would occur.

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

No Impact. A significant impact would occur if the proposed project conflicted with existing agricultural zoning or agricultural parcels enrolled under the Williamson Act. The project site is not zoned for agricultural use or under a Williamson Contract. As the site and surrounding area do not contain farmland of any type, the proposed project would not conflict with a Williamson Contract. Therefore, no impacts would occur.

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

No Impact. A significant impact would occur if the proposed project conflicted with existing zoning or cause rezoning of forest land or timberland or result in the loss of forest land or in the conversion of forest land to non-forest use. The site and the surrounding area are not zoned for forestland or timberland. Accordingly, the proposed project would not conflict with forest land or timberland zoning or resulting in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur.

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

No Impact. A significant impact would occur if the proposed project conflicted with existing zoning or caused rezoning of forest land or timberland, or resulted in the loss of forest land or in the conversion of forestland to non-forest use. The site and the surrounding area are not zoned for forest land or timberland. Accordingly, the proposed project would not conflict with forest land or timberland zoning or result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur.

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. A significant impact would occur if the proposed project caused the conversion of farmland to non-agricultural use. The project site does not contain farmland, forestland, or

timberland. The subject site is identified on ZIMAS as a Urban Agriculture Incentive Zone, but no agricultural uses are currently on site. Therefore, no impacts would occur.

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?

Less Than Significant Impact. 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 2012 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 a three-story (two-story of residential over a ground level parking garage), 43 foot in height, 25,214 square foot, nine unit multi-family residential building all on two lots totaling 16,645 square feet. The project includes the removal of a 30 foot building line along Sherman Way. The project is not expected to conflict with or obstruct the implementation of the AQMP and SCAQMD rules. The proposed project is also subject to the City's Green Building Program Ordinance (Ordinance No. 179,890), which was adopted to reduce the use of natural resources, create healthier living environments, and minimize the negative impacts of development on local, regional, and global ecosystems. 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?

Less Than Significant Impact. A significant impact would occur if the project would result in a cumulatively considerable net increase of any criteria pollutant. The project will produce fugitive dust and mobile source emissions as a result of construction activity. The proposed project and the entire Los Angeles metropolitan area are located within the South Coast Air Basin, which is characterized by relatively poor air quality. The basin is currently classified as a federal and State non-attainment area for Ozone (O₃), Respirable Particulate Matter (PM₁₀ and PM_{2.5}), and lead (Pb) and a federal attainment/maintenance area for Carbon Monoxide (CO). It is classified as a State attainment area for CO, and it currently meets the federal and State standards for Nitrogen Dioxide (NO₂), Sulfur Oxides (SO_x), and lead (Pb). Because the Basin is designated as a State and/or federal nonattainment air basin for O₃, PM₁₀, PM_{2.5}, and NO₂, there is an on-going regional cumulative impact associated with these pollutants. However, an individual project can emit these pollutants without significantly contributing to this cumulative impact depending on the magnitude of emissions. This magnitude is determined by the project-level significance thresholds established by the SCAQMD. Based on published studies from similar projects, during the construction phase, the proposed project would not likely exceed the regional SCAQMD significance thresholds for emissions of Carbon Monoxide (CO), Reactive Organic Compounds (ROG), Nitrogen Oxides (NO_x), Particulate Matter (PM₁₀ and PM_{2.5}), and Sulfur Dioxide (SO_x). When a proposed project has less than 80 residential units and involves less than 20,000 cubic yards of soil export, it will not likely exceed the SCAQMD construction or operational thresholds. The project has nine multi-family residential units and is proposing 147 cubic yards of soil export. The project would be subject to regulatory compliance measures (RCMs), which reduce the impacts of operational and construction regional emissions. The proposed project would not likely exceed the project-level SCAQMD localized significance thresholds for criteria air pollutants.

Therefore, the project is not expected to result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. A significant impact may occur if a project were to generate pollutant concentrations to a degree that would significantly affect sensitive receptors. 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 is the removal of a building line and the construction of a multi-family structure in an area already developed with residential uses. Based on published studies of other similar sized projects, it is unlikely that this project would exceed the appropriate significance threshold for localized emissions of particulate matter (PM10 and PM2.5), Carbon Monoxide (CO), and Nitrogen Oxides (NOx). When a proposed project has less than 80 residential units and involves less than 20,000 cubic yards of soil export, it will not likely exceed the SCAQMD construction or operational thresholds. Therefore, localized emission impacts for the proposed project would be less than significant for all construction phases and the project would not expose sensitive receptors to substantial localized criteria pollutant emissions during construction. The proposed project would result in a less than significant impact.

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

Less Than Significant Impact. 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 project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Construction of the proposed project 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 land uses 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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?

Less Than Significant With Mitigation. A project would have a significant biological impact through the loss or destruction of individuals of a species or through the degradation of sensitive habitat. According to the Tree Report provided by Eric Gorsuch, V & E Tree Service, Inc. (dated April 3, 2019, updated September 1, 2021, updated October 27, 2022), it is likely that the project will require the removal of all of the 17 trees on site, including one dead tree (see Appendix A). None of the 17 trees on site are protected species. The applicant's plans show that 15 trees will be planted on site, including five 48-inch box *Melaleuca leucadendra* (Cajeput) and 10 24-inch box *Heteromeles arbutifolia* (Toyon). As mitigated herein, any impact to tree removal will be reduced to a less than significant level. It is possible that the removal of 17 trees would have an impact on nesting birds. As mitigated herein, any impacts on nesting birds would be less than significant. Additionally, there are seven street trees on Sherman Way and Calvus Avenue. SurveyLA identifies five of the street trees on Sherman Way as historic street trees (four Mexican fan palms and one deodar cedar). All of the seven street trees will be protected in place, and as mitigated herein, no street tree will be removed without the review and approval of the Board of Public Works, Urban Forestry Division.

Mitigation Measure BIO-1: Habitat Modification (Nesting Native Birds, Non-Hillside or Urban Areas). The project will result in the removal of vegetation and disturbances to the ground and therefore may result in take of nesting native bird species. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

- Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86).
- If project activities cannot feasibly avoid the breeding bird season, beginning thirty days prior to the disturbance of suitable nesting habitat, the applicant shall:
 - a. Arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the project site, as access to adjacent areas allows. The surveys shall be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.

- b. If a protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat for the observed protected bird species until August 31.
- c. Alternatively, the Qualified Biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest or as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. The buffer zone from the nest shall be established in the field with flagging and stakes. Construction personnel shall be instructed on the sensitivity of the area.
- d. The applicant shall record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. Such record shall be submitted and received into the case file for the associated discretionary action permitting the project.

Mitigation Measure BIO-2. Tree Removal (Non-Protected Trees). Environmental impacts from project implementation may result due to the loss of significant trees on the site. However, the potential impacts will be mitigated to a less than significant level by the following measures.

- Prior to the issuance of any permit, a plot plan shall be prepared indicating the location, size, type, and general condition of all existing trees on the site and within the adjacent public right(s)-of-way.
- All significant (8-inch or greater trunk diameter, or cumulative trunk diameter if multi-trunked, as measured 54 inches above the ground) non-protected trees on the site proposed for removal shall be replaced at a 1:1 ratio with a minimum 24-inch box tree. Net, new trees, located within the parkway of the adjacent public right(s)-of-way, may be counted toward replacement tree requirements.
- Removal or planting of any tree in the public right-of-way requires approval of the Board of Public Works. Contact Urban Forestry Division at: 213-847-3077. All trees in the public right-of-way shall be provided per the current standards of the Urban Forestry Division the Department of Public Works, Bureau of Street Services.

Mitigation Measure BIO-3. Tree Removal (Street Trees)

- Removal of street trees (i.e., trees in the public right-of-way) requires approval by the Board of Public Works.
- The required Tree Report shall include the location, size, type, and condition of all existing trees in the adjacent public right-of-way and shall be submitted for review and approval by the Urban Forestry Division of the Bureau of Street Services, Department of Public Works (213-847-3077).
- All trees in the public right-of-way shall be provided per the current Urban Forestry Division standards.

Mitigation Measure BIO-4. Tree Protection Zone. The Historic Street Trees should be protected by establishing a Tree Protection Zone (TPZ). The TPZ should encompass the grass

parkway, curb to sidewalk, in front of the properties on Sherman Way. The TPZ for the Palm on Calvus Avenue should encompass the grass parkway, from curb to sidewalk, and 6 feet north and south of the palm. For the Crepe Myrtle, the TPZ should also encompass the grass parkway, from sidewalk to curb, to the edge of the crown's dripline north and south of the tree.

The following TPZ recommendations should be followed:

- a. The TPZ fencing should be 4 feet tall at the edge of the TPZ. Orange mesh (hurricane) or chain link fencing should be used. The TPZ fence will remain in place during all grading and construction activities in the area.
- b. No heavy equipment shall be used or stored within the TPZ.
- c. No stockpiling of soils or construction materials within the TPZ.
- d. Irrigation shall remain on during project. Notify the Consulting Arborist if changes occur.
- e. No additional water shall be added without direct Arborist approval.
- f. Notify Consulting Arborist if hardscape demolition or trenching is to occur within 10 feet of TPZ fence line.
- g. The following root protections are to be followed if trenching operations are required within the TPZ or sidewalk replacement occurs:
 - Exploratory hand digging to locate major roots where possible.
 - Roots should be cut cleanly with a sharpened, sterilized pruning tool.
 - Roots that are 3 inches or larger that need to be pruned will be cut cleanly with a saw (chainsaws and reciprocating saws are allowed). No roots will be chopped with an axe or power equipment.
 - Roots discovered to be damaged below the surface during trenching activities will be traced back 4-6 inches above the break and cut cleanly before the end of the workday. Moist native soil will then re-cover the exposed root.
 - No damaged or cut roots are to be left exposed overnight.
- h. Overhanging limbs should be evaluated for potential future equipment and/or vehicle contact. Contact Consulting Arborist for mitigation measures.
- i. No limbs or branches are to be pruned without prior approval of the Consulting Arborist.
- j. No use of or idling of equipment with exhaust pipes near overhanging limbs or branches.

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 (CDFW) or the United States Fish and Wildlife Services (USFWS), and no impacts would occur.

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 protected 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 is currently improved with two existing single-family dwellings. 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, and no impacts would occur.

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

Less Than Significant With Mitigation. 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. According to the Tree Report provided by Eric Gorsuch, V & E Tree Service, Inc. (dated April 3, 2019, updated September 1, 2021, updated October 27, 2022), it is likely that the project will require the removal of all of the 17 trees on site, including one dead tree (see Appendix A). None of the 17 trees on site are protected species. However, it is possible that the removal of 17 trees would have an impact on native nesting birds. As mitigated herein, any impacts on nesting birds would be less than significant.

Mitigation Measure BIO-1: Habitat Modification (Nesting Native Birds, Non-Hillside or Urban Areas)

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

Less Than Significant With Mitigation. 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 and Shrub Ordinance (No. 186,873). The project site does not contain locally-protected biological resources, such as oak trees, Southern California black walnut, western sycamore, California bay trees, Mexican elderberry, or toyon. 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 (CFGF). Both the MBTA and CFGF 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. Furthermore, the project is mitigated herein to further protect native nesting birds. Therefore, as mitigated herein, 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), and no impacts would occur.

Mitigation Measure BIO-1: Habitat Modification (Nesting Native Birds, Non-Hillside or Urban Areas)

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, and no impacts would occur.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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?

Less Than Significant Impact. A significant impact would occur if the proposed project would substantially alter the environmental context of or remove identified historical resources. SurveyLA for the Reseda – West Van Nuys Community Plan area (Historic Resources Survey Report, Non-Parcel Resources) identifies intact segments of historic street trees under Cultural Landscapes, 1975-1980. The street trees were planted in 1911 as part of a campaign to publicize the communities of Owensmouth (Canoga Park), Marian (Reseda), and Van Nuys. At the time, Sherman Way was also the site of the Pacific Electric Red Car line. The street trees were planted along two segments: between Corbin and Vanalden Avenues and between Caldas and Rubio Avenues. According to SurveyLA, the street trees appear to meet local criteria only and may not meet significance thresholds for National Register or California Register eligibility. The subject site is located between Caldas and Rubio Avenues along Sherman Way. At the project site, five of the street trees on Sherman Way abutting the project are historic street trees under this designation and include four Mexican fan palms and one deodar cedar. As mitigated elsewhere herein (see IV. Biological Resources), the street trees will be protected in place (see Appendix A.) Therefore, there will be less than significant impact to a historical resource.

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 would be removed, altered, or destroyed as a result of the proposed development. 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. A project-related significant impact could occur if a project would significantly affect archaeological resources that fall under either of these categories. If archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. Per regulatory compliance measures, personnel of a proposed project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of a project site. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. Impacts to Tribal cultural resources are analyzed herein pursuant to State AB 52 under Section XVIII. Tribal Cultural Resources. Therefore, the impact would be less than significant.

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

Less Than Significant Impact. A significant impact would occur if excavation or construction activities associated with the proposed project would disturb paleontological or unique geological features, including human remains. If paleontological resources are discovered during excavation, grading, or construction, the City of Los Angeles Department of Building and Safety shall be notified immediately, and all work shall cease in the area of the find until a qualified paleontologist evaluates the find. Construction activity may continue unimpeded on other portions of the project site. The paleontologist shall determine the location, the time frame, and the extent to which any monitoring of earthmoving activities shall be required. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. Impacts to human remains regulated under State AB 52 are discussed herein in Section XVIII. Tribal Cultural Resources. Therefore, the impact to human remains would be less than significant.

VI. ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 type="checkbox"/>	<input checked="" 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 construction of a nine unit multi-family residential structure will result in an increase in energy use; however, the project will be subject to Title 24 California Building Codes as well as the CALGreen building code. Furthermore, the project will provide a minimum of 1,228 square feet of roof top solar panels. Due to these sustainability requirements, the building and the project's construction will minimize wasteful, inefficient, or unnecessary consumption of energy resources and the project will result in a less than significant impact.

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

No Impact. The subject site has not been identified for any future use for renewable resources. The project will not conflict with or obstruct any state or local plan for renewable energy or energy efficiency. Therefore, the project would have no impact.

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

i) **Less Than Significant 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. 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, the proposed project would result in a less than significant impact due to a fault rupture.

ii) **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 development of the proposed project could expose people and structures to strong seismic ground shaking. However, the project would be designed and constructed in accordance with state and local building codes to reduce the potential for exposure of people or structures to seismic risks to the maximum extent possible. As applicable, the proposed project would be required to comply with the California Department of Conservation, Division of Mines and Geology (CDMG), which provides guidance for the evaluation and mitigation for earthquake-related hazards, and with the seismic safety requirements in the Uniform Building Code (UBC) and the LAMC. Compliance with such requirements would reduce seismic ground shaking impacts to the maximum extent practicable with current engineering practices. Therefore, impacts related to strong seismic ground shaking would be less than significant.

iii) **Less Than Significant Impact.** A significant impact would occur if any unstable geological conditions would result in any type of geologic failure, including lateral spreading, off-site landslides, liquefaction, or collapse. The applicant submitted a Geotechnical Investigation Report for the project prepared by A.G.E. Engineering dated April 22, 2019. According to the report, the site is located within an area

identified as having a potential for liquefaction as defined by the State of California per the Seismic Hazard Mapping Act of 1990. A site-specific liquefaction analysis was performed and based on the investigation and analysis the potential for the liquefaction to adversely affect the proposed structure is considered low. Furthermore, the report states that the proposed site is satisfactory for the proposed project (see Appendix B). Additionally, the Grading Division of the Los Angeles Department of Building and Safety (LADBS) reviewed the referenced report and issued a Soils Report Review Letter for the project on June 11, 2019. Subsequently, on January 21, 2020, LADBS issued a Soils Report Approval Letter for the project under Log # 108420-01 (see Appendix C). The conditions in the Soils Report Approval Letter are by reference incorporated herein. With the conditions in the Soils Report Approval Letter, impacts related to seismic induced ground failure, including liquefaction, would be less than significant.

- iv) **Less Than Significant Impact.** A significant impact due to landslides 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. The applicant submitted a Geotechnical Investigation Report for the proposed project prepared by A.G.E. Engineering dated April 22, 2019. According to the report, the site is located within an area identified as having a potential for liquefaction as defined by the State of California per the Seismic Hazard Mapping Act of 1990. A site-specific liquefaction analysis was performed and based on the investigation and analysis the potential for the liquefaction to adversely affect the proposed structure is considered low. Furthermore, the report states that the proposed site is satisfactory for the proposed project (see Appendix B). Additionally, the LADBS Grading Division reviewed the referenced report and issued a Soils Report Review Letter for the project on June 11, 2019. Subsequently, on January 21, 2020, LADBS issued a Soils Report Approval Letter for the proposed project under Log # 108420-01 (see Appendix C). The conditions in the Soils Report Approval Letter are by reference incorporated herein. With the conditions in the Soils Report Approval Letter, impacts related to seismic induced ground failure, including liquefaction, would be less than significant.

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

Less Than Significant Impact. A significant impact would occur if construction activities or future uses would result in substantial soil erosion or loss of topsoil. Construction of the proposed project includes 456 cubic yards of grading (302 cubic yards of cut, 154 cubic yards of fill, 147 cubic yards of export, and no import). This grading work would result in ground surface disturbance, 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 (LARWQCB) through the City's Storm water Management Division. In addition, the proposed project would be required to develop a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would require implementation of an erosion control plan

to reduce the potential for wind or water born erosion during the construction process. In addition, all onsite grading and site preparation would comply with applicable provisions of Chapter IX, Division 70 of the LAMC, and conditions imposed by the City of Los Angeles Department of Building and Safety's Soils Report Approval Letter dated January 21, 2020 under Log # 108420-01 (see Appendix C). Given the quantity of grading onsite, the flat topography of the site, the regulatory compliance measures required, and the required conditions in the Soils and Geology Approval Letter, a less than significant impact would occur with respect to erosion or loss of topsoil.

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

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. 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. According to the Environmental and Public Facilities Maps (1996) and ZIMAS, 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. Construction 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 and the Department of Building and Safety's Soils Report Approval Letter dated January 21, 2020 (Log Reference #108420-01), the potential for landslide lateral spreading, subsidence, liquefaction or collapse would be less than significant.

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

Less Than Significant 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. However, as applicable, the proposed project would be required to comply with the requirements of the UBC, LAMC, and other applicable building codes. Compliance with such requirements would reduce impacts related to expansive soils, and impacts would be less than significant.

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?

Less Than Significant Impact. The project would cause a significant impact if adequate waste water disposal is not available. The project site is located in an urbanized area, where waste water infrastructure is currently in place. The proposed project would connect to existing sewer lines that serve the site. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. A significant impact would occur if excavation or construction activities associated with the proposed project would disturb paleontological or unique geological features. If paleontological resources are discovered during excavation, grading, or construction, the City of Los Angeles Department of Building and Safety shall be notified immediately, and all work shall cease in the area of the find until a qualified paleontologist evaluates the find. Construction activity may continue unimpeded on other portions of the project site. The paleontologist shall determine the location, the time frame, and the extent to which any monitoring of earthmoving activities shall be required. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. Impacts to human remains regulated under State AB 52 are discussed herein in Section XVIII. Tribal Cultural Resources. Therefore, the impact to paleontological resources would be less than significant.

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"/>

The Scoping Plan is a greenhouse gas emission (GHG) reduction roadmap developed and updated by the California Air Resources Board (CARB) at least once every five years, as required by Assembly Bill (AB) 32. It lays out the transformations needed across various sectors to reduce GHG emissions and reach the State's climate targets. CARB published the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) in November 2022, as the third update to the initial plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 target of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual activities (*CARB 2008, Climate Change Scoping Plan*.) The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan Update (adopted in 2014) assessed progress toward achieving the 2020 target and made the case for addressing short-lived climate pollutants (SLCPs) (*CARB 2014, First Update to the Climate Change Scoping Plan*). The 2017 Scoping Plan Update (*CARB 2017, California's 2017 Climate Change Scoping Plan*), shifted focus to the newer Senate Bill (SB) 32 goal of a 40 percent reduction below 1990 levels by 2030 by laying out a detailed cost-effective and technologically feasible path to this target, and also assessed progress towards achieving the AB 32 goal of returning to 1990 GHG levels by 2020. The 2020 goal was ultimately reached in 2016, four years ahead of the schedule called for under AB 32.

The 2022 Scoping Plan Update is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan. The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan Update incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan Update also includes discussion for the first time of the natural and working lands sectors as sources for both sequestration and carbon storage, and as sources of emissions as a result of wildfires.

Estimated Statewide Greenhouse Gas Emissions Reductions in the 2022 Scoping Plan

Emissions Scenario	GHG Emissions (MMTCO _{2e})
2019	
2019 State GHG Emissions	404
2030	
2030 BAU Forecast	312
2030 GHG Emissions without Carbon Removal and Capture	233
2030 GHG Emissions with Carbon Removal and Capture	226
2030 Emissions Target Set by AB 32 (i.e., 1990 level by 2030)	260
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2030	52 (16.7%) ^a
2045	
2045 BAU Forecast	266
2045 GHG Emissions without Carbon Removal and Capture	72
2045 GHG Emissions with Carbon Removal and Capture	(3)
<p><i>MMTCO_{2e} = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values.</i></p> <p>^a $312 - 260 = 52$. $52 / 312 = 16.7\%$</p> <p>Source: CARB, Final 2022 Climate Change Scoping Plan, November 2022.</p>	

The 2022 Scoping Plan Update reflects existing and recent direction in the Governor's Executive Orders and State Statutes, which identify policies, strategies, and regulations in support of and implementation of the Scoping Plan. Among these include Executive Order B-55-18 and AB 1279 (The California Climate Crisis Act), which identify the 2045 carbon neutrality and GHG reduction targets required for the Scoping Plan.

Aligning local jurisdiction action with state-level priorities to tackle climate change and the outcomes called for in the 2022 Scoping Plan Update is identified as critical to achieving the statutory targets for 2030 and 2045. The 2022 Scoping Plan Update discusses the role of local governments in meeting the State's GHG reductions goals. Local governments have the primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can choose to support transit, walking, bicycling, and neighborhoods that do not force people into cars. Local governments also have the option to adopt building ordinances that exceed statewide building code requirements, and play a critical role in facilitating the rollout of Electric Vehicle (EV) infrastructure. As a result, local government decisions play a critical role in supporting state-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment—the two largest GHG emissions sectors over which local governments have authority. The City has taken the initiative in combating climate change by developing programs in the General Plan (Housing Element, Mobility Plan 2035) and regulations such as requirements for All-Electric Buildings, the Green New Deal Green Building Code, converting the City's fleet to zero emission vehicles, and energy emissions retrofits.

Housing Element (Housing Needs Assessment)

The Housing Element of the General Plan is prepared pursuant to state law and provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create and preserve sustainable, mixed-income neighborhoods across the City.

The Housing Needs Assessment chapter of the Housing Element discusses the City's population and housing stock to identify housing needs for a variety of household types across the City. The current RHNA goal for affordable housing within the City is approximately forty percent of new construction. However, the City's projections show affordable housing comprising twenty percent of new construction, which falls short of the forty percent RHNA goal. In order to address this shortfall in affordable housing, the Housing Element provides measures to streamline and incentivize development of affordable housing. Such measures include revising density bonuses for affordable housing; identifying locations which are ideal for funding programs to meet low-income housing goals; and rezoning areas to encourage low-income housing. With implementation of such measures to increase affordable housing, the Housing Element predicts a significant increase in housing production at all income ranges compared to previous cycles.

The Housing Element also promotes sustainability and resilience, and environmental justice through housing, as well as the need to reduce displacement. It encourages the utilization of alternatives to current parking standards that lower the cost of housing, support GHG and VMT goals and recognize the emergence of shared and alternative mobility. The Element also identifies

housing strategies for energy conservation, water conservation, alternative energy sources and sustainable development which support conservation and reduce demand.

Mobility Plan 2035

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City's General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the most recent amendment on September 7, 2016. The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. While the Mobility Plan 2035 mainly relates to transportation, certain components would serve to reduce VMT and mobile source GHG emissions. One component of the Mobility Plan is a GHG emission tracking program to establish compliance with SB 375, AB 32 and the region's Sustainable Community Strategy.

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

Less Than Significant Impact. California continues to experience a severe housing shortage. The State must plan for more than 2.5 million residential units over the next eight years, and no less than one million of those residential units must be affordable to lower-income households. This represents more than double the housing planned for during the last eight years. The housing crisis and the climate crisis must be confronted simultaneously, and it is possible to address the housing crisis in a manner that supports the State's climate and regional air quality goals. The Project represents an infill development within an existing urbanized area that would concentrate new development consistent with the overall growth pattern encouraged in the RTP/SCS. The Project's convenient access to public transit and opportunities for walking and biking would result in a reduction of vehicle trips, vehicle miles traveled (VMT), and GHG emissions. Specifically, the Project Site is located in a transit-rich neighborhood serviced by the Los Angeles County Metropolitan Transit Authority (Metro) and LADOT bus lines. In addition, the Project Site's proximity to a variety of commercial uses and services would encourage employees of the Project Site to walk to nearby destinations to meet their shopping needs, thereby reducing VMT and GHG emissions. Therefore, the Project would be consistent with these reduction strategies.

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 Project represents an infill development within an existing urbanized area that would concentrate new development consistent with the overall growth pattern encouraged in the RTP/SCS. The Project's convenient access to public transit and opportunities for walking and biking would result in a reduction of vehicle trips, vehicle miles traveled (VMT), and GHG emissions. Specifically, the Project Site is located in a transit-rich neighborhood serviced by the Los Angeles County Metropolitan Transit Authority (Metro) and LADOT bus lines. In addition, the Project Site's proximity to a variety of commercial uses and services would encourage employees of the Project Site to walk to nearby destinations to meet their shopping needs, thereby reducing VMT and GHG emissions. Therefore, the Project would be consistent with these reduction strategies. The Project would not involve retrofit of existing buildings and would be completely new construction. Therefore, the Project would be consistent and not conflict with policies to implement energy efficiency retrofits.

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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. Construction of the proposed project would involve the temporary use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. Operation of the project would involve the limited use and storage of common hazardous substances typical of those used in multi-family residential projects, including lubricants, paints, solvents, custodial products (e.g., cleaning supplies), pesticides and other landscaping supplies, and vehicle fuels, oils, and transmission fluids. No 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. As a residential development, the proposed project would not involve large quantities of hazardous materials that would require routine transport, use, or disposal. 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 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?

Less Than Significant 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. City records show that Certificates of Occupancy for the two existing single-family dwellings on the project site were issued in 1952. Therefore, the structures on site may contain asbestos-containing materials (ACMs) and lead-based paint (LBP). Demolition of these buildings would have the potential to release asbestos fibers into the atmosphere if such materials exist and they are not properly stabilized or removed prior to demolition activities. The removal of asbestos is regulated by SCAQMD Rule 1403; therefore, any asbestos found on-site would be required to be removed in accordance with applicable regulations prior to demolition. Similarly, it is likely that lead-based paint is present in buildings constructed prior to 1979. Compliance with existing State laws regarding removal would be required, resulting in a less than significant impact.

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

Less Than Significant Impact. Construction activities have the potential to result in the release, emission, handling, and disposal of hazardous materials within one-quarter mile of an existing school. A private Waldorf School is located at 17426 Sherman Way, approximately 0.2 miles east of the subject site at the southwest corner of Andasol Avenue and Sherman Way. Anatola Elementary School (LAUSD) is located approximately 0.5 miles north of the subject site at 7364 Anatola Avenue. The proposed project would include grading and construction of a multi-family residential structure. The project would be expected to use and store hazardous materials, such

as paints, solvents, cleaners, pesticides, etc. All hazardous materials within the project site would be acquired, handled, used, stored, transported, and disposed of in accordance with all applicable federal, State, and local requirements. With compliance, the proposed project would result in a less than significant impact to students at the neighboring schools.

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?

Less Than Significant Impact. The subject site is located approximately 2.2 miles southwest of the Van Nuys Airport, and ZIMAS records show that the project site location is within an Airport Hazard Horizontal Surface Area. LAMC Section 12.50 regulates height limitations and use within an Airport Hazard area. The proposed development will be required to comply with all Municipal Code requirements related to airport hazards and as such, will result in a less than significant impact relative to airports.

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

Less Than Significant Impact. Updates to the City of Los Angeles Safety Element were adopted in November 2021. The Safety Element references the City's Emergency Management Department 2018 Local Hazard Mitigation Plan (LHMP). The LHMP identifies Critical Facilities and Infrastructure including critical response facilities and critical infrastructure (transportation and utilities). Due to the sensitivity of this information, a detailed list of facilities is not provided therein. Based on the available information, the proposed project would not impair or physically interfere with an adopted emergency response or emergency evacuation plan. Additionally, emergency access to and from the project site would be provided in accordance with requirements of the Los Angeles Fire Department (LAFD). Therefore, there is no information to indicate that the proposed project would impair implementation of or physically interfere with an

adopted emergency response plan or emergency evacuation plan, and less than significant impacts would occur.

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

Less Than Significant Impact. A significant impact would occur if the proposed project exposed people and structures to high risk of wildfire. According to ZIMAS records, the project site is not located in a Very High Fire Severity Zone. The proposed project would be designed and constructed in accordance with State and local Building and Fire Codes, including installing sprinklers and planting fire resistant landscaping as appropriate, to reduce the potential for exposure of people or structures to wildfires to the maximum extent possible. It is possible that occupants of the proposed project would be subject to poor air quality as a result of wildfires; however, these impacts can be mitigated by air filtration as required by local building codes. Therefore, the impact of the project in exposing people or structures to a risk of loss, injury, or death involving wildland fires, would be less than significant.

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 type="checkbox"/>	<input checked="" 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. A significant impact would occur if the proposed project discharges water that does not meet the quality standards of agencies which regulate surface water quality and water discharge into stormwater drainage systems or does not comply with all applicable regulations as governed by the Los Angeles Regional Water Quality Control Board (LARWQCB). Stormwater runoff from the proposed project has the potential to introduce small amounts of pollutants into the stormwater system. Pollutants would be associated with runoff from landscaped areas (pesticides and fertilizers) and paved surfaces (ordinary household cleaners). Thus, the proposed project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) standards and the City's Stormwater and Urban Runoff Pollution Control regulations (Ordinance No. 172,176 and No. 173,494) to ensure pollutant loads from the project site are minimized for downstream receiving waters. The ordinances contain requirements for construction activities and operation of projects to integrate Low Impact Development (LID) practices and standards for stormwater pollution mitigation, and maximize open, green and pervious space on all projects consistent with the City's landscape ordinance and other related requirements in the City's Development Best Management Practices (BMPs) Handbook. The proposed project is a multi-family residential development that does not include potential sources of contaminants. No contaminants would be used that could potentially degrade water quality; furthermore, the project would comply with all federal, state and local regulations governing stormwater discharge. Conformance would be ensured during the City's building plan review and approval process. Therefore, the proposed project would result in less than significant impacts.

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. A significant impact would occur if the proposed project would substantially deplete groundwater or interferes with groundwater recharge. The proposed project would not require the use of groundwater at the project site. Potable water would be supplied by the Los Angeles Department of Water and Power (LADWP), which draws its water supplies from distant sources for which it conducts its own assessment and mitigation of potential environmental impacts. Therefore, the project would not require direct additions or withdrawals of groundwater, and the impact on groundwater supplies or groundwater recharge would be less than significant.

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;**
- 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?**

- i. **No Impact.** A significant impact would occur if the proposed project would substantially alter the course of a stream or river so that erosion or siltation would result. The subject site does not have a stream or river on or near the property. Therefore, no impact would occur.
- ii. **Less Than Significant Impact.** A significant impact would occur if the proposed project would substantially increase surface run-off in a manner that contributes to flooding. During project operation, storm water or any runoff irrigation waters would be directed into existing storm drains that are currently receiving surface water runoff under existing conditions. Impermeable surfaces resulting from the development of the project would not substantially change the volume of stormwater runoff in a manner that would result in flooding on- or off-site. Accordingly, significant alterations to existing drainage patterns within the site and surrounding area would not occur. Therefore, the proposed project would result in less-than-significant impacts related to the alteration of drainage patterns and on- or off-site flooding due to surface run-off.
- iii. **Less Than Significant Impact.** A significant impact would occur if runoff water would exceed the capacity of existing or planned storm drain systems serving the project site, or if the proposed project would substantially increase the probability that polluted runoff would reach the storm drain system. Site-generated surface water runoff would continue to flow to the City's storm drain system. 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.
- iv. **No Impact.** A significant impact would occur if the proposed project would be located within a flood plain or would impede or redirect flood flows. According to ZIMAS and NavigateLA, the project site is not located within a flood zone. Therefore, the proposed project would not impede or redirect flood flows, and no impact would occur.

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 proposed project would be located within an area susceptible to inundation by seiche, tsunami, mudflow, or flooding. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, or lake. A tsunami is a great sea wave produced by a significant undersea disturbance. Mudflows result

from the down slope movement of soil and/or rock under the influence of gravity. The project site and the surrounding areas are not located near a water body to be inundated by seiche. Similarly, the project site and the surrounding areas are located in the San Fernando Valley and not near an ocean or lake. According to ZIMAS and NavigateLA, the project site is not located within a flood zone. Therefore, the project would have a less than significant impact related release of pollutants due to inundation by seiche, tsunami, mudflow, or floods.

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

No Impact. The project will not conflict with or obstruct the implementation of a water quality control plan or sustainable ground water management plan or regulations, including the regulations governed by the Los Angeles Regional Water Quality Control Board (LARWQCB), the National Pollutant Discharge Elimination System (NPDES), the City's Stormwater and Urban Runoff Pollution Control, the City's Low Impact Development (LID), and the City's Standard Urban Stormwater Mitigation Plan (SUSMP). Therefore, there will be no impact to water quality control plans and sustainable groundwater management plans.

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 closure or result in development of new thoroughfares or highways. The proposed project is the removal of a 30 foot building line and construction of a multi-family building in an area with existing residential and commercial uses, and 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 mitigate. The site is located within the Reseda – West Van Nuys Community Plan Area. The site is zoned R1-1, with a General Plan land use designation of Low Medium II Residential. The Low Medium II Residential land use designation corresponds to the RD1.5, RD2, RW2, and RZ2.5 Zones. The applicant is requesting a Zone Change to RD1.5, which corresponds to the land use designation. The subject site consists of two contiguous lots totaling 16,645 square feet. The RD Zone is a Multiple Residential Zone (Restricted Density Multiple Dwelling) that requires a minimum of 1,500 square feet of lot area per dwelling unit and a minimum lot size of 5,000 square feet. The subject site consists of two contiguous lots totaling 16,645 square feet and nine multi-family units are proposed. As such, the proposed project would conform to the allowable land uses pursuant to the Los Angeles Municipal Code. The decision makers will determine whether discretionary requests will 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 resource recovery site. The project site is not classified by the City as containing significant mineral deposits nor is it designated for mineral extraction land use. 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 nor is it designated for mineral extraction land use. There are no known mineral resources on the local General Plan, Specific Plan, or any other land use plan. 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 checked="" type="checkbox"/>	<input 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. The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. Construction activity would result in temporary increases in ambient noise levels in the project area on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction noise for the project will cause a temporary increase in the ambient noise levels but will be subject to the LAMC Sections 112.05 (Maximum Noise Level of Powered Equipment or Powered Hand Tools) and 41.40 (Noise Due to Construction, Excavation Work – When Prohibited) regarding construction hours and construction equipment noise thresholds. The project is required to comply with the City of Los Angeles General Plan Noise Element and Ordinance No. 161,574, which prohibits the emission of creation of noise beyond certain levels at adjacent uses unless technically infeasible. Therefore, the proposed project would result in less than significant impact related to the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

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

Less Than Significant Impact. Construction activities can generate varying degrees of vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. Unless heavy construction activities are conducted extremely close (within a few feet) to the neighboring structures, vibrations from construction activities rarely reach the levels that damage structures. By complying with regulations, the project would result in a less than significant impact related to construction vibration.

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?

Less Than Significant Impact. A significant impact would occur if the proposed project would expose people residing or working in the project area to excessive noise levels from a public airport or public use airport or a private airstrip. The subject site is located approximately 2.2 miles southwest of the Van Nuys Airport and is not located in the vicinity of a private airstrip. Accordingly, the proposed project would not expose people working or residing in the project area to excessive noise levels from a public airport or public use airport or private airstrip. Therefore, a less than significant impact would occur.

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 proposed project would result in the development of nine multi-family residential units. The increase in residential population resulting from the proposed project would not be considered substantial in consideration of anticipated growth for the Reseda – West Van Nuys Community Plan and is within the Southern California Association of Governments' (SCAG) 2020 population projections for the City in their 2016-2035 Regional Transportation Plan. The project would meet a growing demand for housing near jobs and transportation centers, consistent with State, regional, and local regulations designed to reduce trips and greenhouse gas emissions. Operation of the proposed project would not induce substantial 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 analyzed 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 potentially significant impact would occur if the proposed project would displace a substantial quantity of existing residences or a substantial number of people. The project site is currently improved with two single-family residential dwelling units that

are proposed for demolition to allow for the construction of nine multi-family residential dwelling units. Therefore, the project would not result in the displacement of a substantial number of existing people or housing and less than significant impact is anticipated.

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 checked="" type="checkbox"/>	<input 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 Fire Station 100, located at 6751 Louise Avenue (approximately 1 mile southeast of the project site). The proposed project would result in the construction of nine units, 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, given that there are existing fire stations in the San Fernando Valley that are in close proximity to the project site (Fire Station 73 at 7419 Reseda Boulevard; Fire Station 90 at 7921 Woodley Avenue), 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.

b) Police protection?

Less Than Significant Impact. A significant impact would occur if the Los Angeles Police Department (LAPD) could not adequately serve the proposed project, necessitating a new or physically altered station. The proposed project would result in the construction of nine multi-family residential dwelling units and could increase demand for police service. The project site and the surrounding area are currently served by LAPD's West Valley division, located at 19020 Vanowen Street (approximately 2.3 miles southwest of the project site). Prior to the issuance of a building permit, the LAPD would review the project plans to ensure that the design of the project follows the LAPD's Design Out Crime Program, an initiative that introduces the techniques of Crime Prevention Through Environmental Design (CPTED) to all City departments beyond the LAPD. Through the incorporation of these techniques into the project design, in combination with the safety features already incorporated into the proposed project, the proposed project would neither create capacity/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 police protection. Regarding operations, in the event a situation should arise requiring increased staffing or patrol units, additional resources can be called in. Therefore, the proposed project would result in a less than significant impact related to police protection services.

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 would result in the construction of nine multi-family residential dwelling units, which could increase enrollment at schools that serve 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 residential and commercial space. 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 would result in the construction of nine multi-family residential units, which could result in increased demand for parks and recreation facilities. However, the proposed 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. An existing public park, Jesse Owens Mini Park, is located at 7111 White Oak Avenue, approximately 0.5 miles southwest of

the subject site. As such, the proposed project would result in a less than significant impact on park facilities.

e) Other public facilities?

Less Than Significant Impact. A significant impact would occur if the proposed project would result in substantial employment or population growth that could generate a demand for other public facilities, including libraries, which exceed the capacity available to serve the project site, necessitating new or physically altered public facilities, the construction of which would cause significant environmental impacts. The proposed project would result in the loss of two single-family dwellings and the construction of nine new multi-family residential units, which could result in increased demand for library services and resources of the Los Angeles Public Library System. However, the proposed project would not create substantial capacity or service level problems that would require the provision of new or expanded public facilities in order to maintain an acceptable level of service for libraries and other public facilities. Therefore, the proposed project would result in a less than significant impact on other public facilities.

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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?

Less Than Significant Impact. A significant impact would occur if the proposed project would 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. 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 loss of two single-family residential units and addition of nine multi-family residential units under the project yields a net gain of seven residential dwelling units. This gain of residential units would not significantly increase the use of existing parks or recreational services in the area. As such, the proposed project would result in a less than significant impact on park facilities.

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

Less Than Significant Impact. A significant impact would occur if the proposed project included recreational facilities or required the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. 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 would result in the construction of nine multi-family residential units, which includes Code required open space

to serve project residents. Specifically, the project is providing 1,560 square feet (15 x 104 feet) of open space on the second floor that includes benches for seating. This project-required open space would not adversely affect the environment. Furthermore, the proposed 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. An existing public park, Jesse Owens Mini Park, is located at 7111 White Oak Avenue, approximately 0.5 miles southwest of the subject site. As such, the proposed project would result in a less than significant impact on park facilities.

XVII. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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. A significant impact may occur if the project conflicts with an applicable plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, or pedestrian facilities. The project is the removal of a building line and the demolition of two single-family residential dwelling units and the construction of nine multi-family residential units yielding a net increase of seven residential dwelling units on the subject site. The project is subject to the review of the Bureau of Engineering (BOE) and Los Angeles Department of Transportation (LADOT). Ingress/egress and dedications and improvements to the site will be made in accordance with the Mobility Plan 2035 and regional and statewide plans, ordinances, and policies. Therefore, impacts would 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 proposed project individually or cumulatively exceeded the service standards of the Los Angeles County Metropolitan Transportation Authority (Metro) Congestion Management Program (CMP). This program was

created Statewide as a result of Proposition 111 and has been implemented locally by Metro. The CMP for Los Angeles County requires that the traffic impacts of individual development projects of potential regional significance be analyzed. Specific arterial roadways and all State highways comprise the CMP system, and a total of 164 intersections are identified for monitoring throughout Los Angeles County. The local CMP requires that all CMP monitoring intersections be analyzed where a project would likely add more than 50 trips during either the a.m. or p.m. peak hours.

The project was analyzed using the LADOT Vehicle Miles Traveled (VMT) calculator. Currently, the project site is improved with two single-family dwellings yielding 17 daily vehicle trips and 126 daily vehicle miles traveled. The proposed project would add 29 net daily trips for a total of 46 daily vehicle trips and 213 net daily vehicle miles traveled for a total of 339 daily vehicle miles traveled. The proposed project does not generate 250 or more daily vehicle trips and is not required to be referred to LADOT for further assessment. Therefore, impacts would 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)?

Less Than Significant Impact. A significant impact would occur if the proposed project would substantially increase an existing hazardous design feature or introduce incompatible uses to the existing traffic pattern. The proposed project would not include unusual or hazardous design features and the proposed project is compatible with existing uses in the area. As such, impacts would be less than significant.

d) Result in inadequate emergency access?

Less Than Significant Impact. A significant impact may occur if the project design threatened the ability of emergency vehicles to access and serve the project site or adjacent uses. Updates to the City of Los Angeles Safety Element were adopted in November 2021. The Safety Element references the City's Emergency Management Department 2018 Local Hazard Mitigation Plan (LHMP). The LHMP identifies Critical Facilities and Infrastructure including critical response facilities and critical infrastructure (transportation and utilities). Due to the sensitivity of this information, a detailed list of facilities is not provided therein. Based on the available information, the proposed project would not impair or physically interfere with an adopted emergency response or emergency evacuation plan. Additionally, emergency access to and from the project site would be provided in accordance with requirements of the Los Angeles Fire Department (LAFD). Therefore, there is no information to indicate that the proposed project would result in inadequate emergency access or interfere with an emergency response plan or emergency evacuation plan. Therefore, less than significant impacts would 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 With Mitigation. Assembly Bill 52 (AB 52) established a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources, as defined in Public Resources Code §21074, as part of CEQA. As specified in AB 52, lead agencies must provide notice inviting consultation to California Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the Tribe has submitted a request in writing to be notified of proposed projects. The Tribe must respond in writing within 30 days of the City's AB 52 notice.

In response to the applicant's request for a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, the NAHC provided the results of a SLF search dated April 21,

2022 (see Appendix E). The SLF search shows negative results for the project site and states that the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. The NAHC recommends that other sources of cultural resources including Native Tribes be contacted for information regarding known and recorded sites.

A California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) records search (SCCIC File #: 21339.7423) was provided by the California State University, Fullerton, Department of Anthropology dated June 29, 2020 (see Appendix D). The report states that no archaeological resources are recorded in the project area or within a specified radius (0.5 mile radius) around the project area. However, the report also states that does not necessarily mean that nothing is there. It may mean that the area has not been studied and/or that no information regarding the archaeological sensitivity of the property has been filed to the knowledge of the SCCIC. Furthermore, the SCCIC report states that a records search results does not preclude the possibility that surface or buried artifacts might be found during a survey of the property or ground-disturbing activities. According to the CHRIS search, the project site has not been subjected to any previous studies and the cultural resource sensitivity of the project site is unknown. Although the project site is currently developed, there is the potential for the discovery of prehistoric and historic cultural resources within the project boundaries. Therefore, the CHRIS search recommendations include customary caution and a halt-work condition to be in place for any ground-disturbing activities including an assessment and recommendations by a qualified archaeological consultant as well as consultation with the Native American Heritage Commission.

On December 26, 2019, notification was mailed to 11 Tribes that are traditionally and culturally affiliated with the geographic area associated with the proposed project. On January 7, 2020, Planning staff received a request for consultation from the Gabrieleño Band of Mission Indians - Kizh Nation. Consultation began on February 26, 2020 with Department of City Planning staff and Tribal members. During the consultation, the Tribe discussed the regional significance of the project site to the Tribe, particularly along Sherman Way where the project is located. Tribal trade routes were located along waterways including the LA River and railways, including the old Pacific Electric railway along Sherman Way. As such, the LA River and railways are part of the Tribal sacred landscape. Furthermore, the Tribe provided confidential maps that show the Tribe was located in proximity to the subject site. Tribal members continued to provide materials via email (July 8, 2020, July 17, 2020) including an article from the Los Angeles Times referencing archeological remnants of "The Lost Village of Encino," an Indian village in the nearby community of Encino. Consultation continued until July 27, 2021 when the City closed consultation and stated its intent to use its standard Tribal mitigation measure and provided a copy of the mitigation measure. Following the close of consultation, on September 1, 2021, the Tribe requested that the City use a mitigation measure recommended by the Tribe. Based on evidence submitted by the Tribe, some of which is confidential in nature, the City is recommending use of its standard mitigation measure. As mitigated herein, any impacts to Tribal cultural resources are less than significant.

TCR-1. Tribal Monitor

Prior to commencing any ground disturbance activities at the Project site, the Applicant, or its successor, shall retain archeological monitors and tribal monitors that are qualified to identify

subsurface tribal cultural resources. Ground disturbance activities shall include excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing peat, clearing, driving posts, augering, backfilling, blasting, stripping topsoil or a similar activity at the project site. Any qualified tribal monitor(s) shall be approved by the Gabrieleno Band of Mission Indians. Any qualified archaeological monitor(s) shall be approved by the Department of City Planning, Office of Historic Resources ("OHR").

The qualified archeological and tribal monitors shall observe all ground disturbance activities on the project site at all times the ground disturbance activities are taking place. If ground disturbance activities are simultaneously occurring at multiple locations on the project site, an archeological and tribal monitor shall be assigned to each location where the ground disturbance activities are occurring. The on-site monitoring shall end when the ground disturbing activities are completed, or when the archaeological and tribal monitor both indicate that the site has a low potential for impacting tribal cultural resources.

Prior to commencing any ground disturbance activities, the archaeological monitor in consultation with the tribal monitor, shall provide Worker Environmental Awareness Program (WEAP) training to construction crews involved in ground disturbance activities that provides information on regulatory requirements for the protection of tribal cultural resources. As part of the WEAP training, construction crews shall be briefed on proper procedures to follow should a crew member discover tribal cultural resources during ground disturbance activities. In addition, workers will be shown examples of the types of resources that would require notification of the archaeological monitor and tribal monitor. The Applicant shall maintain on the Project site, for City inspection, documentation establishing the training was completed for all members of the construction crew involved in ground disturbance activities.

In the event that any subsurface objects or artifacts that may be tribal cultural resources are encountered during the course of any ground disturbance activities, all such activities shall temporarily cease within the area of discovery, the radius of which shall be determined by a qualified archeologist, in consultation with a qualified tribal monitor, until the potential tribal cultural resources are properly assessed and addressed pursuant to the process set forth below:

1. Upon a discovery of a potential tribal cultural resource, the Applicant, or its successor, shall immediately stop all ground disturbance activities and contact the following: (1) all California Native American tribes that have informed the City they are traditionally and culturally affiliated with the geographic area of the proposed project; (2) and OHR.
2. If OHR determines, pursuant to Public Resources Code Section 21074 (a)(2), that the object or artifact appears to be a tribal cultural resource in its discretion and supported by substantial evidence, the City shall provide any affected tribe a reasonable period of time, not less than 14 days, to conduct a site visit and make recommendations to the Applicant, or its successor, and the City regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered tribal cultural resources.

3. The Applicant, or its successor, shall implement the tribe's recommendations if a qualified archaeologist retained by the City and paid for by the Applicant, or its successor, in consultation with the tribal monitor, reasonably conclude that the tribe's recommendations are reasonable and feasible.
4. In addition to any recommendations from the applicable tribe(s), a qualified archeologist shall develop a list of actions that shall be taken to avoid or minimize impacts to the identified tribal cultural resources substantially consistent with best practices identified by the Native American Heritage Commission and in compliance with any applicable federal, state or local law, rule or regulation.
5. If the Applicant, or its successor, does not accept a particular recommendation determined to be reasonable and feasible by the qualified archaeologist or qualified tribal monitor, the Applicant, or its successor, may request mediation by a mediator agreed to by the Applicant, or its successor, and the City. The mediator must have the requisite professional qualifications and experience to mediate such a dispute. The City shall make the determination as to whether the mediator is at least minimally qualified to mediate the dispute. After making a reasonable effort to mediate this particular dispute, the City may (1) require the recommendation be implemented as originally proposed by the archaeologist or tribal monitor; (2) require the recommendation, as modified by the City, be implemented as it is at least as equally effective to mitigate a potentially significant impact; (3) require a substitute recommendation be implemented that is at least as equally effective to mitigate a potentially significant impact to a tribal cultural resource; or (4) not require the recommendation be implemented because it is not necessary to mitigate an significant impacts to tribal cultural resources. The Applicant, or its successor, shall pay all costs and fees associated with the mediation.
6. The Applicant, or its successor, may recommence ground disturbance activities outside of a specified radius of the discovery site, so long as this radius has been reviewed by both the qualified archaeologist and qualified tribal monitor and determined to be reasonable and appropriate.
7. The Applicant, or its successor, may recommence ground disturbance activities inside of the specified radius of the discovery site only after it has complied with all of the recommendations developed and approved pursuant to the process set forth in paragraphs 2 through 5 above.
8. Copies of any subsequent prehistoric archaeological study, tribal cultural resources study or report, detailing the nature of any significant tribal cultural resources, remedial actions taken, and disposition of any significant tribal cultural resources shall be submitted to the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and to the Native American Heritage Commission for inclusion in its Sacred Lands File.
9. Notwithstanding paragraph 8 above, any information that the Department of City Planning, in consultation with the City Attorney's Office, determines to be confidential in nature shall be excluded from submission to the SCCIC or provided to the public under the applicable provisions of the California Public Records Act, California Public Resources Code, section 6254(r), and handled in compliance with the City's AB 52 Confidentiality Protocols.

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 With Mitigation. See a) above.

TCR-1. Tribal Monitor

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. A significant impact may occur if the project would require or result in the relocation or construction of water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities to such a degree that the construction or relocation of which would cause significant environmental effects. The subject property is located in an established neighborhood in the Reseda - West Van Nuys community that has long been developed and urbanized. The project is entirely consistent with the applicable City long-range and development plans, which have accounted for any potential project impacts on utility capacity and infrastructure. In addition, the project will comply with all applicable regulations

regarding energy usage and discharge, per the requirements of the applicable managing utility departments/agencies. Therefore, the project will have a less than significant impact on the relocation or construction of new or expanded utility facilities.

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 removal of a building line along Sherman Way and the construction of nine multi-family residential dwelling units as a result of 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 in the LADWP 2015 Urban Water Management Plan (UWMP). 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 less than significant impact related to water supplies.

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. A significant impact may occur if the amount of wastewater that the project would generate would exceed the capacity of the existing wastewater treatment provider. Although the project proposes to intensify the residential density on the subject property, it is unlikely to generate such a substantial increase in demand that would exceed the capacity of the existing wastewater treatment system. In addition, all wastewater from the project will be treated in accordance with the requirements of the Los Angeles Regional Water Quality Control Board. The project is entirely consistent with the applicable City long-range and development plans and projected growth, and thus alone will not likely exceed the capacity of the existing system. Prior to any construction activities, the applicant will be required to coordinate with the Los Angeles Bureau of Sanitation to determine the exact wastewater conveyance requirements of the proposed project. Any upgrades to the wastewater infrastructure in the vicinity of the project site that are needed to adequately serve the proposed project would be undertaken as a part of the development. Therefore, the project will have a less than significant impact on wastewater capacity.

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. A significant impact may occur if the amount of solid waste that the project would generate would exceed the capacity of existing infrastructure. The Los

Angeles Bureau of Sanitation and private waste management companies are responsible for the collection, disposal, and recycling of solid waste within the City, including the project site. The entire Southern California region is served by an extensive network of landfills and other waste disposal methods. Although the project proposes to intensify the existing residential use on the subject property, it is unlikely to generate such a substantial increase in waste that would exceed the capacity of the existing waste disposal system. The project will comply with all applicable federal, State, and local regulations involving solid waste. Therefore, the project will have a less than significant impact on the generation of solid waste.

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

Less Than Significant Impact. A significant impact may occur if the project would conflict with any statutes and regulations governing solid waste. The Los Angeles Bureau of Sanitation and private waste management companies are responsible for the collection, disposal, and recycling of solid waste within the City, including the project site. The entire Southern California region is served by an extensive network of landfills and other waste disposal methods. Although the project proposes to intensify the existing residential use on the subject property, it is unlikely to generate such a substantial increase in waste that would exceed the capacity of the existing waste disposal system. The project will comply with all applicable federal, State, and local regulations involving solid waste. Therefore, the project will have a less than significant impact on statutes and regulations governing solid waste.

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less Than Significant Impact. Updates to the City of Los Angeles Safety Element were adopted in November 2021. The Safety Element references the City's Emergency Management Department 2018 Local Hazard Mitigation Plan (LHMP). The LHMP identifies Critical Facilities and Infrastructure including critical response facilities and critical infrastructure (transportation and utilities). The City of Los Angeles Emergency Management Department coordinates with City departments, municipalities, and community-based organizations to ensure that the City and its residents have the resources to prepare, respond, and recover from emergencies, disasters and significant events. The City's Emergency Operations Organization comprises all agencies of the City's government, including Fire. Therefore, the removal of a building line and construction of nine multi-family residential units will not significantly impair any adopted emergency response plan or emergency evacuation.

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?

Less Than Significant Impact. A significant impact would occur if the proposed project exposed people to pollutant concentrations from a wildfire. The greatest wildfire risks are in areas designated as a Very High Fire Severity Zone, High Wind Velocity Area, and Hillside areas. The subject site is not located within a Very High Fire Severity Zone, High Wind Velocity Area, or Hillside area. The subject site is located on a flat in-fill site that is surrounded by improved properties. The project site is located in the San Fernando Valley which is surrounded by mountain ranges on all sides (Santa Susana Mountains to the northwest, Simi Hills to the west, Santa Monica Mountains to the south, Verdugo Mountains to the east, San Gabriel Mountains to the northeast). It is possible that pollutant concentrations from wildfires in mountain ranges surrounding the San Fernando Valley could negatively impact the subject site. Impacts to project residents due to pollutant concentrations can be mitigated on an as needed basis by closing windows and using individual air filtration devices. Therefore, the impact of a possible spread of a wildfire would be less than significant.

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?

Less Than Significant Impact. A significant impact may occur if a project would require the installation or maintenance of associated infrastructure that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment. The project would involve the removal of a building line and the construction of a nine unit multi-family structure in a highly urbanized area of the City of Los Angeles. No roads, fuel breaks, or emergency water sources would be installed or maintained. Installation of any required power lines or other utilities would be done in a manner consistent with other construction projects typical of urban development requiring connection to the existing utility grid and infrastructure and in accordance with applicable City building codes and utility provider policies and would not exacerbate fire risk. Hydrants, water lines, and water tanks would be installed per Fire Code requirements. In addition, the LAFD would review the plans for compliance with applicable City Fire Code, California Fire Code, City of Los

Angeles Building Code, and National Fire Protection Association standards, thereby ensuring that the project would not create any undue fire hazard. Automatic fire sprinkler systems are also required for the proposed land uses as part of the project. Compliance with all building code, developmental regulations, and utility providers' requirements and policies would ensure that the project would not exacerbate fire risks and impacts would be less than significant.

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?

Less Than Significant Impact. A significant impact may occur if a project were to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes. The project site is located on two flat lots and is not in a designated Hillside area. Furthermore, the site is not designated as a Landslide area and is outside of a flood zone. The project would be required to comply with all developmental regulations, City building codes, and regulatory compliance measures with regard to fire safety. Therefore, impacts would be less than significant.

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 and as mitigated, 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. Implementation of the mitigation measures identified and 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 the related products, would result in impacts that are less than significant when viewed separately, but significant when viewed together. Although other projects may be constructed in the project vicinity, the cumulative impacts to which the proposed project would contribute would be less than significant. Implementation of the mitigation measures identified would reduce cumulative impacts to less than significant levels.

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. All potential impacts of the proposed project have been identified, and mitigation measures have been prescribed, where applicable, to reduce all potential impacts to less than significant levels. Upon implementation of mitigation measures identified and compliance with existing regulations, the proposed project would not have the potential to result in substantial adverse impacts on human beings either directly or indirectly.

5. PREPARERS AND PERSONS CONSULTED

A.G.E. Engineering

Eric Gorsuch, V & E Tree Service, Inc.

Gabrieleño-Tataviam Band of Mission Indians – Kizh Nation

Native American Heritage Commission

South Central Coastal Information Center (SCCIC), California State University, Fullerton,
Department of Anthropology

6. REFERENCES, ACRONYMS AND ABBREVIATIONS

ACM - asbestos-containing materials

AQMP – Air Quality Management Plan

BMP – Best Management Practices

BOS – City of Los Angeles Bureau of Sanitation

CARB – California Air Resources Board

CDFW – California Department of Fish and Wildlife

CEQA – California Environmental Quality Act

CFGF – California Fish and Game Code

CMP – Congestion Management Program

DTSC – California Department of Toxic Substances Control

EV – Electric Vehicle

FMMP – Farmland Mapping and Monitoring Program

GHG – greenhouse gasses

LADBS – Los Angeles Department of Building and Safety

LADOT – Los Angeles Department of Transportation

LADWP – Los Angeles Department of Water and Power

LAFD – Los Angeles Fire Department

LAGBC – Los Angeles Green Building Code

LAMC – Los Angeles Municipal Code

LAPD – Los Angeles Police Department

LBP – lead-based paint

LESA - Land Evaluation and Site Assessment

LID – low impact development

LST – localized significance thresholds

MBTA – Migratory Bird Treaty Act

Metro – Los Angeles County Metropolitan Transportation Authority

MND – Mitigated Negative Declaration

NAHC – Native American Heritage Commission

PRC – California Public Resources Code

RAP – Los Angeles Department of Recreation and Parks

REC – Recognized Environmental Condition

RHNA – Regional Housing Needs Assessment

RTP – Regional Transportation Plan

SCAG – Southern California Association of Governments

SCAQMD – South Coast Air Quality Management District

SCCIC - Central Coastal Information Center

SCS – Sustainable Communities Strategy

SLCP – Short Lived Climate Pollutants

TDP - Treatment and Disposition Plan

UBC – Uniform Building Code

USFWS – U.S. Fish and Wildlife Services



27 October 2022
Kazanchyan Design
ATTN: Armen Kazanchyan
RE: Updated Historic Tree Classification and Tree Protection
17534-17540 Sherman Way, Los Angeles

Armen:

This letter is to update the initial April 2019 report at the above location. Research by the Los Angeles City Planning Department's Office of Historic Resources have indicated that the Street Trees listed in the report (Mexican Fan Palms and Deodara Cedars) are considered Historic. Per the Department the Deodara Cedars were planted in 1948 as part of a subdivision owned by The Regency, Inc. Street trees appear to meet local criteria only and may not meet significance thresholds for National Register or California Register eligibility.

The Mexican Fan Palms are considered significant as representing the street planting plan for Sherman Way (paved between 1911 and 1913), which was the main automobile and streetcar corridor from central Los Angeles to Van Nuys and Reseda. Designed to advertise large tracts of Valley land ripe for development. Trees continue further east in the Van Nuys-North Sherman Oaks Community Plan Area (CPA) and west in the Canoga Park CPA. The street trees appear to meet local criteria only and may not meet significance thresholds for National Register or California Register eligibility.

Accordingly I have Updated the Tree Protection Recommendations as follows:

The Historic Street Trees should be protected by establishing a Tree Protection Zone (TPZ). The TPZ should encompass the grass parkway, curb to sidewalk, in front of the properties on Sherman Way. The TPZ for the Palm on Caldas Ave. should encompass the grass parkway, from curb to sidewalk, and six (6) feet north and south of the palm. For the Crepe Myrtle the TPZ should also encompass the grass parkway, from sidewalk to curb, to the edge of the crown's dripline north and south of the tree.

The following Tree protection Zone recommendations should be followed:

1. The TPZ fencing should be 4 ft. tall at the edge of the TPZ. Orange mesh (hurricane) or chain link fencing should be used. The TPZ fence will remain in place during all construction activities in the area.



2. No heavy equipment within the TPZ.
3. No stockpiling of soils or construction materials within the TPZ.
4. Irrigation shall remain on during project. Notify the Consulting Arborist if changes occur.
5. No additional water shall be added without direct Arborist approval.
6. Notify Consulting Arborist if hardscape demolition or trenching is to occur within 10 ft. of TPZ fence line.
7. The following root protections are to be followed if trenching operations are required within the TPZ or sidewalk replacement occurs:
 - Exploratory hand digging to locate major roots where possible.
 - Roots should be cut cleanly with a sharpened, sterilized pruning tool.
 - Roots that are 3 inches or larger that need to be pruned will be cut cleanly with a saw (chainsaws and reciprocating saws are allowed). No roots will be chopped with an axe or power equipment.
 - Roots discovered to be damaged below the surface during trenching activities will be traced back 4-6 inches above the break and cut cleanly before the end of the workday. Moist native soil will then re-cover the exposed root.
 - No damaged or cut roots are to be left exposed overnight.
8. Overhanging limbs should be evaluated for potential future equipment and/or vehicle contact. Contact Consulting Arborist for mediation measures.
9. No limbs or branches are to be pruned without prior approval of the Consulting Arborist.
10. No use of or idling of equipment with exhaust pipes near overhanging limbs or branches.

Please contact me if you have any questions.

Eric Gorsuch
ASCA Registered Consulting Arborist #575
ISA Certified Arborist WE-7438A
ISA Tree Risk Assessment Qualified
TCIA Certified Treecare Safety Professional 00144
OSHA 30
714-222-2735



V & E Tree Service, Inc.
P.O. Box 3280 Orange, CA 92857 714-997-0903 Fax 714-637-4070





REPORT OF
GEOTECHNICAL INVESTIGATION
PROPOSED 9-UNIT APARTMENT BUILDING
17534-17540 SHERMAN WAY
VAN NUYS, CALIFORNIA

FOR:
SHAHE BOYADJIAN

PROJECT NO. 19-AE-834

APRIL 22, 2019



A.G.E. ENGINEERING
Geotechnical Engineering and Foundation Design

ageengineering@yahoo.com

April 22, 2019

19-AE-834

Shahe Boyadjian
17662 Mahoney Place
Granada Hills, CA 91344

Gentlemen:

It is our pleasure to submit this Geotechnical Investigation Report for the proposed 9-unit apartment building with street level parking to be constructed at 17534-17540 Sherman Way, Van Nuys, California. As we discussed, prior to the completion of this report, the results of our preliminary investigation indicate that the proposed site is satisfactory for the planned development from a geotechnical engineering standpoint. After proper site preparation, a foundation system consisting of conventional spread and isolated footings may be used to support the proposed buildings.

Investigation of the project site included drilling of two 52-foot deep exploratory test borings. The materials encountered at the location of the exploratory test borings, to the depth explored; were consisted of fill soils overlaying natural deposits of sandy silt, clayey silt, and relatively clean sand soils. The depths of fill soils, at the locations of our exploratory test boring, were determined to be about two feet. The site was occupied by residential buildings and garages. We anticipate encountering approximately two feet of fill underneath the existing buildings to be demolished to allow for the construction of the proposed residential units.

During the course of the site grading, the existing surficial fill soils along with any disturbed soils generated from demolition of the existing structures should be excavated and recompacted for new fill, grade slabs and foundation support. The ground surface of the site was relatively level.

The proposed project will consist of the construction of 9-unit apartment building. The first floor will be used for parking, second and third floors will be the residential units. The subject site is rectangular in shape and covers an area of about 16,700 square feet. It is bordered on north by Sherman Way, to the east by an apartment building, to the south by an alley, and to the west by Calvus Avenue and single family homes beyond. The footings and grade slab of the proposed structures will be established near the existing grades. The proposed buildings will be typical wood frame construction.

The proposed building will have 7 feet setback from west, 15 feet setback from north, 6 feet setback from east and 15 feet setback from south property lines.

The site is located within an area identified as having a potential for liquefaction defined by the State of California per the Seismic Hazard Mapping Act of 1990. We have performed a site-specific liquefaction analysis. Based on our investigation and analysis the potential for the liquefaction to adversely affect the proposed structure is considered low.

A detailed analysis of the data collected during the course of our investigation, additional recommendations, and conclusions pertaining to this site are included in this report.

Thank you for the opportunity to serve you on this project. If you have any questions regarding this report please do not hesitate to call the undersigned.

Respectfully submitted,

Zaven Abrahamian

Zaven Abrahamian
Civil Engineer
RCE 41672



ZA/aa

Dist: (3) Addressee

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APPENDIX A

LOG OF EXPLORATORY BORINGS -----	FIGS. A-1 & A-2
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APPENDIX B**LABORATORY TESTING PROCEDURES**

DIRECT SHEAR TESTS -----	FIG. B-1
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REPORT OF
GEOTECHNICAL INVESTIGATION
PROPOSED 9-UNIT APARTMENT BUILDING
17534-17540 SHERMAN WAY
VAN NUYS, CALIFORNIA

INTRODUCTION

This report summarizes the findings of our geotechnical engineering exploration performed on the subject property. The purpose of the exploration was to evaluate the subsurface materials, discuss the engineering properties of the earth materials underlying the property, investigate the soil conditions, and provide soil engineering recommendations and evaluate the feasibility of construction of the proposed apartment building with street level parking.

The field exploration included the drilling of two 52-foot deep exploratory test borings. From this test boring, soils samples were obtained for laboratory testing to determine geotechnical engineering properties of the underlying earth materials. Based on the results of these laboratory tests, recommendations have been provided for design and construction of foundations, grade slabs and grading.

The approximate locations of our exploratory test borings are shown in relation to the site boundaries in the enclosed Site Plan; Drawing No. 1.

Appendix A describes our drilling and sampling procedures. Profiles of the materials encountered at the locations of our exploratory test borings are presented in Figures A-1 and A-2. The Uniform Soil Classification System Chart, a guide to these figures is included as Figure A-3.

Appendix B describes our laboratory testing procedures. The results of direct shear and consolidation tests are performed on selected samples presented in Figures B-1 and B-2.

PROJECT CONSIDERATIONS

The proposed project will consist of the construction of an apartment building with street level parking. The footings and grade slab of the proposed structures will be established near the existing grade. The proposed buildings will be typical wood frame construction.

The structural loads will be transmitted to the footings and then to the subgrade mainly through exterior and interior continuous footings. However, some interior columns may also occur.

Actual structural loads exerted on the isolated and continuous footings are not available at this time. It is anticipated that concentrated column loads will not exceed 100 kips and continuous footings loads will be approximately 10 kips per lineal foot.

PROPOSED GRADING

Prior to placement of compacted fill soils, the site shall be cleared of all vegetation, existing fill, loose top soil, debris, and any other deleterious materials. The site existing fill soils may be used in the compacted fill areas under engineering observations and testing, provided that these materials are free from organic materials and rocks larger than six inches in diameter. Import soils may be required if proposed finished grades are established above the existing grades. The limits of compaction area should extend a minimum of 5 feet beyond the proposed building lines.

ENGINEERING ANALYSIS

Based on the results of laboratory tests, our recommendations have been provided for design and construction of foundations, grade slabs, grading and liquefaction analysis.

SURFACE CONDITIONS

The subject site is located at 17534-17540 Sherman Way, Van Nuys, California. The site is occupied by residential buildings and garages. The ground surface of the site is relatively level. The subject site is rectangular in shape and covers an area of about 16,700 square feet.

SUBSURFACE CONDITIONS

The data gathered from our test borings were sufficiently consistent. The materials encountered at the location of the exploratory test boring, to the depth explored (52-foot deep), were consisted of fill soils overlaying natural deposits of sandy silt, clayey silt, and relatively clean sand soils. The depths of fill soils, at the locations of our exploratory test pits, were determined to be about two feet. We anticipate encountering approximately two feet of fill underneath the existing buildings to be demolished to allow for the construction of the proposed apartment building.

The native materials encountered at the locations of our exploratory test borings were found to be firm, sandy silt native soils. The results of our laboratory testing indicated that the native soils have moderate strength and are low to moderately compressible.

No water was encountered at the locations of our exploratory test borings, to the depth explored.

The site upper soils have low expansion potential.

CONCLUSION AND RECOMMENDATIONS

GENERAL FINDINGS

Based on our field investigation and laboratory testing of soils samples, the proposed development is feasible from a geotechnical engineering standpoint. The

foundation design and construction plans should take into account the appropriate soils engineering features of the site. No ground water was encountered during the course of the drilling of the exploratory test borings, to the depth explored. The foundation soils were found to be firm, sandy silt soils. Existing fill soils along with any disturbed soils generated from demolition of the existing building should be excavated and properly recompacted for new fill, structural foundations, and grade slabs support.

SITE PREPARATION

The existing surficial fill and disturbed soils generated from demolition of the existing buildings should be stripped until sandy silt native soils are exposed. Prior to placing any controlled compacted fill, the Soils Engineer should observe the excavation bottoms. These bottoms should be scarified to a depth of 6-8 inches and compacted near optimum moisture content to at least 90 percent of the maximum dry density as determined by ASTM designation D 1557-12 compaction method.

The excavated upper fill soils could be used in the compacted fill areas, provided that these materials are free from organic materials and rocks larger than six inches in diameter. Import soils will be required if the proposed finished grades are established above the existing grades. Fill import soils should be non-expansive and sandy in nature. A 40-pound sample of each import soils should be submitted to the soil engineer for approval prior to use in compacted fill areas. Fill soils, approved by the Soil Engineer should be placed in loose layers not exceeding 6-8 inches, brought to near optimum moisture content and compacted to at least 90 percent of the maximum laboratory dry density as determined by ASTM Designation D 1557-12 compaction method.

In-place density tests should be made by the Soil Engineer during site grading to assist the contractor in obtaining the required degree of compaction and the proper moisture content. Where compaction of less than 90 percent is indicated, additional compactive effort should be made with adjustment of the moisture content or layer thickness, as necessary, until at least 90 percent compaction is obtained.

FOUNDATIONS

Bearing Value

Conventional, continuous and spread (isolated) footings foundation systems on silty sand native and/or properly compacted fill soils should provide adequate support for the proposed structures. Continuous and isolated footings should be placed at a minimum depth of 30 inches below lowest adjacent finished grades or 30 inches into site native and/or properly compacted fill soils. Continuous footings should be a minimum of 12 inches wide and square footings should be at least 24 inches wide. All continuous footings should be reinforced with at least four #4 steel bars; two shall be placed near the top and two placed near the bottom of the footings. Footings should be cleaned of all loose soils. The recommended bearing value for properly designed and constructed continuous and isolated footings are 1,700 and 1,900 pounds per square foot, respectively. These values could be increased by a rate of 400 and 120 pounds per square foot for each additional foot of footing depth and width, to a maximum value of 3,500 pounds per square foot. These bearing values are for the total of dead and frequently

applied live loads. These values may be increased by $1/3$ for short duration loadings, which includes the effects of wind or seismic forces.

SETTLEMENT

Total settlement of the isolated footings, under the assumed maximum concentrated loads of 100 kips is expected to be approximately $5/8$ of one inch. Continuous footings, with loads of about 10 kips per lineal foot are expected to settle approximately $3/8$ of one inch. Maximum differential settlements are expected to be less than $1/4$ of an inch. The major portion of the settlements will occur during construction.

LATERAL DESIGN

Lateral resistance force at the base of the footings and underlying native soils may be assumed to be the product of the dead load forces and a coefficient of friction of 0.30.

Passive pressure acting on the face of the footings may also be used to resist lateral forces. A passive pressure of 350 pounds per square foot at the top of the footing and increasing at a rate of 250 pounds per square foot per foot of depth to a maximum value of 4,500 pounds per square foot may be used for footings poured against native and/or properly compacted fill soils. When combining passive and friction for lateral resistance, one value should be reduced by one-third.

GRADE SLABS

Grade slabs could be supported on the finished grades which consist of sandy silt native and/or properly compacted fill soils. The site upper soils have medium expansion potential.

Grade slab should be a minimum of 5 inches thick and minimum reinforcing should consist of No. 4 rebar with center to center distance of at least 12 inches at both direction and having adequate clearance with the slab sub-grade. The slab sub-grade should consist of at least 12 inches of sandy soils with expansion index of less than 20.

In the areas where floor coverings are sensitive to dampness, vapor barrier should be placed. This normally consists of a 10-mil visqueen covered with 2 inches of sand.

LIQUEFACTION POTENTIAL

Liquefaction potential is greatest where the ground water level is shallow, loose and fine sands occur within a depth of about 50 feet or less. According to open-File Report 97-15, Seismic Hazard Evaluation of the Van Nuys 7.5-Minute Quadrangle, Los Angeles County, California, by the California Department of Conservation, Division of Mines and Geology, the historic high ground water level, at the location of the subject project is at a depth of about 30 feet below grade.

According to the California Division of Mines and Geology (1998), the subject site is located within an area identified as having a potential for liquefaction.

Liquefaction potential analysis was performed based on historic high groundwater level, 30 feet, State peak ground acceleration of 0.66g and 0.44g (2/3 of 0.66g), Design Earthquake Magnitude of 6.65, In-Situ Standard Penetration Test. Based on our liquefaction analysis, it is our opinion that chance of the liquefaction to adversely affect the proposed structure is considered low.

Liquefaction is a process which occurs when saturated sediments are subjected to repeated strain reversals during a seismic event. The strain reversals cause an increase in pore water pressure such that the internal pore pressure approaches the overburden pressure and the shear strength approaches a low residual value. Liquefied soils are subject to flow, consolidation, or excess strain. Liquefaction typically occurs in loose to medium dense sand and silty sand soils below the groundwater table. Predominately fine-grained soils, such as silts, and clay, are less susceptible to liquefaction.

Starting in January 2012, the Department of Building and Safety, Grading Division requires that all liquefaction evaluations conform to the requirements in the latest version of CGS Special Publication 117 (SP 117A), Guidelines for Evaluating and Mitigating Seismic Hazards in California (1803.7.2, 1803.5.12). The so-called "Chinese Criteria" is no longer accepted as an indicator of the potential for liquefaction.

Based on Guidelines for Evaluating and Mitigating Seismic Hazards in California 2008, Special Publication 117 and 117A, if clayey soil materials are encountered during site exploration, those materials may considered non-liquefiable, with the following conditions: Percent finer than 0.005 mm less than 15 percent, Liquid Limit less than 35

and Water Content greater than $0.9 \times \text{Liquid Limit}$. In addition based on Special Publication 117A which states “Although soils having plasticity index (PI) greater than 7 have generally been expected to behave like clays (Boulanger and Idriss, 2006), Bray and Sancio (2006) found loose soils with a $PI < 12$ and moisture content $> 85\%$ of the liquid limit are susceptible to liquefaction”. Moreover, sensitive soils having $PI > 18$ can undergo severe strength loss.

Based on the above requirements and our laboratory analysis and in accordance with the screening procedures referenced in SP 117A (i.e., Bray and Sancio, 2006, and Boulanger and Idriss, 2006, referenced papers), it is our opinion that the potential for liquefaction to adversely affect the proposed structure is considered low (See attached laboratory test results).

SEISMIC DESIGN

Based on the ASCE 70-10 Standard, the following seismic design parameters are provided.

Site Class = D

Mapped 0.2 Second Spectral Response Acceleration, $S_s = 1.808g$

Mapped one Second Spectral Response Acceleration, $S_1 = 0.602g$

Site Coefficient $F_a = 1.00$

Site Coefficient $F_v = 1.50$

Maximum Design Spectral Response Acceleration for short period, $S_{MS} = 1.808g$

Maximum Design Spectral Response Acceleration for one-second period, $S_{M1} = 0.904g$

5% Design Spectral Response Acceleration for short period, $S_{DS} = 1.206g$

5% Design Spectral Response Acceleration for one-second period, $S_{D1} = 0.602g$

Strong ground shaking can be expected here and at most localities in the greater Los Angeles area from earthquakes that originates on any of the many active faults that cross Southern California.

Based on the State of California Seismic Hazard Maps, the subject site is located within a liquefaction hazard zone. Based upon the liquefaction analysis, liquefaction should not pose any significant hazard to the proposed development. Based upon the liquefaction analysis, liquefaction induced settlement is estimated to be (0.29) inch and differential settlement of (0.190) inch. Based upon the liquefaction analysis, the settlement is not anticipated to be detrimental to the proposed development.

OBSERVATION DURING CONSTRUCTION

The presented recommendations in this report assume that all structural foundations will be established on firm sandy silt native and/or properly compacted fill soils. All footing excavations should be observed by a representative of this office before reinforcing is placed. It is essential to assure that footing excavations are established in the recommended bearing materials and are free of disturbed soils.

Site grading work should be conducted under observation and testing by a representative of this firm. Please notify this office at least 24 hours before any observation work is required.

The recommendations included in this report are based on data derived during the course of our geotechnical investigation. Based on our future observation of the project development this office may find it necessary to modify some of its recommendations.

CLOSURE

The findings and recommendations presented in this report are based on our professional engineering experience and judgment combined with our field investigation and laboratory testing results. The report was prepared in accordance with generally accepted engineering principles and practice. No warranty, either express or implied, is made or intended in connection with this report or by furnishing this report or by any other oral or written agreement. Any liability in connection herewith shall not exceed the fee for this report.

SHERMANW.OUT

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*      Version 1.50                  *
*                                     *
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EMPIRICAL PREDICTION OF
EARTHQUAKE-INDUCED LIQUEFACTION POTENTIAL

JOB NUMBER: 19-AE-834

DATE: 04-26-2019

JOB NAME: ShermanBoring1

SOIL-PROFILE NAME: SHERMANW.LDW

BORING GROUNDWATER DEPTH: 60.00 ft

CALCULATION GROUNDWATER DEPTH: 30.00 ft

DESIGN EARTHQUAKE MAGNITUDE: 6.65 Mw

SITE PEAK GROUND ACCELERATION: 0.660 g

BOREHOLE DIAMETER CORRECTION FACTOR: 1.00

SAMPLER SIZE CORRECTION FACTOR: 1.00

N60 HAMMER CORRECTION FACTOR: 1.00

MAGNITUDE SCALING FACTOR METHOD: Idriss (1997, in press)

Magnitude Scaling Factor: 1.360

rd-CORRECTION METHOD: Seed (1985)

FIELD SPT N-VALUES ARE CORRECTED FOR THE LENGTH OF THE DRIVE RODS.

Rod Stick-Up Above Ground: 3.0 ft

CN NORMALIZATION FACTOR: 1.044 tsf

MINIMUM CN VALUE: 0.6

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 1

File Name: SHERMANW.OUT

SHERMANW.OUT

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EMPIRICAL PREDICTION OF
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JOB NUMBER: 19-AE-834

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SOIL-PROFILE NAME: SHERMANW.LDW

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CALCULATION GROUNDWATER DEPTH: 30.00 ft

DESIGN EARTHQUAKE MAGNITUDE: 6.65 Mw

SITE PEAK GROUND ACCELERATION: 0.440 g

BOREHOLE DIAMETER CORRECTION FACTOR: 1.00

SAMPLER SIZE CORRECTION FACTOR: 1.00

N60 HAMMER CORRECTION FACTOR: 1.00

MAGNITUDE SCALING FACTOR METHOD: Idriss (1997, in press)

Magnitude Scaling Factor: 1.360

rd-CORRECTION METHOD: Seed (1985)

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NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 1

File Name: SHERMANW.OUT

SHERMANW.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
1	0.25	0.014	0.014	32	9.95	*	*	*	*	*	**
1	0.75	0.042	0.042	32	9.95	*	*	*	*	*	**
1	1.25	0.071	0.071	32	9.95	*	*	*	*	*	**
1	1.75	0.099	0.099	32	9.95	*	*	*	*	*	**
1	2.25	0.127	0.127	32	9.95	*	*	*	*	*	**
1	2.75	0.155	0.155	32	9.95	*	*	*	*	*	**
1	3.25	0.184	0.184	32	9.95	*	*	*	*	*	**
1	3.75	0.212	0.212	32	9.95	*	*	*	*	*	**
1	4.25	0.240	0.240	32	9.95	*	*	*	*	*	**
1	4.75	0.268	0.268	32	9.95	*	*	*	*	*	**
1	5.25	0.297	0.297	32	9.95	*	*	*	*	*	**
1	5.75	0.325	0.325	32	9.95	*	*	*	*	*	**
1	6.25	0.353	0.353	32	9.95	*	*	*	*	*	**
1	6.75	0.381	0.381	32	9.95	*	*	*	*	*	**
1	7.25	0.410	0.410	32	9.95	*	*	*	*	*	**
1	7.75	0.438	0.438	32	9.95	*	*	*	*	*	**
1	8.25	0.466	0.466	32	9.95	*	*	*	*	*	**
1	8.75	0.494	0.494	32	9.95	*	*	*	*	*	**
1	9.25	0.523	0.523	32	9.95	*	*	*	*	*	**
1	9.75	0.551	0.551	32	9.95	*	*	*	*	*	**
1	10.25	0.579	0.579	32	9.95	*	*	*	*	*	**
1	10.75	0.607	0.607	32	9.95	*	*	*	*	*	**
1	11.25	0.636	0.636	32	9.95	*	*	*	*	*	**
1	11.75	0.664	0.664	32	9.95	*	*	*	*	*	**
1	12.25	0.692	0.692	32	9.95	*	*	*	*	*	**
1	12.75	0.720	0.720	32	9.95	*	*	*	*	*	**
1	13.25	0.749	0.749	32	9.95	*	*	*	*	*	**
1	13.75	0.777	0.777	32	9.95	*	*	*	*	*	**
1	14.25	0.805	0.805	32	9.95	*	*	*	*	*	**
1	14.75	0.833	0.833	32	9.95	*	*	*	*	*	**
1	15.25	0.862	0.862	32	9.95	*	*	*	*	*	**
1	15.75	0.890	0.890	32	9.95	*	*	*	*	*	**
1	16.25	0.918	0.918	32	9.95	*	*	*	*	*	**
1	16.75	0.946	0.946	32	9.95	*	*	*	*	*	**
1	17.25	0.975	0.975	32	9.95	*	*	*	*	*	**
1	17.75	1.003	1.003	32	9.95	*	*	*	*	*	**
1	18.25	1.031	1.031	32	9.95	*	*	*	*	*	**
1	18.75	1.059	1.059	32	9.95	*	*	*	*	*	**
1	19.25	1.088	1.088	32	9.95	*	*	*	*	*	**
1	19.75	1.116	1.116	32	9.95	*	*	*	*	*	**
1	20.25	1.144	1.144	32	9.95	*	*	*	*	*	**
1	20.75	1.172	1.172	32	9.95	*	*	*	*	*	**
1	21.25	1.201	1.201	32	9.95	*	*	*	*	*	**

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 2

File Name: SHERMANW.OUT

SOIL	CALC. DEPTH	TOTAL STRESS	EFF. STRESS	FIELD N	FC DELTA	C	CORR. (N1)60	LIQUE. RESIST	r	INDUC. STRESS	LIQUE. SAFETY
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SHERMANW.OUT

4	44.25	2.550	2.105	64	0.05	0.654	41.9	Infin	0.812	0.281	NonLiq
4	44.75	2.582	2.121	64	0.05	0.654	41.9	Infin	0.807	0.281	NonLiq
5	45.25	2.613	2.137	70	0.05	0.614	43.0	Infin	0.802	0.280	NonLiq
5	45.75	2.645	2.153	70	0.05	0.614	43.0	Infin	0.797	0.280	NonLiq
5	46.25	2.676	2.169	70	0.05	0.614	43.0	Infin	0.792	0.279	NonLiq
5	46.75	2.708	2.185	70	0.05	0.614	43.0	Infin	0.787	0.279	NonLiq
5	47.25	2.739	2.201	70	0.05	0.614	43.0	Infin	0.782	0.278	NonLiq
5	47.75	2.771	2.217	70	0.05	0.614	43.0	Infin	0.776	0.278	NonLiq
5	48.25	2.802	2.233	70	0.05	0.614	43.0	Infin	0.771	0.277	NonLiq
5	48.75	2.834	2.249	70	0.05	0.614	43.0	Infin	0.766	0.276	NonLiq
5	49.25	2.865	2.265	70	0.05	0.614	43.0	Infin	0.761	0.275	NonLiq
5	49.75	2.897	2.281	70	0.05	0.614	43.0	Infin	0.756	0.275	NonLiq

SHERMAN.OUT

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*                                     *
*      L I Q U E F Y 2             *
*      Version 1.50                 *
*                                     *
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EMPIRICAL PREDICTION OF EARTHQUAKE-INDUCED LIQUEFACTION POTENTIAL

JOB NUMBER: 19-AE-834

DATE: 04-26-2019

JOB NAME: ShermanBoring2

SOIL-PROFILE NAME: SHERMAN.LDW

BORING GROUNDWATER DEPTH: 60.00 ft

CALCULATION GROUNDWATER DEPTH: 30.00 ft

DESIGN EARTHQUAKE MAGNITUDE: 6.65 Mw

SITE PEAK GROUND ACCELERATION: 0.660 g

BOREHOLE DIAMETER CORRECTION FACTOR: 1.00

SAMPLER SIZE CORRECTION FACTOR: 1.00

N60 HAMMER CORRECTION FACTOR: 1.00

MAGNITUDE SCALING FACTOR METHOD: Idriss (1997, in press)

Magnitude Scaling Factor: 1.360

rd-CORRECTION METHOD: Seed (1985)

FIELD SPT N-VALUES ARE CORRECTED FOR THE LENGTH OF THE DRIVE RODS.

Rod Stick-Up Above Ground: 3.0 ft

CN NORMALIZATION FACTOR: 1.044 tsf

MINIMUM CN VALUE: 0.6

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 1

File Name: SHERMAN.OUT

Page 1

SHERMAN.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
1	0.25	0.015	0.015	31	4.14	*	*	*	*	*	**
1	0.75	0.044	0.044	31	4.14	*	*	*	*	*	**
1	1.25	0.073	0.073	31	4.14	*	*	*	*	*	**
1	1.75	0.102	0.102	31	4.14	*	*	*	*	*	**
1	2.25	0.131	0.131	31	4.14	*	*	*	*	*	**
1	2.75	0.160	0.160	31	4.14	*	*	*	*	*	**
1	3.25	0.189	0.189	31	4.14	*	*	*	*	*	**
1	3.75	0.218	0.218	31	4.14	*	*	*	*	*	**
1	4.25	0.247	0.247	31	4.14	*	*	*	*	*	**
1	4.75	0.276	0.276	31	4.14	*	*	*	*	*	**
1	5.25	0.305	0.305	31	4.14	*	*	*	*	*	**
1	5.75	0.334	0.334	31	4.14	*	*	*	*	*	**
1	6.25	0.363	0.363	31	4.14	*	*	*	*	*	**
1	6.75	0.392	0.392	31	4.14	*	*	*	*	*	**
1	7.25	0.421	0.421	31	4.14	*	*	*	*	*	**
1	7.75	0.450	0.450	31	4.14	*	*	*	*	*	**
1	8.25	0.479	0.479	31	4.14	*	*	*	*	*	**
1	8.75	0.508	0.508	31	4.14	*	*	*	*	*	**
1	9.25	0.537	0.537	31	4.14	*	*	*	*	*	**
1	9.75	0.566	0.566	31	4.14	*	*	*	*	*	**
1	10.25	0.595	0.595	31	4.14	*	*	*	*	*	**
1	10.75	0.623	0.623	31	4.14	*	*	*	*	*	**
1	11.25	0.652	0.652	31	4.14	*	*	*	*	*	**
1	11.75	0.681	0.681	31	4.14	*	*	*	*	*	**
1	12.25	0.710	0.710	31	4.14	*	*	*	*	*	**
1	12.75	0.739	0.739	31	4.14	*	*	*	*	*	**
1	13.25	0.768	0.768	31	4.14	*	*	*	*	*	**
1	13.75	0.797	0.797	31	4.14	*	*	*	*	*	**
1	14.25	0.826	0.826	31	4.14	*	*	*	*	*	**
1	14.75	0.855	0.855	31	4.14	*	*	*	*	*	**
1	15.25	0.884	0.884	31	4.14	*	*	*	*	*	**
1	15.75	0.913	0.913	31	4.14	*	*	*	*	*	**
1	16.25	0.942	0.942	31	4.14	*	*	*	*	*	**
1	16.75	0.971	0.971	31	4.14	*	*	*	*	*	**
1	17.25	1.000	1.000	31	4.14	*	*	*	*	*	**
1	17.75	1.029	1.029	31	4.14	*	*	*	*	*	**
1	18.25	1.058	1.058	31	4.14	*	*	*	*	*	**
1	18.75	1.087	1.087	31	4.14	*	*	*	*	*	**
1	19.25	1.116	1.116	31	4.14	*	*	*	*	*	**
1	19.75	1.145	1.145	31	4.14	*	*	*	*	*	**
1	20.25	1.174	1.174	31	4.14	*	*	*	*	*	**
1	20.75	1.203	1.203	31	4.14	*	*	*	*	*	**
1	21.25	1.232	1.232	31	4.14	*	*	*	*	*	**

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 2

File Name: SHERMAN.OUT

SOIL	CALC. DEPTH	TOTAL STRESS	EFF. STRESS	FIELD N	FC DELTA	C	CORR. (N1)60	LIQUE. RESIST	r	INDUC. STRESS	LIQUE. SAFETY
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SHERMAN.OUT											
NO.	(ft)	(tsf)	(tsf)	(B/ft)	N1_60	N	(B/ft)	RATIO	d	RATIO	FACTOR
1	21.75	1.261	1.261	31	4.14	*	*	*	*	*	**
1	22.25	1.290	1.290	31	4.14	*	*	*	*	*	**
1	22.75	1.319	1.319	31	4.14	*	*	*	*	*	**
1	23.25	1.348	1.348	31	4.14	*	*	*	*	*	**
1	23.75	1.377	1.377	31	4.14	*	*	*	*	*	**
1	24.25	1.406	1.406	31	4.14	*	*	*	*	*	**
1	24.75	1.435	1.435	31	4.14	*	*	*	*	*	**
1	25.25	1.464	1.464	31	4.14	*	*	*	*	*	**
1	25.75	1.493	1.493	31	4.14	*	*	*	*	*	**
1	26.25	1.522	1.522	31	4.14	*	*	*	*	*	**
1	26.75	1.551	1.551	31	4.14	*	*	*	*	*	**
1	27.25	1.580	1.580	31	4.14	*	*	*	*	*	**
2	27.75	1.610	1.610	35	3.78	*	*	*	*	*	**
2	28.25	1.640	1.640	35	3.78	*	*	*	*	*	**
2	28.75	1.669	1.669	35	3.78	*	*	*	*	*	**
2	29.25	1.699	1.699	35	3.78	*	*	*	*	*	**
2	29.75	1.729	1.729	35	3.78	*	*	*	*	*	**
2	30.25	1.759	1.751	35	3.78	0.764	30.5	Infin	0.920	0.396	NonLiq
2	30.75	1.788	1.765	35	3.78	0.764	30.5	Infin	0.917	0.399	NonLiq
2	31.25	1.818	1.779	35	3.78	0.764	30.5	Infin	0.914	0.401	NonLiq
2	31.75	1.848	1.793	35	3.78	0.764	30.5	Infin	0.912	0.403	NonLiq
2	32.25	1.878	1.807	35	3.78	0.764	30.5	Infin	0.909	0.405	NonLiq
3	32.75	1.907	1.822	51	0.05	0.712	36.4	Infin	0.906	0.407	NonLiq
3	33.25	1.937	1.836	51	0.05	0.712	36.4	Infin	0.903	0.409	NonLiq
3	33.75	1.967	1.850	51	0.05	0.712	36.4	Infin	0.899	0.410	NonLiq
3	34.25	1.997	1.865	51	0.05	0.712	36.4	Infin	0.896	0.412	NonLiq
3	34.75	2.027	1.879	51	0.05	0.712	36.4	Infin	0.893	0.413	NonLiq
3	35.25	2.057	1.894	51	0.05	0.712	36.4	Infin	0.889	0.415	NonLiq
3	35.75	2.087	1.908	51	0.05	0.712	36.4	Infin	0.886	0.416	NonLiq
3	36.25	2.117	1.922	51	0.05	0.712	36.4	Infin	0.882	0.417	NonLiq
3	36.75	2.147	1.937	51	0.05	0.712	36.4	Infin	0.878	0.418	NonLiq
3	37.25	2.177	1.951	51	0.05	0.712	36.4	Infin	0.874	0.419	NonLiq
4	37.75	2.208	1.966	58	0.45	0.665	39.0	Infin	0.871	0.419	NonLiq
4	38.25	2.239	1.982	58	0.45	0.665	39.0	Infin	0.866	0.420	NonLiq
4	38.75	2.270	1.997	58	0.45	0.665	39.0	Infin	0.862	0.421	NonLiq
4	39.25	2.301	2.012	58	0.45	0.665	39.0	Infin	0.858	0.421	NonLiq
4	39.75	2.332	2.028	58	0.45	0.665	39.0	Infin	0.854	0.421	NonLiq
4	40.25	2.363	2.043	58	0.45	0.665	39.0	Infin	0.849	0.421	NonLiq
4	40.75	2.394	2.059	58	0.45	0.665	39.0	Infin	0.845	0.422	NonLiq
4	41.25	2.425	2.074	58	0.45	0.665	39.0	Infin	0.840	0.422	NonLiq
4	41.75	2.456	2.089	58	0.45	0.665	39.0	Infin	0.836	0.421	NonLiq
4	42.25	2.487	2.105	58	0.45	0.665	39.0	Infin	0.831	0.421	NonLiq
5	42.75	2.518	2.120	100	1.07	0.615	62.5	Infin	0.826	0.421	NonLiq
5	43.25	2.549	2.135	100	1.07	0.615	62.5	Infin	0.822	0.421	NonLiq

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 3

File Name: SHERMAN.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
5	43.75	2.579	2.150	100	1.07	0.615	62.5	Infin	0.817	0.420	NonLiq

SHERMAN.OUT

5	44.25	2.610	2.166	100	1.07	0.615	62.5	Infin	0.812	0.420	NonLiq
5	44.75	2.641	2.181	100	1.07	0.615	62.5	Infin	0.807	0.419	NonLiq
5	45.25	2.672	2.196	100	1.07	0.615	62.5	Infin	0.802	0.418	NonLiq
5	45.75	2.702	2.211	100	1.07	0.615	62.5	Infin	0.797	0.418	NonLiq
5	46.25	2.733	2.226	100	1.07	0.615	62.5	Infin	0.792	0.417	NonLiq
5	46.75	2.764	2.241	100	1.07	0.615	62.5	Infin	0.787	0.416	NonLiq
5	47.25	2.795	2.256	100	1.07	0.615	62.5	Infin	0.782	0.415	NonLiq
6	47.75	2.826	2.272	120	0.37	0.600	72.4	Infin	0.776	0.414	NonLiq
6	48.25	2.857	2.287	120	0.37	0.600	72.4	Infin	0.771	0.413	NonLiq
6	48.75	2.888	2.303	120	0.37	0.600	72.4	Infin	0.766	0.412	NonLiq
6	49.25	2.919	2.319	120	0.37	0.600	72.4	Infin	0.761	0.411	NonLiq
6	49.75	2.951	2.334	120	0.37	0.600	72.4	Infin	0.756	0.410	NonLiq

SHERMAN.OUT

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*      L I Q U E F Y 2              *
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*      Version 1.50                  *
*                                     *
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EMPIRICAL PREDICTION OF
EARTHQUAKE-INDUCED LIQUEFACTION POTENTIAL

JOB NUMBER: 19-AE-834

DATE: 04-26-2019

JOB NAME: ShermanBoring2

SOIL-PROFILE NAME: SHERMAN.LDW

BORING GROUNDWATER DEPTH: 60.00 ft

CALCULATION GROUNDWATER DEPTH: 30.00 ft

DESIGN EARTHQUAKE MAGNITUDE: 6.65 Mw

SITE PEAK GROUND ACCELERATION: 0.440 g

BOREHOLE DIAMETER CORRECTION FACTOR: 1.00

SAMPLER SIZE CORRECTION FACTOR: 1.00

N60 HAMMER CORRECTION FACTOR: 1.00

MAGNITUDE SCALING FACTOR METHOD: Idriss (1997, in press)

Magnitude Scaling Factor: 1.360

rd-CORRECTION METHOD: Seed (1985)

FIELD SPT N-VALUES ARE CORRECTED FOR THE LENGTH OF THE DRIVE RODS.

Rod Stick-Up Above Ground: 3.0 ft

CN NORMALIZATION FACTOR: 1.044 tsf

MINIMUM CN VALUE: 0.6

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 1

File Name: SHERMAN.OUT

SHERMAN.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
1	0.25	0.015	0.015	31	4.14	*	*	*	*	*	**
1	0.75	0.044	0.044	31	4.14	*	*	*	*	*	**
1	1.25	0.073	0.073	31	4.14	*	*	*	*	*	**
1	1.75	0.102	0.102	31	4.14	*	*	*	*	*	**
1	2.25	0.131	0.131	31	4.14	*	*	*	*	*	**
1	2.75	0.160	0.160	31	4.14	*	*	*	*	*	**
1	3.25	0.189	0.189	31	4.14	*	*	*	*	*	**
1	3.75	0.218	0.218	31	4.14	*	*	*	*	*	**
1	4.25	0.247	0.247	31	4.14	*	*	*	*	*	**
1	4.75	0.276	0.276	31	4.14	*	*	*	*	*	**
1	5.25	0.305	0.305	31	4.14	*	*	*	*	*	**
1	5.75	0.334	0.334	31	4.14	*	*	*	*	*	**
1	6.25	0.363	0.363	31	4.14	*	*	*	*	*	**
1	6.75	0.392	0.392	31	4.14	*	*	*	*	*	**
1	7.25	0.421	0.421	31	4.14	*	*	*	*	*	**
1	7.75	0.450	0.450	31	4.14	*	*	*	*	*	**
1	8.25	0.479	0.479	31	4.14	*	*	*	*	*	**
1	8.75	0.508	0.508	31	4.14	*	*	*	*	*	**
1	9.25	0.537	0.537	31	4.14	*	*	*	*	*	**
1	9.75	0.566	0.566	31	4.14	*	*	*	*	*	**
1	10.25	0.595	0.595	31	4.14	*	*	*	*	*	**
1	10.75	0.623	0.623	31	4.14	*	*	*	*	*	**
1	11.25	0.652	0.652	31	4.14	*	*	*	*	*	**
1	11.75	0.681	0.681	31	4.14	*	*	*	*	*	**
1	12.25	0.710	0.710	31	4.14	*	*	*	*	*	**
1	12.75	0.739	0.739	31	4.14	*	*	*	*	*	**
1	13.25	0.768	0.768	31	4.14	*	*	*	*	*	**
1	13.75	0.797	0.797	31	4.14	*	*	*	*	*	**
1	14.25	0.826	0.826	31	4.14	*	*	*	*	*	**
1	14.75	0.855	0.855	31	4.14	*	*	*	*	*	**
1	15.25	0.884	0.884	31	4.14	*	*	*	*	*	**
1	15.75	0.913	0.913	31	4.14	*	*	*	*	*	**
1	16.25	0.942	0.942	31	4.14	*	*	*	*	*	**
1	16.75	0.971	0.971	31	4.14	*	*	*	*	*	**
1	17.25	1.000	1.000	31	4.14	*	*	*	*	*	**
1	17.75	1.029	1.029	31	4.14	*	*	*	*	*	**
1	18.25	1.058	1.058	31	4.14	*	*	*	*	*	**
1	18.75	1.087	1.087	31	4.14	*	*	*	*	*	**
1	19.25	1.116	1.116	31	4.14	*	*	*	*	*	**
1	19.75	1.145	1.145	31	4.14	*	*	*	*	*	**
1	20.25	1.174	1.174	31	4.14	*	*	*	*	*	**
1	20.75	1.203	1.203	31	4.14	*	*	*	*	*	**
1	21.25	1.232	1.232	31	4.14	*	*	*	*	*	**

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 2

File Name: SHERMAN.OUT

SOIL	CALC. DEPTH	TOTAL STRESS	EFF. STRESS	FIELD N	FC DELTA	C	CORR. (N1)60	LIQUE. RESIST	r	INDUC. STRESS	LIQUE. SAFETY
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SHERMAN.OUT											
NO.	(ft)	(tsf)	(tsf)	(B/ft)	N1_60	N	(B/ft)	RATIO	d	RATIO	FACTOR
1	21.75	1.261	1.261	31	4.14	*	*	*	*	*	**
1	22.25	1.290	1.290	31	4.14	*	*	*	*	*	**
1	22.75	1.319	1.319	31	4.14	*	*	*	*	*	**
1	23.25	1.348	1.348	31	4.14	*	*	*	*	*	**
1	23.75	1.377	1.377	31	4.14	*	*	*	*	*	**
1	24.25	1.406	1.406	31	4.14	*	*	*	*	*	**
1	24.75	1.435	1.435	31	4.14	*	*	*	*	*	**
1	25.25	1.464	1.464	31	4.14	*	*	*	*	*	**
1	25.75	1.493	1.493	31	4.14	*	*	*	*	*	**
1	26.25	1.522	1.522	31	4.14	*	*	*	*	*	**
1	26.75	1.551	1.551	31	4.14	*	*	*	*	*	**
1	27.25	1.580	1.580	31	4.14	*	*	*	*	*	**
2	27.75	1.610	1.610	35	3.78	*	*	*	*	*	**
2	28.25	1.640	1.640	35	3.78	*	*	*	*	*	**
2	28.75	1.669	1.669	35	3.78	*	*	*	*	*	**
2	29.25	1.699	1.699	35	3.78	*	*	*	*	*	**
2	29.75	1.729	1.729	35	3.78	*	*	*	*	*	**
2	30.25	1.759	1.751	35	3.78	0.764	30.5	Infin	0.920	0.264	NonLiq
2	30.75	1.788	1.765	35	3.78	0.764	30.5	Infin	0.917	0.266	NonLiq
2	31.25	1.818	1.779	35	3.78	0.764	30.5	Infin	0.914	0.267	NonLiq
2	31.75	1.848	1.793	35	3.78	0.764	30.5	Infin	0.912	0.269	NonLiq
2	32.25	1.878	1.807	35	3.78	0.764	30.5	Infin	0.909	0.270	NonLiq
3	32.75	1.907	1.822	51	0.05	0.712	36.4	Infin	0.906	0.271	NonLiq
3	33.25	1.937	1.836	51	0.05	0.712	36.4	Infin	0.903	0.272	NonLiq
3	33.75	1.967	1.850	51	0.05	0.712	36.4	Infin	0.899	0.274	NonLiq
3	34.25	1.997	1.865	51	0.05	0.712	36.4	Infin	0.896	0.275	NonLiq
3	34.75	2.027	1.879	51	0.05	0.712	36.4	Infin	0.893	0.275	NonLiq
3	35.25	2.057	1.894	51	0.05	0.712	36.4	Infin	0.889	0.276	NonLiq
3	35.75	2.087	1.908	51	0.05	0.712	36.4	Infin	0.886	0.277	NonLiq
3	36.25	2.117	1.922	51	0.05	0.712	36.4	Infin	0.882	0.278	NonLiq
3	36.75	2.147	1.937	51	0.05	0.712	36.4	Infin	0.878	0.279	NonLiq
3	37.25	2.177	1.951	51	0.05	0.712	36.4	Infin	0.874	0.279	NonLiq
4	37.75	2.208	1.966	58	0.45	0.665	39.0	Infin	0.871	0.280	NonLiq
4	38.25	2.239	1.982	58	0.45	0.665	39.0	Infin	0.866	0.280	NonLiq
4	38.75	2.270	1.997	58	0.45	0.665	39.0	Infin	0.862	0.280	NonLiq
4	39.25	2.301	2.012	58	0.45	0.665	39.0	Infin	0.858	0.281	NonLiq
4	39.75	2.332	2.028	58	0.45	0.665	39.0	Infin	0.854	0.281	NonLiq
4	40.25	2.363	2.043	58	0.45	0.665	39.0	Infin	0.849	0.281	NonLiq
4	40.75	2.394	2.059	58	0.45	0.665	39.0	Infin	0.845	0.281	NonLiq
4	41.25	2.425	2.074	58	0.45	0.665	39.0	Infin	0.840	0.281	NonLiq
4	41.75	2.456	2.089	58	0.45	0.665	39.0	Infin	0.836	0.281	NonLiq
4	42.25	2.487	2.105	58	0.45	0.665	39.0	Infin	0.831	0.281	NonLiq
5	42.75	2.518	2.120	100	1.07	0.615	62.5	Infin	0.826	0.281	NonLiq
5	43.25	2.549	2.135	100	1.07	0.615	62.5	Infin	0.822	0.280	NonLiq

NCEER [1997] Method

LIQUEFACTION ANALYSIS SUMMARY

PAGE 3

File Name: SHERMAN.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
5	43.75	2.579	2.150	100	1.07	0.615	62.5	Infin	0.817	0.280	NonLiq

SHERMAN . LDW

60.0

27.5	31.0	1	116.0	16	0.560	26.25
32.5	35.0	1	119.0	15	0.590	30.75
37.5	51.0	1	120.0	4	0.260	35.25
42.5	58.0	1	124.0	7	0.330	40.25
47.5	100.0	1	123.0	8	0.250	46.75
50.0	120.0	1	125.0	6	0.210	49.25

SHERMAN.LAR

60

27.5	29.66	26.93	1	116.0	16.0	0.560	26.25	9999.00
32.5	30.53	28.09	1	119.0	15.0	0.590	30.75	9999.00
37.5	36.37	36.33	1	120.0	4.0	0.260	35.25	9999.00
42.5	39.00	39.18	1	124.0	7.0	0.330	40.25	9999.00
47.5	62.53	62.25	1	123.0	8.0	0.250	46.75	9999.00
50.0	72.37	72.39	1	125.0	6.0	0.210	49.25	9999.00

Liquefy.sum

LIQUEFACTION ANALYSIS SUMMARY

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Input File Name: UNTITLED
Title:
Subtitle:

Surface Elev.=
Hole No.=2
Depth of Hole= 50.00 ft
Water Table during Earthquake= 60.00 ft
Water Table during In-Situ Testing= 30.00 ft
Max. Acceleration= 0.66 g
Earthquake Magnitude= 6.65

Input Data:

Surface Elev.=
Hole No.=2
Depth of Hole=50.00 ft
Water Table during Earthquake= 60.00 ft
Water Table during In-Situ Testing= 30.00 ft
Max. Acceleration=0.66 g
Earthquake Magnitude=6.65
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
 2. Settlement Analysis Method: Ishihara / Yoshimine
 3. Fines Correction for Liquefaction: Idriss/Seed
 4. Fine Correction for Settlement: During Liquefaction*
 5. Settlement Calculation in: All zones*
 6. Hammer Energy Ratio,
 7. Borehole Diameter,
 8. Sampling Method,
 9. User request factor of safety (apply to CSR) , User= 1
Plot two CSR (fs1=1, fs2=User)
 10. Use Curve Smoothing: Yes*
- * Recommended Options

Ce = 1
Cb= 1
Cs= 1

Liquefy.sum

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
27.50	31.00	116.00	-1.00
32.50	35.00	119.00	-1.00
37.50	51.00	120.00	-1.00
42.50	58.00	124.00	-1.00
47.50	100.00	123.00	-1.00
50.00	120.00	125.00	-1.00

Output Results:

Settlement of Saturated Sands=0.00 in.

Settlement of Unsaturated Sands=0.29 in.

Total Settlement of Saturated and Unsaturated Sands=0.29 in.

Differential Settlement=0.144 to 0.190 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
27.50	0.40	0.40	1.00*	0.00	0.29	0.29
27.55	0.40	0.40	1.00*	0.00	0.29	0.29
27.60	0.40	0.40	1.00*	0.00	0.29	0.29
27.65	0.40	0.40	1.00*	0.00	0.28	0.28
27.70	0.40	0.40	1.00*	0.00	0.28	0.28
27.75	0.40	0.40	1.00*	0.00	0.28	0.28
27.80	0.40	0.40	1.00*	0.00	0.28	0.28
27.85	0.40	0.40	1.00*	0.00	0.28	0.28
27.90	0.40	0.40	1.00*	0.00	0.28	0.28
27.95	0.40	0.40	1.00*	0.00	0.28	0.28
28.00	0.40	0.40	1.00*	0.00	0.27	0.27
28.05	0.40	0.40	1.00*	0.00	0.27	0.27
28.10	0.40	0.40	1.00*	0.00	0.27	0.27
28.15	0.40	0.40	1.00*	0.00	0.27	0.27
28.20	0.40	0.40	1.00*	0.00	0.27	0.27
28.25	0.40	0.40	1.00*	0.00	0.27	0.27
28.30	0.40	0.40	1.00*	0.00	0.27	0.27
28.35	0.40	0.40	1.00*	0.00	0.27	0.27
28.40	0.40	0.40	1.00*	0.00	0.26	0.26
28.45	0.40	0.40	1.00*	0.00	0.26	0.26
28.50	0.40	0.40	1.00*	0.00	0.26	0.26
28.55	0.40	0.40	1.00*	0.00	0.26	0.26
28.60	0.40	0.40	1.00*	0.00	0.26	0.26
28.65	0.40	0.40	1.00*	0.00	0.26	0.26
28.70	0.40	0.40	1.00*	0.00	0.26	0.26
28.75	0.40	0.40	1.00*	0.00	0.26	0.26
28.80	0.40	0.40	1.00*	0.00	0.25	0.25

Liquefy.sum						
28.85	0.40	0.40	1.00*	0.00	0.25	0.25
28.90	0.40	0.40	1.00*	0.00	0.25	0.25
28.95	0.40	0.40	1.00*	0.00	0.25	0.25
29.00	0.40	0.40	1.00*	0.00	0.25	0.25
29.05	0.40	0.40	1.00*	0.00	0.25	0.25
29.10	0.40	0.40	1.00*	0.00	0.25	0.25
29.15	0.40	0.40	1.00*	0.00	0.24	0.24
29.20	0.40	0.40	1.00*	0.00	0.24	0.24
29.25	0.40	0.40	1.00*	0.00	0.24	0.24
29.30	0.40	0.40	1.00*	0.00	0.24	0.24
29.35	0.40	0.40	1.00*	0.00	0.24	0.24
29.40	0.40	0.40	1.00*	0.00	0.24	0.24
29.45	0.40	0.40	1.00*	0.00	0.24	0.24
29.50	0.40	0.40	1.00*	0.00	0.24	0.24
29.55	0.40	0.40	1.00*	0.00	0.23	0.23
29.60	0.40	0.40	1.00*	0.00	0.23	0.23
29.65	0.40	0.40	1.00*	0.00	0.23	0.23
29.70	0.40	0.40	1.00*	0.00	0.23	0.23
29.75	0.40	0.40	1.00*	0.00	0.23	0.23
29.80	0.40	0.40	1.00*	0.00	0.23	0.23
29.85	0.40	0.40	1.00*	0.00	0.23	0.23
29.90	0.40	0.40	1.00*	0.00	0.22	0.22
29.95	0.40	0.40	1.00*	0.00	0.22	0.22
30.00	0.40	0.40	1.00*	0.00	0.22	0.22
30.05	0.40	0.40	1.00*	0.00	0.22	0.22
30.10	0.40	0.40	1.00*	0.00	0.22	0.22
30.15	0.40	0.40	1.00*	0.00	0.22	0.22
30.20	0.40	0.40	1.00*	0.00	0.22	0.22
30.25	0.40	0.40	1.00*	0.00	0.22	0.22
30.30	0.40	0.40	1.00*	0.00	0.21	0.21
30.35	0.40	0.40	1.00*	0.00	0.21	0.21
30.40	0.40	0.40	1.00*	0.00	0.21	0.21
30.45	0.40	0.40	1.00*	0.00	0.21	0.21
30.50	0.40	0.40	1.00*	0.00	0.21	0.21
30.55	0.40	0.40	1.00*	0.00	0.21	0.21
30.60	0.40	0.40	1.00*	0.00	0.21	0.21
30.65	0.40	0.40	1.00*	0.00	0.20	0.20
30.70	0.40	0.40	1.00*	0.00	0.20	0.20
30.75	0.40	0.40	1.00*	0.00	0.20	0.20
30.80	0.40	0.40	1.00*	0.00	0.20	0.20
30.85	0.40	0.40	1.00*	0.00	0.20	0.20
30.90	0.40	0.40	1.00*	0.00	0.20	0.20
30.95	0.40	0.40	1.00*	0.00	0.20	0.20
31.00	0.40	0.40	1.00*	0.00	0.20	0.20
31.05	0.40	0.40	1.00*	0.00	0.19	0.19
31.10	0.40	0.40	1.00*	0.00	0.19	0.19
31.15	0.39	0.39	1.00*	0.00	0.19	0.19
31.20	0.39	0.39	1.00*	0.00	0.19	0.19

Liquefy.sum						
31.25	0.39	0.39	1.00*	0.00	0.19	0.19
31.30	0.39	0.39	1.00*	0.00	0.19	0.19
31.35	0.39	0.39	1.00*	0.00	0.19	0.19
31.40	0.39	0.39	1.00*	0.00	0.19	0.19
31.45	0.39	0.39	1.00*	0.00	0.18	0.18
31.50	0.39	0.39	1.00*	0.00	0.18	0.18
31.55	0.39	0.39	1.00*	0.00	0.18	0.18
31.60	0.39	0.39	1.00*	0.00	0.18	0.18
31.65	0.39	0.39	1.00*	0.00	0.18	0.18
31.70	0.39	0.39	1.00*	0.00	0.18	0.18
31.75	0.39	0.39	1.00*	0.00	0.18	0.18
31.80	0.39	0.39	1.00*	0.00	0.18	0.18
31.85	0.39	0.39	1.00*	0.00	0.17	0.17
31.90	0.39	0.39	1.00*	0.00	0.17	0.17
31.95	0.39	0.39	1.00*	0.00	0.17	0.17
32.00	0.39	0.39	1.00*	0.00	0.17	0.17
32.05	0.39	0.39	1.00*	0.00	0.17	0.17
32.10	0.39	0.39	1.00*	0.00	0.17	0.17
32.15	0.39	0.39	1.00*	0.00	0.17	0.17
32.20	0.39	0.39	1.00*	0.00	0.17	0.17
32.25	0.39	0.39	1.00*	0.00	0.16	0.16
32.30	0.39	0.39	1.00*	0.00	0.16	0.16
32.35	0.39	0.39	1.00*	0.00	0.16	0.16
32.40	0.39	0.39	1.00*	0.00	0.16	0.16
32.45	0.39	0.39	1.00*	0.00	0.16	0.16
32.50	0.39	0.39	1.00*	0.00	0.16	0.16
32.55	0.39	0.39	1.00*	0.00	0.16	0.16
32.60	0.39	0.39	1.00*	0.00	0.16	0.16
32.65	0.39	0.39	1.00*	0.00	0.15	0.15
32.70	0.39	0.39	1.00*	0.00	0.15	0.15
32.75	0.39	0.39	1.00*	0.00	0.15	0.15
32.80	0.39	0.39	1.00*	0.00	0.15	0.15
32.85	0.39	0.39	1.00*	0.00	0.15	0.15
32.90	0.39	0.39	1.00*	0.00	0.15	0.15
32.95	0.39	0.39	1.00*	0.00	0.15	0.15
33.00	0.39	0.39	1.00*	0.00	0.15	0.15
33.05	0.39	0.39	1.00*	0.00	0.15	0.15
33.10	0.39	0.39	1.00*	0.00	0.14	0.14
33.15	0.39	0.39	1.00*	0.00	0.14	0.14
33.20	0.39	0.39	1.00*	0.00	0.14	0.14
33.25	0.39	0.39	1.00*	0.00	0.14	0.14
33.30	0.39	0.39	1.00*	0.00	0.14	0.14
33.35	0.39	0.39	1.00*	0.00	0.14	0.14
33.40	0.39	0.39	1.00*	0.00	0.14	0.14
33.45	0.39	0.39	1.00*	0.00	0.14	0.14
33.50	0.39	0.39	1.00*	0.00	0.14	0.14
33.55	0.39	0.39	1.00*	0.00	0.13	0.13
33.60	0.39	0.39	1.00*	0.00	0.13	0.13

Liquefy.sum						
33.65	0.39	0.39	1.00*	0.00	0.13	0.13
33.70	0.39	0.39	1.00*	0.00	0.13	0.13
33.75	0.39	0.39	1.00*	0.00	0.13	0.13
33.80	0.39	0.39	1.00*	0.00	0.13	0.13
33.85	0.39	0.39	1.00*	0.00	0.13	0.13
33.90	0.39	0.39	1.00*	0.00	0.13	0.13
33.95	0.39	0.39	1.00*	0.00	0.13	0.13
34.00	0.38	0.38	1.00*	0.00	0.13	0.13
34.05	0.38	0.38	1.00*	0.00	0.13	0.13
34.10	0.38	0.38	1.00*	0.00	0.12	0.12
34.15	0.38	0.38	1.00*	0.00	0.12	0.12
34.20	0.38	0.38	1.00*	0.00	0.12	0.12
34.25	0.38	0.38	1.00*	0.00	0.12	0.12
34.30	0.38	0.38	1.00*	0.00	0.12	0.12
34.35	0.38	0.38	1.00*	0.00	0.12	0.12
34.40	0.38	0.38	1.00*	0.00	0.12	0.12
34.45	0.38	0.38	1.00*	0.00	0.12	0.12
34.50	0.38	0.38	1.00*	0.00	0.12	0.12
34.55	0.38	0.38	1.00*	0.00	0.12	0.12
34.60	0.38	0.38	1.00*	0.00	0.12	0.12
34.65	0.38	0.38	1.00*	0.00	0.11	0.11
34.70	0.38	0.38	1.00*	0.00	0.11	0.11
34.75	0.38	0.38	1.00*	0.00	0.11	0.11
34.80	0.38	0.38	1.00*	0.00	0.11	0.11
34.85	0.38	0.38	1.00*	0.00	0.11	0.11
34.90	0.38	0.38	1.00*	0.00	0.11	0.11
34.95	0.38	0.38	1.00*	0.00	0.11	0.11
35.00	0.38	0.38	1.00*	0.00	0.11	0.11
35.05	0.38	0.38	1.00*	0.00	0.11	0.11
35.10	0.38	0.38	1.00*	0.00	0.11	0.11
35.15	0.38	0.38	1.00*	0.00	0.11	0.11
35.20	0.38	0.38	1.00*	0.00	0.11	0.11
35.25	0.38	0.38	1.00*	0.00	0.11	0.11
35.30	0.38	0.38	1.00*	0.00	0.11	0.11
35.35	0.38	0.38	1.00*	0.00	0.10	0.10
35.40	0.38	0.38	1.00*	0.00	0.10	0.10
35.45	0.38	0.38	1.00*	0.00	0.10	0.10
35.50	0.38	0.38	1.00*	0.00	0.10	0.10
35.55	0.38	0.38	1.00*	0.00	0.10	0.10
35.60	0.38	0.38	1.00*	0.00	0.10	0.10
35.65	0.38	0.38	1.00*	0.00	0.10	0.10
35.70	0.38	0.38	1.00*	0.00	0.10	0.10
35.75	0.38	0.38	1.00*	0.00	0.10	0.10
35.80	0.38	0.38	1.00*	0.00	0.10	0.10
35.85	0.38	0.38	1.00*	0.00	0.10	0.10
35.90	0.38	0.38	1.00*	0.00	0.10	0.10
35.95	0.38	0.38	1.00*	0.00	0.10	0.10
36.00	0.38	0.38	1.00*	0.00	0.10	0.10

Liquefy.sum						
36.05	0.38	0.38	1.00*	0.00	0.10	0.10
36.10	0.38	0.38	1.00*	0.00	0.09	0.09
36.15	0.38	0.38	1.00*	0.00	0.09	0.09
36.20	0.38	0.38	1.00*	0.00	0.09	0.09
36.25	0.38	0.38	1.00*	0.00	0.09	0.09
36.30	0.38	0.38	1.00*	0.00	0.09	0.09
36.35	0.38	0.38	1.00*	0.00	0.09	0.09
36.40	0.38	0.38	1.00*	0.00	0.09	0.09
36.45	0.38	0.38	1.00*	0.00	0.09	0.09
36.50	0.38	0.38	1.00*	0.00	0.09	0.09
36.55	0.38	0.38	1.00*	0.00	0.09	0.09
36.60	0.38	0.38	1.00*	0.00	0.09	0.09
36.65	0.38	0.38	1.00*	0.00	0.09	0.09
36.70	0.38	0.38	1.00*	0.00	0.09	0.09
36.75	0.38	0.38	1.00*	0.00	0.09	0.09
36.80	0.38	0.38	1.00*	0.00	0.09	0.09
36.85	0.37	0.37	1.00*	0.00	0.09	0.09
36.90	0.37	0.37	1.00*	0.00	0.09	0.09
36.95	0.37	0.37	1.00*	0.00	0.08	0.08
37.00	0.37	0.37	1.00*	0.00	0.08	0.08
37.05	0.37	0.37	1.00*	0.00	0.08	0.08
37.10	0.37	0.37	1.00*	0.00	0.08	0.08
37.15	0.37	0.37	1.00*	0.00	0.08	0.08
37.20	0.37	0.37	1.00*	0.00	0.08	0.08
37.25	0.37	0.37	1.00*	0.00	0.08	0.08
37.30	0.37	0.37	1.00*	0.00	0.08	0.08
37.35	0.37	0.37	1.00*	0.00	0.08	0.08
37.40	0.37	0.37	1.00*	0.00	0.08	0.08
37.45	0.37	0.37	1.00*	0.00	0.08	0.08
37.50	0.37	0.37	1.00*	0.00	0.08	0.08
37.55	0.37	0.37	1.00*	0.00	0.08	0.08
37.60	0.37	0.37	1.00*	0.00	0.08	0.08
37.65	0.37	0.37	1.00*	0.00	0.08	0.08
37.70	0.37	0.37	1.00*	0.00	0.08	0.08
37.75	0.37	0.37	1.00*	0.00	0.08	0.08
37.80	0.37	0.37	1.00*	0.00	0.08	0.08
37.85	0.37	0.37	1.00*	0.00	0.08	0.08
37.90	0.37	0.37	1.00*	0.00	0.08	0.08
37.95	0.37	0.37	1.00*	0.00	0.07	0.07
38.00	0.37	0.37	1.00*	0.00	0.07	0.07
38.05	0.37	0.37	1.00*	0.00	0.07	0.07
38.10	0.37	0.37	1.00*	0.00	0.07	0.07
38.15	0.37	0.37	1.00*	0.00	0.07	0.07
38.20	0.37	0.37	1.00*	0.00	0.07	0.07
38.25	0.37	0.37	1.00*	0.00	0.07	0.07
38.30	0.37	0.37	1.00*	0.00	0.07	0.07
38.35	0.37	0.37	1.00*	0.00	0.07	0.07
38.40	0.37	0.37	1.00*	0.00	0.07	0.07

Liquefy.sum						
38.45	0.37	0.37	1.00*	0.00	0.07	0.07
38.50	0.37	0.37	1.00*	0.00	0.07	0.07
38.55	0.37	0.37	1.00*	0.00	0.07	0.07
38.60	0.37	0.37	1.00*	0.00	0.07	0.07
38.65	0.37	0.37	1.00*	0.00	0.07	0.07
38.70	0.37	0.37	1.00*	0.00	0.07	0.07
38.75	0.37	0.37	1.00*	0.00	0.07	0.07
38.80	0.37	0.37	1.00*	0.00	0.07	0.07
38.85	0.37	0.37	1.00*	0.00	0.07	0.07
38.90	0.37	0.37	1.00*	0.00	0.07	0.07
38.95	0.37	0.37	1.00*	0.00	0.07	0.07
39.00	0.37	0.37	1.00*	0.00	0.07	0.07
39.05	0.37	0.37	1.00*	0.00	0.07	0.07
39.10	0.37	0.37	1.00*	0.00	0.06	0.06
39.15	0.37	0.37	1.00*	0.00	0.06	0.06
39.20	0.37	0.37	1.00*	0.00	0.06	0.06
39.25	0.37	0.37	1.00*	0.00	0.06	0.06
39.30	0.37	0.37	1.00*	0.00	0.06	0.06
39.35	0.37	0.37	1.00*	0.00	0.06	0.06
39.40	0.37	0.37	1.00*	0.00	0.06	0.06
39.45	0.37	0.37	1.00*	0.00	0.06	0.06
39.50	0.37	0.37	1.00*	0.00	0.06	0.06
39.55	0.37	0.37	1.00*	0.00	0.06	0.06
39.60	0.37	0.37	1.00*	0.00	0.06	0.06
39.65	0.37	0.37	1.00*	0.00	0.06	0.06
39.70	0.37	0.37	1.00*	0.00	0.06	0.06
39.75	0.36	0.36	1.00*	0.00	0.06	0.06
39.80	0.36	0.36	1.00*	0.00	0.06	0.06
39.85	0.36	0.36	1.00*	0.00	0.06	0.06
39.90	0.36	0.36	1.00*	0.00	0.06	0.06
39.95	0.36	0.36	1.00*	0.00	0.06	0.06
40.00	0.36	0.36	1.00*	0.00	0.06	0.06
40.05	0.36	0.36	1.00*	0.00	0.06	0.06
40.10	0.36	0.36	1.00*	0.00	0.06	0.06
40.15	0.36	0.36	1.00*	0.00	0.06	0.06
40.20	0.36	0.36	1.00*	0.00	0.06	0.06
40.25	0.36	0.36	1.00*	0.00	0.06	0.06
40.30	0.36	0.36	1.00*	0.00	0.06	0.06
40.35	0.36	0.36	1.00*	0.00	0.05	0.05
40.40	0.36	0.36	1.00*	0.00	0.05	0.05
40.45	0.36	0.36	1.00*	0.00	0.05	0.05
40.50	0.36	0.36	1.00*	0.00	0.05	0.05
40.55	0.36	0.36	1.00*	0.00	0.05	0.05
40.60	0.36	0.36	1.00*	0.00	0.05	0.05
40.65	0.36	0.36	1.00*	0.00	0.05	0.05
40.70	0.36	0.36	1.00*	0.00	0.05	0.05
40.75	0.36	0.36	1.00*	0.00	0.05	0.05
40.80	0.36	0.36	1.00*	0.00	0.05	0.05

				Liquefy.sum			
40.85	0.36	0.36	1.00*	0.00	0.05	0.05	
40.90	0.36	0.36	1.00*	0.00	0.05	0.05	
40.95	0.36	0.36	1.00*	0.00	0.05	0.05	
41.00	0.36	0.36	1.00*	0.00	0.05	0.05	
41.05	0.36	0.36	1.00*	0.00	0.05	0.05	
41.10	0.36	0.36	1.00*	0.00	0.05	0.05	
41.15	0.36	0.36	1.00*	0.00	0.05	0.05	
41.20	0.36	0.36	1.00*	0.00	0.05	0.05	
41.25	0.36	0.36	1.00*	0.00	0.05	0.05	
41.30	0.36	0.36	1.00*	0.00	0.05	0.05	
41.35	0.36	0.36	1.00*	0.00	0.05	0.05	
41.40	0.36	0.36	1.00*	0.00	0.05	0.05	
41.45	0.36	0.36	1.00*	0.00	0.05	0.05	
41.50	0.36	0.36	1.00*	0.00	0.05	0.05	
41.55	0.36	0.36	1.00*	0.00	0.05	0.05	
41.60	0.36	0.36	1.00*	0.00	0.05	0.05	
41.65	0.36	0.36	1.00*	0.00	0.05	0.05	
41.70	0.36	0.36	1.00*	0.00	0.04	0.04	
41.75	0.36	0.36	1.00*	0.00	0.04	0.04	
41.80	0.36	0.36	1.00*	0.00	0.04	0.04	
41.85	0.36	0.36	1.00*	0.00	0.04	0.04	
41.90	0.36	0.36	1.00*	0.00	0.04	0.04	
41.95	0.36	0.36	1.00*	0.00	0.04	0.04	
42.00	0.36	0.36	1.00*	0.00	0.04	0.04	
42.05	0.36	0.36	1.00*	0.00	0.04	0.04	
42.10	0.36	0.36	1.00*	0.00	0.04	0.04	
42.15	0.36	0.36	1.00*	0.00	0.04	0.04	
42.20	0.36	0.36	1.00*	0.00	0.04	0.04	
42.25	0.36	0.36	1.00*	0.00	0.04	0.04	
42.30	0.36	0.36	1.00*	0.00	0.04	0.04	
42.35	0.36	0.36	1.00*	0.00	0.04	0.04	
42.40	0.36	0.36	1.00*	0.00	0.04	0.04	
42.45	0.36	0.36	1.00*	0.00	0.04	0.04	
42.50	0.36	0.36	1.00*	0.00	0.04	0.04	
42.55	0.36	0.36	1.00*	0.00	0.04	0.04	
42.60	0.35	0.35	1.00*	0.00	0.04	0.04	
42.65	0.35	0.35	1.00*	0.00	0.04	0.04	
42.70	0.35	0.35	1.00*	0.00	0.04	0.04	
42.75	0.35	0.35	1.00*	0.00	0.04	0.04	
42.80	0.35	0.35	1.00*	0.00	0.04	0.04	
42.85	0.35	0.35	1.00*	0.00	0.04	0.04	
42.90	0.35	0.35	1.00*	0.00	0.04	0.04	
42.95	0.35	0.35	1.00*	0.00	0.04	0.04	
43.00	0.35	0.35	1.00*	0.00	0.04	0.04	
43.05	0.35	0.35	1.00*	0.00	0.04	0.04	
43.10	0.35	0.35	1.00*	0.00	0.03	0.03	
43.15	0.35	0.35	1.00*	0.00	0.03	0.03	
43.20	0.35	0.35	1.00*	0.00	0.03	0.03	

Liquefy.sum						
43.25	0.35	0.35	1.00*	0.00	0.03	0.03
43.30	0.35	0.35	1.00*	0.00	0.03	0.03
43.35	0.35	0.35	1.00*	0.00	0.03	0.03
43.40	0.35	0.35	1.00*	0.00	0.03	0.03
43.45	0.35	0.35	1.00*	0.00	0.03	0.03
43.50	0.35	0.35	1.00*	0.00	0.03	0.03
43.55	0.35	0.35	1.00*	0.00	0.03	0.03
43.60	0.35	0.35	1.00*	0.00	0.03	0.03
43.65	0.35	0.35	1.00*	0.00	0.03	0.03
43.70	0.35	0.35	1.00*	0.00	0.03	0.03
43.75	0.35	0.35	1.00*	0.00	0.03	0.03
43.80	0.35	0.35	1.00*	0.00	0.03	0.03
43.85	0.35	0.35	1.00*	0.00	0.03	0.03
43.90	0.35	0.35	1.00*	0.00	0.03	0.03
43.95	0.35	0.35	1.00*	0.00	0.03	0.03
44.00	0.35	0.35	1.00*	0.00	0.03	0.03
44.05	0.35	0.35	1.00*	0.00	0.03	0.03
44.10	0.35	0.35	1.00*	0.00	0.03	0.03
44.15	0.35	0.35	1.00*	0.00	0.03	0.03
44.20	0.35	0.35	1.00*	0.00	0.03	0.03
44.25	0.35	0.35	1.00*	0.00	0.03	0.03
44.30	0.35	0.35	1.00*	0.00	0.03	0.03
44.35	0.35	0.35	1.00*	0.00	0.03	0.03
44.40	0.35	0.35	1.00*	0.00	0.03	0.03
44.45	0.35	0.35	1.00*	0.00	0.03	0.03
44.50	0.35	0.35	1.00*	0.00	0.03	0.03
44.55	0.35	0.35	1.00*	0.00	0.03	0.03
44.60	0.35	0.35	1.00*	0.00	0.03	0.03
44.65	0.35	0.35	1.00*	0.00	0.03	0.03
44.70	0.35	0.35	1.00*	0.00	0.02	0.02
44.75	0.35	0.35	1.00*	0.00	0.02	0.02
44.80	0.35	0.35	1.00*	0.00	0.02	0.02
44.85	0.35	0.35	1.00*	0.00	0.02	0.02
44.90	0.35	0.35	1.00*	0.00	0.02	0.02
44.95	0.35	0.35	1.00*	0.00	0.02	0.02
45.00	0.35	0.35	1.00*	0.00	0.02	0.02
45.05	0.35	0.35	1.00*	0.00	0.02	0.02
45.10	0.35	0.35	1.00*	0.00	0.02	0.02
45.15	0.35	0.35	1.00*	0.00	0.02	0.02
45.20	0.35	0.35	1.00*	0.00	0.02	0.02
45.25	0.35	0.35	1.00*	0.00	0.02	0.02
45.30	0.35	0.35	1.00*	0.00	0.02	0.02
45.35	0.35	0.35	1.00*	0.00	0.02	0.02
45.40	0.35	0.35	1.00*	0.00	0.02	0.02
45.45	0.34	0.34	1.00*	0.00	0.02	0.02
45.50	0.34	0.34	1.00*	0.00	0.02	0.02
45.55	0.34	0.34	1.00*	0.00	0.02	0.02
45.60	0.34	0.34	1.00*	0.00	0.02	0.02

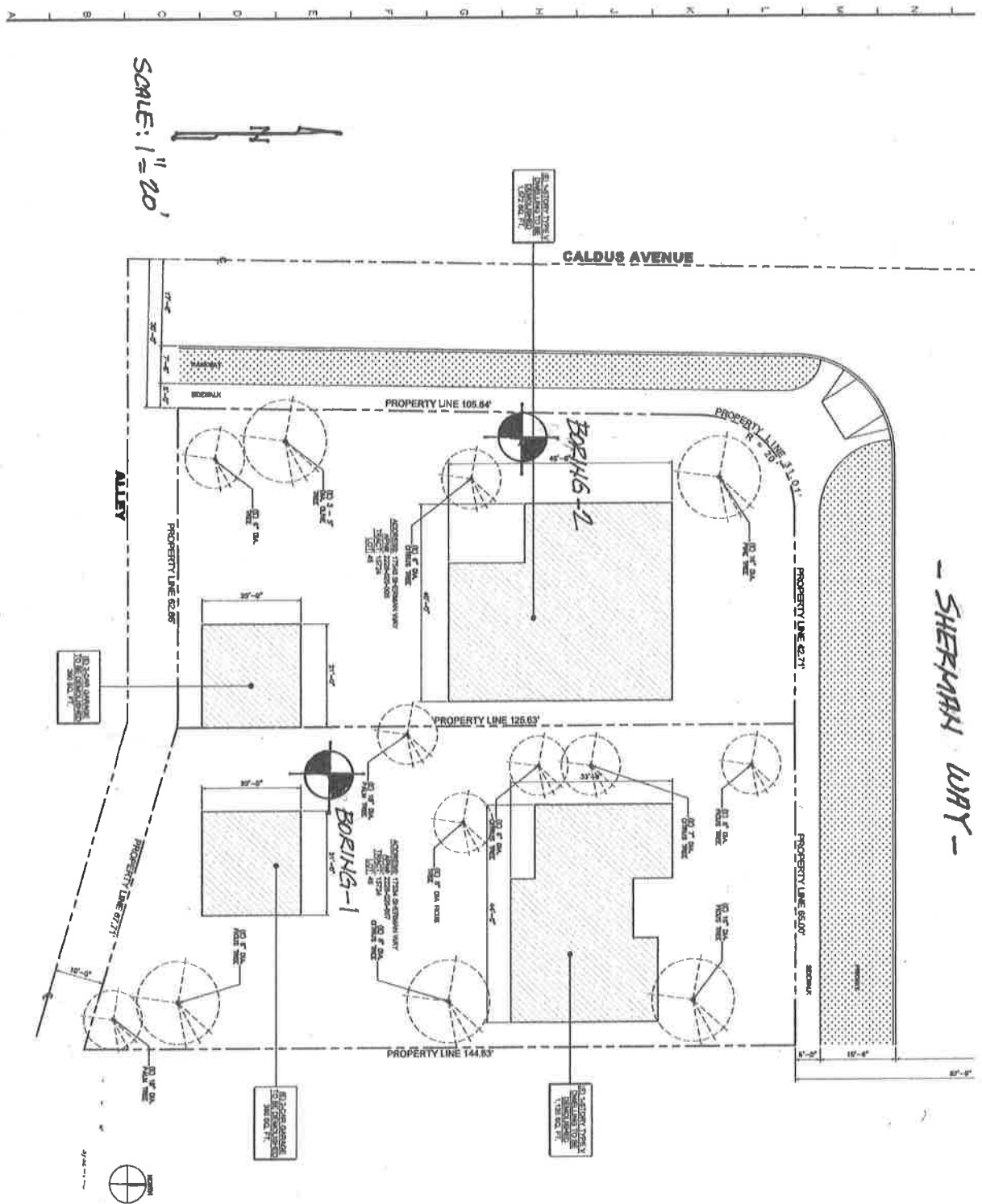
Liquefy.sum						
45.65	0.34	0.34	1.00*	0.00	0.02	0.02
45.70	0.34	0.34	1.00*	0.00	0.02	0.02
45.75	0.34	0.34	1.00*	0.00	0.02	0.02
45.80	0.34	0.34	1.00*	0.00	0.02	0.02
45.85	0.34	0.34	1.00*	0.00	0.02	0.02
45.90	0.34	0.34	1.00*	0.00	0.02	0.02
45.95	0.34	0.34	1.00*	0.00	0.02	0.02
46.00	0.34	0.34	1.00*	0.00	0.02	0.02
46.05	0.34	0.34	1.00*	0.00	0.02	0.02
46.10	0.34	0.34	1.00*	0.00	0.02	0.02
46.15	0.34	0.34	1.00*	0.00	0.02	0.02
46.20	0.34	0.34	1.00*	0.00	0.02	0.02
46.25	0.34	0.34	1.00*	0.00	0.02	0.02
46.30	0.34	0.34	1.00*	0.00	0.02	0.02
46.35	0.34	0.34	1.00*	0.00	0.02	0.02
46.40	0.34	0.34	1.00*	0.00	0.02	0.02
46.45	0.34	0.34	1.00*	0.00	0.02	0.02
46.50	0.34	0.34	1.00*	0.00	0.02	0.02
46.55	0.34	0.34	1.00*	0.00	0.02	0.02
46.60	0.34	0.34	1.00*	0.00	0.01	0.01
46.65	0.34	0.34	1.00*	0.00	0.01	0.01
46.70	0.34	0.34	1.00*	0.00	0.01	0.01
46.75	0.34	0.34	1.00*	0.00	0.01	0.01
46.80	0.34	0.34	1.00*	0.00	0.01	0.01
46.85	0.34	0.34	1.00*	0.00	0.01	0.01
46.90	0.34	0.34	1.00*	0.00	0.01	0.01
46.95	0.34	0.34	1.00*	0.00	0.01	0.01
47.00	0.34	0.34	1.00*	0.00	0.01	0.01
47.05	0.34	0.34	1.00*	0.00	0.01	0.01
47.10	0.34	0.34	1.00*	0.00	0.01	0.01
47.15	0.34	0.34	1.00*	0.00	0.01	0.01
47.20	0.34	0.34	1.00*	0.00	0.01	0.01
47.25	0.34	0.34	1.00*	0.00	0.01	0.01
47.30	0.34	0.34	1.00*	0.00	0.01	0.01
47.35	0.34	0.34	1.00*	0.00	0.01	0.01
47.40	0.34	0.34	1.00*	0.00	0.01	0.01
47.45	0.34	0.34	1.00*	0.00	0.01	0.01
47.50	0.34	0.34	1.00*	0.00	0.01	0.01
47.55	0.34	0.34	1.00*	0.00	0.01	0.01
47.60	0.34	0.34	1.00*	0.00	0.01	0.01
47.65	0.34	0.34	1.00*	0.00	0.01	0.01
47.70	0.34	0.34	1.00*	0.00	0.01	0.01
47.75	0.34	0.34	1.00*	0.00	0.01	0.01
47.80	0.34	0.34	1.00*	0.00	0.01	0.01
47.85	0.34	0.34	1.00*	0.00	0.01	0.01
47.90	0.34	0.34	1.00*	0.00	0.01	0.01
47.95	0.34	0.34	1.00*	0.00	0.01	0.01
48.00	0.34	0.34	1.00*	0.00	0.01	0.01

Liquefy.sum						
48.05	0.34	0.34	1.00*	0.00	0.01	0.01
48.10	0.34	0.34	1.00*	0.00	0.01	0.01
48.15	0.34	0.34	1.00*	0.00	0.01	0.01
48.20	0.34	0.34	1.00*	0.00	0.01	0.01
48.25	0.34	0.34	1.00*	0.00	0.01	0.01
48.30	0.34	0.34	1.00*	0.00	0.01	0.01
48.35	0.33	0.33	1.00*	0.00	0.01	0.01
48.40	0.33	0.33	1.00*	0.00	0.01	0.01
48.45	0.33	0.33	1.00*	0.00	0.01	0.01
48.50	0.33	0.33	1.00*	0.00	0.01	0.01
48.55	0.33	0.33	1.00*	0.00	0.01	0.01
48.60	0.33	0.33	1.00*	0.00	0.01	0.01
48.65	0.33	0.33	1.00*	0.00	0.01	0.01
48.70	0.33	0.33	1.00*	0.00	0.01	0.01
48.75	0.33	0.33	1.00*	0.00	0.01	0.01
48.80	0.33	0.33	1.00*	0.00	0.00	0.00
48.85	0.33	0.33	1.00*	0.00	0.00	0.00
48.90	0.33	0.33	1.00*	0.00	0.00	0.00
48.95	0.33	0.33	1.00*	0.00	0.00	0.00
49.00	0.33	0.33	1.00*	0.00	0.00	0.00
49.05	0.33	0.33	1.00*	0.00	0.00	0.00
49.10	0.33	0.33	1.00*	0.00	0.00	0.00
49.15	0.33	0.33	1.00*	0.00	0.00	0.00
49.20	0.33	0.33	1.00*	0.00	0.00	0.00
49.25	0.33	0.33	1.00*	0.00	0.00	0.00
49.30	0.33	0.33	1.00*	0.00	0.00	0.00
49.35	0.33	0.33	1.00*	0.00	0.00	0.00
49.40	0.33	0.33	1.00*	0.00	0.00	0.00
49.45	0.33	0.33	1.00*	0.00	0.00	0.00
49.50	0.33	0.33	1.00*	0.00	0.00	0.00
49.55	0.33	0.33	1.00*	0.00	0.00	0.00
49.60	0.33	0.33	1.00*	0.00	0.00	0.00
49.65	0.33	0.33	1.00*	0.00	0.00	0.00
49.70	0.33	0.33	1.00*	0.00	0.00	0.00
49.75	0.33	0.33	1.00*	0.00	0.00	0.00
49.80	0.33	0.33	1.00*	0.00	0.00	0.00
49.85	0.33	0.33	1.00*	0.00	0.00	0.00
49.90	0.33	0.33	1.00*	0.00	0.00	0.00
49.95	0.33	0.33	1.00*	0.00	0.00	0.00
50.00	0.33	0.33	1.00*	0.00	0.00	0.00

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

	Liquefy.sum
1 atm (atmosphere)	= 1 tsf (ton/ft ²)
CRRm	Cyclic resistance ratio from soils
CSRs _f	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRs _f
S _{sat}	Settlement from saturated sands
S _{dry}	Settlement from Unsaturated Sands
S _{all}	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils



A.G.E. ENGINEERING
Geotechnical Engineering and Foundation Design

SITE PLAN - EXISTING

17534-17540 SHERMAN WAY, VAN NUYS, CA.

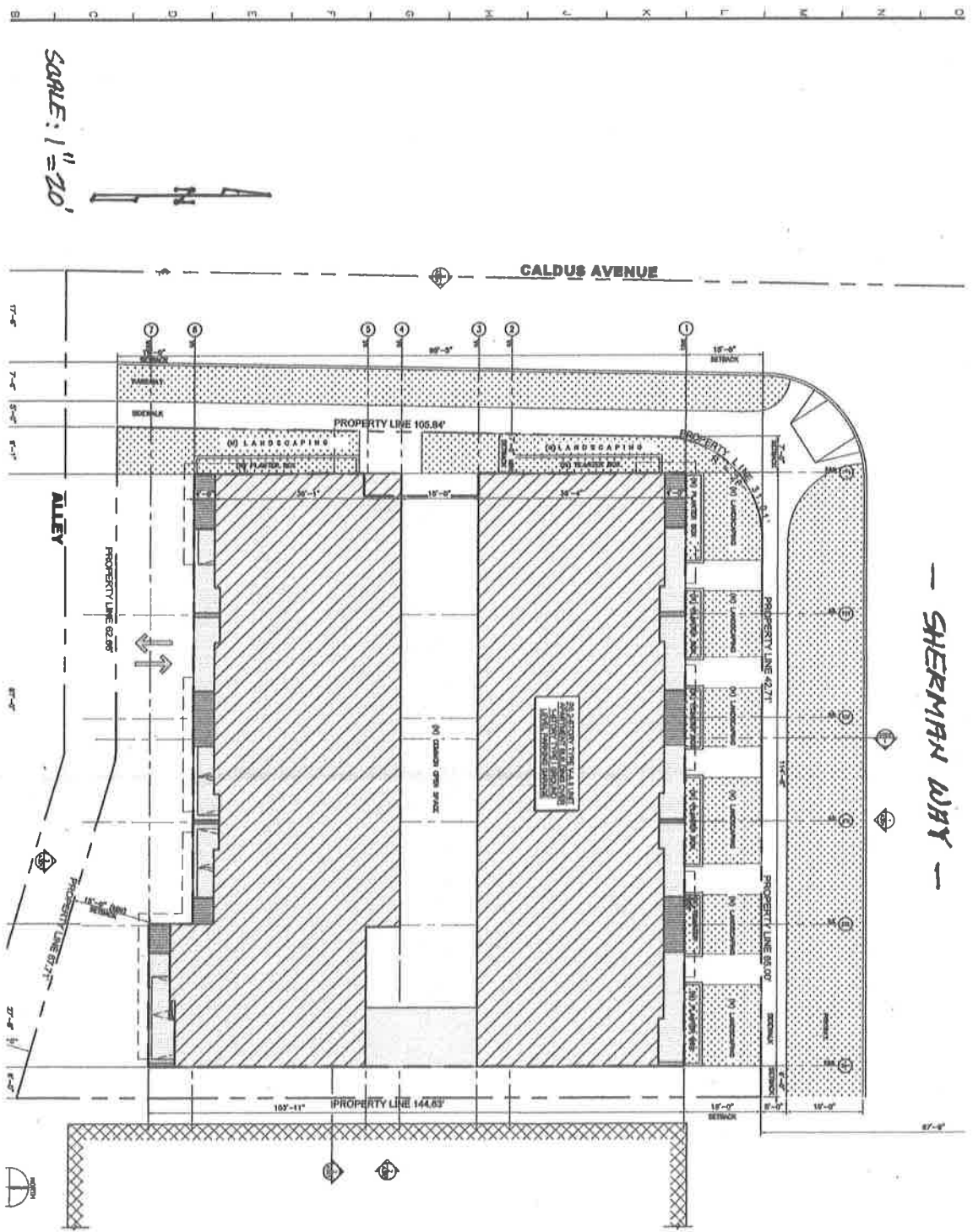
For: BOYADJIAN

DATE: 4-22-19

PROJECT NO. 19-AE-834

DRAWING NO.

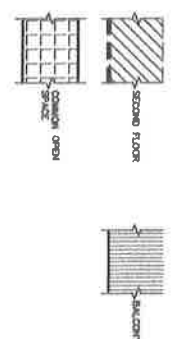
1



SCALE: 1" = 20'



A.G.E. ENGINEERING
Geotechnical Engineering and Foundation Design



SITE PLAN - PROPOSED		
17534 - 17540 SHERMAN WAY, VAN NUYS, CA.		
For: BOYADJIAN	DATE: 4-22-19	PROJECT NO. 19-AE-034
		DRAWING NO. 1A

The following Figures and Appendices are attached and complete this report:

Site Plan - Drawing No. 1

Appendix A - Method of Field Exploration

Figures A-1 and A-2

Appendix B - Methods of Laboratory Testing

Figures B-1 and B-2

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Z. M. Abrahamian', is written over a horizontal dashed line.

Zaven Abrahamian
Civil Engineer
RCE 41672

ZA/aa

Dist: (3) Addressee

APPENDIX A**METHOD OF FIELD EXPLORATION**

Two exploratory test borings were drilled to a depth of 52 feet below the existing ground surface. The test borings were logged by our field personnel and classified by visual examination. Representative undisturbed and bulk samples of the subsurface soils were obtained and returned to the laboratory for subsequent testing. The approximate locations of the test borings are shown on the enclosed Site Plan. Exploratory Test Borings were drilled with an 8-inch hollow stem drilling rig.

A description of soils encountered at test borings was recorded during the field work and are presented in Figures A-1 and A-2 within this Appendix. These figures also show the number and approximate depths of each of the recovered soils samples.

Relatively undisturbed samples of representative soils were obtained at frequent intervals in the test boring. The samples were obtained by driving a thin walled steel sampler with successive drops of a 140-pound hammer free falling a vertical distance of about 30 inches. The number of blows required for one foot of sampler penetration was recorded at the time of the field investigation and are shown on the log of exploratory test boring. The relatively undisturbed soil samples were retained in 2.5 inches in diameter and 1.0 inch in height brass rings. Standard Penetration test, which consist of counting the number of hammer blows (140 pound hammer free falling 30 inches) required to drive a standard sampler (called a split spoon) to a depth of 12 inches, were performed

during the course of the drilling of the 52' deep borings and the number of the blows were recorded and are shown on the log of the exploratory test borings.

Field investigation for this project was performed on April 6, 2019. The exploratory test borings were backfilled following examination, logging and sampling.

A.G.E. ENGINEERING

Log of Boring No. 1												
DATE DRILLED: 4/6/19					GROUND ELEVATION:							
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description		
1	1	103	10	11	Sand (SM)					Fill: Moderately compact, moist ↓ brown, silty sand		
2					Silt (ML)						Firm, moist, brown, fine sandy	
3												
4									(ML)			
5												
6	2	101	20.4	17	(ML)					Grades to increase in moisture		
7												
8												
9												
10	3	106	12.7	24	(ML)					Grades to stiff, light brown, clayey		
11												
12												

LOG OF EXPLORATORY BORING

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA	JOB NO: 19-AE-834
FIGURE No.: A-1	

A.G.E. ENGINEERING

Log of Boring No. 1										
DATE DRILLED: 04/6/19					GROUND ELEVATION:					
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description
12	4	108	14.1	42	Silt					Grades to very stiff, brown
					(ML)					
13										
14										
					(ML)					
15	5	107	9.8	15/SPT						Grades to light brown
16										
17										
18										
19										
20					(ML)					
21										
22										
23										

LOG OF EXPLORATORY BORING

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA
JOB NO: 19-AE-834

FIGURE No.: A-1

A.G.E. ENGINEERING

Log of Boring No. 1										
DATE DRILLED: 04/6/19					GROUND ELEVATION:					
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description
23	6	111	11.1	19/SPT	(ML)					Grades to hard
24										
25										
26										
27										
28	7	113	11.5	32/SPT	(ML)					Grades to light brown, slightly clayey
29										
30										
31										
32										
33										
34										

LOG OF EXPLORATORY BORING

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA	JOB NO: 19-AE-834
FIGURE No.: A-1	

A.G.E. ENGINEERING

Log of Boring No. 1							
DATE DRILLED: 04/6/19				GROUND ELEVATION:			
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol	Material Description
35	8	116	8.8	35/SPT	(ML)		Grades to light yellowish brown, fine sandy
36							
37	9	118	7.9	39/SPT	Sand (SM/SP)		Dense, moist, yellowish brown, fine to medium grained, slightly silty
38							
39	10	118	8.2	43/SPT	Sand (SP)		Grades to very dense, fine to coarse grained, trace of fines slightly gravelly
40							
41	11	127	5.8	64/SPT	(SP)		Grades to light brown, fine to medium grained
42							
43							
44							
45							
46							
LOG OF EXPLORATORY BORING							
JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA				JOB NO: 19-AE-834			
				FIGURE No.: A-1			

A.G.E. ENGINEERING

Log of Boring No. 1														
DATE DRILLED: 04/6/19				GROUND ELEVATION:										
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol	Material Description							
47	12	126	6.2	70/SPT	Sand (SP)		Grades to yellowish brown fine to corase grained							
48														
49														
50														
51														
52														
53														
54														
55														
56														
57														
58														
LOG OF EXPLORATORY BORING														
JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA								JOB NO: 19-AE-834						
								FIGURE No.: A-1						

A.G.E. ENGINEERING

Log of Boring No. 2										
DATE DRILLED: 4/6/19					GROUND ELEVATION:					
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description
1	1	111	8.2	30	Silt (ML)					Firm, moist, dark brown, fine sandy
2										
3										
4										
5	2	102	15.1	10	(ML)					Grades to less sandy, brown
6										
7										
8										
9	3	105	17.9	11	(ML)					Grades to increase in moisture
10										
11										
12										

LOG OF EXPLORATORY BORING	
JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA	JOB NO: 19-AE-834
FIGURE No.: A-2	

A.G.E. ENGINEERING

Log of Boring No. 2										
DATE DRILLED: 04/16/19					GROUND ELEVATION:					
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description
12	4	107	11.2	35	Silt (ML)					Grades to stiff, light brown, increase in moisture, clayey
13										
14										
15										
16										
17	5	108	9.2	19/SPT	(ML)					Grades to light brown
18										
19										
20										
21										
22	6	112	7.2	21/SPT	(ML)					Grades to light brown
23										

LOG OF EXPLORATORY BORING

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA
JOB NO: 19-AE-834

FIGURE No.: A-2

A.G.E. ENGINEERING

Log of Boring No. 2																
DATE DRILLED: 04/6/19					GROUND ELEVATION:											
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description						
23																
24																
25																
26																
27																
28						7	116	10.6	31/SPT		(ML)					Grades to hard, brown, increase in moisture
29																
30																
31																
32																
33	8	119	11.5	35/SPT	(ML)					Grades to yellowish brown, fine sandy						
34																

LOG OF EXPLORATORY BORING	
JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA	JOB NO: 19-AE-834
FIGURE No.: A-2	

A.G.E. ENGINEERING

Log of Boring No. 2										
DATE DRILLED: 04/6/19					GROUND ELEVATION:					
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol				Material Description
35	9	121	8.1	49/SPT	Sand (SM/SP)					Dense, moist, yellowish brown, fine grained, slightly silty
36										
37										
38	10	120	7.3	51/SPT	(SM/SP)					Grades to fine to medium grained
39										
40										
41										
42										
43	11	124	7.2	58/SPT	(SP)					Grades to very hard, grayish brown, fine to coarse grained
44										
45										
46										

LOG OF EXPLORATORY BORING

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA
JOB NO: 19-AE-834

FIGURE No.: A-2

A.G.E. ENGINEERING

Log of Boring No. 2							
DATE DRILLED: 04/6/19				GROUND ELEVATION:			
Depth In Feet	Sample No.	Dry Density (pcf)	Field Moisture (% Dry Weight)	Blows Per Foot	Material Type	Material Symbol	Material Description
47	12	123	6.6	100 SPT	(SP)		Grades to yellowish brown, fine to corase grained
48							
49							
50	12	125	8.1	120 SPT	(SP)		
51							
52							
53							End of boring at 52' No Water
54							
55							
56							
57							
58							

LOG OF EXPLORATORY BORING

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA

JOB NO: 19-AE-834

FIGURE No.: A-2

APPENDIX B

LABORATORY TESTING PROCEDURES

Moisture - Density

The field moisture content and dry density are determined for each of the undisturbed soil samples, and the results are shown in the log of the exploratory test borings. The moisture-density information provides a gross picture of the soil consistency between borings. The dry density is determined in pounds per cubic foot and the field moisture content is determined as a percentage of the dry density. The tests were performed using ASTM D-2216-98 Laboratory Determination of water content Test Method.

Shear Tests

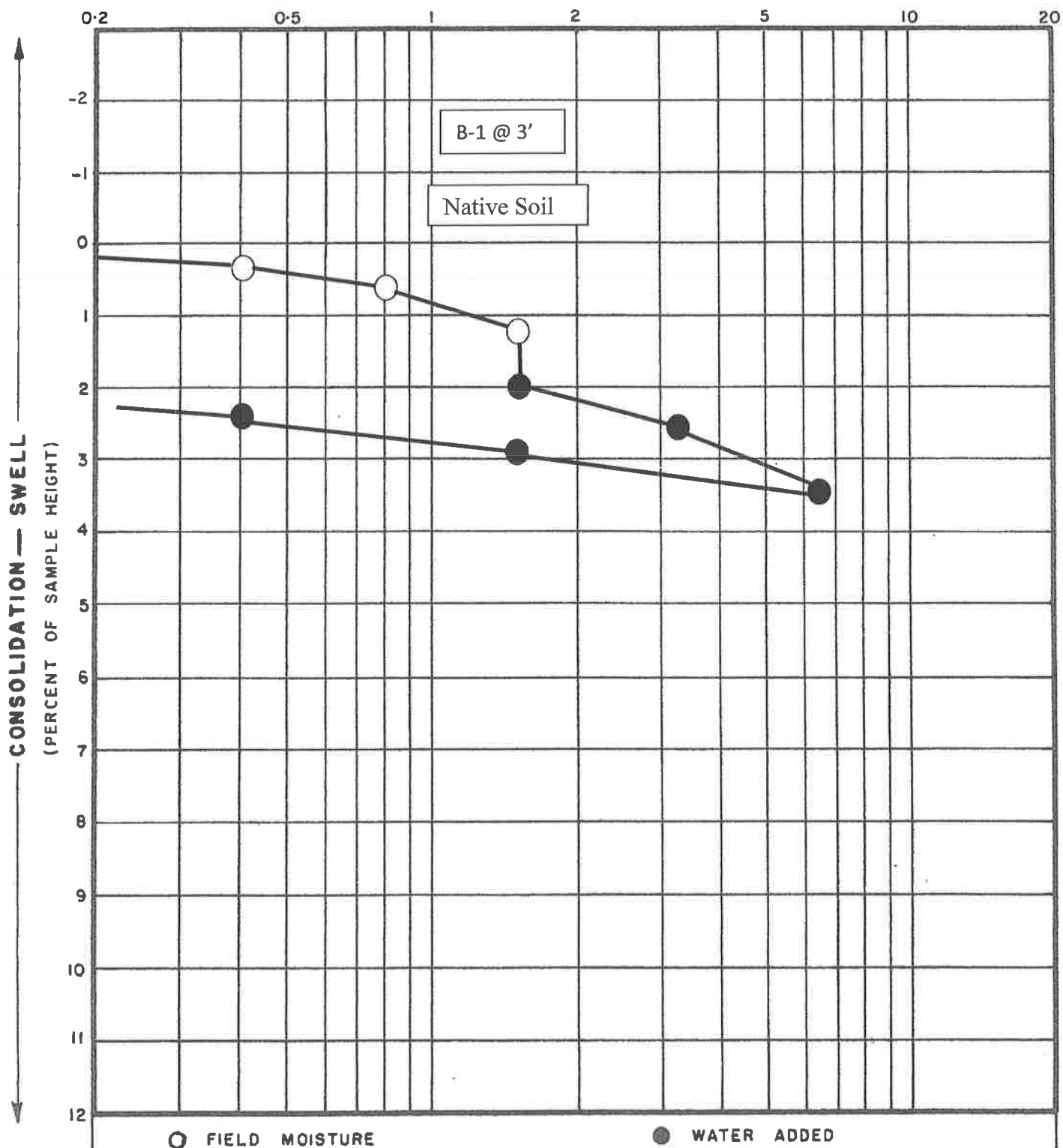
Shear tests were performed on selected undisturbed soil samples, under varying normal stresses, in order to determine the shear strength parameters, cohesion and angle of internal friction. Shear tests are performed in the direct shear machine at a constant rate of strain. The results of these tests are presented in Figure B-1. For the proposed project, a rate of 0.005 was selected. The tests were performed using ASTM D-3080-04 Laboratory Direct Shear Test Method.

Consolidation Tests

Consolidation tests were performed on selected undisturbed soil samples taken at and below the foundation level. The consolidation apparatus is designed to receive the undisturbed soil sample in an one- inch high ring. Loads are applied in several increments, in geometric progression, to a maximum value of 6,400 lbs. per square foot. The resulting deformations are recorded at selected time intervals.

Porous stones are placed at the top and bottom of each specimen to permit free flow of water into or from the specimen during the test. The test results are shown in Figure B-2. The tests were performed using ASTM D-2435-03 Laboratory Consolidation Test Method.

PRESSURE IN KIPS PER SQUARE FOOT



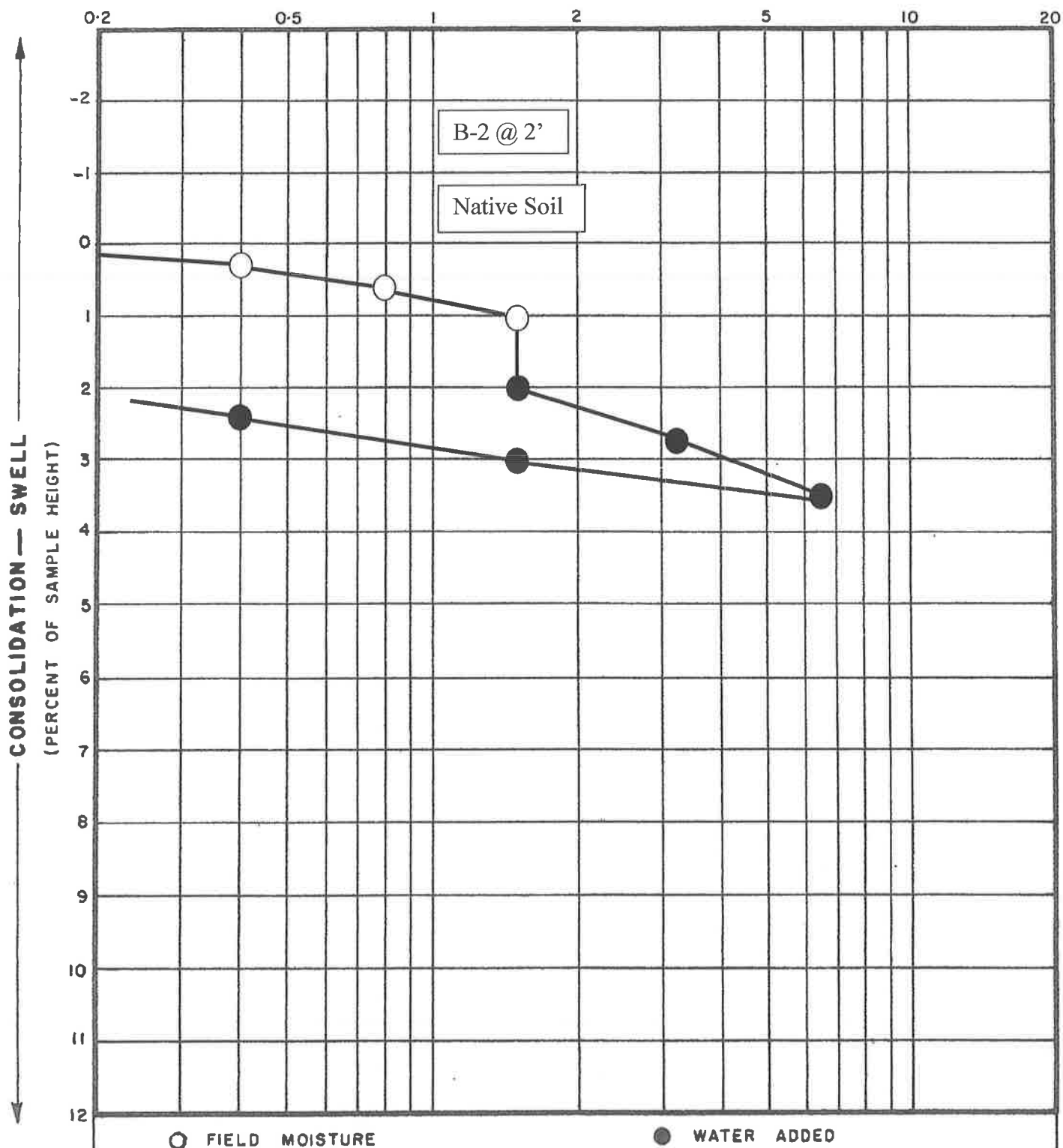
SWELL-CONSOLIDATION TESTS

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA

JOB NO. 19-AE-834

FIGURE NO. B-3

PRESSURE IN KIPS PER SQUARE FOOT



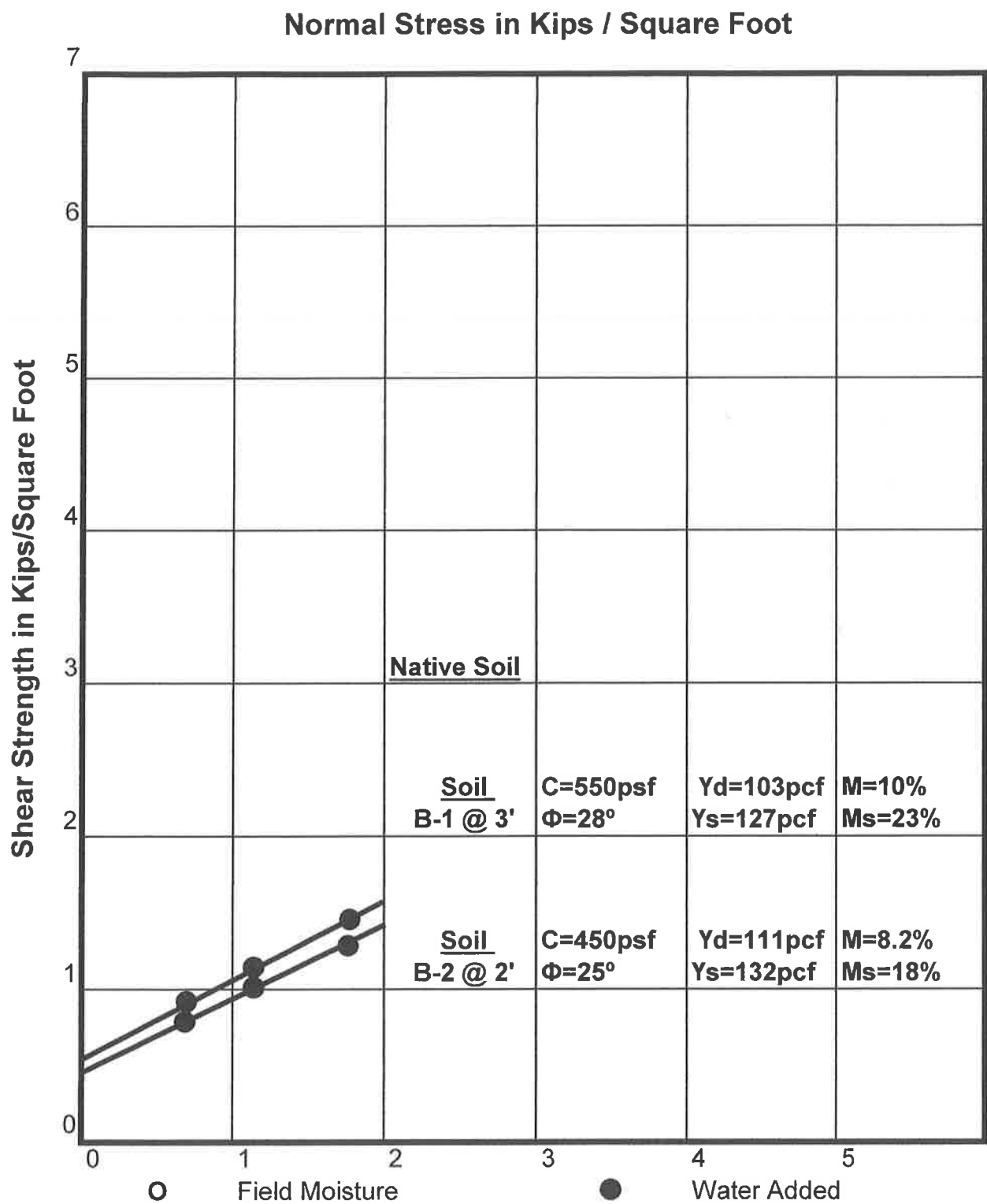
SWELL-CONSOLIDATION TESTS

JOB NAME: 17534-17540 Sherman Way, Van Nuys, CA

JOB NO. 19-AE-834

FIGURE NO. B-2

A.G.E. Engineering



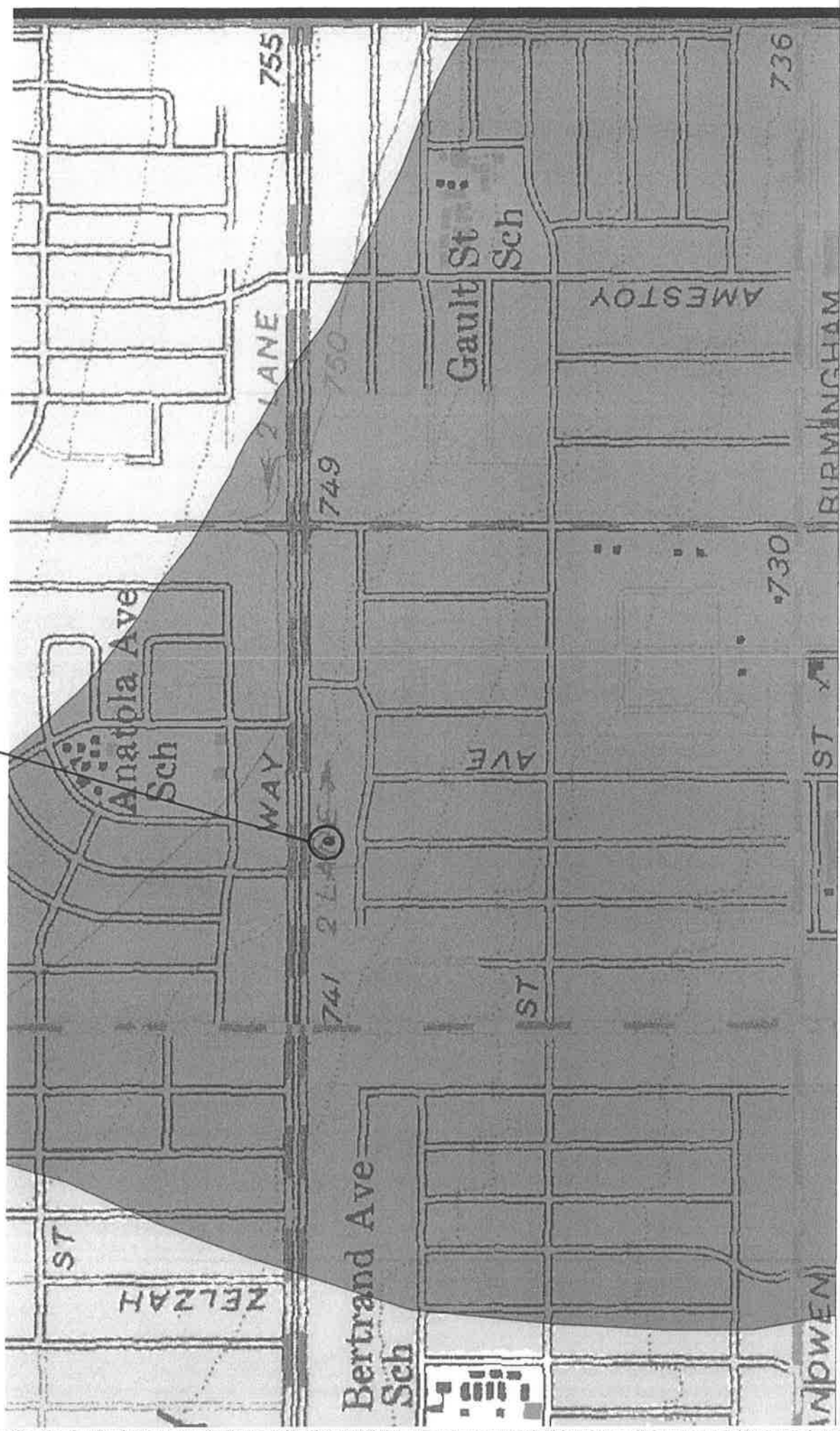
Project Name: 17534-17540 Sherman Way, Van Nuys, CA

DIRECT SHEAR TESTS

Project No.: 19-AE-834

Figure No. B-1

PROJ SITE





17534-17540 Sherman Way, Van Nuys, CA

Latitude, Longitude: 34.20111, -118.5154

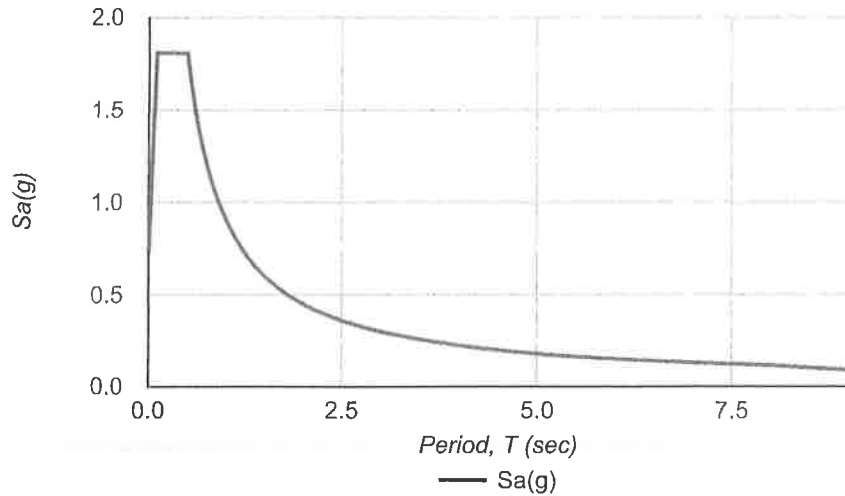
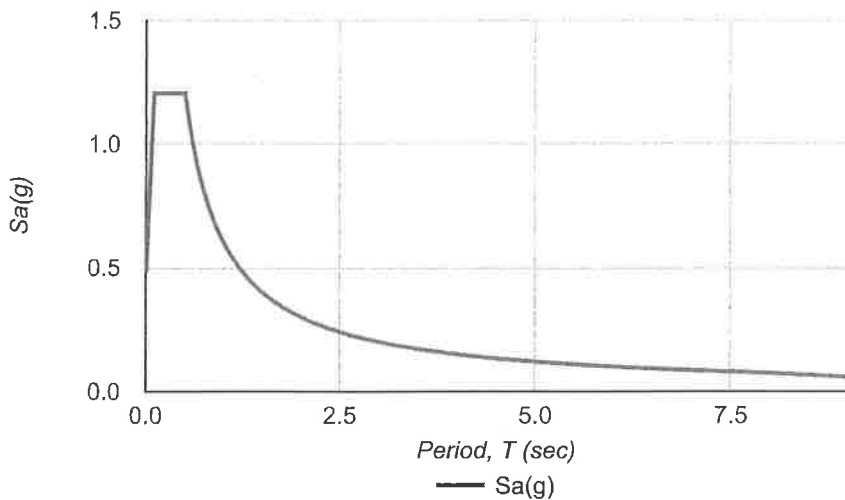


Map data ©2019 Google

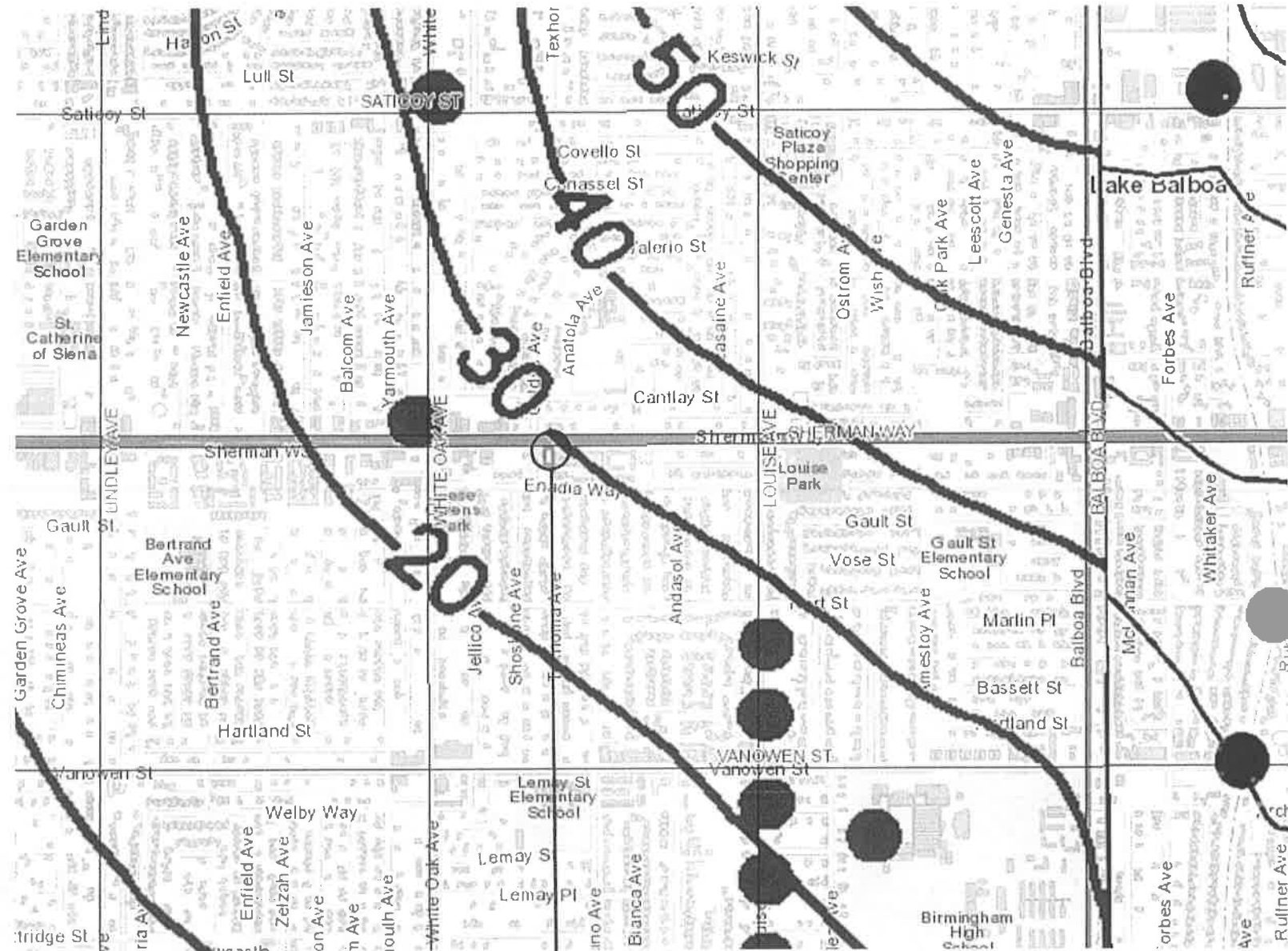
Date	4/21/2019, 9:25:48 PM
Design Code Reference Document	ASCE7-10
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_s	1.808	MCE_R ground motion. (for 0.2 second period)
S_1	0.602	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.808	Site-modified spectral acceleration value
S_{M1}	0.904	Site-modified spectral acceleration value
S_{DS}	1.206	Numeric seismic design value at 0.2 second SA
S_{D1}	0.602	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.665	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.665	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
$SsRT$	2.085	Probabilistic risk-targeted ground motion. (0.2 second)
$SsUH$	2.025	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.808	Factored deterministic acceleration value. (0.2 second)
$S1RT$	0.737	Probabilistic risk-targeted ground motion. (1.0 second)
$S1UH$	0.709	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
$S1D$	0.602	Factored deterministic acceleration value. (1.0 second)
PGA_d	0.665	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	1.029	Mapped value of the risk coefficient at short periods
C_{R1}	1.039	Mapped value of the risk coefficient at a period of 1 s

MCER Response Spectrum**Design Response Spectrum****DISCLAIMER**

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PROJ SITE

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201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

FRANK M. BUSH
GENERAL MANAGER
SUPERINTENDENT OF BUILDING

OSAMA YOUNAN, P.E.
EXECUTIVE OFFICER

SOILS REPORT APPROVAL LETTER

January 21, 2020

LOG # 108420-01
SOILS/GEOLOGY FILE - 2
LIQ

Shahe Boyadjian
17662 Mahony Place
Granada Hills, CA 91344

TRACT: 15724
LOT(S): 46 & 45
LOCATION: 17534 & 17540 W. Sherman Way

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Soils Report	19-AE-834	12/19/2019	A.G.E. Engineering

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Review Letter	108420	06/11/2019	LADBS
Soils Report	19-AE-834	04/22/2019	A.G.E. Engineering

The Grading Division of the Department of Building and Safety has reviewed the referenced reports that provide recommendations for the proposed 2-story, 9-unit, apartment building over street level parking (total 3 stories established near existing grades), as shown on Drawing 1A in the 04/22/2019 report. The existing structures will be demolished. The site is relatively level.

Two borings were drilled to depths of 52 feet. The earth materials at the subsurface exploration locations consist of up to 2 feet of uncertified fill underlain by natural deposits. According to the consultants, the upper soils have a medium expansion potential (see pg. 11 in the 04/22/2019 report). Per the consultants, groundwater was not encountered to the maximum depths explored and historically highest groundwater level is at about 30 feet below existing grade.

The consultants recommend to support the proposed structure(s) on conventional foundations bearing on properly placed fill, a minimum of 3 feet thick below the bottom of the footings (see pg. 1 of the 12/19/2020 report).

The site is located in a designated liquefaction hazard zone as shown on the Seismic Hazard Zones map issued by the State of California. The Liquefaction study included as a part of the 04/22/2019 report demonstrates that the site does not possess a liquefaction potential (based on 2/3rd the PG_AM). This satisfies the requirement of the 2017 Los Angeles City Building Code Section 1802.2.7.

As of January 1, 2020, the City of Los Angeles has adopted the new 2020 Los Angeles Building Code (LABC). The 2020 LABC requirements will apply to all projects where the permit application submittal date is after January 1, 2020.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2017 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. In the event that the permit application submittal date is after January 1, 2020, a supplemental report shall be provided to update the recommendations to be in conformance to the 2020 LABC.
2. The soils engineer shall review and approve the detailed plans prior to issuance of any permit. This approval shall be by signature on the plans that clearly indicates the soils engineer has reviewed the plans prepared by the design engineer; and, that the plans included the recommendations contained in their reports (7006.1).
3. All recommendations of the reports that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
4. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
5. A grading permit shall be obtained for all structural fill (106.1.2).
6. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.
7. If import soils are used, no footings shall be poured until the soils engineer has submitted a compaction report containing in-place shear test data and settlement data to the Grading Division of the Department; and, obtained approval (7008.2).
8. Compacted fill shall extend beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings, or a minimum of 5 feet (see pg. 6 in the 04/22/2019 report), whichever is greater, as recommended.
9. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
10. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
11. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

12. All loose foundation excavation material shall be removed prior to commencement of framing (7005.3).
13. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).
14. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be constructed using ABC slot cuts, as recommended. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)
15. Where any excavation, not addressed in the approved reports, would remove lateral support (as defined in 3307.3.1) from a public way, adjacent property or structures, a supplemental report shall be submitted to the Grading Division of the Department containing recommendations for shoring, underpinning, and sequence of construction. Shoring recommendations shall include the maximum allowable lateral deflection of shoring system to prevent damage to adjacent structures, properties and/or public ways. Report shall include a plot plan and cross-section(s) showing the construction type, number of stories, and location of adjacent structures, and analysis incorporating all surcharge loads that demonstrate an acceptable factor of safety against failure. (7006.2 & 3307.3.2)
16. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).
17. Unsurcharged temporary excavation may be cut vertical up to 5 feet. Excavations over 5 feet shall be trimmed back at a uniform gradient not exceeding 1:1, from top to bottom of excavation, as recommended.
18. Surcharged ABC slot-cut method may be used for temporary excavations with each slot-cut not exceeding 5 feet in height and not exceeding 8 feet in width, as recommended. The surcharge load shall not exceed the value given in the report. The soils engineer shall determine the clearance between the excavation and the existing foundation. The soils engineer shall verify in the field if the existing earth materials are stable in the slot-cut excavation. Each slot shall be inspected by the soils engineer and approved in writing prior to any worker access.
19. All foundations shall derive entire support from properly placed fill (a minimum of 3 feet thick), as recommended and approved by the soils engineer by inspection.
20. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.
21. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2014-116 "Foundation Design for Expansive Soils" (1803.5.3).
22. Slabs shall be at least 5 inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 12 inches on center each way, as recommended.
23. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane.

24. The seismic design shall be based on a Site Class D as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.
25. The structure shall be connected to the public sewer system per P/BC 2017-027.
26. All roof, pad and deck drainage shall be conducted to the street in an acceptable manner in non-erosive devices or other approved location in a manner that is acceptable to the LADBS and the Department of Public Works (7013.10).
27. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
28. The soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008 & 1705.6).
29. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)
30. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; ABC slot cuts; protection fences; and, dust and traffic control will be scheduled (108.9.1).
31. Slot cutting shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).
32. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).
33. No footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.



GLEN RAAD
Geotechnical Engineer I

Log No. 108420-01
213-482-0480

cc: Armen Kazanchyan, Applicant
A.G.E. Engineering, Project Consultant
VN District Office

South Central Coastal Information Center

California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395

California Historical Resources Information System
Los Angeles, Orange, Ventura and San Bernardino Counties
sccic@fullerton.edu

6/29/2020

SCCIC File #: 21339.7423

Sevana Medzoyan
Mailian & Associates
3818 Forestglen Drive
Glendale, CA 91214

Re: Record Search Results for 17534-17540 West Sherman Way, Los Angeles, CA 91406; Case No. APCSV-2018- 2184-ZC

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Canoga Park, CA USGS 7.5' quadrangle. The following summary reflects the results of the records search for the project area and a ½-mile radius. The search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), the California State Built Environment Resources Directory (BERD), and the City of Los Angeles Historic-Cultural Monuments (LAHCM) listings were reviewed for the above referenced project site and a ¼-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released.

RECORDS SEARCH RESULTS SUMMARY

Archaeological Resources* (*see Recommendations section)	Within project area: 0 Within project radius: 0
Built-Environment Resources	Within project area: 0 Within project radius: 1
Reports and Studies	Within project area: 0 Within project radius: 3
OHP Built Environment Resources Directory (BERD) 2019	Within project area: 0 Within ¼-mile radius: 1
California Points of Historical Interest (SPHI) 2019	Within project area: 0 Within ¼-mile radius: 0
California Historical Landmarks (SHL) 2019	Within project area: 0 Within ¼-mile radius: 0
California Register of Historical Resources (CAL REG) 2019	Within project area: 0 Within ¼-mile radius: 0

National Register of Historic Places (NRHP) 2019	Within project area: 0 Within ¼-mile radius: 0
City of Los Angeles Historic-Cultural Monuments (LAHCM)	Within project area: 0 Within ¼-mile radius: 0

HISTORIC MAP REVIEW – Calabasas, CA (1903, 1908, 1947) 15' USGS historic maps indicate that in 1903 and 1908 there was no visible development within the project area. There was one road along the northern edge of the project search radius. In 1947, there was still no visible development within the project area. There Pacific Electric line ran through the project search radius directly north of the project area. The previously mentioned road still remained.

RECOMMENDATIONS

*When we report that no archaeological resources are recorded in your project area or within a specified radius around the project area; that does not necessarily mean that nothing is there. It may simply mean that the area has not been studied and/or that no information regarding the archaeological sensitivity of the property has been filed at this office. The reported records search result does not preclude the possibility that surface or buried artifacts might be found during a survey of the property or ground-disturbing activities.

According to our records, the project site has not been subjected to any previous studies and the cultural resource sensitivity of the project site is unknown. Although the project site is currently developed, there is the potential for the discovery of prehistoric and historic cultural resources within the project boundaries. Therefore, customary caution and a halt-work condition should be in place for any ground-disturbing activities. In the event that any evidence of cultural resources is discovered, all work within the vicinity of the find should stop until a qualified archaeological consultant can assess the find and make recommendations. Excavation of potential cultural resources should not be attempted by project personnel. It is also recommended that the Native American Heritage Commission be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area. The NAHC may also refer you to local tribes with particular knowledge of potential sensitivity. The NAHC and local tribes may offer additional recommendations to what is provided here and may request an archaeological monitor during ground-disturbing activities or additional research.

For your convenience, you may find a professional consultant**at www.chrisinfo.org. Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

**The SCCIC does not endorse any particular consultant and makes no claims about the qualifications of any person listed. Each consultant on this list self-reports that they meet current professional standards.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm. Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the [California Historical Resources Information System](#),

Isabela Kott
GIS Technician/Staff Researcher

Stacy St. James

Digitally signed by Stacy St. James
Date: 2020.06.29 22:07:45 -07'00'

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

NATIVE AMERICAN HERITAGE COMMISSION

April 21, 2020

Sevana Medzyoan
Mailian & Associates

Via Email to: mailianassociates@gmail.com

Re: Development of a new 9 unit Multi Family Residential complex Project, Los Angeles County

Dear Ms. Medzyoan:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

CHAIRPERSON
Laura Miranda
*Luiseño*VICE CHAIRPERSON
Reginald Pagaling
*Chumash*SECRETARY
Merri Lopez-Keifer
*Luiseño*PARLIAMENTARIAN
Russell Attebery
*Karuk*COMMISSIONER
Marshall McKay
*Wintun*COMMISSIONER
William Mungary
*Paiute/White Mountain Apache*COMMISSIONER
[Vacant]COMMISSIONER
Julie Tumamait-Stenslie
*Chumash*COMMISSIONER
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Christina Snider
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nahc@nahc.ca.gov
NAHC.ca.gov

MITIGATION AND MONITORING PROGRAM

1.1 INTRODUCTION

This Mitigation Monitoring Program (“MMP”) has been prepared pursuant to Public Resources Code Section 21081.6, which requires a Lead Agency to adopt a “reporting or monitoring program for changes to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” In addition, Section 15097(a) of the State CEQA Guidelines requires that a public agency adopt a program for monitoring or reporting mitigation measures and project revisions, which it has required to mitigate or avoid significant environmental effects. This MMP has been prepared in compliance with the requirements of CEQA, Public Resources Code Section 21081.6 and Section 15097 of the State CEQA Guidelines.

The City of Los Angeles is the Lead Agency for the Project and therefore is responsible for administering and implementing the MMP. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity that accepts the delegation; however, until mitigation measures have been completed, the Lead Agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

A Mitigated Negative Declaration (MND) has been prepared to address the potential environmental impacts of the Project. The evaluation of the Project’s impacts in the MND takes into consideration the project design features (PDF) and applies mitigation measures (MM) needed to avoid or reduce potentially significant environmental impacts. This MMP is designed to monitor implementation of the PDFs and MMs identified for the Project.

1.2 ORGANIZATION

As shown on the following pages, each identified project design feature and mitigation measure for the Project is listed and categorized by environmental impact area, with accompanying identification of the following:

- Enforcement Agency: the agency with the power to enforce the PDF or MM.
- Monitoring Agency: the agency to which reports involving feasibility, compliance, implementation, and development are made.
- Monitoring Phase: the phase of the Project during which the PDF or MM shall be monitored.
- Monitoring Frequency : the frequency at which the PDF or MM shall be monitored.
- Action Indicating Compliance: the action by which the Enforcement or Monitoring Agency indicates that compliance with the identified PDF or required MM has been implemented.

1.3 ADMINISTRATIVE PROCEDURES AND ENFORCEMENT

This MMP shall be enforced throughout all phases of the Project. The Applicant shall be responsible for implementing each PDF and MM and shall be obligated to provide certification, as identified below, to the appropriate monitoring and enforcement agencies that each PDF and MM has been implemented. The Applicant shall maintain records demonstrating compliance with each PDF and MM. Such records shall be made available to the City upon request.

During the construction phase and prior to the issuance of building permits, the Applicant shall retain an independent Construction Monitor (either via the City or through a third-party consultant), approved by the Department of City Planning, who shall be responsible for monitoring implementation of PDFs and MMs during construction activities consistent with the monitoring phase and frequency set forth in this MMP.

The Construction Monitor shall also prepare documentation of the Applicant's compliance with the PDFs and MMs during construction every 90 days in a form satisfactory to the Department of City Planning. The documentation must be signed by the Applicant and Construction Monitor and be included as part of the Applicant's Compliance Report. The Construction Monitor shall be obligated to immediately report to the Enforcement Agency any non-compliance with the MMs and PDFs within two businesses days if the Applicant does not correct the non-compliance within a reasonable time of notification to the Applicant by the monitor or if the non-compliance is repeated. Such non-compliance shall be appropriately addressed by the Enforcement Agency.

1.4 PROGRAM MODIFICATION

After review and approval of the final MMP by the Lead Agency, minor changes and modifications to the MMP are permitted, but can only be made subject to City approval. The Lead Agency, in conjunction with any appropriate agencies or departments, will determine the adequacy of any proposed change or modification. This flexibility is necessary in light of the nature of the MMP and the need to protect the environment. No changes will be permitted unless the MMP continues to satisfy the requirements of CEQA, as determined by the Lead Agency.

The Project shall be in substantial conformance with the PDFs and MMs contained in this MMP. The enforcing departments or agencies may determine substantial conformance with PDFs and MMs in the MMP in their reasonable discretion. If the department or agency cannot find substantial conformance, a PDF or MM may be modified or deleted as follows: the enforcing department or agency, or the decision maker for a subsequent discretionary project related approval, finds that the modification or deletion complies with CEQA, including CEQA Guidelines Sections 15162 and 15164, which could include the preparation of an addendum or subsequent environmental clearance, if necessary, to analyze the impacts from the modifications to or deletion of the PDFs or MMs. Any addendum or subsequent CEQA clearance shall explain why the PDF or MM is no longer needed, not feasible, or the other basis for modifying or deleting the PDF or MM, and that the modification will not result in a new significant impact consistent with the requirements of CEQA. Under this process, the modification or deletion of a PDF or MM shall not in and of itself require a modification to any Project discretionary approval unless the Director of Planning also finds that the change to the PDF or MM results in a substantial change to the Project or the non-environmental conditions of approval.

1.5 MITIGATION MONITORING PROGRAM

A. AESTHETICS

Mitigation Measure AES-1: Landscape Plan. Environmental impacts to the character and aesthetics of the neighborhood may result from project implementation. However, the potential impacts will be mitigated to a less than significant impact with the following measure:

- All landscaped areas shall be maintained in accordance with a landscape plan, including an automatic irrigation plan, prepared by a licensed landscape architect in accordance with LAMC Sections 12.40 and 12.41. The final landscape plan shall be reviewed and approved by the City of Los Angeles Department of City Planning during the building permit process.

Enforcement Agency: Los Angeles Department of City Planning (plan review); Los Angeles Department of Building and Safety (operation)

Monitoring Agency: Los Angeles Department of City Planning (plan review); Los Angeles Department of Building and Safety (operation and maintenance)

Monitoring Phase: Pre-construction; Construction

Monitoring Frequency: Once, at plan check for Project; Once, during field inspection

Action Indicating Compliance: Plan approval and issuance of applicable building permit (Preconstruction); Issuance of Certificate of Occupancy of Use of Land (Construction)

Mitigation Measure AES-2: Light. Environmental Impacts to the adjacent residential properties may result in excessive illumination on the Project site. However, the potential impacts will be mitigated to a less than significant level by the following measure.

- Outdoor lighting shall be designed and installed with shielding and directed downward to illuminate only the subject property, such that the light source cannot be seen from adjacent residential properties, the public right-of-way, nor from above. Uplighting shall be prohibited.

Enforcement Agency: Los Angeles Department of Building and Safety

Monitoring Agency: Los Angeles Department of Building and Safety

Monitoring Phase: Pre-construction

Monitoring Frequency: Once, at plan check

Action Indicating Compliance: Plan approval

Mitigation Measure AES-3: Glare. Environmental impacts to the adjacent residential properties may result from glare from the proposed project. However, the potential impacts will be mitigated to a less than significant level by the following measure.

- The exterior of the proposed structure shall be constructed of materials such as, but not limited to, high-performance and/or non-reflective tinted glass (no mirror-like tints or films) and pre-cast concrete or fabricated wall surfaces to minimize glare and reflected heat.
- All exterior windows shall be low-reflective, non-glare glass.
- All exterior lighting fixtures shall be shielded and directed downward to illuminate only the Project property. Uplighting shall be prohibited.

Enforcement Agency: Los Angeles Department of Building and Safety

Monitoring Agency: Los Angeles Department of Building and Safety

Monitoring Phase: Pre-construction

Monitoring Frequency: Once, at plan check

Action Indicating Compliance: Plan approval

B. BIOLOGICAL RESOURCES

Mitigation Measure BIO-1: Habitat Modification (Nesting Native Birds, Non-Hillside or Urban Areas)

The project will result in the removal of vegetation and disturbances to the ground and therefore may result in take of nesting native bird species. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

- Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86).
- If project activities cannot feasibly avoid the breeding bird season, beginning thirty days prior to the disturbance of suitable nesting habitat, the applicant shall:
 - a. Arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the project site, as access to adjacent areas allows. The surveys shall be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.
 - b. If a protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat for the observed protected bird species until August 31.
 - c. Alternatively, the Qualified Biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest or as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. The buffer zone from the nest shall be established in the field with flagging and stakes. Construction personnel shall be instructed on the sensitivity of the area.
 - d. The applicant shall record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. Such record shall be submitted and received into the case file for the associated discretionary action permitting the project.

Enforcement Agency: Los Angeles Department of Building and Safety

Monitoring Agency: Los Angeles Department of Building and Safety

Monitoring Phase: Construction

Monitoring Frequency: Once, prior to issuance of building permit; or, if vegetation removal, building demolition or grading is initiated during the nesting season, as determined by a qualified biologist

Action Indicating Compliance: if vegetation removal, building demolition, or grading is initiated during the nesting season, submittal of a survey report by a qualified biologist

Mitigation Measure BIO-2. Tree Removal (Non-Protected Trees). Environmental impacts from project implementation may result due to the loss of significant trees on the site. However, the potential impacts will be mitigated to a less than significant level by the following measures.

- Prior to the issuance of any permit, a plot plan shall be prepared indicating the location, size, type, and general condition of all existing trees on the site and within the adjacent public right(s)-of-way.
- All significant (8-inch or greater trunk diameter, or cumulative trunk diameter if multi-trunked, as measured 54 inches above the ground) non-protected trees on the site proposed for removal shall be replaced at a 1:1 ratio with a minimum 24-inch box tree. Net, new trees, located within the parkway of the adjacent public right(s)-of-way, may be counted toward replacement tree requirements.
- Removal or planting of any tree in the public right-of-way requires approval of the Board of Public Works. Contact Urban Forestry Division at: 213-847-3077. All trees in the public right-of-way shall be provided per the current standards of the Urban Forestry Division the Department of Public Works, Bureau of Street Services.

Enforcement Agency: Board of Public Works Urban Forestry Division

Monitoring Agency: Board of Public Works Urban Forestry Division

Monitoring Phase: Pre-construction, Construction

Monitoring Frequency: Once, at plan check, and once at field inspection

Action Indicating Compliance: Issuance of Certificate of Occupancy

Mitigation Measure BIO-3. Tree Removal (Street Trees)

- Removal of street trees (i.e., trees in the public right-of-way) requires approval by the Board of Public Works.
- The required Tree Report shall include the location, size, type, and condition of all existing trees in the adjacent public right-of-way and shall be submitted for review and approval by the Urban Forestry Division of the Bureau of Street Services, Department of Public Works (213-847-3077).
- All trees in the public right-of-way shall be provided per the current Urban Forestry Division standards.

Enforcement Agency: Board of Public Works Urban Forestry Division

Monitoring Agency: Board of Public Works Urban Forestry Division

Monitoring Phase: Pre-construction, Construction

Monitoring Frequency: Once, at plan check, and once at field inspection

Action Indicating Compliance: Issuance of Certificate of Occupancy

Mitigation Measure BIO-4. Tree Protection Zone. The Historic Street Trees should be protected by establishing a Tree Protection Zone (TPZ). The TPZ should encompass the grass parkway, curb to sidewalk, in front of the properties on Sherman Way. The TPZ for the Palm on Caldas Avenue should encompass the grass parkway, from curb to sidewalk, and 6 feet north and south of the palm. For the Crepe Myrtle, the TPZ should also encompass the grass parkway, from sidewalk to curb, to the edge of the crown's dripline north and south of the tree.

The following TPZ recommendations should be followed:

- a. The TPZ fencing should be 4 feet tall at the edge of the TPZ. Orange mesh (hurricane) or chain link fencing should be used. The TPZ fence will remain in place during all grading and construction activities in the area.
- b. No heavy equipment shall be used or stored within the TPZ.
- c. No stockpiling of soils or construction materials within the TPZ.
- d. Irrigation shall remain on during project. Notify the Consulting Arborist if changes occur.
- e. No additional water shall be added without direct Arborist approval.
- f. Notify Consulting Arborist if hardscape demolition or trenching is to occur within 10 feet of TPZ fence line.
- g. The following root protections are to be followed if trenching operations are required within the TPZ or sidewalk replacement occurs:
 - Exploratory hand digging to locate major roots where possible.
 - Roots should be cut cleanly with a sharpened, sterilized pruning tool.
 - Roots that are 3 inches or larger that need to be pruned will be cut cleanly with a saw (chainsaws and reciprocating saws are allowed). No roots will be chopped with an axe or power equipment.
 - Roots discovered to be damaged below the surface during trenching activities will be traced back 4-6 inches above the break and cut cleanly before the end of the workday. Moist native soil will then re-cover the exposed root.
 - No damaged or cut roots are to be left exposed overnight.
- h. Overhanging limbs should be evaluated for potential future equipment and/or vehicle contact. Contact Consulting Arborist for mediation measures.
- i. No limbs or branches are to be pruned without prior approval of the Consulting Arborist.
- j. No use of or idling of equipment with exhaust pipes near overhanging limbs or branches.

Enforcement Agency: Los Angeles Department of Building and Safety, Board of Public Works Urban Forestry Division

Monitoring Agency: Los Angeles Department of Building and Safety, Board of Public Works Urban Forestry Division

Monitoring Phase: Pre-construction; Construction

Monitoring Frequency: Ongoing during construction

Action Indicating Compliance: Issuance of Certificate of Occupancy or Land Use Permit

TCR-1. Tribal Monitor

Prior to commencing any ground disturbance activities at the Project site, the Applicant, or its successor, shall retain archeological monitors and tribal monitors that are qualified to identify subsurface tribal cultural resources. Ground disturbance activities shall include excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing peat, clearing, driving posts, augering, backfilling, blasting, stripping topsoil or a similar activity at the project site. Any qualified tribal monitor(s) shall be approved by the Gabrieleno Band of Mission Indians. Any qualified archaeological monitor(s) shall be approved by the Department of City Planning, Office of Historic Resources ("OHR").

The qualified archeological and tribal monitors shall observe all ground disturbance activities on the project site at all times the ground disturbance activities are taking place. If ground disturbance activities are simultaneously occurring at multiple locations on the project site, an archeological and tribal monitor shall be assigned to each location where the ground disturbance activities are occurring. The on-site monitoring shall end when the ground disturbing activities are completed, or when the archaeological and tribal monitor both indicate that the site has a low potential for impacting tribal cultural resources.

Prior to commencing any ground disturbance activities, the archaeological monitor in consultation with the tribal monitor, shall provide Worker Environmental Awareness Program (WEAP) training to construction crews involved in ground disturbance activities that provides information on regulatory requirements for the protection of tribal cultural resources. As part of the WEAP training, construction crews shall be briefed on proper procedures to follow should a crew member discover tribal cultural resources during ground disturbance activities. In addition, workers will be shown examples of the types of resources that would require notification of the archaeological monitor and tribal monitor. The Applicant shall maintain on the Project site, for City inspection, documentation establishing the training was completed for all members of the construction crew involved in ground disturbance activities.

In the event that any subsurface objects or artifacts that may be tribal cultural resources are encountered during the course of any ground disturbance activities, all such activities shall temporarily cease within the area of discovery, the radius of which shall be determined by a qualified archeologist, in consultation with a qualified tribal monitor, until the potential tribal cultural resources are properly assessed and addressed pursuant to the process set forth below:

1. Upon a discovery of a potential tribal cultural resource, the Applicant, or its successor, shall immediately stop all ground disturbance activities and contact the following: (1) all California Native American tribes that have informed the City they are traditionally and culturally affiliated with the geographic area of the proposed project; (2) and OHR.
2. If OHR determines, pursuant to Public Resources Code Section 21074 (a)(2), that the object or artifact appears to be a tribal cultural resource in its discretion and supported by

substantial evidence, the City shall provide any affected tribe a reasonable period of time, not less than 14 days, to conduct a site visit and make recommendations to the Applicant, or its successor, and the City regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered tribal cultural resources.

3. The Applicant, or its successor, shall implement the tribe's recommendations if a qualified archaeologist retained by the City and paid for by the Applicant, or its successor, in consultation with the tribal monitor, reasonably conclude that the tribe's recommendations are reasonable and feasible.
4. In addition to any recommendations from the applicable tribe(s), a qualified archeologist shall develop a list of actions that shall be taken to avoid or minimize impacts to the identified tribal cultural resources substantially consistent with best practices identified by the Native American Heritage Commission and in compliance with any applicable federal, state or local law, rule or regulation.
5. If the Applicant, or its successor, does not accept a particular recommendation determined to be reasonable and feasible by the qualified archaeologist or qualified tribal monitor, the Applicant, or its successor, may request mediation by a mediator agreed to by the Applicant, or its successor, and the City. The mediator must have the requisite professional qualifications and experience to mediate such a dispute. The City shall make the determination as to whether the mediator is at least minimally qualified to mediate the dispute. After making a reasonable effort to mediate this particular dispute, the City may (1) require the recommendation be implemented as originally proposed by the archaeologist or tribal monitor; (2) require the recommendation, as modified by the City, be implemented as it is at least as equally effective to mitigate a potentially significant impact; (3) require a substitute recommendation be implemented that is at least as equally effective to mitigate a potentially significant impact to a tribal cultural resource; or (4) not require the recommendation be implemented because it is not necessary to mitigate an significant impacts to tribal cultural resources. The Applicant, or its successor, shall pay all costs and fees associated with the mediation.
6. The Applicant, or its successor, may recommence ground disturbance activities outside of a specified radius of the discovery site, so long as this radius has been reviewed by both the qualified archaeologist and qualified tribal monitor and determined to be reasonable and appropriate.
7. The Applicant, or its successor, may recommence ground disturbance activities inside of the specified radius of the discovery site only after it has complied with all of the recommendations developed and approved pursuant to the process set forth in paragraphs 2 through 5 above.
8. Copies of any subsequent prehistoric archaeological study, tribal cultural resources study or report, detailing the nature of any significant tribal cultural resources, remedial actions taken, and disposition of any significant tribal cultural resources shall be submitted to the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and to the Native American Heritage Commission for inclusion in its Sacred Lands File.

9. Notwithstanding paragraph 8 above, any information that the Department of City Planning, in consultation with the City Attorney's Office, determines to be confidential in nature shall be excluded from submission to the SCCIC or provided to the public under the applicable provisions of the California Public Records Act, California Public Resources Code, section 6254(r), and handled in compliance with the City's AB 52 Confidentiality Protocols.

Enforcement Agency: Los Angeles Department of Building and Safety, Department of City Planning

Monitoring Agency: Los Angeles Department of Building and Safety, Department of City Planning

Monitoring Phase: Pre-construction; Construction

Monitoring Frequency: Ongoing during construction

Action Indicating Compliance: Issuance of Certificate of Occupancy or Land Use Permit

1.6 REGULATORY COMPLIANCE MEASURES

In addition to the Mitigation Measures required of the project, and any proposed Project Design Features, the applicant shall also adhere to any applicable Regulatory Compliance Measures required by law. Listed below is a list of often required Regulatory Compliance Measures. Please note that requirements are determined on a case by case basis, and these are an example of the most often required Regulatory Compliance Measures.

AESTHETICS

- **Regulatory Compliance Measure RC-AE-1 (Hillside): Compliance with Baseline Hillside Ordinance.** To ensure consistency with the Baseline Hillside Ordinance, the project shall comply with the City's Hillside Development Guidelines, including but not limited to setback requirements, residential floor area maximums, height limits, lot coverage and grading restrictions.
- **Regulatory Compliance Measure RC-AE-2 (LA River): Compliance with provisions of the Los Angeles River Improvement Overlay District.** The project shall comply with development regulations set forth in Section 13.17.F of the Los Angeles Municipal Code as applicable, including but not necessarily limited to, landscaping, screening/fencing, and exterior site lighting.
- **Regulatory Compliance Measure RC-AE-3 (Vandalism): Compliance with provisions of the Los Angeles Building Code.** The project shall comply with all applicable building code requirements, including the following:
 - Every building, structure, or portion thereof, shall be maintained in a safe and sanitary condition and good repair, and free from, debris, rubbish, garbage, trash, overgrown vegetation or other similar material, pursuant to Municipal Code Section 91.8104.
 - The exterior of all buildings and fences shall be free from graffiti when such graffiti is visible from a street or alley, pursuant to Municipal Code Section 91.8104.15.
- **Regulatory Compliance Measure RC-AE-4 (Signage): Compliance with provisions of the Los Angeles Building Code.** The project shall comply with the Los Angeles Municipal Code Section 91.6205, including on-site signage maximums and multiple temporary sign restrictions, as applicable.
- **Regulatory Compliance Measure RC-AE-5 (Signage on Construction Barriers): Compliance with provisions of the Los Angeles Building Code.** The project shall comply with the Los Angeles Municipal Code Section 91.6205, including but not limited to the following provisions:
 - The applicant shall affix or paint a plainly visible sign, on publically accessible portions of the construction barriers, with the following language: "POST NO BILLS".
 - Such language shall appear at intervals of no less than 25 feet along the length of the publically accessible portions of the barrier.
 - The applicant shall be responsible for maintaining the visibility of the required signage and for maintaining the construction barrier free and clear of any unauthorized signs within 48 hours of occurrence.

AGRICULTURE and FORESTRY

AIR QUALITY

- **Regulatory Compliance Measure RC-AQ-1(Demolition, Grading and Construction Activities): Compliance with provisions of the SCAQMD District Rule 403.** The project shall comply with all applicable standards of the Southern California Air Quality Management District, including the following provisions of District Rule 403:
 - All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
 - The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
 - All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.
 - All dirt/soil loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust.
 - All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amount of dust.
 - General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
 - Trucks having no current hauling activity shall not idle but be turned off.
- **Regulatory Compliance Measure RC-AQ-2:** In accordance with Sections 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- **Regulatory Compliance Measure RC-AQ-3:** In accordance with Section 93115 in Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.
- **Regulatory Compliance Measure RC-AQ-4:** The Project shall comply with South Coast Air Quality Management District Rule 1113 limiting the volatile organic compound content of architectural coatings.
- **Regulatory Compliance Measure RC-AQ-5:** The Project shall install odor-reducing equipment in accordance with South Coast Air Quality Management District Rule 1138.
- **Regulatory Compliance Measure RC-AQ-6:** New on-site facility nitrogen oxide emissions shall be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters) as required by South Coast Air Quality Management District Regulation XIII, New Source Review.

- **Regulatory Compliance Measure RC-AQ-7 (Spray Painting): Compliance with provisions of the SCAQMD District Rule 403.** The project shall comply with all applicable rules of the Southern California Air Quality Management District, including the following:
 - All spray painting shall be conducted within an SCAQMD-approved spray paint booth featuring approved ventilation and air filtration system.
 - Prior to the issuance of a building permit, use of land, or change of use to permit spray painting, certification of compliance with SCAQMD air pollution regulations shall be submitted to the Department of Building and Safety.
- **Regulatory Compliance Measure RC-AQ-8 (Wireless Facilities):** If rated higher than 50 brake horsepower (bhp), permit required in accordance with SCAQMD Rule 1470 - Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Initial Engines and SCAQMD Rule 1110.2 - Emissions from Gaseous- and Liquid- Field Engines.

BIOLOGY

- **(Duplicate of WQ Measure) Regulatory Compliance Measure RC-WQ-5 (Alteration of a State or Federal Watercourse):** The project shall comply with the applicable sections of the federal Clean Water Act (CWA) and California's Porter Cologne Water Quality Control Act (Porter Cologne). Prior to the issuance of any grading, use of land, or building permit which may affect an existing watercourse, the applicant shall consult with the following agencies and obtain all necessary permits and/or authorizations, to the satisfaction of the Department of Building and Safety. Compliance shall be determined through written communication from each jurisdictional agency, a copy of which shall be submitted to the Environmental Review case file for reference:
 - *United States Army Corps of Engineers.* The applicant shall obtain a Jurisdictional Determination (preliminary or approved), or a letter otherwise indicating that no permit is required. Contact: Aaron O. Allen, Chief - North Coast Branch, Regulatory Division, 805-585-2148.
 - *State Water Resources Control Board.* The applicant shall consult with the 401 Certification and Wetlands Unit and obtain all necessary permits and/or authorizations, or a letter otherwise indicating that no permit is required. Contact: 401 Certification and Wetlands Unit, Los Angeles Region, 320 W 4th Street, #200, Los Angeles, CA 90013, (213) 576-6600.
 - *California Department of Fish and Wildlife.* The applicant shall consult with the Lake and Streambed Alteration Agreement Program and obtain a Streambed Alteration Agreement, or a letter otherwise indicating that no permit is required. Contact: LSAA Program, 4949 Viewridge Avenue, San Diego, CA 92123, (858) 636-3160.

CULTURAL RESOURCES

- **Regulatory Compliance Measure RC-CR-1 (Designated Historic-Cultural Resource): Compliance with United States Department of the Interior – National Park Service – Secretary of the Interior's Standards for the Treatment of Historic**

Properties. The project shall comply with the Secretary of the Interior's Standards for Historical Resources, including but not limited to the following measures:

- Prior to the issuance of any permit, the project shall obtain clearance from the Department of Cultural Affairs for the proposed work.
 - A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
 - The historic character of a property shall be retained and preserved. The removal of historic material or alteration of features and spaces shall be avoided.
 - Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other buildings, shall not be undertaken.
 - Most properties change over time; those changes that have acquired significance in their own right shall be retained and preserved.
- **Regulatory Compliance Measure RC-CR-2 (Archaeological):** If archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. Personnel of the proposed Modified Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the Project site. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2.
 - Distinctive features, finishes and construction techniques or examples of skilled craftsmanship which characterize an historic property shall be preserved.
 - Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive historic feature, the new feature shall match the old in design, color, texture, and other visual qualities, and where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
 - Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
 - Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
 - New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
 - New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

GEOLOGY AND SOILS

- **Regulatory Compliance Measure RC-GEO-1 (Seismic):** The design and construction of the project shall conform to the California Building Code seismic standards as approved by the Department of Building and Safety.

- **Regulatory Compliance Measure RC-GEO-2 (Hillside Grading Area):** The grading plan shall conform with the City's Landform Grading Manual guidelines, subject to approval by the Advisory Agency and the Department of Building and Safety's Grading Division. Appropriate erosion control and drainage devices shall be provided to the satisfaction of the Building and Safety Department. These measures include interceptor terraces, berms, vee-channels, and inlet and outlet structures, as specified by Section 91.7013 of the Building Code, including planting fast-growing annual and perennial grasses in areas where construction is not immediately planned.
- **Regulatory Compliance Measure RC-GEO-3 (Landslide Area):** Prior to the issuance of grading or building permits, the applicant shall submit a geotechnical report, prepared by a registered civil engineer or certified engineering geologist, to the Department of Building and Safety, for review and approval. The geotechnical report shall assess potential consequences of any landslide and soil displacement, estimation of settlement, lateral movement or reduction in foundation soil-bearing capacity, and discuss mitigation measures that may include building design consideration. Building design considerations shall include, but are not limited to:
 - ground stabilization
 - selection of appropriate foundation type and depths
 - selection of appropriate structural systems to accommodate anticipated displacements or any combination of these measures

The project shall comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the proposed project, and as it may be subsequently amended or modified.

- **Regulatory Compliance Measure RC-GEO-4 (Liquefaction Area):** The project shall comply with the Uniform Building Code Chapter 18. Division 1 Section 1804.5 Liquefaction Potential and Soil Strength Loss. Prior to the issuance of grading or building permits, the applicant shall submit a geotechnical report, prepared by a registered civil engineer or certified engineering geologist, to the Department of Building and Safety, for review and approval. The geotechnical report shall assess potential consequences of any liquefaction and soil strength loss, estimation of settlement, lateral movement or reduction in foundation soil-bearing capacity, and discuss mitigation measures that may include building design consideration. Building design considerations shall include, but are not limited to:
 - ground stabilization
 - selection of appropriate foundation type and depths
 - selection of appropriate structural systems to accommodate anticipated displacements or any combination of these measures.

The project shall comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the proposed project, and as it may be subsequently amended or modified.

- **Regulatory Compliance Measure RC-GEO-5 (Subsidence Area):** Prior to the issuance of building or grading permits, the applicant shall submit a geotechnical report prepared by a registered civil engineer or certified engineering geologist to the written satisfaction of the Department of Building and Safety. The geotechnical report shall assess potential consequences of any subsidence and soil strength loss, estimation of settlement, lateral movement or reduction in foundation soil-bearing capacity, and discuss mitigation measures that may include building design consideration. Building design considerations

shall include, but are not limited to: ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements or any combination of these measures. The project shall comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the proposed project, and as it may be subsequently amended or modified.

- **Regulatory Compliance Measure RC-GEO-6 (Expansive Soils Area):** Prior to the issuance of grading or building permits, the applicant shall submit a geotechnical report, prepared by a registered civil engineer or certified engineering geologist, to the Department of Building and Safety, for review and approval. The geotechnical report shall assess potential consequences of any soil expansion and soil strength loss, estimation of settlement, lateral movement or reduction in foundation soil-bearing capacity, and discuss mitigation measures that may include building design consideration. Building design considerations shall include, but are not limited to: ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements or any combination of these measures. The project shall comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the proposed project, and as it may be subsequently amended or modified.
- **Regulatory Compliance Measure RC-GHG-1 (Green Building Code):** In accordance with the City of Los Angeles Green Building Code (Chapter IX, Article 9, of the Los Angeles Municipal Code), the Project shall comply with all applicable mandatory provisions of the 2013 Los Angeles Green Code and as it may be subsequently amended or modified.

HAZARDS AND HAZARDOUS MATERIALS

- **Regulatory Compliance Measure RC-HAZ-1: Explosion/Release (Existing Toxic/Hazardous Construction Materials)**
 - **(Asbestos)** Prior to the issuance of any permit for the demolition or alteration of the existing structure(s), the applicant shall provide a letter to the Department of Building and Safety from a qualified asbestos abatement consultant indicating that no Asbestos-Containing Materials (ACM) are present in the building. If ACMs are found to be present, it will need to be abated in compliance with the South Coast Air Quality Management District's Rule 1403 as well as all other applicable State and Federal rules and regulations.
 - **(Lead Paint)** Prior to issuance of any permit for the demolition or alteration of the existing structure(s), a lead-based paint survey shall be performed to the written satisfaction of the Department of Building and Safety. Should lead-based paint materials be identified, standard handling and disposal practices shall be implemented pursuant to OSHA regulations.
 - **(Polychlorinated Biphenyl – Commercial and Industrial Buildings)** Prior to issuance of a demolition permit, a polychlorinated biphenyl (PCB) abatement contractor shall conduct a survey of the project site to identify and assist with compliance with applicable state and federal rules and regulation governing PCB removal and disposal.
- **Regulatory Compliance Measure RC-HAZ-2: Explosion/Release (Methane Zone):** As the Project Site is within a methane zone, prior to the issuance of a building permit, the Site shall be independently analyzed by a qualified engineer, as defined in Ordinance No. 175,790 and Section 91.7102 of the LAMC, hired by the Project Applicant. The engineer

shall investigate and design a methane mitigation system in compliance with the LADBS Methane Mitigation Standards for the appropriate Site Design Level which will prevent or retard potential methane gas seepage into the building. The Applicant shall implement the engineer's design recommendations subject to DOGGR, LADBS and LAFD plan review and approval.

- **Regulatory Compliance Measure RC-HAZ-3: Explosion/Release (Soil Gases):** During subsurface excavation activities, including borings, trenching and grading, OSHA worker safety measures shall be implemented as required to preclude any exposure of workers to unsafe levels of soil-gases, including, but not limited to, methane.
- **Regulatory Compliance Measure RC-HAZ-4 Listed Sites (Removal of Underground Storage Tanks):** Underground Storage Tanks shall be decommissioned or removed as determined by the Los Angeles City Fire Department Underground Storage Tank Division. If any contamination is found, further remediation measures shall be developed with the assistance of the Los Angeles City Fire Department and other appropriate State agencies. Prior to issuance of a use of land or building permit, a letter certifying that remediation is complete from the appropriate agency (Department of Toxic Substance Control or the Regional Water Quality Control Board) shall be submitted to the decision maker.
- **Regulatory Compliance Measure RC-HAZ-5 (Hazardous Materials Site):** Prior to the issuance of any use of land, grading, or building permit, the applicant shall obtain a sign-off from the Fire Department indicating that all on-site hazardous materials, including contamination of the soil and groundwater, have been suitably remediated, or that the proposed project will not impede proposed or on-going remediation measures.

HYDROLOGY AND WATER QUALITY

- **Regulatory Compliance Measure RC-WQ-1: National Pollutant Discharge Elimination System General Permit.** Prior to issuance of a grading permit, the Applicant shall obtain coverage under the State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System No. CAS000002) (Construction General Permit) for Phase 1 of the proposed Modified Project. The Applicant shall provide the Waste Discharge Identification Number to the City of Los Angeles to demonstrate proof of coverage under the Construction General Permit. A Storm Water Pollution Prevention Plan shall be prepared and implemented for the proposed Modified Project in compliance with the requirements of the Construction General Permit. The Storm Water Pollution Prevention Plan shall identify construction Best Management Practices to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in stormwater runoff as a result of construction activities.
- **Regulatory Compliance Measure RC-WQ-2: Dewatering.** If required, any dewatering activities during construction shall comply with the requirements of the Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2008-0032, National Pollutant Discharge Elimination System No. CAG994004) or subsequent permit. This will include submission of a Notice of Intent for coverage under the permit to the Los Angeles Regional Water Quality Control Board at least 45 days prior

to the start of dewatering and compliance with all applicable provisions in the permit, including water sampling, analysis, and reporting of dewatering-related discharges.

- **Regulatory Compliance Measure RC-WQ-3: Low Impact Development Plan.** Prior to issuance of grading permits, the Applicant shall submit a Low Impact Development Plan and/or Standard Urban Stormwater Mitigation Plan to the City of Los Angeles Bureau of Sanitation Watershed Protection Division for review and approval. The Low Impact Development Plan and/or Standard Urban Stormwater Mitigation Plan shall be prepared consistent with the requirements of the Development Best Management Practices Handbook.
- **Regulatory Compliance Measure RC-WQ-4: Development Best Management Practices.** The Best Management Practices shall be designed to retain or treat the runoff from a storm event producing 0.75 inch of rainfall in a 24-hour period, in accordance with the Development Best Management Practices Handbook Part B Planning Activities. A signed certificate from a licensed civil engineer or licensed architect confirming that the proposed Best Management Practices meet this numerical threshold standard shall be provided.
- **Regulatory Compliance Measure RC-WQ-5 (Alteration of a State or Federal Watercourse):** The project shall comply with the applicable sections of the federal Clean Water Act (CWA) and California's Porter Cologne Water Quality Control Act (Porter Cologne). Prior to the issuance of any grading, use of land, or building permit which may affect an existing watercourse, the applicant shall consult with the following agencies and obtain all necessary permits and/or authorizations, to the satisfaction of the Department of Building and Safety. Compliance shall be determined through written communication from each jurisdictional agency, a copy of which shall be submitted to the Environmental Review case file for reference:
 - *United States Army Corps of Engineers.* The applicant shall obtain a Jurisdictional Determination (preliminary or approved), or a letter otherwise indicating that no permit is required. Contact: Aaron O. Allen, Chief - North Coast Branch, Regulatory Division, 805-585-2148.
 - *State Water Resources Control Board.* The applicant shall consult with the 401 Certification and Wetlands Unit and obtain all necessary permits and/or authorizations, or a letter otherwise indicating that no permit is required. Contact: 401 Certification and Wetlands Unit, Los Angeles Region, 320 W 4th Street, #200, Los Angeles, CA 90013, (213) 576-6600.
 - *California Department of Fish and Wildlife.* The applicant shall consult with the Lake and Streambed Alteration Agreement Program and obtain a Streambed Alteration Agreement, or a letter otherwise indicating that no permit is required. Contact: LSAA Program, 4949 Viewridge Avenue, San Diego, CA 92123, (858) 636-3160.
- **Regulatory Compliance Measure RC-WQ-6 (Flooding/Tidal Waves):** The project shall comply with the requirements of the Flood Hazard Management Specific Plan, Ordinance No. 172081 effective 7/3/98.

LAND USE AND PLANNING

- **Regulatory Compliance Measure RC-LU-1 (Slope Density):** The project shall not exceed the maximum density permitted in Hillside Areas, as calculated by the formula set forth in Los Angeles Municipal Code Section 17.05-C (for tracts) or 17.50-E (for parcel maps).

MINERAL RESOURCES

NOISE

- **Regulatory Compliance Measure RC-NO-1 (Demolition, Grading, and Construction Activities):** The project shall comply with the City of Los Angeles Noise Ordinance and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible.

POPULATION AND HOUSING

- **New Regulatory Compliance Measure RC-PH-1 (Tenant Displacement):**
 - **Apartment Converted to Condominium** - Prior to final map recordation, and pursuant to the provisions of Section 12.95.2-G and 47.06 of the Los Angeles Municipal Code (LAMC), a tenant relocation plan shall be submitted to the Los Angeles Housing Department for review and approval.
 - **Apartment Demolition** - Prior to the issuance of a demolition permit, and pursuant to the provisions of Section 47.07 of the Los Angeles Municipal Code, a tenant relocation plan shall be submitted to the Los Angeles Housing Department for review and approval.
 - **Mobile Home Park Closure or Conversion to Different Use** Prior to the issuance of any permit or recordation, and pursuant to the provisions of Section 47.08 and 47.09 of the Los Angeles Municipal Code, a tenant relocation plan and mobile home park closure impact report shall be submitted to the Los Angeles Housing Department for review and approval.

PUBLIC SERVICES

Schools

- **Regulatory Compliance Measure RC-PS-1 (Payment of School Development Fee)** Prior to issuance of a building permit, the General Manager of the City of Los Angeles, Department of Building and Safety, or designee, shall ensure that the Applicant has paid all applicable school facility development fees in accordance with California Government Code Section 65995.

Parks

- **Regulatory Compliance Measure RC-PS-2 (Increased Demand For Parks Or Recreational Facilities):**
 - (*Subdivision*) Pursuant to Section 17.12-A or 17.58 of the Los Angeles Municipal Code, the applicant shall pay the applicable Quimby fees for the construction of dwelling units.
 - (*Apartments*) Pursuant to Section 21.10 of the Los Angeles Municipal Code, the applicant shall pay the Dwelling Unit Construction Tax for construction of apartment buildings.

- **Regulatory Compliance Measure RC-PS-3 (Increase Demand For Parks Or Recreational Facilities – Zone Change)** Pursuant to Section 12.33 of the Los Angeles Municipal Code, the applicant shall pay the applicable fees for the construction of dwelling units.

RECREATION

See RC measures above under Parks.

TRANSPORTATION AND TRAFFIC

- **Regulatory Compliance Measure RC-TT-1 (Increased Vehicle Trips/Congestion - West Side Traffic Fee)** Prior to issuance of a Building Permit, the applicant shall pay a traffic impact fee to the City, based on the requirements of the West Los Angeles Traffic Improvement and Mitigation Specific Plan (WLA TIMP).

PUBLIC UTILITIES AND SERVICE SYSTEMS

Water Supply

- **Regulatory Compliance Measure RC-WS-1 (Fire Water Flow)** The Project Applicant shall consult with the LADBS and LAFD to determine fire flow requirements for the Proposed Project, and will contact a Water Service Representative at the LADWP to order a SAR. This system hydraulic analysis will determine if existing LADWP water supply facilities can provide the proposed fire flow requirements of the Project. If water main or infrastructure upgrades are required, the Applicant would pay for such upgrades, which would be constructed by either the Applicant or LADWP.
- **Regulatory Compliance Measure RC-WS-2 (Green Building Code):** The Project shall implement all applicable mandatory measures within the LA Green Building Code that would have the effect of reducing the Project's water use.
- **Regulatory Compliance Measure RC-WS-3 (New Carwash):** The applicant shall incorporate a water recycling system to the satisfaction of the Department of Building and Safety.
- **Regulatory Compliance Measure RC-WS-4 (Landscape)** The Project shall comply with Ordinance No. 170,978 (Water Management Ordinance), which imposes numerous water conservation measures in landscape, installation, and maintenance (e.g., use drip irrigation and soak hoses in lieu of sprinklers to lower the amount of water lost to evaporation and overspray, set automatic sprinkler systems to irrigate during the early morning or evening hours to minimize water loss due to evaporation, and water less in the cooler months and during the rainy season).

Energy

- **Regulatory Compliance Measure RC-EN-1(Green Building Code):** The Project shall implement all applicable mandatory measures within the LA Green Building Code that would have the effect of reducing the Project's energy use.

Solid Waste

- **Regulatory Compliance Measure RC-SW-1 (Designated Recycling Area)** In compliance with Los Angeles Municipal Code, the proposed Modified Project shall provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals.

- **Regulatory Compliance Measure RC-SW-2 (Construction Waste Recycling)** In order to meet the diversion goals of the California Integrated Waste Management Act and the City of Los Angeles, which will total 70 percent by 2013, the Applicant shall salvage and recycle construction and demolition materials to ensure that a minimum of 70 percent of construction-related solid waste that can be recycled is diverted from the waste stream to be landfilled. Solid waste diversion would be accomplished through the on-site separation of materials and/or by contracting with a solid waste disposal facility that can guarantee a minimum diversion rate of 70 percent. In compliance with the Los Angeles Municipal Code, the General Contractor shall utilize solid waste haulers, contractors, and recyclers who have obtained an Assembly Bill (AB) 939 Compliance Permit from the City of Los Angeles Bureau of Sanitation.
- **Regulatory Compliance Measure RC-SW-3 (Commercial/Multifamily Mandatory Recycling)** In compliance with AB341, recycling bins shall be provided at appropriate locations to promote recycling of paper, metal, glass and other recyclable material. These bins shall be emptied and recycled accordingly as a part of the Proposed Project's regular solid waste disposal program. The Project Applicant shall only contract for waste disposal services with a company that recycles solid waste in compliance with AB341.