

EXHIBIT E

ENVIRONMENTAL CLEARANCE

ENV-2022-1158-CE

E1 – Notice of Exemption & Justification for
Categorical Exemption

E2 – Tree Inventory Report

E3 – LADOT Referral Form

E4 - LADBS Soils Report Approval Letter &
Geotechnical Investigation Report

COUNTY CLERK'S USE

CITY OF LOS ANGELES

OFFICE OF THE CITY CLERK
200 NORTH SPRING STREET, ROOM 395
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT

NOTICE OF EXEMPTION

(PRC Section 21152; CEQA Guidelines Section 15062)

Pursuant to Public Resources Code § 21152(b) and CEQA Guidelines § 15062, the notice should be posted with the County Clerk by mailing the form and posting fee payment to the following address: Los Angeles County Clerk/Recorder, Environmental Notices, P.O. Box 1208, Norwalk, CA 90650. Pursuant to Public Resources Code § 21167 (d), the posting of this notice starts a 35-day statute of limitations on court challenges to reliance on an exemption for the project. Failure to file this notice as provided above, results in the statute of limitations being extended to 180 days.

PARENT CASE NUMBER(S) / REQUESTED ENTITLEMENTS

AA-2022-1157-PMLA-SL-HCA & APCW-2022-1156-SPE-HCA

LEAD CITY AGENCY

City of Los Angeles (Department of City Planning)

CASE NUMBER

ENV-2022-1158-CE

PROJECT TITLE

11835 West Tennessee Place

COUNCIL DISTRICT

11 - Park

PROJECT LOCATION (Street Address and Cross Streets and/or Attached Map)

11835 West Tennessee Place, Los Angeles, CA 90064

☐ Map attached.

PROJECT DESCRIPTION:

☐ Additional page(s) attached.

The proposed project is a small lot subdivision of a 7,461 square foot site into four (4) new small lots, each with a three-story single-family dwelling with a height of 45 feet and two (2) parking spaces. The existing single-family dwelling will be demolished.

The project assumes a worst-case scenario of removing all street trees, in the event of changes to the right-of-way improvement plans after approval of the environmental clearance. However, this environmental analysis does not authorize the removal of any street trees without prior approval of Urban Forestry, in compliance with LAMC Sections 62.169 and 62.170 and their applicable findings. The project may involve the removal of up to nine (9) non-protected trees along the public right-of-way.

NAME OF APPLICANT / OWNER:

Tennessee Place, LLC / Brian Silveira & Associates

CONTACT PERSON (If different from Applicant/Owner above)

Connie Chauv

(AREA CODE) TELEPHONE NUMBER

213 978 0016

EXT.

EXEMPT STATUS: (Check all boxes, and include all exemptions, that apply and provide relevant citations.)

STATE CEQA STATUTE & GUIDELINES

☐ STATUTORY EXEMPTION(S)

Public Resources Code Section(s) _____

☒ CATEGORICAL EXEMPTION(S) (State CEQA Guidelines Sec. 15301-15333 / Class 1-Class 33)CEQA Guideline Section(s) / Class(es) Section 15332 (Class 32)☐ OTHER BASIS FOR EXEMPTION (E.g., CEQA Guidelines Section 15061(b)(3) or (b)(4) or Section 15378(b))

JUSTIFICATION FOR PROJECT EXEMPTION:

☐ Additional page(s) attached

Class 32: In-fill development meeting the conditions described in CEQA Guidelines 15332: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations. (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses. (c) The project site has no value as habitat for endangered, rare or threatened species. (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality. (e) The site can be adequately served by all required utilities and public services.

☐ None of the exceptions in CEQA Guidelines Section 15300.2 to the categorical exemption(s) apply to the Project.☐ The project is identified in one or more of the list of activities in the City of Los Angeles CEQA Guidelines as cited in the justification.

IF FILED BY APPLICANT, ATTACH CERTIFIED DOCUMENT ISSUED BY THE CITY PLANNING DEPARTMENT STATING THAT THE DEPARTMENT HAS FOUND THE PROJECT TO BE EXEMPT.

If different from the applicant, the identity of the person undertaking the project.

CITY STAFF USE ONLY:

CITY STAFF NAME AND SIGNATURE

Connie Chauv

STAFF TITLE

City Planner

ENTITLEMENTS APPROVED

Parcel Map, Specific Plan Exception

DISTRIBUTION: County Clerk, Agency Record

Rev. 6-22-2021

**DEPARTMENT OF
CITY PLANNING**

COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION

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CALIFORNIA**



KAREN BASS
MAYOR

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DEPUTY DIRECTOR

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DEPUTY DIRECTOR

LISA M. WEBBER, AICP
DEPUTY DIRECTOR

**JUSTIFICATION FOR PROJECT EXEMPTION
ENV-2022-1158-CE**

The Planning Department determined that the City of Los Angeles Guidelines for the implementation of the California Environmental Quality Act of 1970 and the CEQA Guidelines designate the subject project as Categorically Exempt under State CEQA Guidelines, Article 19, Section 15332 (Class 32), Case No. ENV-2022-1158-CE.

The proposed project is a small lot subdivision of a 7,461 square foot site into four (4) new small lots, each with a three-story single-family dwelling with a height of 45 feet and two (2) parking spaces. The existing single-family dwelling will be demolished. The project assumes a worst-case scenario of removing all street trees, in the event of changes to the right-of-way improvement plans after approval of the environmental clearance. However, this environmental analysis does not authorize the removal of any street trees without prior approval of Urban Forestry, in compliance with LAMC Sections 62.169 and 62.170 and their applicable findings. The project may involve the removal of up to nine (9) non-protected trees along the public right-of-way.

As a small lot subdivision, and a project which is characterized as in-fill development, the project qualifies for the Class 32 Categorical Exemption.

CEQA Determination – Class 32 Categorical Exemption Applies

A project qualifies for a Class 32 Categorical Exemption if it is developed on an infill site and meets the following criteria:

- (a) **The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations.**

The project site is located in the West Los Angeles Community Plan, and is designated for Medium Residential land uses, with a corresponding zone of R3. The site is zoned R3(EC), and is consistent with the land use designation. The site is located within the Exposition Corridor Transit Neighborhood Plan Specific Plan ("Expo TNP") Subarea 12, which contains additional development standards and environmental standards subject to review through Administrative Clearance, however the applicant requests a Specific Plan Exception pursuant to LAMC Section 11.5.7.F to allow reduced front yards of 5 feet in lieu of the 15 feet otherwise required by Expo TNP Section 4.3.1.A.2 (Case No. APCW-2022-1156-SPE-HCA), which is currently pending. The R3(EC) Zone allows R3 density with the exception that the minimum lot area per dwelling unit shall be 1,200 square feet; therefore the site would be permitted a maximum of six (6) dwelling units. The Expo TNP allows a building height of 45 feet and Floor Area Ratio ("FAR") of 3:1 on the subject site. The proposed project will have a height of 3 stories and 45 feet with a FAR of approximately

2.42:1 which is consistent with the zoning. As demonstrated in the case file, the project is consistent with the General Plan, the applicable West Los Angeles Community Plan designation and policies, and all applicable zoning designations and regulations.

The proposed project aligns with the intent of the West Los Angeles Community Plan including the following:

Goal 1 – A safe, secure, and high quality residential environment for all economic, age, and ethnic segments of the community.

Objective 1-1 - To provide for the preservation of existing housing and for the development of new housing to meet the diverse economic and physical needs of the existing residents and projected population of the Plan area to the year 2010

Policy 1-1.3 - Provide for adequate multi-family residential development.

Objective 1-2 - To reduce vehicular trips and congestion by developing new housing in proximity to adequate services and facilities

Policy 1-2.1 - Locate higher residential densities near commercial centers and major bus routes where public service facilities and infrastructure will support this development.

Objective 1-4 - To promote adequate and affordable housing and increase its accessibility to more segments of the population, especially students and senior citizens.

Policy 1-4.1 - Promote greater individual choice in type, quality, price and location of housing.

Policy 1.4-2 - Ensure that new housing opportunities minimize displacement of residents.

The proposed project also aligns with the purposes of the Expo TNP including the following:

A. Direct growth and accommodate new residential, mixed-use, commercial, and industrial development near transit stations.

G. Create opportunities for the development of new housing that meets the diverse needs and income levels of City residents

I. Implement the policies of the General Plan Framework, which include conserving stable single-family neighborhoods and directing growth toward transit corridors.

O. Ensure new development is pedestrian-oriented, acknowledges the transit stations, and is compatible with surrounding neighborhoods through building design and site planning.

Furthermore, the site is subject to the Expo TNP's zoning and development standards (Section 2) and urban design standards (Section 4) through Administrative Clearance. The Project complies with the Expo TNP's applicable zoning and development standards related to use, density, FAR, height, as well as the Expo TNP's applicable design standards including but not limited to building orientation, architectural treatment, vehicle access and parking design. The approval of the Specific Plan Exception for reduced front yards will be consistent with the principles, intent, and goals of the Specific Plan and any applicable element of the General Plan.

- (b) **The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.**

The subject site is wholly within the City of Los Angeles, on a site that is approximately 0.17 acres (7,461 square feet) and is surrounded by urban uses. Lots adjacent to the subject site are developed with the following urban uses: single family dwellings, multi-family residential buildings, commercial buildings. The subject site is located within one-half mile (2,640 feet) of the Bundy Station of the Los Angeles County Metropolitan Transportation Authority ("Metro") Exposition ("E") Line, which constitutes a Major Transit Stop. There are also several bus stops in the area serving the Santa Monica Big Blue Bus 5, 7, R7, and 15 bus lines.

- (c) **The project site has no value as habitat for endangered, rare or threatened species.**

The site is previously disturbed and surrounded by development and therefore is not, and has no value as, a habitat for endangered, rare or threatened species. The site is currently improved with a single-family dwelling.

Prior to any work on the adjacent public right-of-way, the applicant will be required to obtain approved plans from the Department of Public Works. As there currently is no approved right-of-way improvement plan and for purposes of conservative analysis under CEQA, Planning has analyzed the worst-case potential for removal of all street trees. Note that street trees and protected trees shall not be removed without prior approval of the Board of Public Works/Urban Forestry (BPW) under LAMC Sections 62.161 - 62.171. At the time of preparation of this environmental document, no approvals have been given for any tree removals on-site or in the right-of-way by BPW. The City has required a Tree Report to identify all protected trees/shrubs on the project site and all street trees in the adjacent public right-of-way. There are no protected trees on the subject site or public right-of-way, according to the Tree Inventory Report prepared by The Urban Lumberjack, LLC dated January 19, 2023. The Tree Inventory Report identified nine (9) non-protected trees along the public right-of-way (olive, Indian laurel fig, redwood, primrose, orange, avocado, ornamental pear); there are no (0) protected or non-protected trees on the subject site. However, the Project assumes a worst-case scenario of removing all street trees, in the event of changes to the right-of-way improvement plans after approval of the environmental clearance. However, this analysis does not authorize the removal of any street trees without prior approval of Urban Forestry, in compliance with Los Angeles Municipal Code, Chapter VI, Section 62.169 through 62.170 and their applicable findings. The project may involve the removal of up to nine (9) non-protected trees along the public right-of-way.

Furthermore, the project site does not adjoin any open space or wetlands that could support habitat for endangered, rare or threatened species. Therefore, the site does not contain or have value as habitat for endangered, rare or threatened species and is not located adjacent to any habitat for endangered, rare or threatened species. As such, the proposed project meets this criterion.

(d) **Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.**

The project will be subject to Regulatory Compliance Measures (RCMs), which require compliance with the City of Los Angeles Noise Ordinance, pollutant discharge, dewatering, stormwater mitigations; and Best Management Practices for stormwater runoff.

The Expo TNP contains Environmental Standards to implement the Mitigation and Monitoring Program that were reviewed in the Program EIR. The project is required to comply with these environmental standards. Therefore, the proposed project is required to comply with the following:

- **Mitigation Measure (Air Quality Best Practices):** Projects shall ensure all contractors include the best management practices provided in the bulleted list below in contract specifications:
 - Use properly tuned and maintained equipment.
 - Use diesel-fueled construction equipment to be retrofitted with after treatment products (e.g., engine catalysts) to the extent they are readily available and feasible.
 - Use heavy duty diesel-fueled equipment that uses low NOX diesel fuel to the extent it is readily available and feasible.
 - Use construction equipment that uses low polluting fuels (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent available and feasible.
 - Maintain construction equipment in good operating condition to minimize air pollutants.
 - Project applicants shall ensure that all construction equipment meets or exceeds equivalent emissions performance to that of U.S. Environmental Protection Agency (USEPA) Tier 4 standards for non-road engines. In the event that Tier 4 engines are not available for any off-road equipment larger than 100 horsepower, that equipment shall be equipped with a Tier 3 engine, or an engine that is equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides and diesel particulate matter to no more than Tier 3 levels unless certified by engine manufacturers or the on-site air quality construction mitigation manager that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is “not practical” for the following, as well as other, reasons:
 - There is no available retrofit control device that has been verified by either the CARB or USEPA to control the engine in question to Tier 3;
 - The construction equipment is intended to be on site for five days or less; or
 - Relief may be granted from this requirement if a good faith effort has been made to comply with this requirement and that compliance is not practical.

- The use of a retrofit control device may be terminated immediately, provided that a replacement for the equipment item in question meeting the required controls occurs within ten days of termination of the use, if the equipment would be needed to continue working at this site for more than 15 days after the use of the retrofit control device is terminated, if one of the following conditions exists:
 - The use of the retrofit control device is excessively reducing the normal availability of the construction equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in back pressure;
 - The retrofit control device is causing or is reasonably expected to cause engine damage;
 - The retrofit control device is causing or is reasonably expected to cause a substantial risk to workers or the public; or
 - Any other seriously detrimental cause which has the approval of the project manager prior to implementation of the termination.
- Construction contractors shall use electricity from power poles rather than temporary gasoline or diesel power generators, as feasible.
- Use building materials, paints, sealants, mechanical equipment, and other materials that yield low air pollutants and are nontoxic.
- Construction contractors shall utilize supercompliant architectural coatings as defined by the South Coast Air Quality Management District (Volatile Organic Compound standard of less than ten grams per liter).
- Construction contractors shall utilize materials that do not require painting, as feasible.
- Construction contractors shall use pre-painted construction materials, as feasible.
- **Mitigation Measure (Construction Noise and Vibration):**
 - Haul Routes. Construction haul truck and materials delivery traffic shall avoid residential areas whenever feasible. If no alternatives are available, truck traffic shall be routed on streets with the fewest residences.
 - Construction Staging Areas. The construction contractor shall locate construction staging areas away from Sensitive Land Uses.
 - Construction Noise Barriers. When construction activities are located within 500 feet of Sensitive Land Uses, noise barriers (e.g., temporary walls or piles of excavated material) shall be constructed between activities and Sensitive Land Uses.
 - Vibrations. The construction contractor shall manage construction phasing (scheduling demolition, earthmoving, and ground-impacting operations so as not to occur in the same time period), use low-impact construction technologies, and shall avoid the use of vibrating equipment where possible to avoid construction vibration impacts.
 - Pile Driving Use and Location. Impact pile drivers shall be avoided where possible near Sensitive Land Uses. Drilled piles or the use of a sonic vibratory pile driver are quieter alternatives that shall be utilized where geological conditions permit their use. Noise shrouds shall be used when necessary to reduce noise of pile drilling/driving.
 - Pile Driving Control Measures): The construction contractor shall utilize alternatives to impact pile drivers, such as sonic pile drivers or caisson drills. If geotechnical limitations require the use of pile driving, control measures shall be used to reduce vibration levels. These measures may include, but are not limited to:

- Predrilled holes;
 - Cast-in-place or auger cast piles;
 - Pile cushioning (i.e., a resilient material placed between the driving hammer and the pile);
 - Jetting (i.e., pumping a mixture of air and water through high-pressure nozzles to erode the soil adjacent to the pile); and
 - Non-displacement piles (i.e., piles that achieve capacity from the end bearing rather than the pile shaft).
 - Construction equipment shall be equipped with mufflers that comply with manufacturers' requirements.
 - The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible.
- **Regulatory Compliance Measure (Idling):** 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.

Geotechnical - The applicant has submitted a Geotechnical Investigation Report prepared by A.G.I. Geotechnical, Inc. dated January 12, 2022. RCMs also include the submittal of the Geology and Soils Report to the Department of Building and Safety ("DBS"), and compliance with a Soils Report Approval Letter (Log No. 120346, dated February 17, 2022) which details conditions of approval that must be followed. In addition, the RCMs require that design and construction of the building must conform to the California Building Code, and grading on site shall comply with the City's Landform Grading Manual, as approved by the Department of Building and Safety Grading Division.

Traffic - The Project does not exceed the threshold criteria established by LADOT for preparing a traffic study. The Department of Transportation (LADOT) Referral Form dated December 29, 2022 and the Vehicle Miles Traveled (VMT) calculator indicated that the number of daily vehicle trips will be 31 which is under the threshold of 250 or more daily vehicles trips to require VMT analysis. Therefore, the project does not exceed the threshold criteria established by LADOT for preparing a traffic study and will not have any significant impacts related to traffic.

Noise – The Project must comply with the adopted City of Los Angeles Noise Ordinances No. 144,331 and 161,574 and LAMC Section 41.40 as indicated above in RC-NO-1, LAMC Section 112.05, as well as any subsequent Ordinances, which prohibit the emission or creation of noise beyond certain levels. These Ordinances cover both operational noise levels (i.e., post-construction), and any construction noise impacts. As a result of this mandatory compliance, the proposed Project will not result in any significant noise impacts.

Air Quality – The Project's potential air quality effects were evaluated by estimating the potential construction and operations emissions of criteria pollutants, and comparing those levels to significance thresholds provided by the Southern California Air Quality Management District (SCAQMD). In addition, there are several Regulatory Compliance Measures which regulate air quality-related impacts for projects citywide as noted above.

(e) **The site can be adequately served by all required utilities and public services.**

The project site will be adequately served by all public utilities and services given that the construction of a small lot subdivision will be on a site which has been previously developed and is consistent with the General Plan.

Therefore, the project meets all of the Criteria for the Class 32 Categorical Exemption.

CEQA Section 15300.2: Exceptions to the Use of Categorical Exemptions

There are five (5) Exceptions which must be considered in order to find a project exempt under Class 32:

(a) **Cumulative Impacts.** *All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.*

There is not a succession of known projects of the same type and in the same place as the subject project. Therefore, in conjunction with citywide RCMs and compliance with other applicable regulations, no foreseeable cumulative impacts are expected, and this exception does not apply.

(b) **Significant Effect Due to Unusual Circumstances.** *A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.*

The project proposes a small lot subdivision in an area zoned and designated for such development. All adjacent lots are developed single-family, multi-family residential, and commercial uses, and the subject site is of a similar size and slope to nearby properties. The project proposes a Floor Area Ratio (FAR) of 2.42:1 on a site that is permitted to have an FAR of 3:1 by the site's zoning. The project size and height is not unusual for the vicinity of the subject site, and is similar in scope to other existing multi-family dwellings and proposed future projects in the area. Furthermore, there is no substantial evidence in the administrative record that this project will cause a significant impact. Thus, there are no unusual circumstances which may lead to a significant effect on the environment, and this exception does not apply.

(c) **Scenic Highways.** *A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway.*

The only State Scenic Highway within the City of Los Angeles is the Topanga Canyon State Scenic Highway, State Route 27, which travels through a portion of Topanga State Park. State Route 27 is located approximately 7.3 miles northwest of the subject site. Therefore, the subject site will not create any impacts within a designated state scenic highway, and this exception does not apply.

(d) **Hazardous Waste Sites.** *A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code*

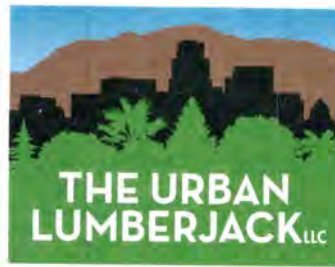
According to Envirostor, the State of California's database of Hazardous Waste Sites, neither the subject site, nor any site in the vicinity, is identified as a hazardous waste site.

- (e) **Historical Resources.** *A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.*

The project site is not listed in the National Register of Historic Places, California Register of Historical Resources, the Los Angeles Historic-Cultural Monuments Register, and/or any local register, and was not found to be a potential historic resource based on the City's HistoricPlacesLA website or SurveyLA, the citywide survey of Los Angeles. As such, the Project would have no impact on historical resources. Based on this, the project will not result in a substantial adverse change to the significance of a historic resource and this exception does not apply.

1-19-2023

Tree Inventory Report
11835 Tennessee Place
Los Angeles, CA 90064
Lot 7 of Tract 1196578
Book 226 Page 5



To Whom It May Concern:

On Thursday, January 19, 2023 I visited the above-referenced to confirm my earlier inventory of the existing tree stock, to determine if there were any specimens on or adjacent to the property which qualify as Protected under the guidelines of City Ordinance 186873 and to determine if there were any City-owned trees which might be impacted by the proposed development.

The 4 tree groups or species protected under City Ordinance 186873 are: All California Native Oaks (*Quercus agrifolia*, *Q. engelmannii*, *Q. lobata* and etc.), the Western Sycamore (*Platanus racemosa*), the Southern California Black Walnut (*Juglans californica californica*) and the California Bay (*Umbrellica californica*).

The 2 Species of shrubs protected by City Ordinance 186873 are: the Mexican Elderberry (*Sambucus Mexicana*) and the Toyon (*Heteromeles arbutifolia*).

None of these trees and shrubs are to be found on or adjacent to this property.

However, this was not my first visit to this property.

Almost exactly a year ago I had visited this property and, based on my misinterpretation of the Survey document I was carrying, I had then reached some erroneous conclusions that were reflected in my Tree Report and in my Index of Trees, dated January 12th, 2022.

The property in question featured then (and features still today) a wooden fence surrounding the totality of the lot and within this fence are to be found the nine trees that I inventoried.

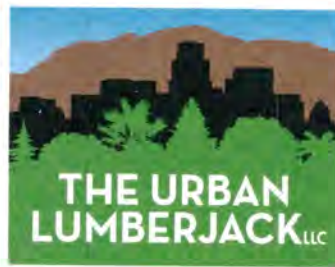
At that time, I was unaware that the fence, which is very close to the curb, was in fact enclosing territory belongs to the City of Los Angeles by virtue of a right of way. It proves to be the case that there is a ten-foot-wide belt of land fronting on both Tennessee Avenue and Tennessee Place as well as in the area that bridges the gap between these two streets near the eastern end of this lot and that this belt represents City-owned land and therefore that eight of the nine trees included in my inventory are actually the property of the City of Los Angeles and under the purview of the Department of Urban Forestry.



The Urban Lumberjack Tree Care • Reports • Consultations
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Tree Inventory Report
11835 Tennessee Place
Los Angeles, CA 90064
Lot 7 of Tract 1196578
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Therefore, eight of the nine trees on the property must be treated with the same deference and afforded the same protection as though they were “conventional” City-owned street trees, regardless of who planted them originally and of who has been caring for them subsequently.

Armed with a now-clear understanding of the realities of whose trees these are, I returned to the lot to see if these trees were in harm’s way from the forthcoming construction.

Once there I discovered that steps will need to be taken to preserve the eight City-owned trees from harm during the course of construction. These steps will be detailed in the Tree Protection Plan and consist of installing temporary fencing surrounding the area of forthcoming construction as well as placement of sheets of 1 1/4” OSB plywood above the soil where the Root Protection Zone (RPZ) of these trees is outside the enclosure of the projected fenced-in enclosure but required to be used as a staging and construction-activity location. The purposes of plating these areas with this OSB “carpet” is to spread the loads of foot traffic and machinery presence, thereby reducing the hazards of undesirable soil compaction.

It is appropriate here to note that one of the nine trees, specifically TREE C on my Modified Tree Site Plan, a Coast Redwood (*Sequoia sempervirens*) has been inaccurately represented on the survey of the property prepared by Pacific Land Consultants and dated 8-11-2021. In their document, as is not uncommon on land surveys, the size and the location and (often) the species of the trees onsite are incorrectly rendered. I wish I had the skills of a licensed surveyor, which I do not, but it must be acknowledged that the surveyor’s task is to determine and render the property lines, not to perform an arboreal inventory.

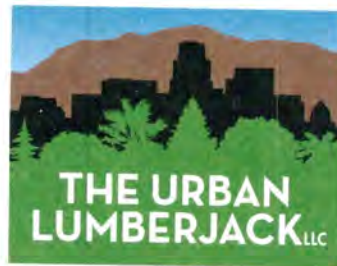
In the case of their document, TREE C is shown as being sited within the public right of way when, in fact, it is on the property-owner’s side of the ten foot band of land constituting the City-owned right of way. Nevertheless, the intention of the builder is to retain this tree and a portion of the Tree Protection Plan will be dedicated to the steps required to afford this tree the necessary protection. Moreover, this tree’s true location is rendered correctly on my Modified Tree Site Plan.



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Tree Inventory Report
11835 Tennessee Place
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If the steps in the Tree Protection Plan are adhered to, there is every reason to expect that the impact of the construction process and that the presence of the intended structures should have no lasting adverse effects to the existing tree stock.

Please feel free if I may provide any additional information and thanks for your time and attention to this matter.

Sincerely yours,

Steve Marshall
ISA Certified Arborist
Member, American Society of Consulting Arborists
The Urban Lumberjack LLC
CA LIC 740167



The Urban Lumberjack Tree Care • Reports • Consultations
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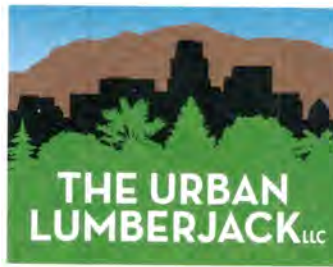
TREE INVENTORY INDEX

11836 Tennessee Place Los Angeles, CA 90064

Please note – north/south and east/west canopy widths are measured at the widest diameter of the living portion of the crowns and are only approximately in the directions listed.

Letter	Species	DSH	Height	Diameter North/ South	Diameter East West	Notes
A.	Olive <i>Olea Europa</i>	12.3"	21'	31'	23'	Thriving. Forms glade with Tree B
B.	Indian Laurel Fig <i>Ficus macrocarpa</i>	15.9"	22'	29'	26'	Thriving. Forms glade with Tree A.
C.	Redwood <i>Sequoia sempervirens</i>	23.7"	48'	28'	25'	Thriving.
D.	Primrose <i>Lagunaria patersonia</i>	6.1", 6.4", 5.4"	14'	18'	21'	Thriving.
E.	Orange <i>Citrus sinensis</i>	3.0", 3.1", 4.1", 12.3"	16'	18'	19'	Adequate. Onset of senescence.
F.	Avocado <i>Persea americana</i>	4.0", 4.3"	11'	17'	10'	Adequate. Forms grove with Tree G.
G.	Avocado <i>Persea americana</i>	5.1"	11'	13'	12'	Adequate. Forms glade with Tree F.
H.	Avocado <i>Persea americana</i>	9.4"	14'	22'	27'	Thriving.
I.	Ornamental Pear <i>Pyrus kawakameii</i>	5.8", 8.3", 8.4"	12'	20'	17'	Declining, features conks at base.

Tree Protection Plan
11835 Tennessee Place
Los Angeles, CA 90064



To Whom It May Concern:

INTRODUCTION

As mentioned in the Tree Inventory Report, there are eight City-owned trees set on an easement abutting the lot found at the above-referenced address and one additional tree worthy of reporting that is located on the privately-owned portion of this property.

Of the eight City-owned trees, the Root Protection Zones (RPZs) of two of them- TREES A and B – will be protected by Fence #1 and by the installation of sheets of 1 1/4" OSB atop the existing grade acting as a temporary "road surface" in order to prevent unacceptable soil compaction.

Of the remaining six trees, – TREES D, E, F, G, H and I – nearly all of their RPZ s will be sufficiently enclosed and protected by the run of Fence #2, promoting confidence that these trees will be unaffected by the forthcoming construction. In that area where the RPZs most closely approach the excavation necessary for the foundation, there will be another area covered by the sheets of OSB.

The remaining tree, TREE C, is the lone Coast Redwood (*Sequoia sempervirens*) which has proven to be sited entirely on the portion of this property that belongs to the property owner. The steps taken to preserve this tree from harm will be, as is the case with TREES A and B as well as TREES D - I, a combination of a fence installation surrounding most of the RPZ as well as the placement of the 1 1/4" OSB

OVERVIEW

As is well known, trees face two perils from construction: The *product* of construction (structures newly present) and the *process* of the construction itself.

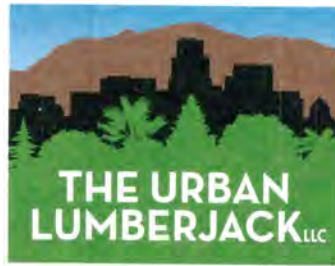
In this case, the *products* of the construction are destined to be sufficiently outside the RPZs of the eight City trees to present little threat. The building come closest to TREES A and B but these are robust specimens of tough species in good to excellent condition and should readily withstand the modest insults to their roots represented by the presence of the proposed new structures. As for the other six City trees, the presence of the new buildings will pose no threat to them at all. TREE C, the non-City-owned Redwood , will lose some root matter to the trenching but not enough to be threatening to this vigorous young specimen



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Tree Protection Plan
11835 Tennessee Place
Los Angeles, CA 90064



Page 2

OVERVIEW (con't)

But there remains the potential perils of the construction *process* which is a rough-and-tumble enterprise. It is for the purpose of mitigating any potential impact from this activity that the fences and OSB plates are to be installed and maintained throughout the construction process.

DESCRIPTIONS

The mitigation measures will occur in three discrete areas.

For purposes of this document, let us assume that Tennessee Place, which borders on one long side of the property, runs in a true west-to-east direction (which is close to the truth). Therefore, the existing building would be north of Tennessee Place and south of Tennessee Avenue and would be sited primarily on the western portion of the lot.

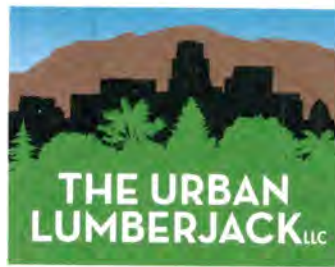
AREA A is near the northwest corner of the property and there we find two City-owned trees, a Mediterranean Olive (*Olio europa*) and an Indian Laurel Fig (*Ficus microcarpa*). Both are sprawling, unruly and vigorous specimens which have seen no pruning in quite some time – see PHOTO A, taken from Tennessee Street and facing south. . As such, both specimens have stretched aggressively towards the south and this will carry their driplines across the line of the forthcoming foundation location, in the Olive's case by perhaps six feet though less so in the case of the Ficus which will surrender perhaps four or five feet of the outside of its canopy. See PHOTO B, taken from the western frontier of the lot and facing east.

But as the rest of the soil in which these trees' RPZs are located is to remain undisturbed, defended by the proposed FENCE #1 and, where space must be allotted to facilitate the activity of construction, by the temporary placement of 1 ¼" thick sheets of OSB (Oriented Strand Boards, a form of plywood) atop the soil, the surrender of a modest amount of their RPZs will not impact these trees in any discernible fashion. As for the necessary pruning they will need to undergo, both species are well-known for their abilities to withstand far more severe canopy diminishment that these two trees face.



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AREA B encompasses the remaining six City-owned specimens and between the protection afforded by the proposed FENCE #2 and, in a small area, the additional protection of an OSB-protected working surface, these trees should be entirely unaware that the construction occurs at all.

In AREA C we find the owner's Redwood. This tree has the most expression of roots and canopy to lose to permit the construction to occur but this specimen is in surprisingly robust condition. It is no secret that the higher average temperatures and ongoing/reoccurring droughts have disadvantaged this noble species in the Southern California area with many specimens in pitiable condition. Here we find an exception – this tree is in excellent condition. FENCE #3 and the OSB platforms surrounding it will protect its roots and the surrender of some root matter and foliage will be offset by pruning practices to diminish windload. The outlook for this tree's survival and future prospects are excellent.

DETAILS OF MITIGATION

FENCE #s 1, 2 and 3 will be constituted of 6' high galvanized chain-link material supported by 8' posts on 8' (or less) centers sunk 2' below grade into holes packed with sand to support these poles but to permit eventual extraction.

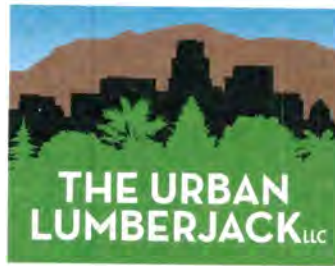
The OSB "road" surfaces that are to be installed before the construction process begins (and which will remain in place until the construction is completed) will be secured one to another by ½" rebar bent into a shape like that of a staple, 18' long on both legs and 12" across the top. Holes will be drilled 6" inside from the 4' edge of these OSB sheets to accommodate these stakes and one leg of each side of each staple will be driven through these holes in each adjoining sheet of OSB, linking the whole into a contiguous surface with 3 staples to connect the 4' edges of each sheet. Where there are no adjoining sheets at the end of each run of these "road" surfaces, 3 "L" shaped rebar stakes will be utilized instead to secure the "free" end of the OSB run.

FENCE # 1 in AREA A will originate adjacent to the existing north-south fence that runs along the western edge of the lot and will run atop the edge of the 10' easement line for 68' before turning 90 degrees to the north to terminate adjacent to the existing wood fence that fronts Tennessee Avenue. See TREE SITE PLAN FENCE #1 detail. As this enclosure is relatively narrow, no gate need be installed for access for irrigation purposes.



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Abutting the south side of that entire fence run will be placed a 4' wide "road" of 1 1/2" thick OSB which will provide a surface on which construction activity can occur without prejudice to the roots below and the soil in which they exist. That "road" location is indicated on the TREE SITE PLAN by cross-hatching.

FENCE #2 in AREA B begins adjacent to the existing wooden fence that fronts Tennessee Avenue 168' from the northwest corner of the lot. It heads south for 10' where it encounters the line of the southern edge of the City's right of way where it bends south-east to run atop that line for 45' before bending south until it encounters the northern edge of the southern City right of way. There it bends west and runs 78' until encountering the existing driveway where it bends south until it reaches a line even with the existing wooden fence, bending a final time for a short run to kiss the end of that wooden fence, completing the enclosure. In the middle of the north-south run of this enclosure will be found a single gate secured with a padlock which can be opened with a key that only the builder himself will possess. This gate is to permit entrance into the enclosure for the purposes of tree maintenance.

There is a 35' long section adjacent this fence where an OSB "road" is to be installed as per the directions for AREA A to afford additional protection to the RPZ.

FENCE #3 in AREA C is dedicated to the protection of the Redwood. The canopy of this specimen reaches beyond the edge of the foundation but fully 85 – 90% of the RPZ of this young tree will be either enclosed within the fence or protected by the OSB "road" and this vigorous young tree should not suffer unduly. In the interests of prudence, the tree will undergo a pruning designed to diminish the density of the canopy to lessen wind resistance and such a canopy "lacing" should be repeated as necessary over the next 5 years in respect of the reduction of the root plate necessary for the construction to occur.

FENCE # 3 is the only fence where all sides of the enclosure will be made of chain-link material. The fence will start its run adjacent the curb fronting Tennessee Place at 70' east of the southwestern corner of the lot. It will then run 30' further east before bending at 90 degrees and running 10' up to the northern edge of the southern right of way where it bends again at 90 degrees to run 30' west before bending 90 degrees a final time to complete the enclosure. No gate will be necessary for this relatively narrow enclosure.

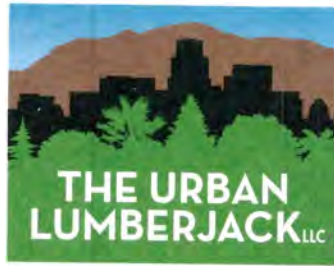
The crosshatched area adjacent this enclosure represents the footprint of an OSB "road" that will be installed as per the directions for the similar structure found in AREA A.



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Tree Protection Plan
11835 Tennessee Place
Los Angeles, CA 90064



Page 5

CONCLUSIONS

If the steps detailed within this tree protection plan are followed we may have every confidence that the trees on this property will withstand the forthcoming construction process with no lasting harm and continue to be an asset to the property and the passersby.

Thanks for your attention to these matters and please feel free to reach out if I may provide any additional information.

Sincerely yours,

Steve Marshall
ISA Certified Arborist
Member, American Society of Consulting Arborists
The Urban Lumberjack LLC
CA LIC 740167



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REFERRAL FORMS:

TRANSPORTATION STUDY ASSESSMENT

DEPARTMENT OF TRANSPORTATION - REFERRAL FORM

RELATED CODE SECTION: Los Angeles Municipal Code Section 16.05 and various code sections.

PURPOSE: The Department of Transportation (LADOT) Referral Form serves as an initial assessment to determine whether a project requires a Transportation Assessment.

GENERAL INFORMATION

- Administrative: Prior to the submittal of a referral form with LADOT, a Planning case must have been filed with the Department of City Planning.
- All new school projects, including by-right projects, must contact LADOT for an assessment of the school's proposed drop-off/pick-up scheme and to determine if any traffic controls, school warning and speed limit signs, school crosswalk and pavement markings, passenger loading zones and school bus loading zones are needed.
- Unless exempted, projects located within a transportation specific plan area may be required to pay a traffic impact assessment fee regardless of the need to prepare a transportation assessment.
- Pursuant to LAMC Section 19.15, a review fee payable to LADOT may be required to process this form. The applicant should contact the appropriate LADOT Development Services Office to arrange payment.
- LADOT's Transportation Assessment Guidelines, VMT Calculator, and VMT Calculator User Guide can be found at <http://ladot.lacity.org>.
- A transportation study is not needed for the following project applications:
 - Ministerial / by-right projects
 - Discretionary projects limited to a request for change in hours of operation
 - Tenant improvement within an existing shopping center for change of tenants
 - Any project only installing a parking lot or parking structure
 - Time extension
 - Single family home (unless part of a subdivision)
- This Referral Form is not intended to address the project's site access plan, driveway dimensions and location, internal circulation elements, dedication and widening, etc. These items require separate review and approval by LADOT.

SPECIAL REQUIREMENTS

When submitting this referral form to LADOT, include the completed documents listed below.

- ☐ Copy of Department of City Planning Application (CP-7771.1).
- ☐ Copy of a fully dimensioned site plan showing all existing and proposed structures, parking and loading areas, driveways, as well as on-site and off-site circulation.
- ☐ If filing for purposes of Site Plan Review, a copy of the Site Plan Review Supplemental Application.
- ☐ Copy of project-specific VMT Calculator¹ analysis results.

TO BE VERIFIED BY PLANNING STAFF PRIOR TO LADOT REVIEW

LADOT DEVELOPMENT SERVICES DIVISION OFFICES: Please route this form for processing to the appropriate LADOT Office as follows:

Metro
213-972-8482
100 S. Main St, 9th Floor
Los Angeles, CA 90012

West LA
213-485-1062
7166 W. Manchester Blvd
Los Angeles, CA 90045

Valley
818-374-4699
6262 Van Nuys Blvd, 3rd Floor
Van Nuys, CA 91401

1. PROJECT INFORMATION

Case Number: APCW-2022-1156-SPE-HCA

Address: 11835 W Tennessee Pl

Project Description: demolition of existing sfd, subdivision of lot, and construction of 4 small lot homes

Seeking Existing Use Credit (will be calculated by LADOT): Yes _____ No ☒ Not sure _____

Applicant Name: Jesi Harris, Brian Silveira & Associates

Applicant E-mail: HarrisLandUse@gmail.com Applicant Phone: (704) 277-7332

Planning Staff Initials: _____ Date: _____

2. PROJECT REFERRAL TABLE

	Land Use (list all)	Size / Unit	Daily Trips ¹
Proposed ¹	Residential <u>Single Family</u>	4	31
Total trips ¹ :			<u>31</u>
a. Does the proposed project involve a discretionary action? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
b. Would the proposed project generate 250 or more daily vehicle trips ² ? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
c. If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a heavy rail, light rail, or bus rapid transit station ³ ? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
If YES to a. and b. or c. , or to all of the above, the Project <u>must</u> be referred to LADOT for further assessment.			
Verified by: Planning Staff Name: <u>CONNIE CHAUV</u>		Phone: <u>213-978-0016</u>	
Signature: <u>Connie Chauv</u>		Date: <u>12/29/2022</u>	

¹ Qualifying Existing Use to be determined by LADOT staff on following page, per LADOT's Transportation Assessment Guidelines.

² To calculate the project's total daily trips, use the VMT Calculator. Under 'Project Information', enter the project address, land use type, and intensity of all proposed land uses. Select the '+' icon to enter each land use. After you enter the information, copy the 'Daily Vehicle Trips' number into the total trips in this table. Do not consider any existing use information for screening purposes. For additional questions, consult LADOT's [VMT Calculator User Guide](#) and the LADOT Transportation Assessment Guidelines (available on the LADOT website).

³ Relevant transit lines include: Metro Red, Purple, Blue, Green, Gold, Expo, Orange, and Silver line stations; and Metrolink stations.

TO BE COMPLETED BY LADOT

3. PROJECT INFORMATION

	Land Use (list all)	Size / Unit	Daily Trips
Proposed			
	Total new trips:		
Existing			
	Total existing trips:		
	Net Increase / Decrease (+ or -)		

- a. Is the project a single retail use that is less than 50,000 square feet? Yes ☐ No ☐
- b. Would the project generate a net increase of 250 or more daily vehicle trips? Yes ☐ No ☐
- c. Would the project result in a net increase in daily VMT? Yes ☐ No ☐
- d. If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a heavy rail, light rail, or bus rapid transit station? Yes ☐ No ☐
- e. Does the project trigger Site Plan Review (LAMC 16.05)? Yes ☐ No ☐
- f. Project size:
- i. Would the project generate a net increase of 1,000 or more daily vehicle trips? Yes ☐ No ☐
- ii. Is the project's frontage 250 linear feet or more along a street classified as an Avenue or Boulevard per the City's General Plan? Yes ☐ No ☐
- iii. Is the project's building frontage encompassing an entire block along a street classified as an Avenue or Boulevard per the City's General Plan? Yes ☐ No ☐

VTM Analysis (CEQA Review)

If **YES** to **a.** and **NO** to **d.** a VMT analysis is **NOT** required.

If **YES** to both **b.** and **c.**; or to **d.** a VMT analysis **is** required.

Access, Safety, and Circulation Assessment (Corrective Conditions)

If **YES** to **b.**, a project access, safety, and circulation evaluation may be required.

If **YES** to **e.** and either **f.i.**, **f.ii.**, or **f.iii.**, an access assessment may be required.

LADOT Comments:

Please note that this form is not intended to address the project's site access plan, driveway dimensions and location, internal circulation elements, dedication and widening, etc. These items require separate review and approval by LADOT. Qualifying Existing Use to be determined per LADOT's Transportation Assessment Guidelines.

4. Specific Plan with Trip Fee or TDM Requirements: **Yes** ☐ **No** ☐

Fee Calculation Estimate: _____

VMT Analysis Required (Question b. satisfied): **Yes** ☐ **No** ☐

Access, Safety, and Circulation Evaluation Required (Question b. satisfied): **Yes** ☐ **No** ☐

Access Assessment Required (Question b., e., and either f.i., f.ii. or f.iii satisfied): **Yes** ☐ **No** ☐

Prepared by DOT Staff Name: _____ Phone: _____

Signature: _____ Date: _____

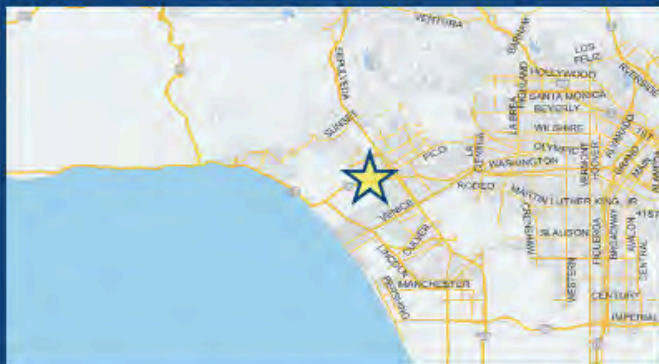
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Tennessee Strait Co Subdivision Project

Scenario:

Address: 11835 W TENNESSEE PL 30304



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Housing Single Family	1	DU

[Click here to add a single custom land use type \(will be included in the above list\)](#)

Proposed Project Land Use

Land Use Type	Value	Unit
Housing Single Family	4	DU

[Click here to add a single custom land use type \(will be included in the above list\)](#)

[Reset all user inputs \(clean template\)](#)

Project Screening Summary

Existing Land Use	Proposed Project
7 Daily Vehicle Trips	31 Daily Vehicle Trips
41 Daily VMT	185 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **24**
Net Daily Trips

The net increase in daily VMT ≤ 0 **144**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **0.000**
ksf

The proposed project is not required to perform VMT analysis.

BOARD OF
BUILDING AND SAFETY
COMMISSIONERS

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DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

OSAMA YOUNAN, P.E.
GENERAL MANAGER
SUPERINTENDENT OF BUILDING

SOILS REPORT APPROVAL LETTER

February 17, 2022

LOG # 120346
SOILS/GEOLOGY FILE - 2
LIQ

MDM Builders Group
541 S. Spring St. #213
Los Angeles, CA 90013

TRACT: 11968
LOT(S): 7
LOCATION: 11835 W. Tennessee Pl.

<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	31-6013-00	01/12/2022	AGI Geotechnical, Inc.

The Grading Division of the Department of Building and Safety has reviewed the referenced report that provide recommendations for the proposed 4 unit, 3 story residential structures. The earth materials at the subsurface exploration locations consist of native soils. The consultants recommend to support the proposed structure(s) on conventional foundations bearing on properly placed fill.

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 report/s demonstrates that the site soils are subject to liquefaction. However, these settlement magnitudes are considered by the Department to be within acceptable levels. The requirements of the 2020 City of Los Angeles Building Code have been satisfied.

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 report is acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2020 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. 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).
2. All recommendations of the report that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
3. 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.
4. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).
5. 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.
6. 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).
7. 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 three feet whichever is greater (7011.3).
8. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
9. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
10. 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).
11. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by using ABC slot cuts. 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)
12. 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)

13. 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).
14. Unsurcharged temporary excavation may be cut vertical up to 5 feet.
15. 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.
16. All foundations shall derive entire support from properly placed fill, as recommended.
17. 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.
18. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2017-116 "Foundation Design for Expansive Soils" (1803.5.3).
19. 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.
20. 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).
21. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.
22. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
23. 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 & 1705.8).
24. 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)

25. 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).
26. Installation of shoring, underpinning, slot cutting and/or pile excavations shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).
27. 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).
28. No footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.


ALAN DANG
Structural Engineering Associate II

AD/ad
Log No. 120346
213-482-0480

cc: AGI Geotechnical, Inc., Project Consultant
WL District Office

CITY OF LOS ANGELES
DEPARTMENT OF BUILDING AND SAFETY
Grading Division

WLA District	Log No. 120344
-----------------	-----------------------

Date: 1/19/22

APPLICATION FOR REVIEW OF TECHNICAL REPORTS

INSTRUCTIONS

- A. Address all communications to the Grading Division, LADBS, 221 N. Figueroa St., 12th Fl., Los Angeles, CA 90012
Telephone No. (213)482-0480.
- B. Submit two copies (three for subdivisions) of reports, one "pdf" copy of the report on a CD-Rom or flash drive,
and one copy of application with items "1" through "10" completed.
- C. Check should be made to the City of Los Angeles.

1. LEGAL DESCRIPTION

Tract: 11968

Block: _____ Lots: 7

3. OWNER: M.D.M. Builders Group

Address: 541 S. Spring St. #213

City: Los Angeles Zip: 90013

Phone (Daytime): 818-785-5244

2. PROJECT ADDRESS:

11835 W. Tennessee Pl., Los Angeles

4. APPLICANT AGI GEOTECHNICAL, INC.

Address: 16555 SHERMAN WAY UNIT A

City: VAN NUYS Zip: 91406

Phone (Daytime): 818-785-5244

E-mail address: frank@agigeo.com

5. Report(s) Prepared by: AGI GEOTECHNICAL, INC. **6. Report Date(s):** 1/12/22-geotechnical-31-6013-00

7. Status of project: ☐ Proposed ☒ Under Construction ☐ Storm Damage

8. Previous site reports? ☐ YES if yes, give date(s) of report(s) and name of company who prepared report(s)

9. Previous Department actions? ☐ YES if yes, provide dates and attach a copy to expedite processing.

Dates: Frank

10. Applicant Signature: Beristain Position: Project Admin.

Digitally signed by Frank
Beristain
DN: cn=Frank Beristain,
ou=AGI GEOTECHNICAL, INC.,
c=US
Date: 2022.01.19 10:11:12
+0800

(DEPARTMENT USE ONLY)

REVIEW REQUESTED	FEES	REVIEW REQUESTED	FEES
<input checked="" type="checkbox"/> Soils Engineering	<u>363.00</u>	No. of Lots	
<input type="checkbox"/> Geology		No. of Acres	
<input type="checkbox"/> Combined Soils Engr. & Geol.		<input type="checkbox"/> Division of Land	
<input type="checkbox"/> Supplemental		Other	
<input type="checkbox"/> Combined Supplemental		<input checked="" type="checkbox"/> Expedite	<u>181.50</u>
<input type="checkbox"/> Import-Export Route		<input type="checkbox"/> Response to Correction	
Cubic Yards: _____		<input type="checkbox"/> Expedite ONLY	
		Sub-total	<u>544.50</u>
		One-Stop Surcharge	<u>129.80</u>
		TOTAL FEE	\$674.30

Fee Due: 674.30
Fee Verified By: GM Date: 1-27-22
(Cashier Use Only)

Los Angeles Department of Building
and Safety
Van Nuys 01/27/2022 10:01:19 AM
User ID: rkhachatrian
Receipt Ref Nbr: 2022027003-6
Transaction ID: 2022027003-8-1
GRADING REPORT #363.00
SYSTEMS DEV SURCH #32.67
GEN PLAN MAINT SURCH #38.12
DEV SERV CENTER SURCH #16.34
CITY PLAN SURCH #32.67
PLAN APPROVAL FEE #181.50
MISC OTHER #10.00
Amount Paid: \$674.30
PCIS Number: NA
Job Address: 11835 W. TENNESSEE PL
Owners Name: M.D.M. BUILDERS GROUP

ACTION BY:

THE REPORT IS: ☐ NOT APPROVED

☐ APPROVED WITH CONDITIONS

☐ BELOW

☐ ATTACHED

For Geology

Date

For Soils

Date

GEOTECHNICAL INVESTIGATION

Proposed 4-Unit Small Lot Subdivision

APN: 4259-037-003

Tract: 11968; Lot: 7

11835 W. Tennessee Place

Los Angeles, California

January 12, 2022

Project No. 31-6013-00

Prepared for:

M.D.M. Builders Group
Attn: Mr. Michael Librush
541 S. Spring St., Unit 213
Los Angeles, CA 90013



A. G. I. G E O T E C H N I C A L , I N C .

16555 Sherman Way, Suite A - Van Nuys, CA 91406 - Office: (818) 785-5244 - Facsimile: (818) 785-6251

January 12, 2022

Project No. 31-6013-00

M.D.M. Builders Group
541 S. Spring St., Unit 213
Los Angeles, CA 90013

Attention: Mr. Michael Librush

Subject: **GEOTECHNICAL INVESTIGATION**
Proposed 4-Unit Small Lot Subdivision
APN: 4259-037-003
Tract: 11968; Lot: 7
11835 W. Tennessee Place
Los Angeles, California

Dear Mr. Librush:

This report presents the results of our investigation and opinions regarding the soils engineering factors affecting the development of the subject site. The investigation was performed in November and December 2021 and January 2022, and consisted of field exploration, laboratory testing, engineering analyses of field and laboratory data, and preparation of this report. *Determination of the presence or not of hazardous or toxic materials in the on-site soils is beyond the scope of this investigation.*

If you have any questions regarding this report, please contact this office.

Respectfully submitted,
A.G.I. GEOTECHNICAL, INC.

Bruce Smith, R.G.E. 2673
Senior Engineer

MBS:wb



Distribution: (3) M.D.M. Builders Group

Enclosures: Location Map, Figure 1
Site Plan, Figure 2
Plot Plan, Figure 3
Boring Logs
Laboratory Test Results
U.S. Seismic Design Maps
USGS Deaggregations
Liquefaction Analyses
Shrinkage Calculation
Bearing Capacity Analysis
Slot Cut Stability Analysis
Quadrangle Location Map
Groundwater Map



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INTRODUCTION

DESCRIPTION OF SITE

The subject site is located on the southwestern corner of Tennessee Avenue, Tennessee Place and Granville Avenue, in the city of Los Angeles, California. The site is practically level and presently occupied by a 1-story residence, hardscape, and landscaped areas. Trees are present. The site is bound on the southwest by developed properties. The location of the site is shown on the enclosed Location Map, Figure 1.

PROPOSED SITE DEVELOPMENT

The proposed development consists of a 4-unit small lot subdivision comprised of 3-story residential buildings with parking on-grade. Structural loads are anticipated to be relatively light, less than about ten kips per linear foot for continuous footings and about 100 kips for column loads. The proposed development is shown on the enclosed Site Plan, Figure 2.

FIELD EXPLORATION

Subsurface conditions were explored by drilling two exploratory borings at the approximate locations shown on the Plot Plan, Figure 3. The borings were drilled to a maximum depth of 51.5 feet below existing grade with Standard Penetration Tests (SPT) performed at selected depths. The borings were drilled using a truck mounted 8-inch diameter hollow stem flight auger.

Drilling of the borings was supervised by our field engineer who logged the materials brought up from the borings. Undisturbed and bulk samples were collected at depths appropriate to the investigation. Undisturbed samples were sealed immediately in watertight containers for shipment to our laboratory. Soil samplers used in our investigation included a 2.50-inch I.D. split barrel sampler lined with 1-inch brass rings (Modified California Sampler, MC) and a 1.5-inch I.D. Standard Penetration Test (SPT) split barrel sampler. Samplers used in the exploratory borings were driven to a depth of 18 inches with a 140-pound hammer falling from a height of 30 inches. The number of blows to drive the samplers 18 inches in three six-inch increments is reported on the enclosed Logs. Blow counts for the final 12 inches of the 1.5-inch sampler are the "N" Values from the SPTs.



SUBSURFACE CONDITIONS

Soil Profile

The existing soil profile, as depicted in the borings, consists of alluvium comprised of light brown to dark brown lean clays, silty sands, and clayey sands in a slightly moist to wet and stiff to very stiff or medium dense to very dense condition, except for the upper five feet which were porous. For a more detailed description of the soils encountered in the exploratory borings, please refer to the Boring Logs enclosed with this report.

Groundwater

Groundwater was encountered in exploratory Boring B-1 at a depth of about 45 feet below existing ground surface. According to the "Seismic Hazard Evaluation of the Beverly Hills 7.5-Minute Quadrangle, Los Angeles County, California" dated 1998 by the Department of Conservation - Division of Mines and Geology, historically highest groundwater level has been about 30 feet below ground surface. The groundwater level may fluctuate because of seasonal changes, injection or extraction of water, variations in temperature and other causes.

LIQUEFACTION POTENTIAL (CYCLIC MOBILITY)

Liquefaction and dry sand settlement analyses were performed using analytical procedures described in Tokimatsu, K., and Seed, H. (1987), *Evaluation of Settlements in Sands Due to Earthquake Shaking*, Youd, T.L., and Idriss, I.M. (1997) "Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils", Technical Report NCEER-97-0022, FHWA. Foundation type selection was based on the criteria contained in the City of Los Angeles' memorandum dated July 16, 2014. Seismic settlements discussed herein include both liquefaction and dry sand settlements.

Liquefaction calculations were performed for a 475-year return period and a 2475-year return period. The peak ground acceleration for 475 years was evaluated using $\frac{2}{3}$ of the PGA_M and a required factor of safety of 1.1. Peak ground acceleration for 2475 years was evaluated using the full PGA_M and a required factor of safety of 1.0. Seismic settlement calculations are enclosed. Results of the liquefaction evaluation are summarized below:



Return Period	Peak Ground Acceleration ⁽¹⁾		Moment Magnitude Mw ⁽²⁾	Factor of Safety	Calculated Total Settlement	Calculated Differential Settlement
475 years	2/3 PGA _M	0.614g	6.66	1.10	0.5"	0.33"
2475 years	100% PGA _M	0.921g	6.80	1.00	3.91"	2.61"

NOTES: 1) From U.S. Seismic Design Maps website: <https://seismicmaps.org/>
 2) From USGS Deaggregation website: <https://earthquake.usgs.gov/hazards/interactive/>

The 0.50 inch total and 0.33 inch differential settlements from the 475 year calculation are the design settlements and should be acceptable, but must be combined with the predicted static settlements for final verification. Static settlements are discussed subsequently in this report. The 3.91 inch total and 2.61 inch differential settlement from the 2475 year analysis present risk of cracking of the structure, but not collapse.

ON-SITE INFILTRATION FACILITIES

The soil profile, as depicted in the borings to the depth explored, consists of lean clays, silty sands, and clayey sands with high fine percentages in a slightly moist to wet and stiff to very stiff or medium dense to very dense condition. These soils generally have low permeability and they carry the potential for creating perched water conditions. Based on the soils present at the site to the depths explored, it is our opinion that the percolation characteristics of these soils would **not** be suitable for use on a properly functioning infiltration-type of SUSMP system on the subject property.

SEISMICITY AND SEISMIC DESIGN CRITERIA

Future structures should be designed by the structural engineer in accordance with the applicable Seismic Building Code. Based on our investigation, the subject site is classified as **Site Class D** in accordance with the 2020 Los Angeles Building Code (2020 LABC) and the 2019 California Building Code (2019 CBC).

Per Section 11.4.8 of ASCE 7-16, structures shall be designed for the Seismic Response Coefficient C_s determined by Eq. (12.8-2) for values of $T \leq 1.5 T_s$, as 1.5 times the value computed in accordance with Eq. (12.8-3) for $T_L \geq T > 1.5 T_s$, or as 1.5 times the value computed in accordance with Eq. 37.5 (12.8-4) for $T > T_L$ where:

T = the fundamental period of the building

$T_s = S_{D1}/S_{DS}$

T_L = long-period transition period



The Design Spectral Response Acceleration Parameters presented on the following table generated by the U.S. Seismic Design Map Website (<https://seismicmaps.org>), may be utilized for seismic design:

2020 LABC / 2019 CBC Seismic Design Parameters (Site Class D)

Site Location (Latitude, Longitude): (34.0311 N, 118.4492 W)				
Spectral Period, T (Seconds)	MCE _R Ground Motion (g)	Site-Modified Spectral Acceleration (g)		Seismic Design Acceleration (g)
0.2	S _S = 1.962	F _a = 1.0	S _{MS} = 1.962	S _{DS} = 1.308
1.0	S ₁ = 0.700	F _v = 1.7	S _{M1} = 1.190	S _{D1} = 0.793
Site Modified Peak Ground Acceleration PGA _M = 0.921g				
Long-Period Transition Period T _L = 8 Seconds				
Seismic Design Category = D				

If the Seismic Response Coefficient C_s recommended above is not applicable for structural design, our office can perform a Site-Specific Ground Motion Hazard Analysis upon the project structural engineer's request.

Present building codes and construction practices, and the recommendations presented in this report, are intended to minimize structural damage to buildings and prevent loss of life as a result of a moderate or a major earthquake; they are not intended to totally prevent damage to structures, graded slopes and natural hillsides. While it may be possible to design structures and graded slopes to withstand strong ground motion, the construction costs associated with such designs are usually prohibitive, and the design restrictions may be severely limiting. Earthquake insurance is often the only economically feasible form of protection for your property against major earthquake damage. Damage to sidewalks, steps, decks, patios and similar exterior improvements can be expected as these are not normally controlled by the Building Code.

LABORATORY TESTING

CLASSIFICATION

Soils were classified visually according to the Unified Soil Classification System. Unit weight and moisture determinations were performed for each undisturbed sample. Results of density and moisture determinations, together with classifications, are shown on the enclosed Boring Logs.

LOAD CONSOLIDATION TESTS (ASTM:D-2435)

To investigate the settlement of the soils under the pressure of the proposed foundations, consolidation tests were performed on undisturbed samples of the on-site soils. Axial loads were carried to a maximum of 9,400lb/ft². To hasten consolidation, investigate the collapse potential and simulate possible adverse field conditions, water was added at an axial load of 2,350lb/ft². Compressibility of the soils within the zone of significant stress was investigated and the result considered in our engineering analyses. Graphic plots of the load consolidation curves are included in this report.

DIRECT SHEAR TESTS (ASTM:D-3080)

In order to determine the shear strength of the soils, direct shear tests were performed on remolded and undisturbed samples of the on-site soils. The remolded sample was tested at 90% of the maximum dry density. To simulate possible adverse field conditions, the samples were saturated prior to shearing. Graphic summaries of the test results, including moisture content at the time of shearing, are included with this report.

GRAIN SIZE DISTRIBUTION (ASTM:D-422-63(2002))

To aid in classification, sieve analyses, an Atterberg limits test, and a hydrometer test were performed on typical samples of the on-site soils. Results of the tests are shown on the enclosed Grain Size Distribution Charts and Boring Logs.

MAXIMUM DENSITY/OPTIMUM MOISTURE (ASTM:D-1557)

Maximum density/optimum moisture content relationship was determined for a typical sample of the upper soils. The test was conducted in accordance with the ASTM:D-1557 standard. A graphic summary of the test result is enclosed.

EXPANSION TEST (ASTM:D-4829)

An expansion test was performed on a representative sample of the on-site soils in accordance with ASTM:D-4829 to evaluate its volume change with increasing moisture conditions. The result is as follows:

Location	Depth (ft.)	Expansion Index	Potential Expansion
B-1	0-5	54	Medium

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

The property is suitable for the proposed construction from a geotechnical engineering standpoint. Construction plans should consider the appropriate soils engineering features of the site. On-site soils are stiff to very stiff or medium dense to very dense. The upper five feet of the on-site soils are porous. Groundwater was encountered in Boring B-1 at a depth of about 45 feet below existing surface. The on-site soils have a medium potential expansion.

SITE PREPARATION

Debris due to demolition, vegetation and underground utility lines to be abandoned should be removed from the site. After site clearance, the upper five feet of the on-site soils below finished pad elevation should be removed and placed back as compacted fill. The removal and compaction should extend beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings or a minimum of three feet whichever is greater (LABC 7011.3). The compacted fill should be placed to a minimum thickness of twelve inches below the bottom of footings. After removal, the exposed surface should be scarified to a depth of eight inches, brought to about 3% above optimum moisture content and compacted to at least 90% of the maximum dry density as determined by ASTM:D-1557. Minimal shrinkage value of less than about 5% is expected for the on-site soils when placed as compacted fill.

All excavations resulting from removal of existing obstructions (e.g. tree roots, old foundations) should be backfilled with soil compacted to at least 90% of the maximum dry density as determined by ASTM:D-1557.

If any cesspools or seepage pits are encountered during grading, they should be backfilled with vibrated gravel or slurry mix to five feet below finish grade. The upper five feet should be backfilled with soil compacted by mechanical means.

FILL PLACEMENT

Fill soils should be cleared of deleterious debris, placed in 6- to 8-inch lifts, brought to about 3% above optimum moisture content, and compacted to at least 90% of the maximum dry density as determined by ASTM:D-1557. **The placement of the fill should be performed under our observation and testing.**



FOUNDATION DESIGN

Type of Foundation

The proposed buildings may be supported on conventional shallow isolated and continuous footings. Exterior and interior footings should be founded on compacted fill soils with a minimum embedment of 24 inches below lowest adjacent grade. Minimum reinforcement in continuous footings should consist of four No. 4 bars: two placed about four inches from the top and two placed about four inches from the bottom.

Soil Bearing Pressures

Footings founded on compacted fill may be designed for a maximum soil bearing pressure of 3,500lb/ft² for footings at least 24 inches wide. The recommended soil bearing pressure may be increased by 400lb/ft² per each additional foot of embedment over 24 inches and by 200lb/ft² per each additional foot in width over 24 inches up to 5,000lb/ft². In addition, the recommended soil bearing pressures may be increased by one-third when designing for wind and seismic forces.

Expected Settlements

If foundations are supported on compacted fill and are sized for the recommended bearing pressures, static differential settlements are not expected to exceed 0.25 inch in a 30-foot span. Total static settlements are anticipated to be less than 0.5 inch. When combined with the 0.50 inch total seismic settlement and 0.33 inch differential seismic settlement, the overall total and differential settlements should not exceed about 1.0 inches and 0.6 inch, respectively.

FLOOR SLABS-ON-GRADE

Concrete floor slabs-on-grade thickness and reinforcement should reflect the anticipated use of the slabs and should be designed by the structural engineer. They should be a minimum of four inches thick with minimum reinforcement consisting of No. 4 deformed bars spaced a maximum of 16 inches each way and should be underlain by four inches of ½ inch or larger clean aggregate base. In areas where floor coverings or equipment that are sensitive to moisture are contemplated, a 10-mil visqueen moisture barrier should be placed on the base in direct contact with the concrete slab. Cracking of reinforced concrete is a relatively common occurrence. Some cracking of reinforced concrete, including slabs, can be anticipated. Irregularities in new slabs are also common. If cracking of slabs cannot be tolerated, heavily reinforced structural slabs are an option.

The recommendations presented above are intended to reduce the potential for random cracking to which concrete flatwork is often prone. Judicious spacing of crack control joints has proven effective in further reducing random cracking. A structural engineer may recommend the desirable spacing. Usually, the crack control joints are placed 12 to 15 feet apart in each direction. Factors influencing cracking of concrete flatwork, (other than expansion, settlement and creep of soils), and which should be avoided, include: poor-quality concrete, excessive time passing between the mixing and placement of the concrete (the concrete should be rejected if this time interval exceeds two hours), temperature and wind conditions at the time of placement of the concrete, curing of the concrete and workmanship. The concrete should be maintained in a moist condition (curing) for at least the first seven days after concrete placement. During hot weather, proper attention should be given to the ingredients, production methods, handling, placement, protection and curing to prevent excessive concrete temperature or water evaporation. In hot weather and windy conditions, water evaporates more rapidly from the surface of the concrete flatwork. This requires more frequent moistening of the concrete during the curing period or the use of a protective chemical film to prevent evaporation.

LATERAL RESISTANCE

An allowable lateral bearing of 250lb/ft² per foot of depth may be assumed up to a maximum of 3,500lb/ft². A coefficient of friction between soil and concrete of 0.3 may be used.

LATERAL LOADS

There are no retaining walls proposed. Backfill for retaining walls, if any, should consist of granular, free-draining material. Cantilevered retaining walls should be designed to resist an active pressure of 45lb/ft³ equivalent fluid pressure (EFP). Restrained walls should be designed for an earth pressure of 60lb/ft³ EFP. Walls subject to surcharge loads should be designed to include the additional lateral pressure. Walls should have adequate drainage to prevent build-up of hydrostatic pressure.

DRAINAGE

Adequate drainage at the site is essential and it should be provided. Rain gutters should be connected to an appropriate drainage system and carried away from the buildings to the street. Yard drainage should be kept adequate to prevent ponding of water and saturation of soils. Water should be directed to the street in an approved manner. Future performance of the buildings and any other structures will be significantly influenced by the site drainage conditions.

PLANTERS

Planters and lawns adjacent to the buildings should be avoided. If planters are planned adjacent to the buildings, they should have the bottom and walls waterproofed and a drain installed to carry irrigation water away from footing areas.

CONSTRUCTION CUTS

Construction cuts up to five feet high may be excavated vertically for their entire length and height provided they do not undermine adjacent buildings or property line walls; otherwise, the construction cuts will need to be excavated using the 'A, B, C' slot-cutting method. If the slot-cutting method is used, the cut should be opened at a gradient of 1:1 first, then each slot opened, and the removed soils replaced as engineered compacted fill before the subsequent slot is opened. The slots should not exceed eight feet in width and five feet in height. If the construction cuts are to remain open for more than two weeks or if rain is expected while they are open, they should be covered by a plastic membrane kept in place by holding blocks or driven re-bars at the top and bottom of the membrane. No equipment or personnel should stand closer than ten feet from the top of the temporary cut. **We should examine the construction cuts periodically to verify performance.** All construction cuts should comply with the State of California Construction Safety Orders (CAL/OSHA).

WORKMAN SAFETY-EXCAVATIONS

It is essential for the contractor to provide adequate shoring and safety equipment as required by the State or Federal OSHA regulations. All regulations of the State or Federal OSHA should be followed before allowing workmen in a trench or other excavation. If excavations are to be made during the rainy season, particular care should be given to ensure that berms or other devices will prevent surface water from flowing over the top of the excavation or ponding at the top of the excavations.

RECOMMENDED INSPECTIONS

It is strongly recommended (and is a condition of use of this report), that the developer ensures that each phase of construction be properly inspected and approved by the local Building Department official.

OBSERVATION

Removal bottoms are to be examined and approved by the City inspector and us before any fill is placed. We need to examine footing excavations prior to forming or placement of reinforcement steel to confirm that soil conditions meet the requirements set by this report. Footing excavations should be kept moist and concrete should be placed as soon as possible after excavations are completed, examined and approved by us and the City inspector.

REVIEW

The geotechnical consultants shall review and sign the plans and specifications.

REGULATORY AGENCY REVIEW AND ADDITIONAL CONSULTING

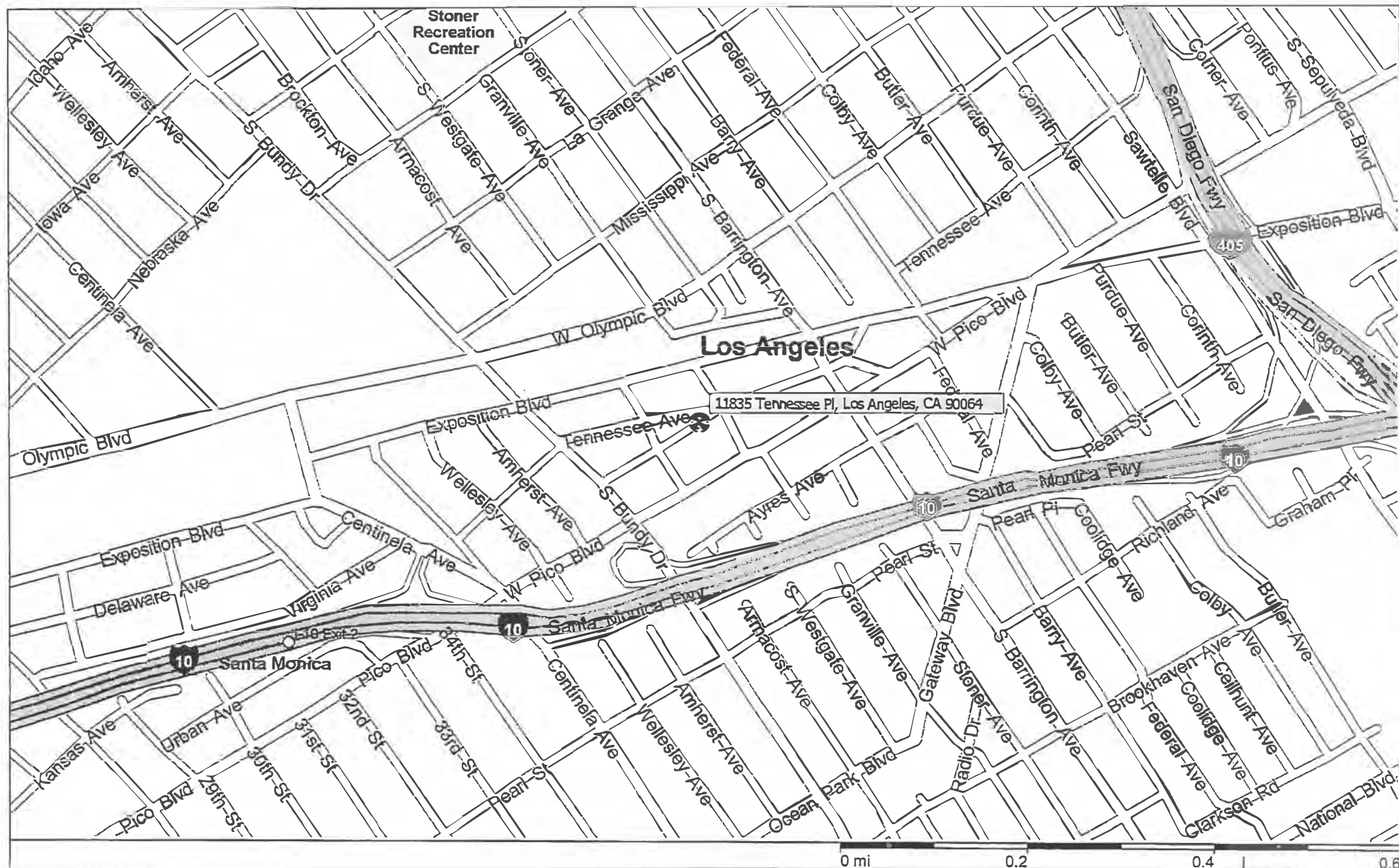
All geotechnical and/or engineering geologic aspects of the proposed development are subject to review and approval by the government reviewing agency. The government reviewing agency may approve or deny any portion of the proposed development which may require additional geotechnical services by this office. Additional geotechnical services may include review responses, supplemental letters, plan reviews, construction/site observations, meetings, etc. The fees for generating additional reports, letters, exploration, analyses, etc. will be billed on a time and material basis.

COMMENTS

The conclusions and recommendations presented in this report are based on research, site observations, and limited subsurface information. The conclusions and recommendations presented are based on the supposition that subsurface conditions do not vary significantly from those indicated. Although no significant variations in subsurface conditions are anticipated, the possibility of significant variations cannot be ruled out. If such conditions are encountered, this consultant should be contacted immediately to consider the need for modification of this project.

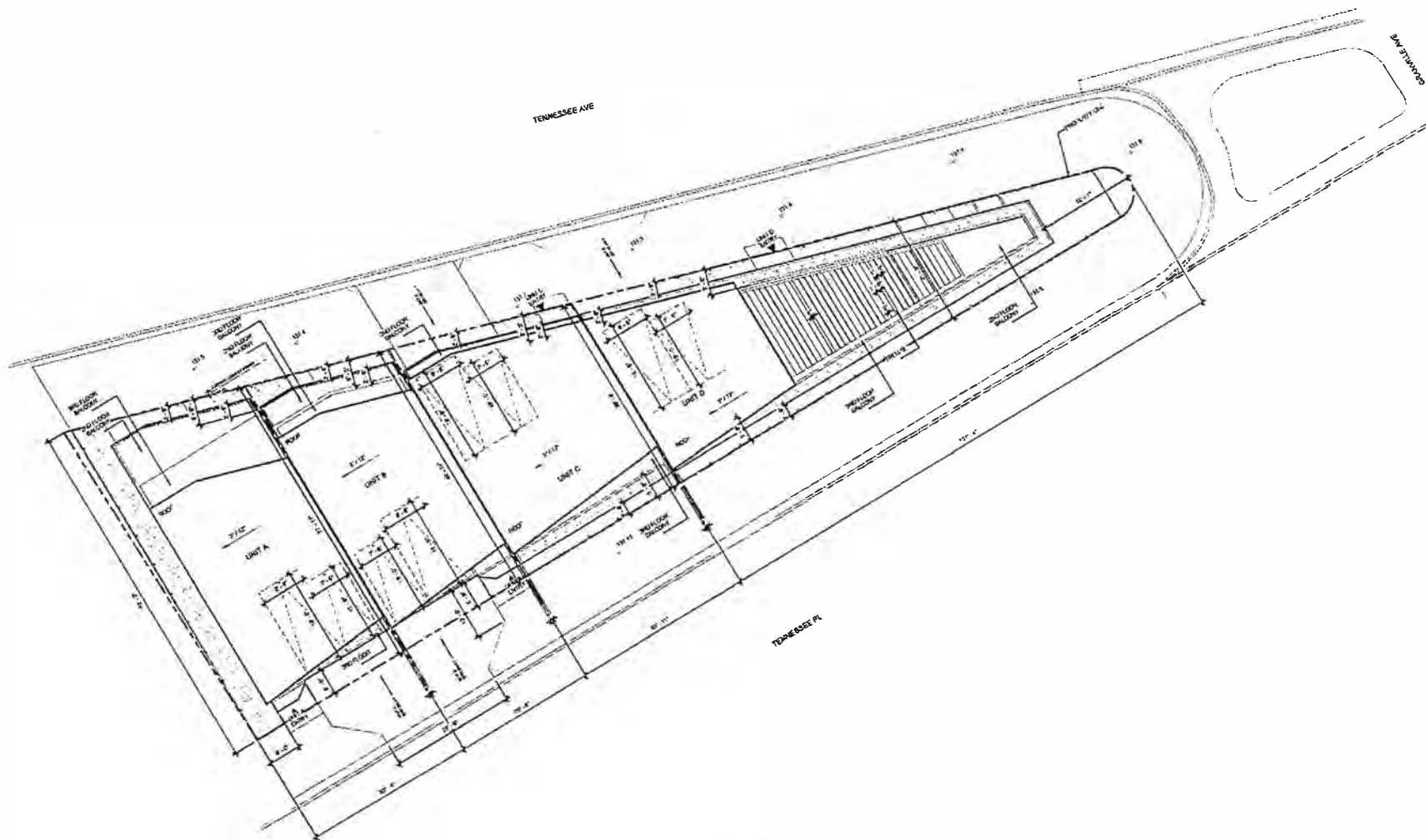
This report was prepared for the exclusive use of M.D.M. Builders Group and their design consultants for the specific project outlined herein. This report may not be suitable for use by other parties or other uses. This report is subject to review by regulatory agencies and these agencies may require their approval before the project can proceed. No guarantee that the regulatory public agency or agencies will approve the project is intended, expressed or implied.

One of the purposes of this report is to provide the client with advice regarding geotechnical conditions at the site. It is important to recognize that other consultants could arrive at different conclusions and recommendations. No warranties of future site performance are intended, expressed or implied.



LOCATION MAP
 11835 W. Tennessee Pl., Los Angeles

FIGURE 1



Scale 1" = 30'
FIGURE 2



A.G.I. GEOTECHNICAL, INC.

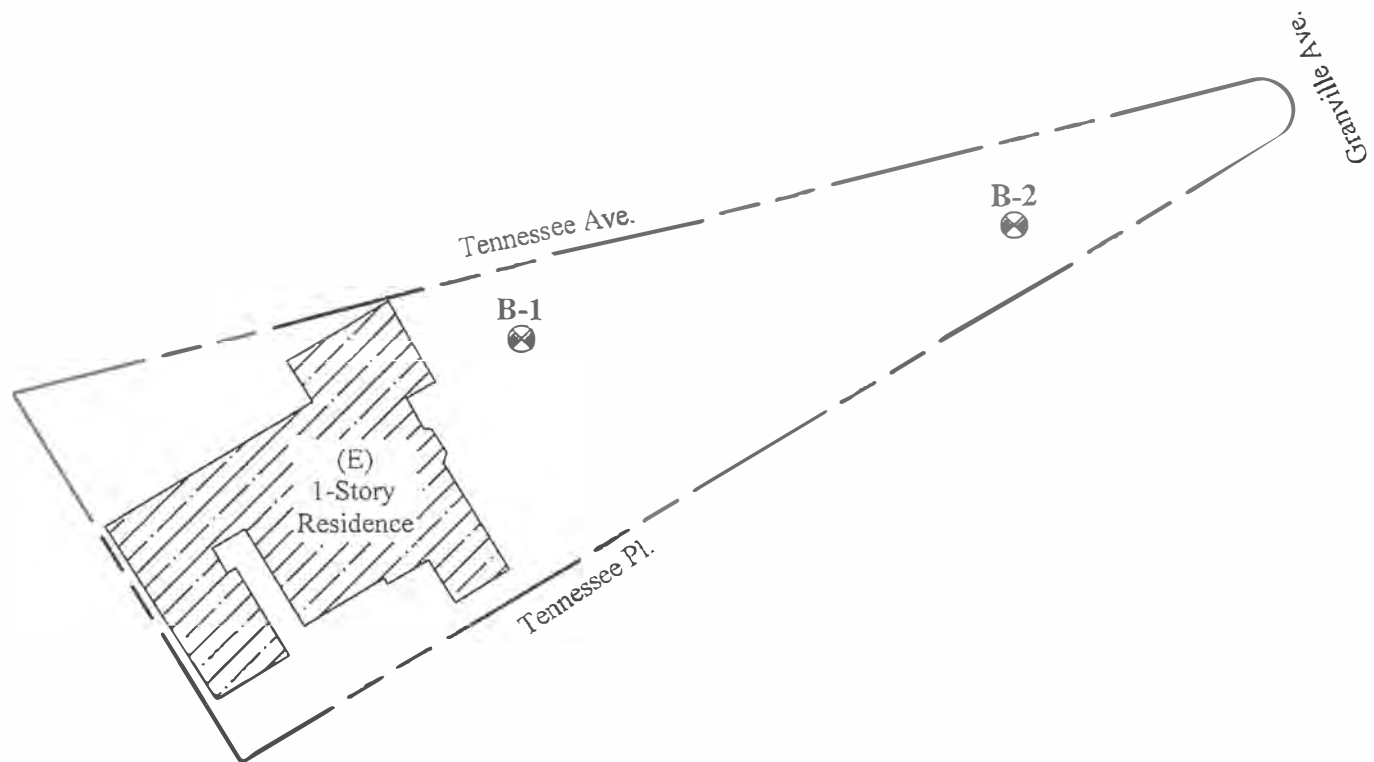
Engineering Geology • Geotechnical Engineering

15555 Sherman Way, Ste. A • Van Nuys, CA 91406
(818) 785-5244 • Fax (818) 785-6251

SITE PLAN

11835 W. Tennessee Pl., Los Angeles

PROJECT NO.	31-6013-00
DATE	1-2022
PREPARED BY	WFB
APPROVED BY	MBS



EXPLANATION

B-1 Approximate Location
 of Exploratory Boring

Scale 1" = 30'
FIGURE 3



A.G.I. GEOTECHNICAL, INC.

Engineering Geology • Geotechnical Engineering

16555 Sherman Way, Ste. A • Van Nuys, CA 91406
 (818) 785-5244 • Fax (818) 785-6251

PLOT PLAN

11835 W. Tennessee Pl., Los Angeles

PROJECT NO. 31-6013-00

DATE 1-2022

PREPARED BY AGF

APPROVED BY MBS

BORING LOGS

LEGEND

 Ring Sample, or Bulk Sample

 Standard Penetration Test (SPT)

 Ground Water Level

SOIL SIZE	
COMPONENT	SIZE RANGE
Boulders	Above 12"
Cobbles	3"-12"
Gravel	#4 - 3"
coarse	3/4" - 3"
fine	#4 - 3/4"
Sand	#200-#4
coarse	#10-#4
medium	#40-#10
fine	#200-#40
Fines (Silt or Clays)	Below #200

PLASTICITY OF FINE GRAINED SOILS	
PLASTICITY INDEX	VOLUME CHANGE POTENTIAL
0-15	Probably Low
15-30	Probably Moderate
30 or more	Probably High

WATER CONTENT	
Dry:	No feel of moisture
Damp:	Much less than normal moisture
Moist:	Normal moisture
Wet:	Much greater than normal moisture
Saturated:	At or near saturation

RELATIVE DENSITY	
SANDS & GRAVELS	BLOWS PER FOOT
Very loose	0-4
Loose	4-10
Medium dense	10-30
Dense	30-50
Very dense	Over 50

CONSISTENCY	
CLAYS & SILTS	BLOWS PER FOOT
Very soft	0-2
Soft	2-4
Firm	4-8
Stiff	8-15
Very stiff	15-30
Hard	Over 30

	GROUP SYMBOLS	DESCRIPTIONS	DIVISIONS
COARSE-GRAINED SOILS (Less than 50% Fines)	GW	Well-graded gravels or gravel-sand mixtures, less than 5% fines	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size
	GP	Poorly-graded gravels or gravel-sand mixtures, less than 5% fines	
	GM	Silty gravels, gravel-sand silt mixtures, more than 12% fines	
	GC	Clayey gravels, gravel-sand-clay mixtures, more than 12% fines	
	SW	Well-graded sands or gravelly sands, less than 5% fines	SANDS More than half of coarse fraction is smaller than No. 4 sieve size
	SP	Poorly-graded sands or gravelly sands, less than 5% fines	
	SM	Silty sands, sand-silt mixtures, more than 12% fines	
	SC	Clayey sands, sand-clay mixtures, more than 12% fines	
FINE-GRAINED SOILS (More than 50% Fines)	ML	Inorganic silt, very fine sands, rock flour, silty or clayey fine sands	SILTS AND CLAYS Liquid limit less than 50
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
	OL	Organic silts or organic silt-clays of low plasticity	
	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts	SILTS AND CLAYS Liquid limit less than 50
	CH	Inorganic clays of high plasticity, fat clays	
	OH	Organic clays of medium to high plasticity	
	PT	Peat, mulch, and other highly organic soils	HIGHLY ORGANIC SOILS



A.G.I. GEOTECHNICAL, INC.

Engineering Geology • Geotechnical Engineering



A.G.I. GEOTECHNICAL, INC.

BORING NUMBER B-1

PAGE 1 OF 2

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: M.D.M. Builders Group PROJECT NAME: Proposed 4-Unit Small Lot SubdivisionPROJECT NUMBER: 31-6013-00 PROJECT LOCATION: 11835 W. Tennessee Pl., Los AngelesDATE STARTED: 11/18/2021 COMPLETED: 11/18/2021 GROUND ELEVATION: N/A BORING DIAMETER: 8"EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: 45'DRILLING CONTRACTOR: One Way Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" DropLOGGED BY: CWL CHECKED BY: MBS

DEPTH (ft)	DRIVE SAMPLE	BLOW COUNT (N VALUE)	BULK SAMPLE	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	Wet UNIT WT. (pcf)	SAT. MOISTURE CONTENT (%)	ATTERBERG LIMITS			MATERIAL DESCRIPTION	<200	D 50	Classification
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
0														
		6/8/8		13.2	111	126	19.0				<u>Alluvium</u> Dark brown to light brown Sandy Lean CLAY (Slightly moist, stiff) (Porous to ~5') @ 0-5'; EI = 54, Medium	65		CL
5		4/4/5		7.3										
		14/9/8		10.7	84	94	36.9							
10		6/7/7		10.9										
		16/13/12		10.1	85	94	36.0							
15		7/8/9		7.0						Light brown Silty Fine SAND (Slightly moist, medium dense)			SM	
		6/9/12		4.4	97	101	27.5							
20		6/6/9		7.9										
		9/7/14		14.0	106	121	21.8			Light brown to brown Sandy Lean CLAY to Lean CLAY with Sand (Slightly moist to moist, stiff to very stiff)			CL	
25		5/6/7		13.0										
		6/9/26		11.8	106	118	22.1							
30		7/7/9		23.7				28	19					9
											80			



A.G.I. GEOTECHNICAL, INC.

BORING NUMBER B-1

PAGE 2 OF 2

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: M.D.M. Builders Group PROJECT NAME: Proposed 4-Unit Small Lot SubdivisionPROJECT NUMBER: 31-6013-00 PROJECT LOCATION: 11835 W. Tennessee Pl., Los AngelesDATE STARTED: 11/18/2021 COMPLETED: 11/18/2021 GROUND ELEVATION: N/A BORING DIAMETER: 8"EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: 45'DRILLING CONTRACTOR: One Way Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" DropLOGGED BY: CWL CHECKED BY: MBS

DEPTH (ft)	DRIVE SAMPLE	(N VALUE)	BULK SAMPLE	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	Wet UNIT WT. (pcf)	SAT. MOISTURE CONTENT (%)	ATTERBERG LIMITS			MATERIAL DESCRIPTION	<200	D 50	Classification
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
35	<div><div></div><div></div><div></div></div>	8/14/24		10.0							Dark brown Clayey SAND with Gravel (Slightly moist to wet, dense to very dense)	31		SC
40	<div><div></div><div></div><div></div></div>	9/13/22		15.3										
45	<div><div></div><div></div><div></div></div>	20/60		14.2										
50	<div><div></div><div></div><div></div></div>	23/29/38		11.4										
55											Total Depth: 51.5' Water @ 45'			
60														
65														



A.G.I. GEOTECHNICAL, INC.

BORING NUMBER B-2

PAGE 1 OF 1

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

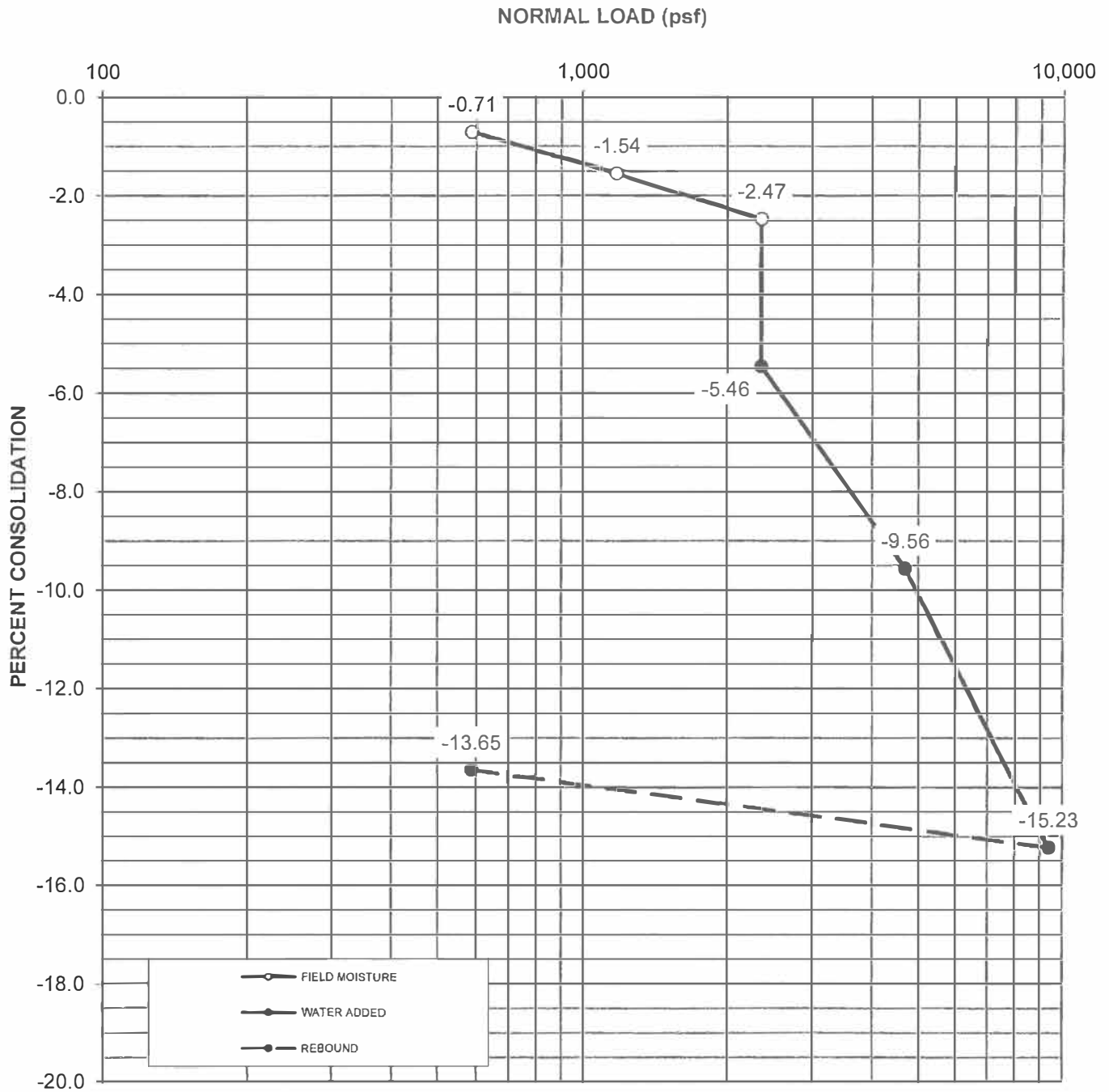
CLIENT: M.D.M. Builders Group PROJECT NAME: Proposed 4-Unit Small Lot SubdivisionPROJECT NUMBER: 31-6013-00 PROJECT LOCATION: 11835 W. Tennessee Pl., Los AngelesDATE STARTED: 11/18/2021 COMPLETED: 11/18/2021 GROUND ELEVATION: N/A BORING DIAMETER: 8"EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: Not EncounteredDRILLING CONTRACTOR: One Way Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" DropLOGGED BY: CWL CHECKED BY: MBS

DEPTH (ft)	DRIVE SAMPLE	BLOW COUNT (N VALUE)	BULK SAMPLE	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	Wet UNIT WT. (pcf)	SAT. MOISTURE CONTENT (%)	ATTERBERG LIMITS			MATERIAL DESCRIPTION	<200	D 50	Classification
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
0														
5	X	5/7/12		7.7	91	98	31.4				Alluvium Light brown Sandy Lean CLAY (Slightly moist, stiff to very stiff)			CL
	X	9/14/13		7.1	104	111	23.0							
10	X	9/11/16		9.9	94	104	29.1							
15	X	22/21/33		9.1	120	131	15.1				Light brown Silty Fine SAND (Slightly moist, dense to medium dense)			SM
20	X	10/10/19		7.3	110	118	19.9							
25											Total Depth: 21.5' No Water			
30														

LABORATORY TEST RESULTS



A.G.I. GEOTECHNICAL, INC.



PROJECT NO. 31-6013-00

BORING NO. B-2

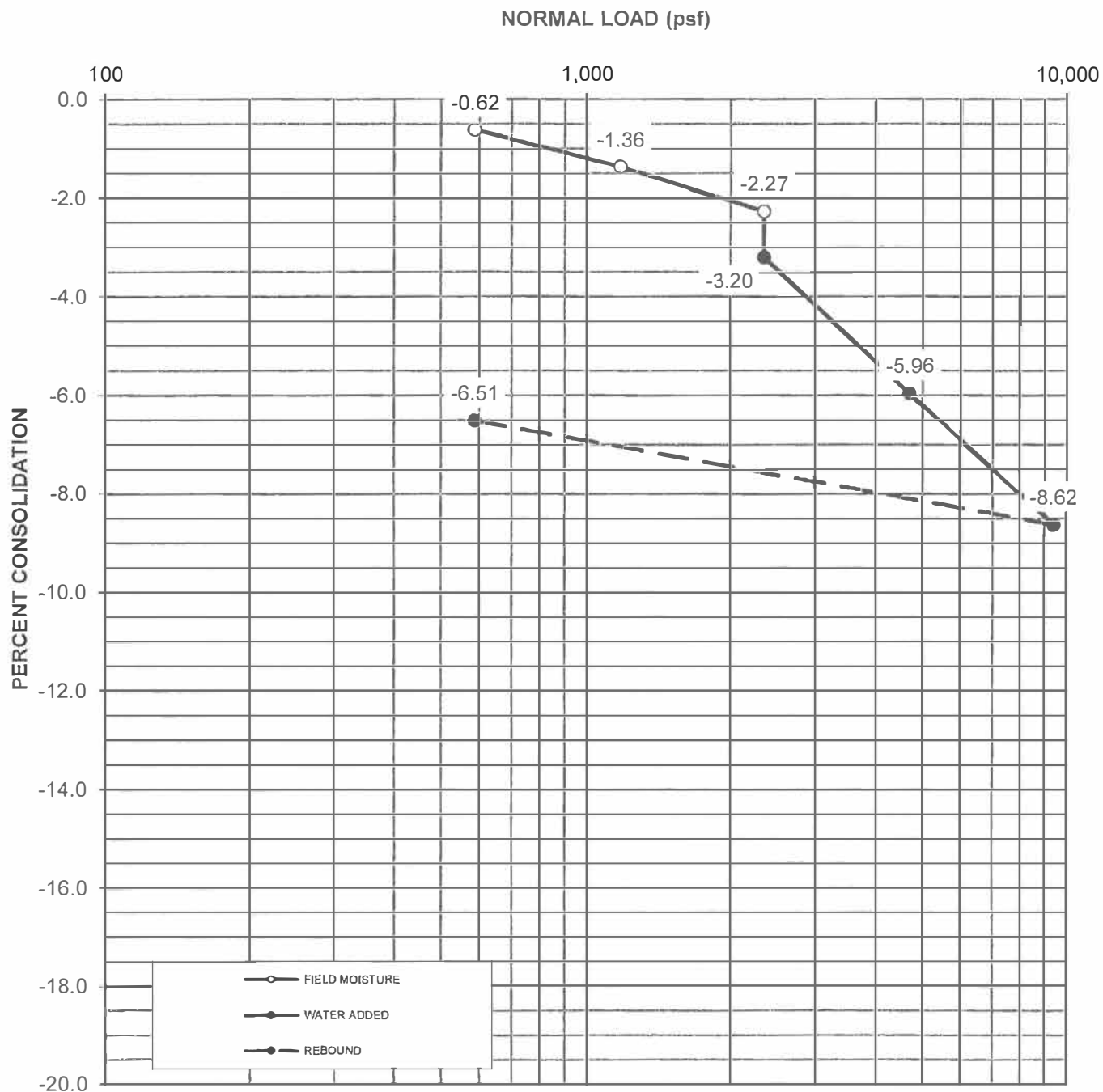
DEPTH (FT) 2.5

REPRESENTATIVE FOR Alluvium
 SOIL TYPE AND DESCRIPTION Sandy Lean CLAY (CL)

HYDROCONSOLIDATION (%) 2.99



A.G.I. GEOTECHNICAL, INC.



PROJECT NO. 31-6013-00

BORING NO. B-2

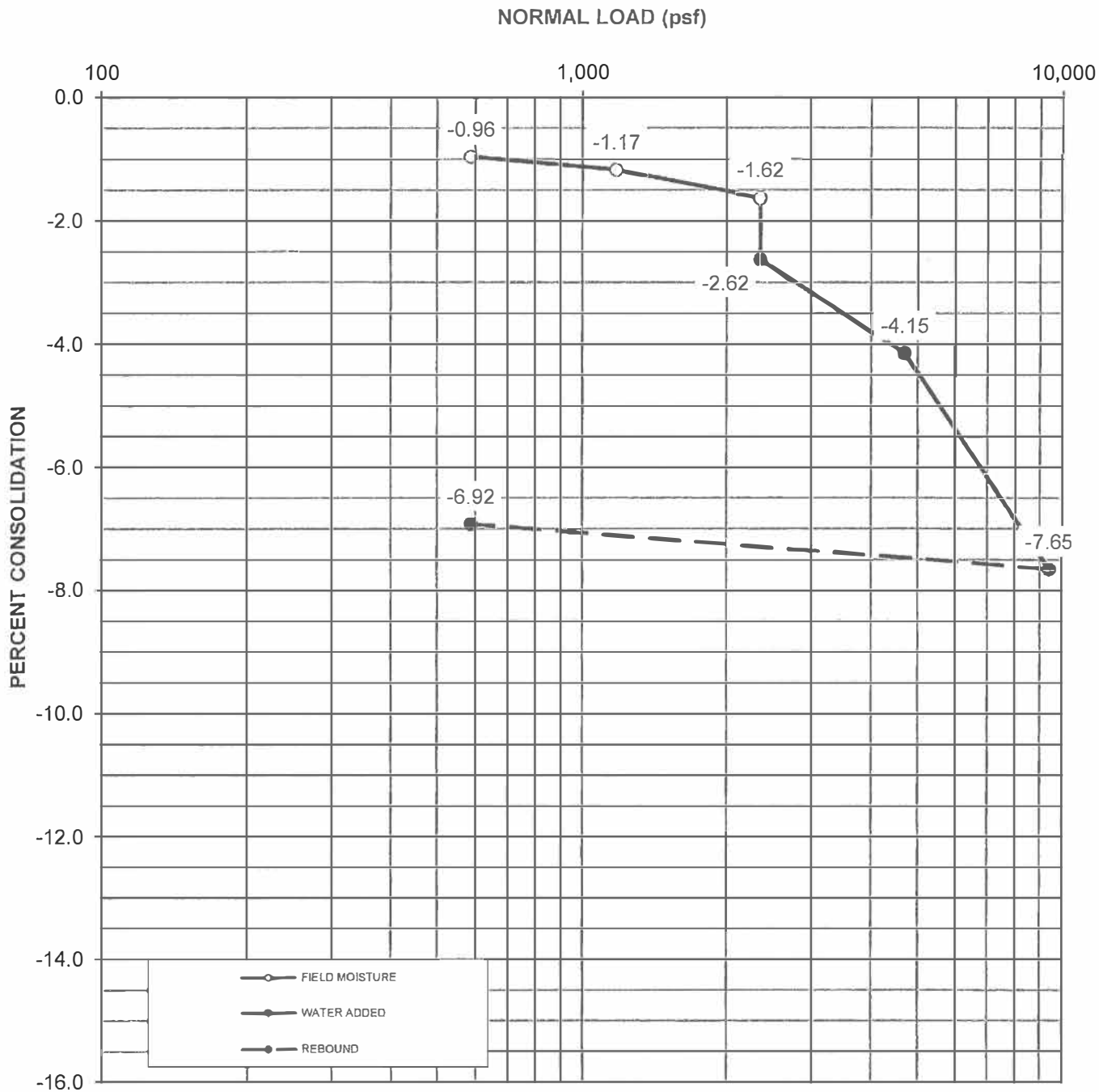
DEPTH (FT) 5

REPRESENTATIVE FOR Alluvium
 SOIL TYPE AND DESCRIPTION Sandy Lean CLAY (CL)

HYDROCONSOLIDATION (%) 0.93



A.G.I. GEOTECHNICAL, INC.



PROJECT NO. 31-6013-00

BORING NO. B-2

DEPTH (FT) 10

REPRESENTATIVE FOR Alluvium
 SOIL TYPE AND DESCRIPTION Sandy Lean CLAY (CL)

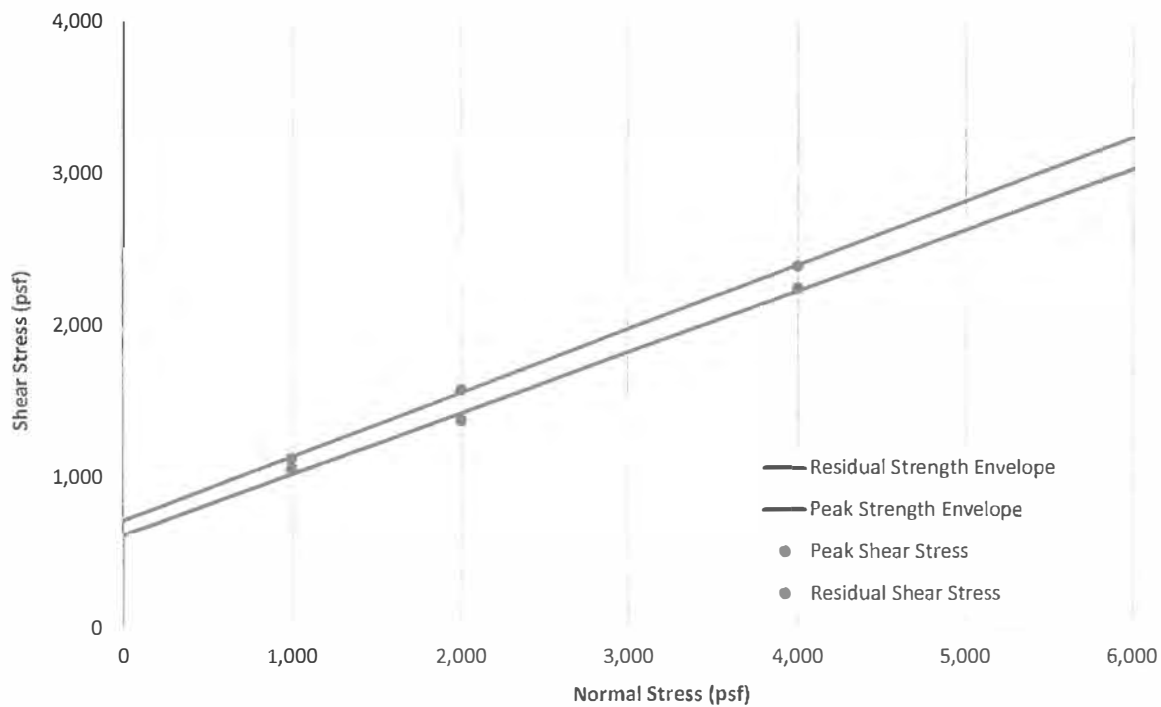
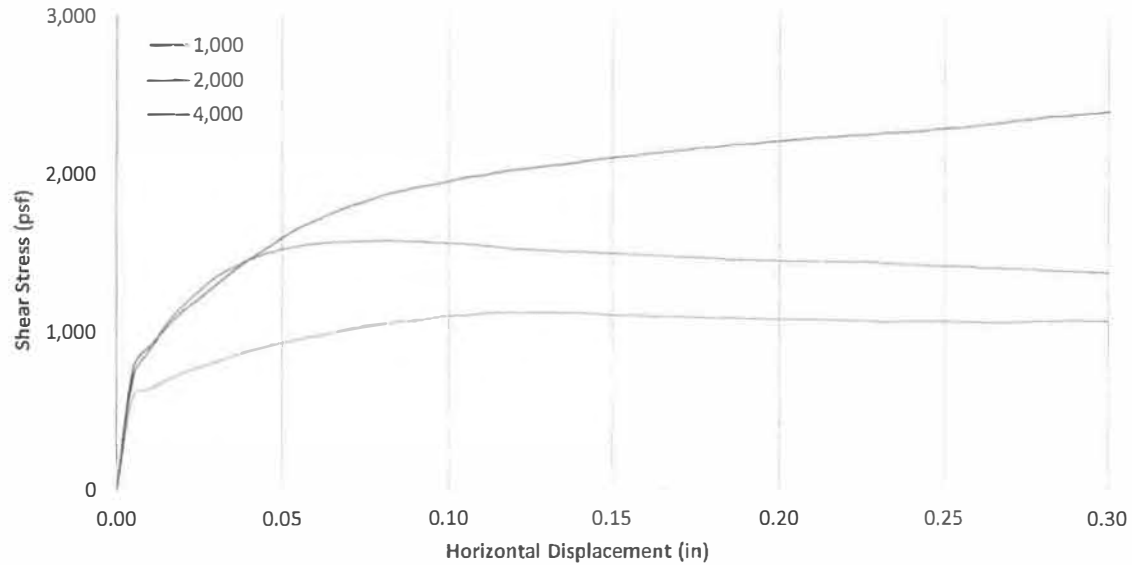
HYDROCONSOLIDATION (%) 1.00



A.G.I. GEOTECHNICAL, INC.

REMOLDED SATURATED DIRECT SHEAR TEST (ASTM:D-3080)

Boring:	B-1	<u>Specimen</u>	<u>Load (psf)</u>	<u>Water (%)</u>	<u>Dry γ (pcf)</u>	<u>Wet γ (pcf)</u>
Depth (ft):	0-5	1	1,000	19.8	104.4	125.1
Geology:	Alluvium	2	2,000	19.4	105.3	125.8
Classification:	Sandy Lean CLAY (CL)	3	4,000	19.5	105.9	126.5



<u>Normal Stress (psf)</u>	<u>Peak Shear Stress (psf)</u>	<u>Residual Shear Stress (psf)</u>	<u>Peak Cohesion (psf)</u>	<u>Peak Friction (deg)</u>
1,000	1,121	1,055	715	22.8
2,000	1,576	1,371	<u>Residual Cohesion (psf)</u>	<u>Residual Friction (deg)</u>
4,000	2,388	2,243	619	21.9



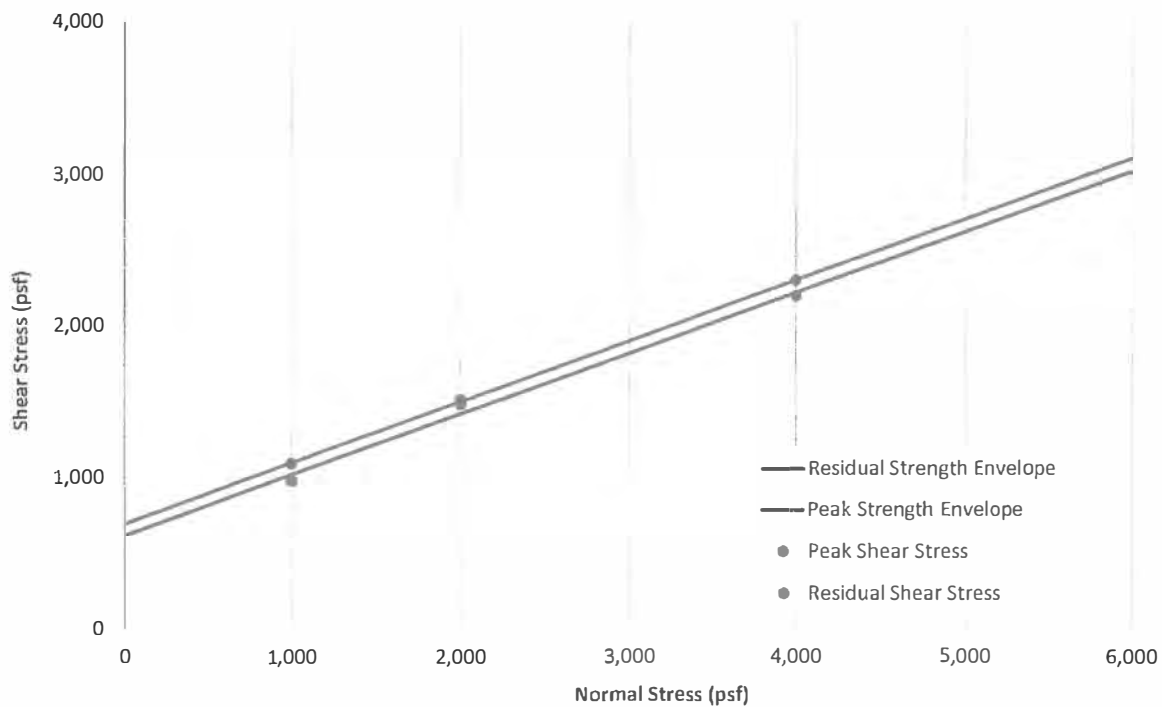
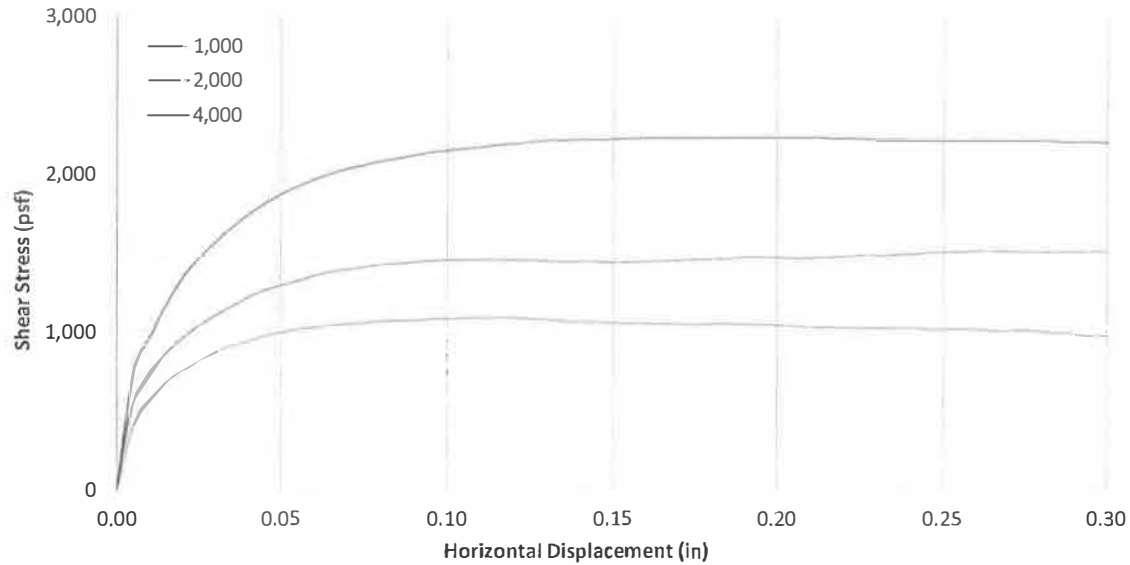
AGI GEOTECHNICAL, INC.

16555 Sherman Way, Van Nuys, California, Ph (818) 785-5244, Fax (818) 785-6251

<u>Proj. No.:</u>	31-6013-00	<u>Date:</u>	January 2022
<u>Project:</u>	11835 W. Tennessee Pl., Los Angeles		
<u>Calc. By:</u>	WFB		

UNDISTURBED SATURATED DIRECT SHEAR TEST (ASTM:D-3080)

Boring:	B-1	Specimen	1	Load (psf)	1,000	Water (%)	17.0	Dry γ (pcf)	109.7	Wet γ (pcf)	128.4
Depth (ft):	2.5		2		2,000		17.0		110.4		129.2
Geology:	Alluvium		3		4,000		18.5		109.8		130.0
Classification:	Sandy Lean CLAY (CL)										



Normal Stress (psf)	Peak Shear Stress (psf)	Residual Shear Stress (psf)	Peak Cohesion (psf)	Peak Friction (deg)
1,000	1,090	976	696	21.9
2,000	1,511	1,480	Residual Cohesion (psf)	Residual Friction (deg)
4,000	2,300	2,198		
			617	21.8



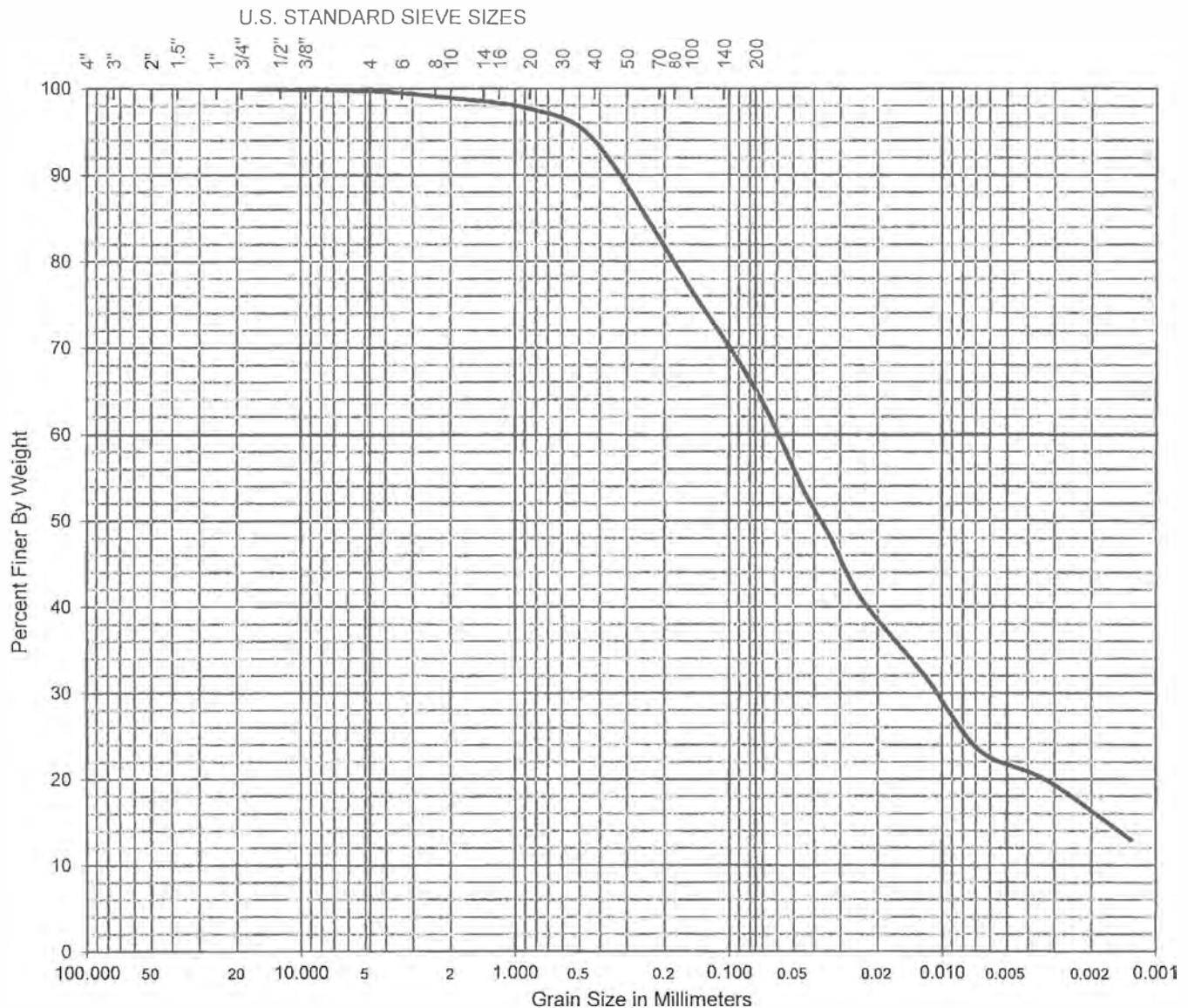
AGI GEOTECHNICAL, INC.

16555 Sherman Way, Van Nuys, California, Ph (818) 785-5244, Fax (818) 785-6251

Proj. No.:	31-6013-00	Date:	January 2022
Project:	11835 W. Tennessee Pl., Los Angeles		
Calc. By:	WFB		

GRAIN SIZE DISTRIBUTION

PROJECT NO. <u>31-6013-00</u>	BORING NO. <u>B-1</u>	DEPTH (feet) <u>0-5</u>
Liquid Limit (LL) _____	Plastic Limit (PL) _____	Plasticity Index (PI) _____
Gravel (%) <u>0.3</u>	Sand (%) <u>34.5</u>	% Silt & Clay (<#200) <u>65.2</u>
D ₁₀ (mm) _____	D ₃₀ (mm) _____	D ₆₀ (mm) _____
C _u _____	C _c _____	% Clay (< 0.005 mm) <u>22</u>
REPRESENTATIVE FOR _____		Alluvium
SOIL TYPE AND DESCRIPTION _____		Sandy Lean CLAY (CL)



GRAVEL		SAND			SILT & CLAY
Coarse	Fine	Coarse	Medium	Fine	

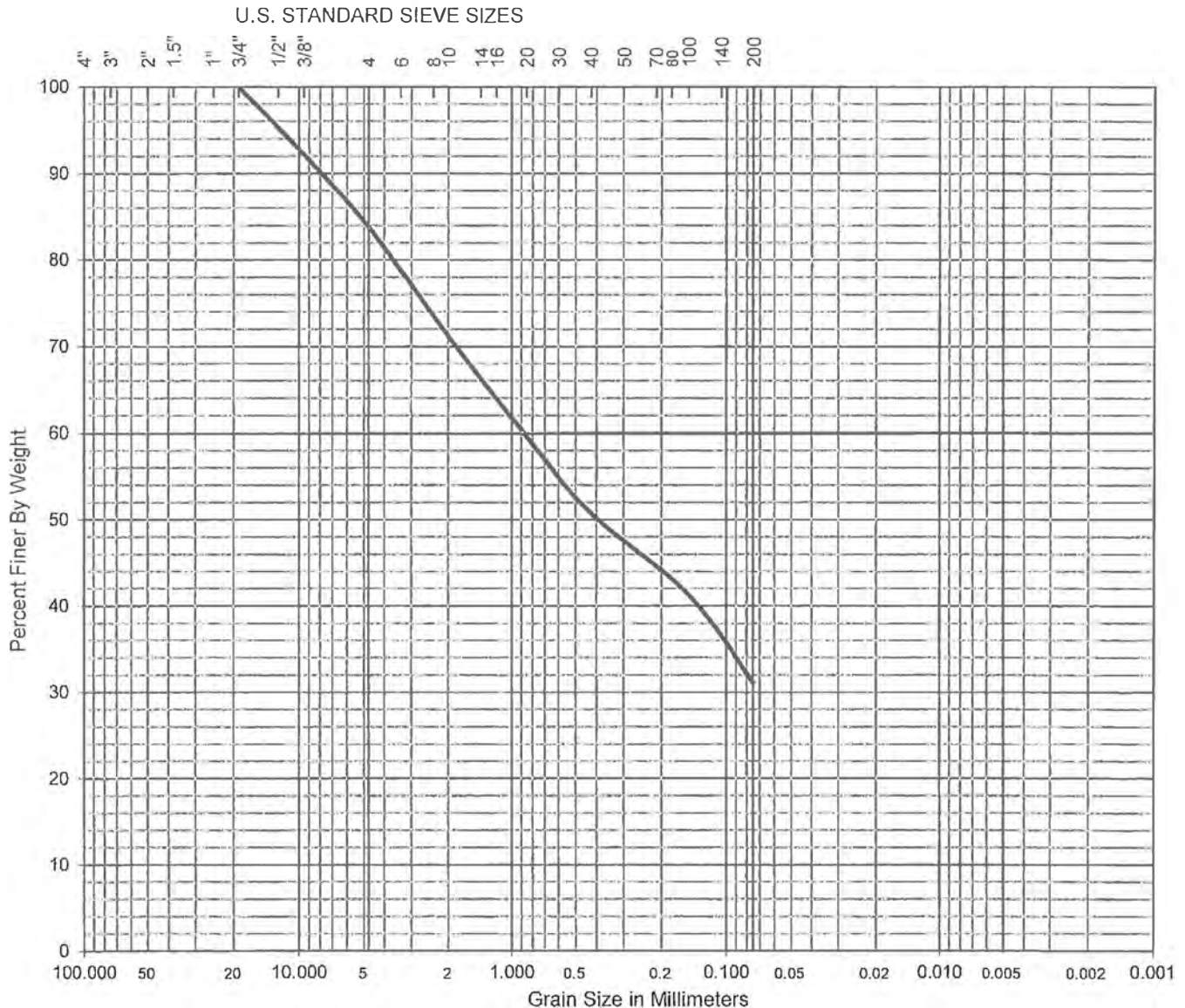


A.G.I. GEOTECHNICAL, INC.

Project: 11835 W. Tennessee Pl.
Date: January 2022

GRAIN SIZE DISTRIBUTION

PROJECT NO. <u>31-6013-00</u>	BORING NO. <u>B-1</u>	DEPTH (feet) <u>35</u>
Liquid Limit (LL) <u>-</u>	Plastic Limit (PL) <u>-</u>	Plasticity Index (PI) <u>-</u>
Gravel (%) <u>16.1</u>	Sand (%) <u>52.7</u>	% Silt & Clay (<#200) <u>31.1</u>
D ₁₀ (mm) <u>-</u>	D ₃₀ (mm) <u>-</u>	D ₆₀ (mm) <u>-</u>
C _u <u>-</u>	C _c <u>-</u>	% Clay (< 0.005 mm) <u>N/A</u>
REPRESENTATIVE FOR <u>Alluvium</u>		
SOIL TYPE AND DESCRIPTION <u>Clayey SAND with Gravel(SC)</u>		



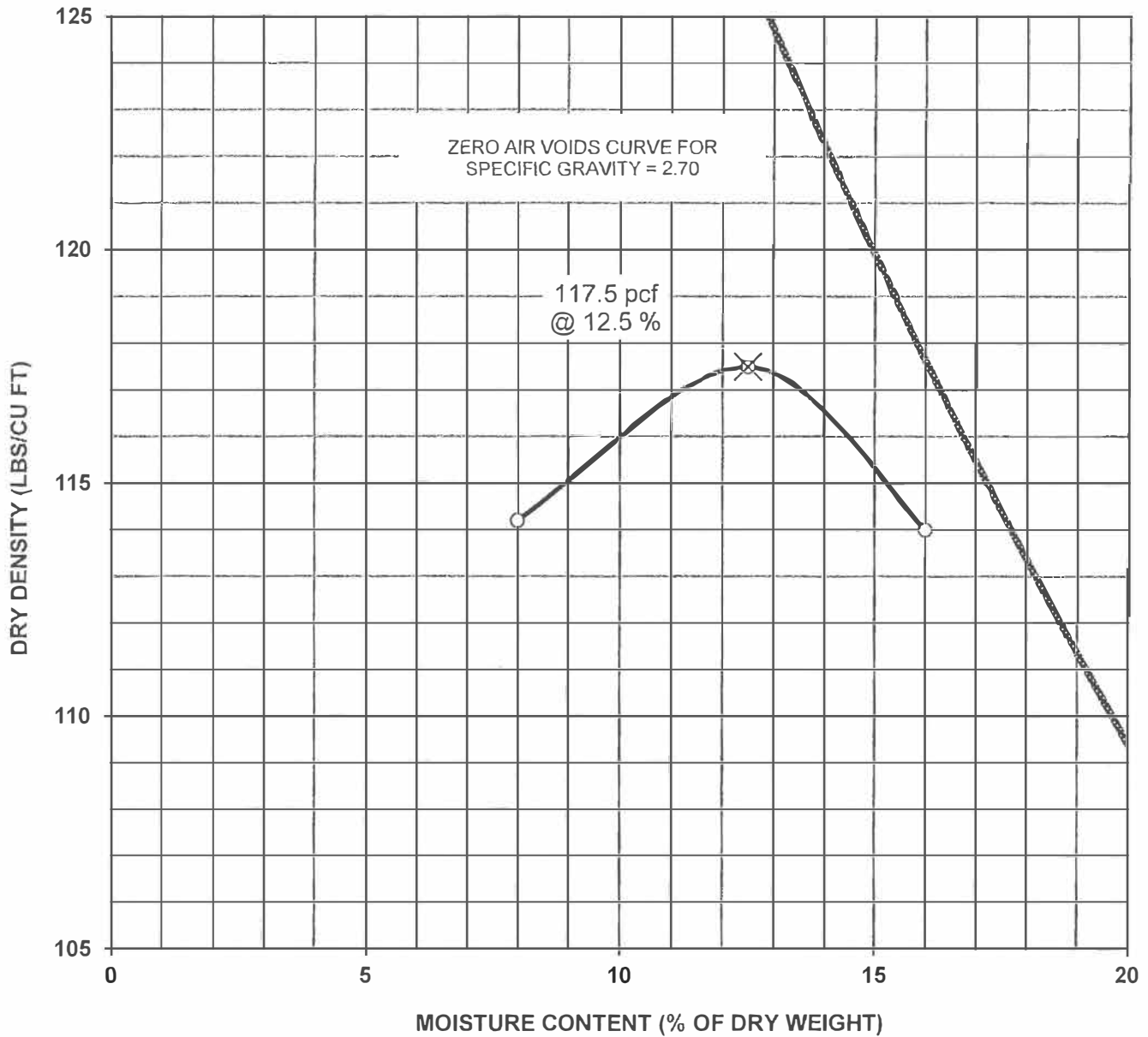
GRAVEL		SAND			SILT & CLAY
Coarse	Fine	Coarse	Medium	Fine	



A.G.I. GEOTECHNICAL, INC.

Project: 11835 W. Tennessee Pl.
Date: January 2022

MAXIMUM DRY DENSITY CURVE



PROJECT NO. 31-6013-00

BORING NO. B-1

DEPTH (FT) 0-5

REPRESENTATIVE FOR Alluvium
SOIL TYPE AND DESCRIPTION Sandy Lean CLAY (CL); El=54, Medium

MAXIMUM DRY DENSITY (LBS/CU FT) 117.5
OPTIMUM MOISTURE CONTENT (% OF DRY WEIGHT) 12.5

METHOD OF COMPACTION
ASTM:D-1557



A.G.I. GEOTECHNICAL, INC.

U.S. SEISMIC DESIGN MAPS USGS DEAGGREGATIONS

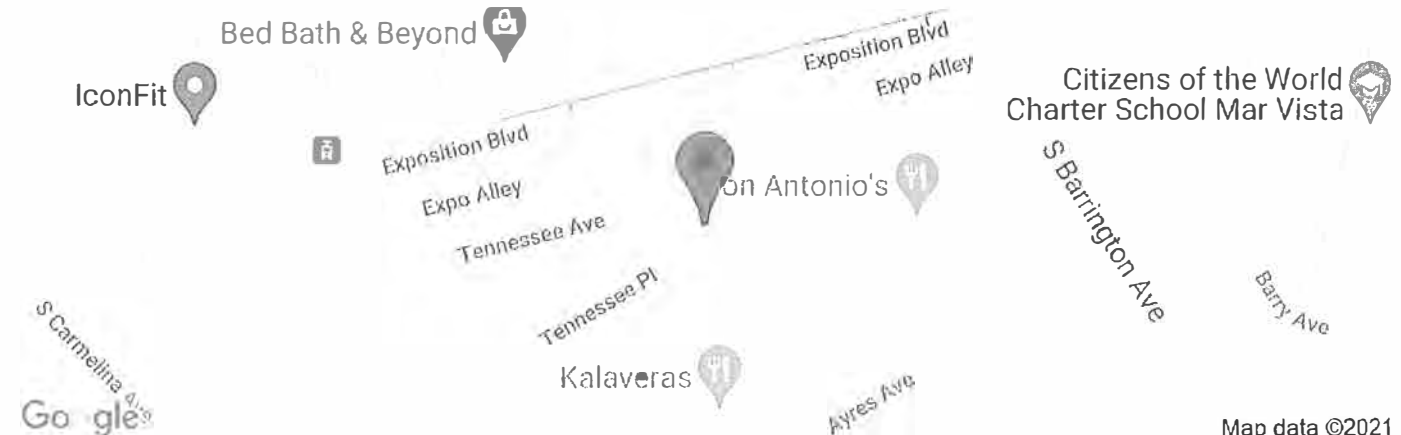


A.G.I. GEOTECHNICAL, INC.



11835 W. Tennessee Pl., Los Angeles; 31-6013-00

Latitude, Longitude: 34.0311, -118.4492



Date	11/24/2021, 12:41:24 PM	
Design Code Reference Document	ASCE7-16	
Risk Category	II	
Site Class	D - Stiff Soil	

Type	Value	Description
S_s	1.962	MCE_R ground motion. (for 0.2 second period)
S_1	0.7	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.962	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.308	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.837	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.921	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
S_{sRT}	1.962	Probabilistic risk-targeted ground motion. (0.2 second)
S_{sUH}	2.164	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
S_{sD}	2.447	Factored deterministic acceleration value. (0.2 second)
S_{1RT}	0.7	Probabilistic risk-targeted ground motion. (1.0 second)
S_{1UH}	0.776	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S_{1D}	0.822	Factored deterministic acceleration value. (1.0 second)
PGA_d	0.988	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.907	Mapped value of the risk coefficient at short periods
C_{R1}	0.903	Mapped value of the risk coefficient at a period of 1 s

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the [U.S. Seismic Design Maps web tools](#) (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

^ Input

Edition

Dynamic: Conterminous U.S. 2014 (update...

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

34.0311

Time Horizon

Return period in years

475

Longitude

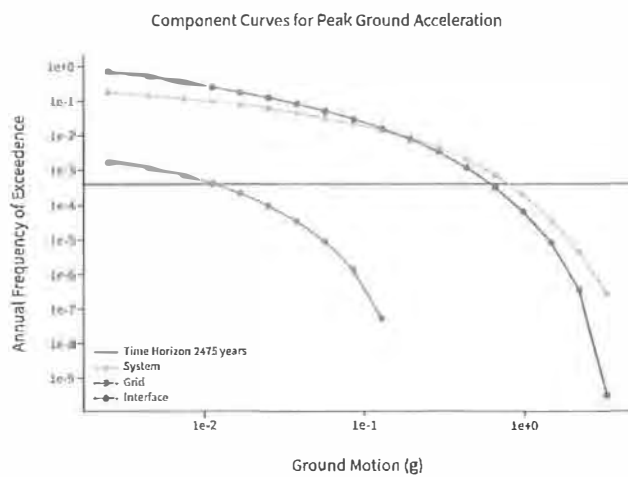
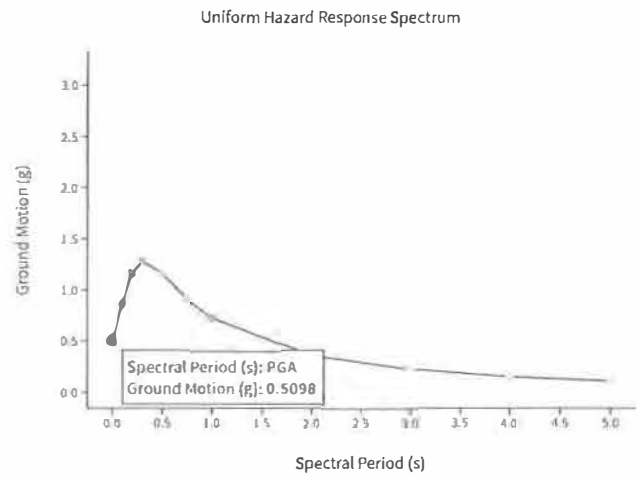
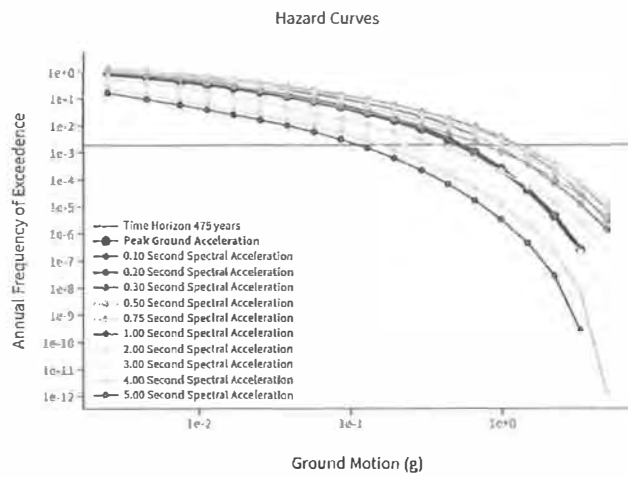
Decimal degrees, negative values for western longitudes

-118.4492

Site Class

259 m/s (Site class D)

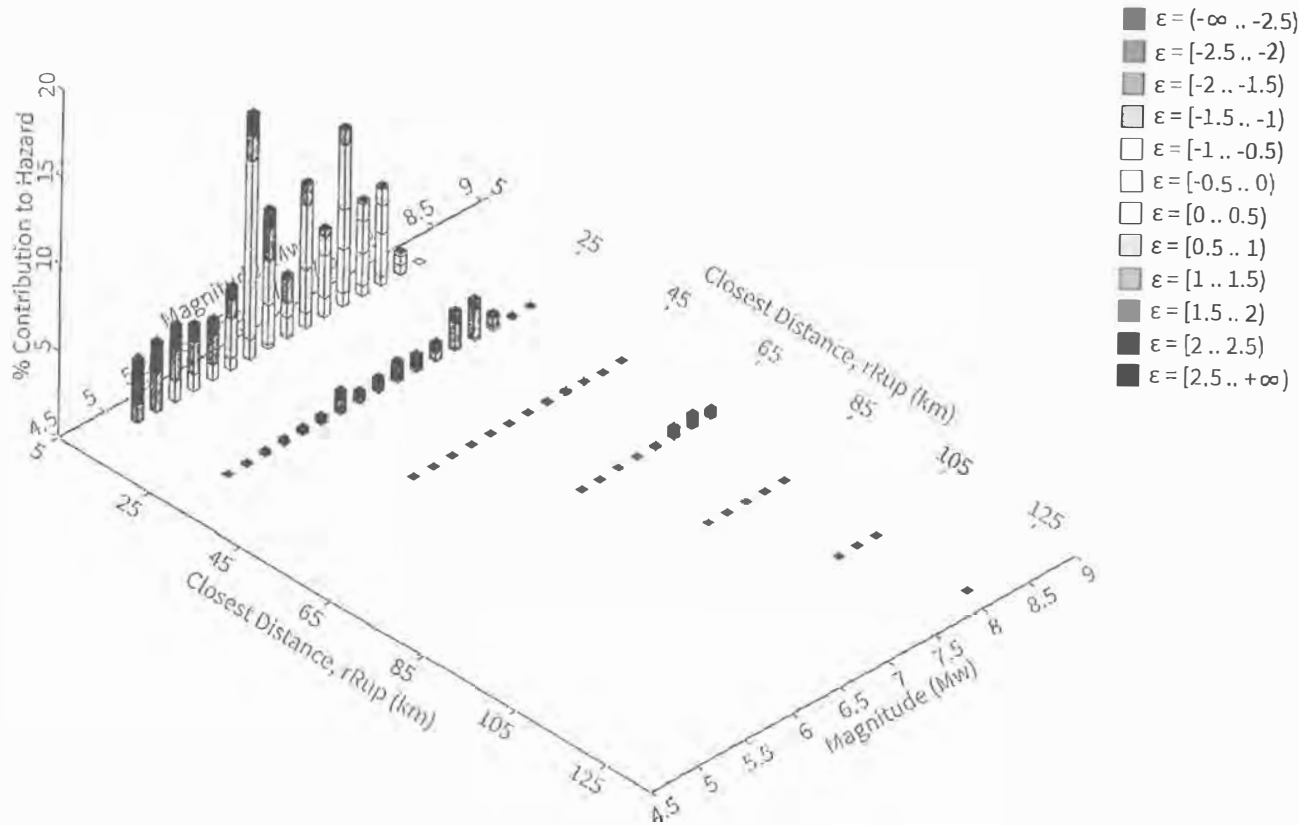
^ Hazard Curve

[View Raw Data](#)

^ Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs

Exceedance rate: 0.0021052632 yr⁻¹

PGA ground motion: 0.50984561 g

Recovered targets

Return period: 507.5815 yrs

Exceedance rate: 0.001970127 yr⁻¹

Totals

Binned: 100 %

Residual: 0 %

Trace: 0.12 %

Mean (over all sources)

m: 6.66

r: 11.96 km

ε₀: 0.92 σ

Mode (largest m-r bin)

m: 6.34

r: 7.23 km

ε₀: 0.82 σ

Contribution: 14.08 %

Mode (largest m-r-ε₀ bin)

m: 6.36

r: 6.1 km

ε₀: 0.72 σ

Contribution: 10.23 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km

m: min = 4.4, max = 9.4, Δ = 0.2

ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε₀: [-∞ .. -2.5)

ε₁: [-2.5 .. -2.0)

ε₂: [-2.0 .. -1.5)

ε₃: [-1.5 .. -1.0)

ε₄: [-1.0 .. -0.5)

ε₅: [-0.5 .. 0.0)

ε₆: [0.0 .. 0.5)

ε₇: [0.5 .. 1.0)

ε₈: [1.0 .. 1.5)

ε₉: [1.5 .. 2.0)

ε₁₀: [2.0 .. 2.5)

ε₁₁: [2.5 .. +∞]

Deaggregation Contributors

Source Set	Source	Type	r	m	ϵ_0	lon	lat	az	%
UC33brAvg_FM32		System							34.06
	Hollywood [2]		6.62	6.97	0.46	118.422°W	34.084°N	22.71	5.36
	Newport-Inglewood alt 2 [8]		5.86	6.63	0.59	118.390°W	34.043°N	76.11	5.20
	Santa Monica alt 2 [2]		1.99	7.10	-0.01	118.460°W	34.043°N	322.74	4.84
	Palos Verdes [15]		12.10	6.96	1.08	118.551°W	33.963°N	231.20	3.77
	Malibu Coast alt 2 [0]		7.16	7.44	0.15	118.525°W	34.033°N	271.74	1.84
	Compton [4]		10.65	7.46	-0.06	118.581°W	33.973°N	242.03	1.50
UC33brAvg_FM31		System							33.18
	Newport-Inglewood alt 1 [8]		5.90	6.57	0.63	118.389°W	34.044°N	75.87	6.73
	Santa Monica alt 1 [0]		2.60	7.13	0.00	118.461°W	34.045°N	324.68	6.22
	Palos Verdes [15]		12.10	6.95	1.05	118.551°W	33.963°N	231.20	3.97
	Compton [4]		10.65	7.38	-0.05	118.581°W	33.973°N	242.03	3.03
	Santa Susana East (connector) [1]		25.08	7.24	1.48	118.419°W	34.292°N	5.41	1.21
UC33brAvg_FM31 (opt)		Grid							16.75
	PointSourceFinite: -118.449, 34.081		7.31	5.71	1.03	118.449°W	34.081°N	0.00	4.07
	PointSourceFinite: -118.449, 34.081		7.31	5.71	1.03	118.449°W	34.081°N	0.00	4.07
	PointSourceFinite: -118.449, 34.108		9.26	5.80	1.26	118.449°W	34.108°N	0.00	1.86
	PointSourceFinite: -118.449, 34.108		9.26	5.80	1.26	118.449°W	34.108°N	0.00	1.86
UC33brAvg_FM32 (opt)		Grid							16.02
	PointSourceFinite: -118.449, 34.081		7.29	5.72	1.02	118.449°W	34.081°N	0.00	3.56
	PointSourceFinite: -118.449, 34.081		7.29	5.72	1.02	118.449°W	34.081°N	0.00	3.56
	PointSourceFinite: -118.449, 34.108		9.32	5.78	1.28	118.449°W	34.108°N	0.00	1.93
	PointSourceFinite: -118.449, 34.108		9.32	5.78	1.28	118.449°W	34.108°N	0.00	1.93

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the [U.S. Seismic Design Maps web tools](#) (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

^ Input

Edition

Dynamic : 6nterminous U.S .2014 (update...

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

34.0311

Time Horizon

Return period in years

2475

Longitude

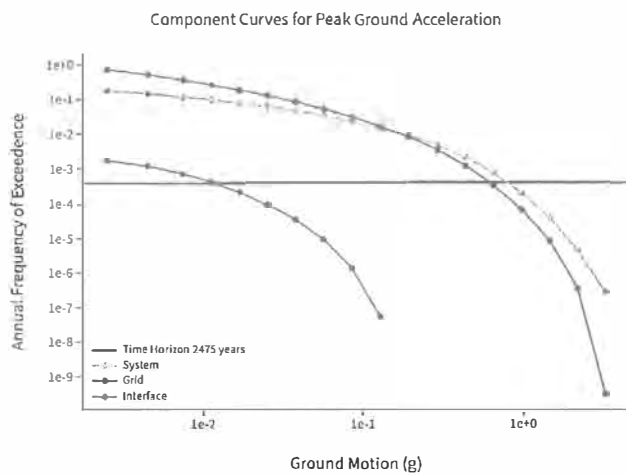
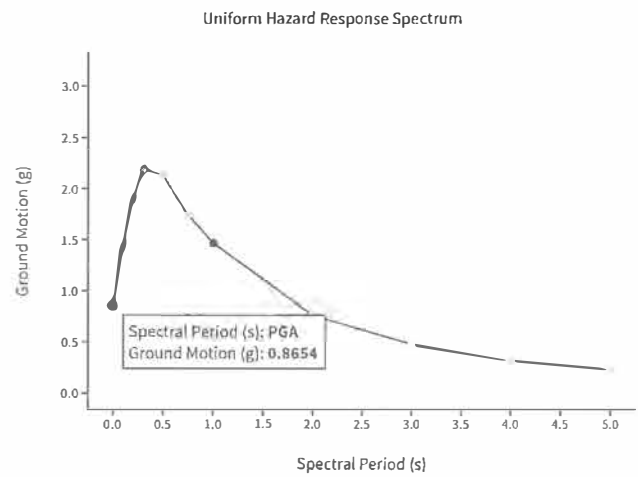
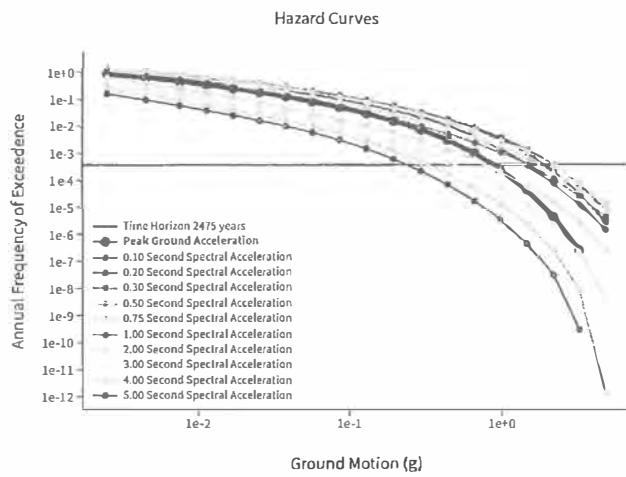
Decimal degrees, negative values for western longitudes

-118.4492

Site Class

259 m/s (Site class D)

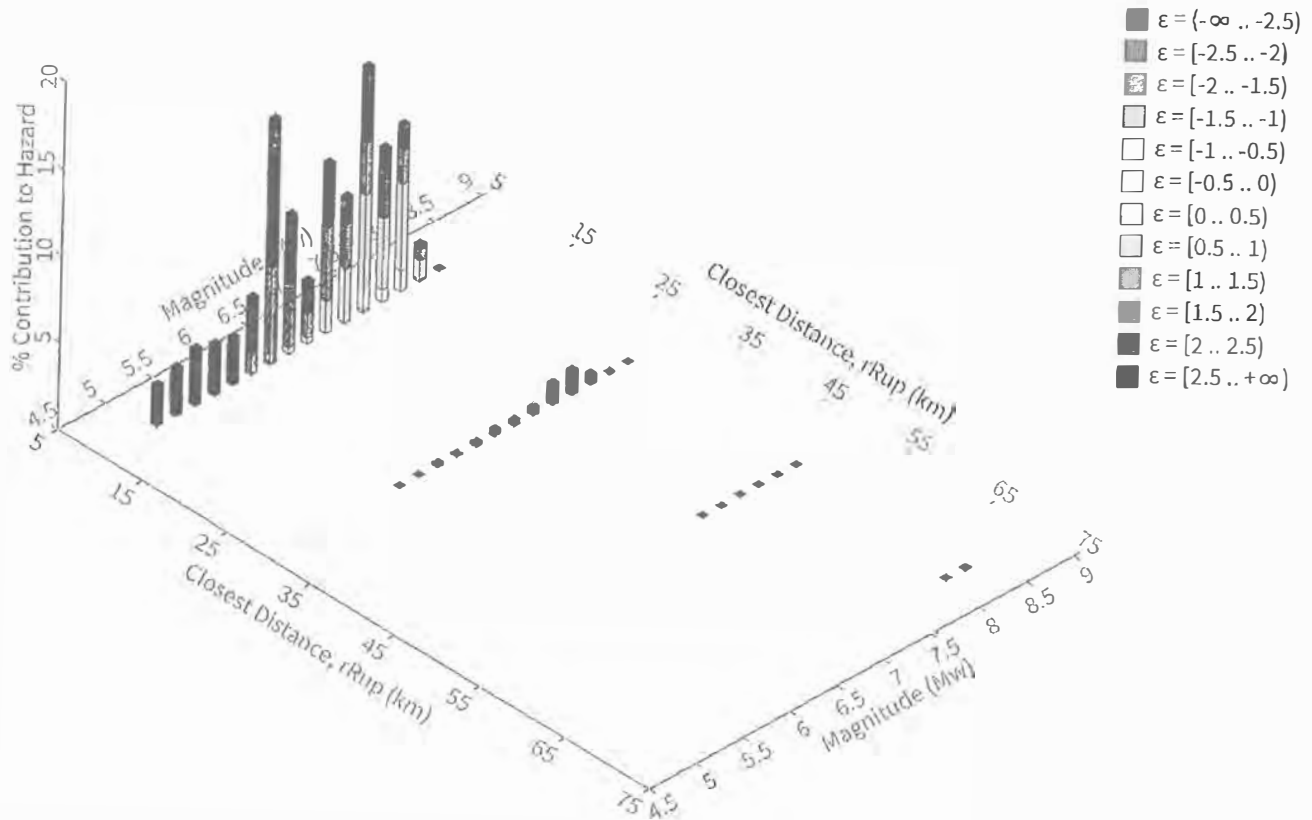
^ Hazard Curve

[View Raw Data](#)

^ Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr⁻¹
PGA ground motion: 0.86538534 g

Recovered targets

Return period: 2986.2602 yrs
Exceedance rate: 0.000334867 yr⁻¹

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.08 %

Mean (over all sources)

m: 6.8
r: 8.27 km
ε0: 1.49 σ

Mode (largest m-r bin)

m: 7.31
r: 8.36 km
ε0: 1.2 σ
Contribution: 14.07 %

Mode (largest m-r-ε0 bin)

m: 7.32
r: 6.94 km
ε0: 0.77 σ
Contribution: 6.61 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set	Source	Type	r	m	ϵ_0	lon	lat	az	%
UC33brAvg_FM32		System							38.30
	Santa Monica alt 2 [2]		1.99	7.15	0.92	118.460°W	34.043°N	322.74	8.69
	Hollywood [2]		6.62	7.01	1.41	118.422°W	34.084°N	22.71	6.69
	Newport-Inglewood alt 2 [8]		5.86	6.69	1.52	118.390°W	34.043°N	76.11	6.00
	Palos Verdes [15]		12.10	7.08	1.92	118.551°W	33.963°N	231.20	2.98
	Malibu Coast alt 2 [0]		7.16	7.51	1.06	118.525°W	34.033°N	271.74	2.94
	Compton [4]		10.65	7.46	0.91	118.581°W	33.973°N	242.03	2.73
	Compton [3]		10.70	7.26	0.95	118.533°W	33.925°N	213.27	1.77
UC33brAvg_FM31		System							36.59
	Santa Monica alt 1 [0]		2.60	7.17	0.95	118.461°W	34.045°N	324.68	10.93
	Newport-Inglewood alt 1 [8]		5.90	6.62	1.56	118.389°W	34.044°N	75.87	7.56
	Compton [4]		10.65	7.39	0.93	118.581°W	33.973°N	242.03	5.44
	Palos Verdes [15]		12.10	7.07	1.85	118.551°W	33.963°N	231.20	3.25
	Compton [3]		10.70	7.35	0.95	118.533°W	33.925°N	213.27	1.17
	Hollywood [2]		6.62	6.97	1.45	118.422°W	34.084°N	22.71	1.14
	San Pedro Escarpment [1]		9.28	7.60	0.85	118.655°W	33.915°N	235.91	1.03
UC33brAvg_FM31 (opt)		Grid							13.00
	PointSourceFinite: -118.449, 34.081		7.18	5.79	1.80	118.449°W	34.081°N	0.00	4.18
	PointSourceFinite: -118.449, 34.081		7.18	5.79	1.80	118.449°W	34.081°N	0.00	4.18
	PointSourceFinite: -118.449, 34.108		8.94	5.93	1.99	118.449°W	34.108°N	0.00	1.52
	PointSourceFinite: -118.449, 34.108		8.94	5.93	1.99	118.449°W	34.108°N	0.00	1.52
UC33brAvg_FM32 (opt)		Grid							12.12
	PointSourceFinite: -118.449, 34.081		7.15	5.80	1.80	118.449°W	34.081°N	0.00	3.67
	PointSourceFinite: -118.449, 34.081		7.15	5.80	1.80	118.449°W	34.081°N	0.00	3.67
	PointSourceFinite: -118.449, 34.108		9.01	5.91	2.01	118.449°W	34.108°N	0.00	1.56
	PointSourceFinite: -118.449, 34.108		9.01	5.91	2.01	118.449°W	34.108°N	0.00	1.56

LIQUEFACTION ANALYSES



A.G.I. GEOTECHNICAL, INC.

SPT Liquefaction & Seismic Settlement Evaluation



A.G.I. GEOTECHNICAL, INC.
16555 Sherman Way
Van Nuys, CA 91406
(818) 785-5214 Fax (818) 785-6251

Project: 11835 W. Tennessee Pl.,
Job No: 31-6013-00
Boring: B-1

Earthquake Magnitude, M: 6.66
Design PGA: 0.614
Magnitude Scaling Factor, r_m : 0.874
Factor, $\epsilon_{C,N} / \epsilon_{C,N+15}$: 0.801

Return Period: 475 years
PGA_{1h}: 0.921 g
F.O.S.: 1.1
Lat: 34.0311
Long: -116.4492

SPT N-Value Correction Factors

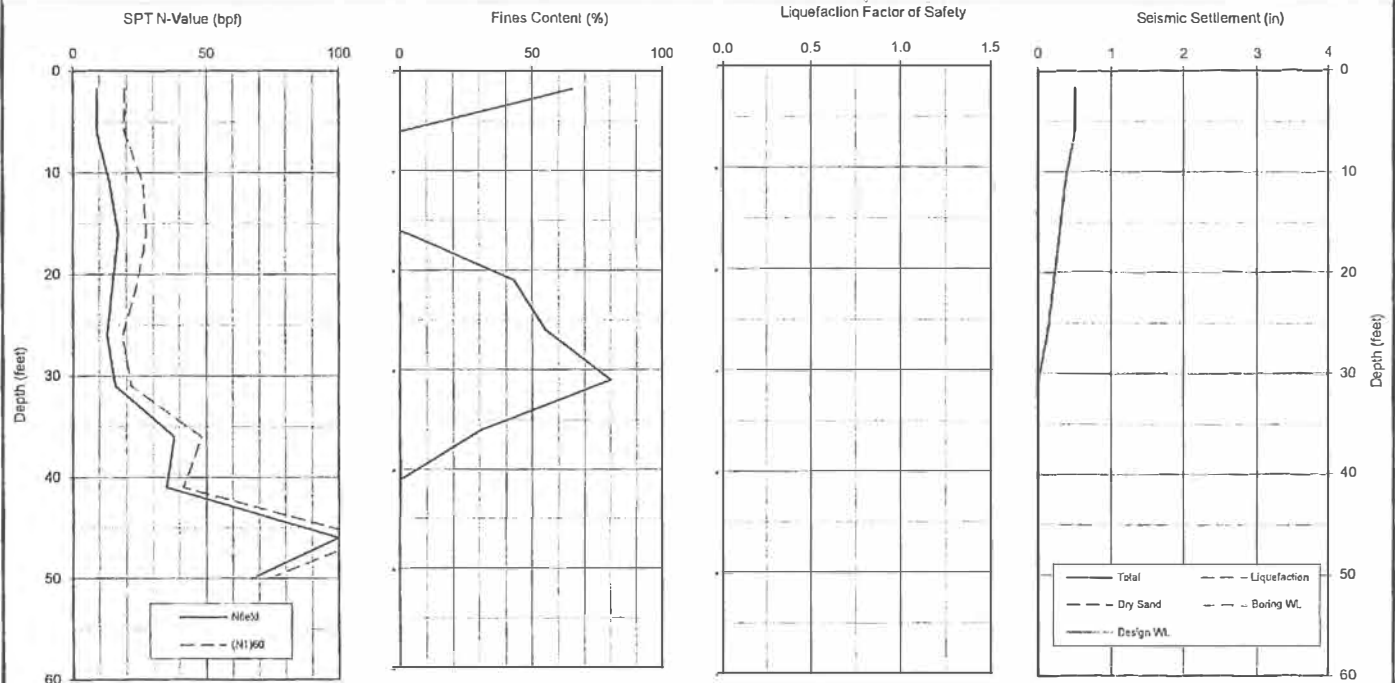
Energy Ratio, C_E : 1.30
Borehole Diameter, C_B : 1.15
Rod Length, C_R : 1.20
Sampler Type, C_S : 1.20
Overall Correction, C_{ES} : 1.79

Boring Water Level (Below Orig), ft: 45.0
Design Water Level (Below Orig), ft: 30.0
Removal Depth (Below Orig), ft: 5.0
Surcharge Fill Height (Above Orig), ft: 0.0
Surcharge Fill Unit Weight γ , pcf: 114

LIQUEFACTION SETTLEMENT (in): 0.00
DRY SAND SETTLEMENT (in): 0.50
TOTAL SEISMIC SETTLEMENT (in): 0.50

Layer	Layer Base, z (ft)	Total Unit Weight γ (pcf)	SPT N_{60cs}	Fines (%)	Incl? (Y/N)	Layer Thickness t (ft)	Layer Midheight z_m (ft)	Design Total Stress σ_o (psf)	Design Effective Stress σ'_o (psf)	Boring Effective Stress σ'_o (psf)	Overburden Correction C_{u1}	Rod Length Corr. C_R	SPT Fines Corr $\delta(N_1)_{80}$	SPT $(N_1)_{80}$	Dry Sett $(N_1)_{60cs}$	r_d	CSR = τ_{ave} / σ'_o
1	3.5	126	9	65	Y	3.50	1.75	221	221	221	1.60	0.750	4.7	19.4	24.1	0.996	0.348
2	8.5	126	9	0	Y	5.00	6.00	756	756	756	1.60	0.750	0.0	19.4	19.3	0.988	0.345
3	13.5	94	14	0	Y	5.00	11.00	1,305	1,305	1,305	1.24	0.850	0.0	26.4	26.4	0.977	0.341
4	18.5	94	17	0	Y	5.00	16.00	1,776	1,776	1,776	1.06	0.850	0.0	27.5	27.5	0.964	0.336
5	23.5	101	15	43	Y	5.00	21.00	2,264	2,264	2,264	0.84	0.950	3.5	24.0	27.5	0.949	0.331
6	28.5	121	13	55	Y	5.00	26.00	2,819	2,819	2,819	0.84	0.950	4.2	18.7	22.8	0.930	0.324
7	33.5	118	16	80	Y	5.00	31.00	3,416	3,354	3,416	0.77	1.000	5.3	22.0	27.3	0.908	0.322
8	38.5	118	38	31	Y	5.00	36.00	4,006	3,632	4,006	0.71	1.000	2.6	48.2	50.8	0.881	0.339
9	43.5	118	35	0	Y	5.00	41.00	4,596	3,910	4,596	0.66	1.000	0.0	41.4	41.4	0.850	0.349
10	48.5	118	100	0	Y	5.00	46.00	5,186	4,188	5,124	0.62	1.000	0.0	112.1	112.1	0.815	0.352
11	51.5	118	67	0	Y	3.00	50.00	5,658	4,410	5,346	0.61	1.000	0.0	73.5	73.5	0.785	0.351
Lyr	α	β	Liq FS SPT $(N_1)_{60cs}$	K_D	CRR ₁₄	Liq FS	Vol Strain (%)	Liq Sett Δs (in)	Sum Liq Sett Δs (in)	Mean Stress σ'_m (psf)	G_{max} (ksf)	$\gamma_{eff}(G_{eff}/G_{max})$	γ_{eff} (%)	$\epsilon_{C,M=7.5}$ (%)	Dry Sett Δs (in)	Sum Dry Sett Δs (in)	Sum Total Sett (in)
1	5.00	1.20	28.3	1.000	9.999	9.999	0.00	Above WL	0.00	147	700	0.000125	0.0499	0.0432	Removed	0.50	0.50
2	0.00	1.00	19.4	1.000	9.999	9.999	0.00	Above WL	0.00	504	1,205	0.000247	0.1190	0.1341	0.13	0.50	0.50
3	0.00	1.00	26.4	1.000	9.999	9.999	0.00	Above WL	0.00	871	1,757	0.000290	0.1086	0.0810	0.08	0.37	0.37
4	0.00	1.00	27.5	1.000	9.999	9.999	0.00	Above WL	0.00	1,184	2,077	0.000329	0.1164	0.0815	0.08	0.30	0.30
5	5.00	1.20	33.8	1.000	9.999	9.999	0.00	Above WL	0.00	1,509	2,345	0.000366	0.1246	0.0870	0.08	0.22	0.22
6	5.00	1.20	27.4	1.000	9.999	9.999	0.00	Above WL	0.00	1,879	2,460	0.000425	0.1546	0.1388	0.13	0.13	0.13
7	5.00	1.20	31.4	0.984	9.999	9.999	0.00	0.00	0.00	2,277	2,873	0.000431	0.1350	0.0952	Below WL	0.00	0.00
8	4.77	1.16	60.8	0.971	9.999	9.999	0.00	0.00	0.00	2,671	3,828	0.000368	0.0829	0.0000	Below WL	0.00	0.00
9	0.00	1.00	41.4	0.958	9.999	9.999	0.00	0.00	0.00	3,064	3,829	0.000407	0.0948	0.0287	Below WL	0.00	0.00
10	0.00	1.00	112.1	0.945	9.999	9.999	0.00	0.00	0.00	3,457	5,670	0.000298	0.0666	0.0000	Below WL	0.00	0.00
11	0.00	1.00	73.5	0.936	9.999	9.999	0.00	0.00	0.00	3,772	5,145	0.000345	0.0589	0.0000	Below WL	0.00	0.00

References: 1) Tokimatsu, K., and Seed, H. (1987). "Evaluation of Settlements in Sands Due to Earthquake Shaking." Journal of Geotechnical Engineering, ASCE, 113(8), 861-878. 2) Youd, T.L., and Idriss, I.M. (1997). "Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils". Technical Report NCEER-97-0022, FHWA.



SPT Liquefaction & Seismic Settlement Evaluation



A.G.I. GEOTECHNICAL, INC.
16555 Sherman Way
Van Nuys, CA 91406
(818) 785-5244 Fax (818) 785-6251

Project: 11835 W. Tennessee Pl.,
Job No: 31-6013-00
Boring: B-1

Earthquake Magnitude, M : 6.80
Design PGA : 0.921
Magnitude Scaling Factor, r_m : 0.898
Factor, $\epsilon_{C,N} / \epsilon_{C,N=15}$: 0.839

Return Period 2475 years
PGA_{eff} 0.921 g
F.O.S 1.0

Lat : 34.0311
Long : -118.4492

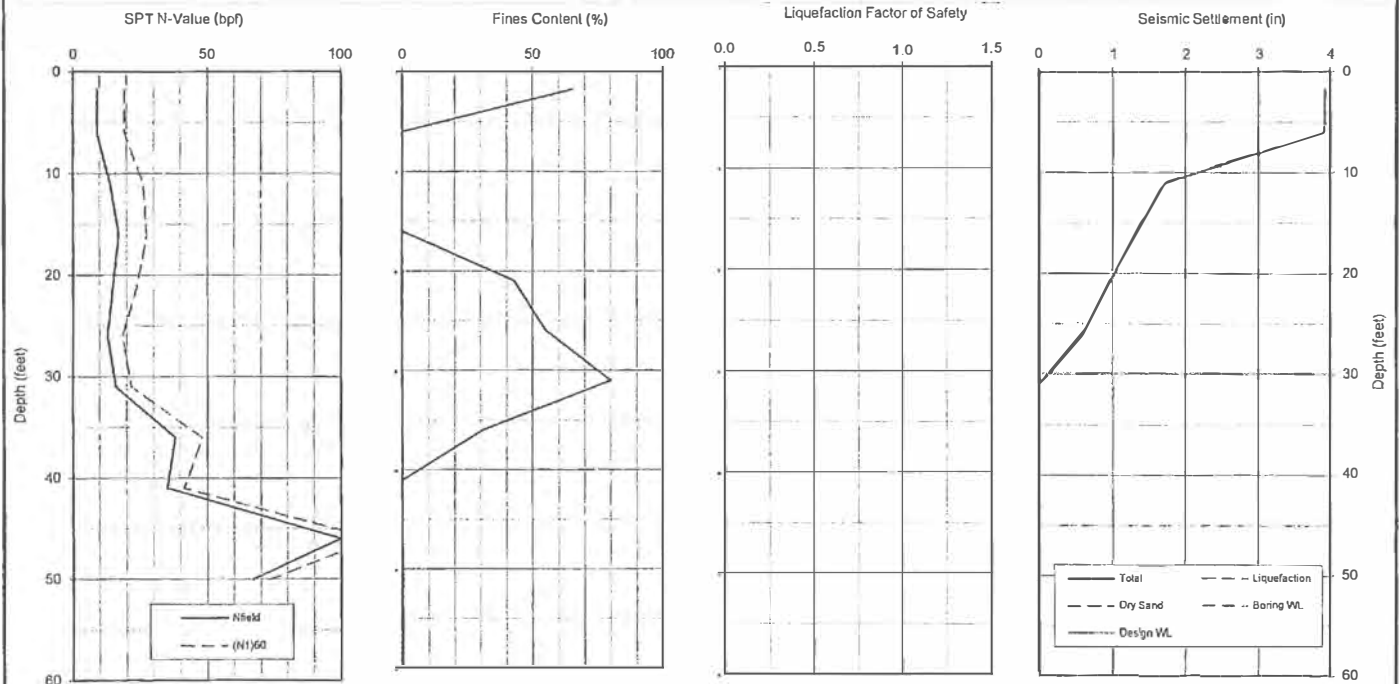
SPT N-Value Correction Factors
Energy Ratio, C_E 1.30
Borehole Diameter, C_B 1.15
Rod Length, C_R 1.20
Sampler Type, C_S 1.20
Overall Correction, C_{ES} 1.79

Boring Water Level (Below Orig), ft : 45.0
Design Water Level (Below Orig), ft : 30.0
Removal Depth (Below Orig), ft : 5.0
Surcharge Fill Height (Above Orig), ft : 0.0
Surcharge Fill Unit Weight γ , pcf : 114

LIQUEFACTION SETTLEMENT (in) : 0.00
DRY SAND SETTLEMENT (in) : 3.91
TOTAL SEISMIC SETTLEMENT (in) : 3.91

	Layer	Layer Base, z (ft)	Total Unit Weight γ (pcf)	SPT N_{field}	Fines (%)	Incl? (Y/N)	Layer Thickness t (ft)	Layer Midheight z_o (ft)	Design Total Stress σ_o (psf)	Design Effective Stress σ'_o (psf)	Boring Effective Stress σ'_b (psf)	Overburden Correction C_R	Rod Length Corr. C_R	SPT Fines Corr $\delta(N_1)_{60}$	SPT $(N_1)_{60}$	Dry Sett $(N_1)_{60cs}$	r_d	CSR = τ_{ave} / σ'_o
5	1	3.5	126	9	65	Y	3.50	1.75	221	221	221	1.60	0.750	4.7	19.4	24.1	0.996	0.536
	2	8.5	126	9	0	Y	5.00	6.00	756	756	756	1.60	0.750	0.0	19.4	19.3	0.988	0.531
10	3	13.5	94	14	0	Y	5.00	11.00	1,306	1,306	1,306	1.24	0.850	0.0	26.4	26.4	0.977	0.525
15	4	18.5	94	17	0	Y	5.00	16.00	1,776	1,776	1,776	1.06	0.850	0.0	27.5	27.5	0.964	0.518
20	5	23.5	101	15	43	Y	5.00	21.00	2,264	2,264	2,264	0.94	0.950	3.5	24.0	27.5	0.949	0.510
25	6	28.5	121	13	55	Y	5.00	26.00	2,819	2,819	2,819	0.84	0.950	4.2	18.7	22.8	0.930	0.500
30	7	33.5	118	16	80	Y	5.00	31.00	3,416	3,354	3,416	0.77	1.000	5.3	22.0	27.3	0.908	0.497
35	8	38.5	118	38	31	Y	5.00	36.00	4,006	3,632	4,006	0.71	1.000	2.6	48.2	50.8	0.881	0.522
40	9	43.5	118	35	0	Y	5.00	41.00	4,596	3,910	4,596	0.66	1.000	0.0	41.4	41.4	0.850	0.537
45	10	48.5	118	100	0	Y	5.00	46.00	5,186	4,188	5,124	0.62	1.000	0.0	112.1	112.1	0.815	0.543
50	11	51.5	118	67	0	Y	3.00	50.00	5,658	4,410	5,346	0.61	1.000	0.0	73.5	73.5	0.785	0.541

References: 1) Tokimatsu, K., and Seed, H. (1987). "Evaluation of Settlements in Sands Due to Earthquake Shaking." Journal of Geotechnical Engineering, ASCE, 113(8), 861-878. 2) Youd, T.L., and Idriss, I.M. (1997). "Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils". Technical Report NCEER-97-0022, FHWA.

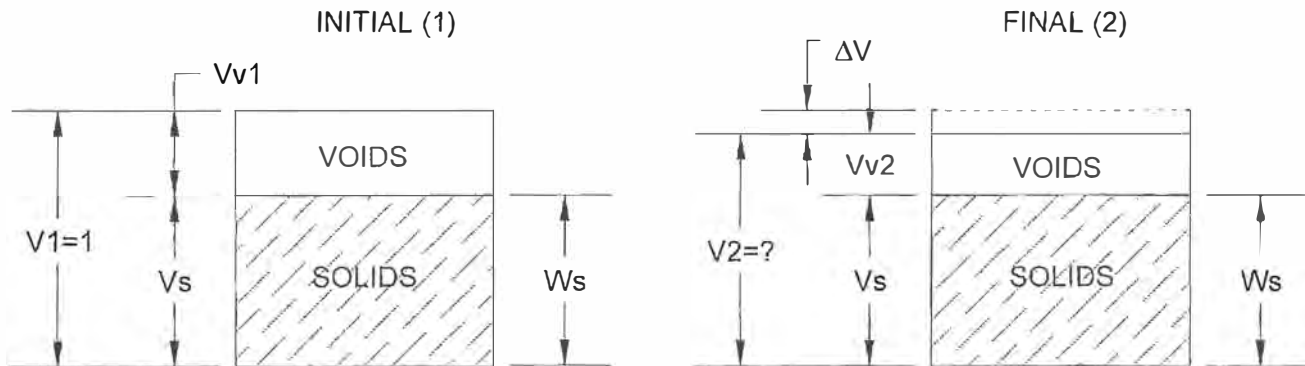


SHRINKAGE CALCULATION



A.G.I. GEOTECHNICAL, INC.

SHRINKAGE (-) / BULKING (+) DETERMINATION



$$\gamma_{d1} = \frac{W_s}{V_1} = \frac{W_s}{1} = W_s$$

$$\gamma_{d2} = \frac{W_s}{V_2}$$

$$V_2 = \frac{W_s}{\gamma_{d2}} = \frac{\gamma_{d1}}{\gamma_{d2}}$$

$$\Delta V = V_2 - V_1 = \frac{\gamma_{d1}}{\gamma_{d2}} - 1$$

$$\Delta V\% = \frac{V_2 - V_1}{V_1} = 100 \times \frac{\frac{\gamma_{d1}}{\gamma_{d2}} - 1}{1} = 100 \times \left(\frac{\gamma_{d1}}{\gamma_{d2}} - 1 \right)$$

1) γ_{d1} , INITIAL DRY DENSITY (pcf)

111 (IN-SITU)

2) γ_{d2} , FINAL DRY DENSITY (pcf)

109 (COMPACTED OR EXCAVATED)

ΔV , VOLUME CHANGE (ft³)

0.0158 ($\gamma_{d1} / \gamma_{d2} - 1$)

$\Delta V\%$, VOLUME CHANGE (%)

1.6 BULKING

Reference: NAVFAC DM-7.01, Chapter 3, Section 2, Table 6, September 1, 1986



AGI GEOTECHNICAL, INC.

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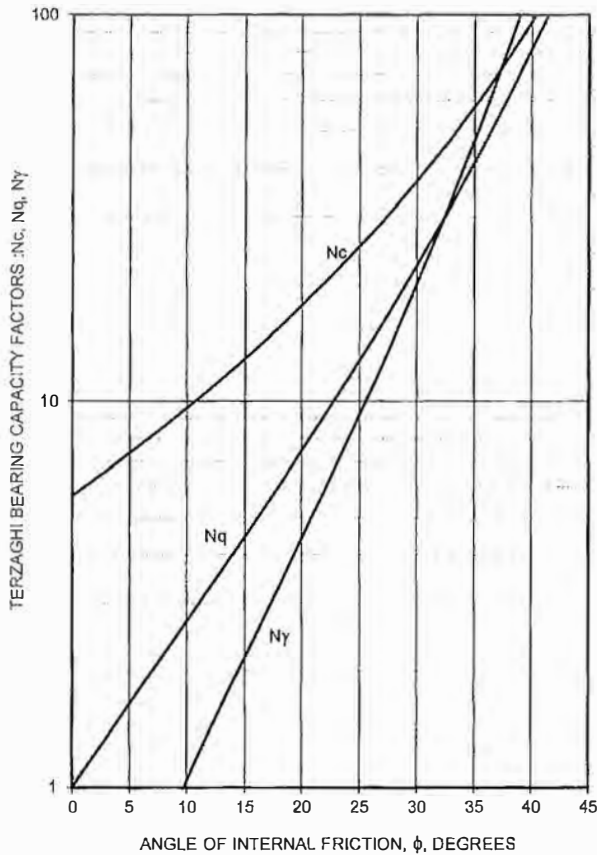
Proj. No.:	31-6013-00	Date:	Jan. 2022
Project:	11835 W. Tennessee Pl., Los Angeles		
Calc. By:	WFB		

BEARING CAPACITY ANALYSIS



A.G.I. GEOTECHNICAL, INC.

BEARING CAPACITY OF CONTINUOUS FOOTING FOUNDATION



ULTIMATE BEARING CAPACITY = q_{ult}

$$q_{ult} = cN_c + \gamma DN_q + 0.5 \gamma BN_\gamma$$

ALLOWABLE BEARING PRESSURE = $q_{allow} = q_{ult}/FOS$

BEARING CAPACITY FACTORS

$$N_q = \frac{e^{2\pi(0.75-\phi/360)\tan\phi}}{2\cos^2(45+\phi/2)}$$

$$N_c = \frac{N_q - 1}{\tan\phi}$$

$$N_\gamma = \frac{2(N_q + 1)\tan\phi}{1 + 0.4\sin 4\phi}$$

SOIL PROPERTIES:

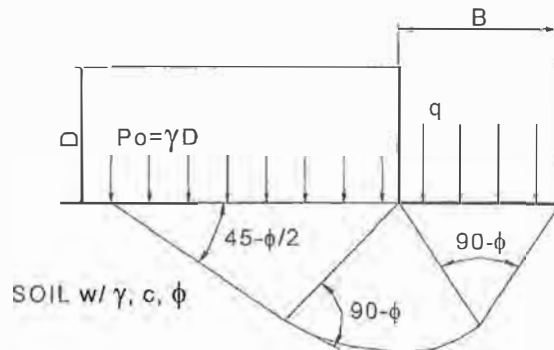
UNIT WEIGHT, γ (pcf)	114
COHESION, c , (psf)	617
FRICTION ANGLE, ϕ (deg)	21.8

FOUNDATION PROPERTIES:

WIDTH, B (feet)	2
DEPTH, D (feet)	2
FACTOR OF SAFETY, FOS	3

BEARING CAPACITY FACTORS:

N_q	9.00
N_c	19.99
N_γ	5.71



ULTIMATE BEARING CAPACITY, q_{ult} : 15,038 psf

ALLOWABLE BEARING PRESSURE, q_{allow} : 5,013 psf

RECOMMENDED BEARING PRESSURE, q : 3,500 psf

References:

1. Coduto, Donald (2001), Foundation Design, Prentice-Hall, ISBN 0-13-589706-8
2. Das, Braja (2007), Principles of Foundation Engineering (6th ed.), Stamford, CT: Cengage Publisher
3. Das, Braja (1999), Bearing Capacity and Settlement, Boca Raton, FL: CRC Press LLC



AGI GEOTECHNICAL, INC.

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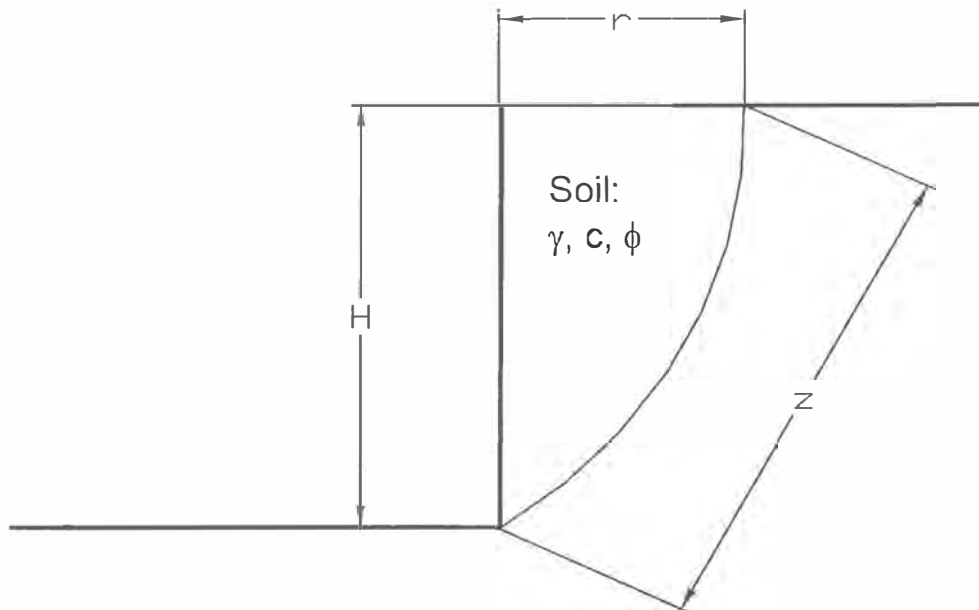
Proj. No.:	31-6013-00	Date:	Jan. 2022
Project:	11835 Tennessee Pl., Los Angeles		
Calc. By:	WFB		

SLOT CUT STABILITY ANALYSIS



A.G.I. GEOTECHNICAL, INC.

SLOT CUT STABILITY ANALYSIS



Description	Value
Unit Weight, γ (pcf)	114
Friction, ϕ (deg)	21.8
Cohesion, c (psf)	617

Cut Height, H (ft)	5.0
Failure Radius, r (ft)	4.0
Failure Width, $B = 2r$ (ft)	8.0

Volume, $V = \pi r^2 H / 4$ (ft ³)	63
Weight, $W = V \gamma$ (lb)	7,182
Surcharge, Q (lb)	10,000
Weight+Surcharge, $W + Q$, (lb)	17,182

Surface Area, $A = 0.5236r ((r^2 + 4H^2)^{3/2} - r^3)$ (ft ²)	50
Driving Force, $F_D = WH / (r^2 + H^2)^{1/2}$ (lb)	13,417
Normal Force, $F_N = Wr / (r^2 + H^2)^{1/2}$ (lb)	10,734
Frictional Resistance, $R_F = F_N \tan \phi$ (lb)	4,293
Cohesive Resistance, $R_C = A c$ (lb)	30,850
Total Resistance, $R = R_F + R_C$ (lb)	35,143
Factor of Safety, $FS = R / F_D$	2.62



A.G.I. GEOTECHNICAL, INC.

Proj. No.:	31-6013-00	Date:	Jan. 2022
Project:	11835 Tennessee Pl.		
Calc. By:	WFB		

QUADRANGLE LOCATION MAP



A.G.I. GEOTECHNICAL, INC.

GROUNDWATER MAP



A.G.I. GEOTECHNICAL, INC.

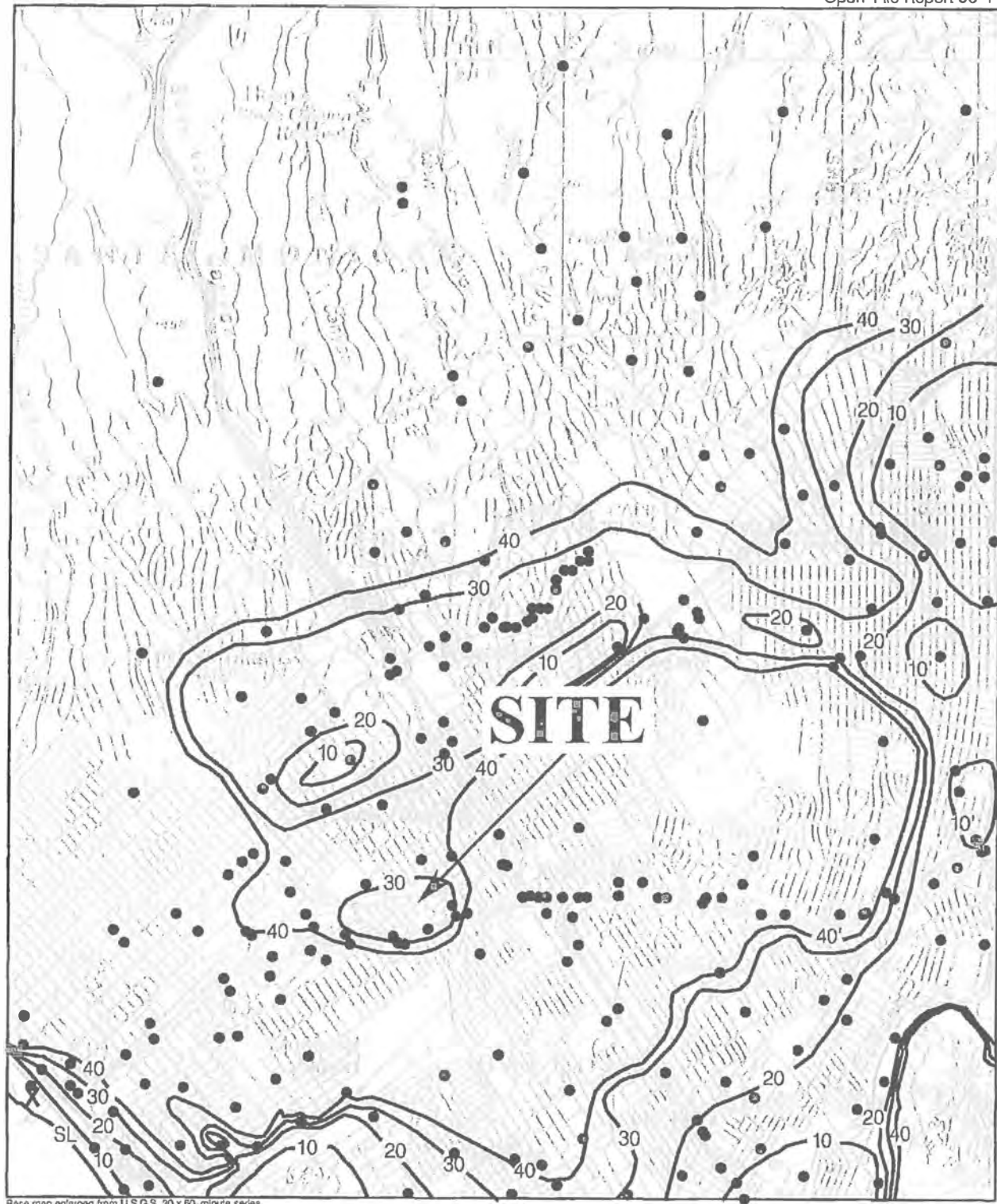


Plate 1.2 Historically Highest Ground Water Contours and Borehole Log Data Locations, Beverly Hills Quadrangle.

• Borehole Site

— 30 — Depth to ground water in feet

X Site of historical earthquake generated liquefaction. See "Areas of Past Liquefaction" discussion in text.

ONE MILE
SCALE



A.G.I. GEOTECHNICAL, INC.

Engineering Geology • Geotechnical Engineering
16555 Sherman Way, Ste. A • Van Nuys, CA 91406

GROUNDWATER MAP

11835 W. Tennessee Pl., Los Angeles

PROJECT NO.	31-6013-00
DATE	11-2021
PREPARED BY	WFB
APPROVED BY	MRS