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

ROBERT R. "BUD" OVROM
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GEOLOGY AND SOILS REPORT APPROVAL LETTER

October 19, 2015

LOG # 89303-01
SOILS/GEOLOGY FILE - 2
LAN

Sol Shaolian
5104 Garden Grove Avenue
Tarzana, CA 91356

TRACT: 8799
LOT(S): FR 26 / FR 27
LOCATION: 2239 / 2243 N. Laurel Canyon Boulevard

<u>CURRENT REFERENCE REPORT/LETTER(S)</u>	<u>REPORT NO.</u>	<u>DATE(S) OF DOCUMENT</u>	<u>PREPARED BY</u>
Geol./Soils Response Rpt.	14-333-22	09/22/2015	Applied Earth Sciences
<u>PREVIOUS REFERENCE REPORT/LETTER(S)</u>	<u>REPORT NO.</u>	<u>DATE(S) OF DOCUMENT</u>	<u>PREPARED BY</u>
Geol./Soils Supplemental Rpt.	14-333-22	07/15/2015	Applied Earth Sciences
Dept. Correction Letter	89303	07/22/2015	LADBS
Dept. Approval Letter	84395-02	12/23/2014	LADBS
Response Rpt.	14-333-22	11/20/2014	Applied Earth Sciences
Response Rpt.	14-333-22	08/18/2014	Applied Earth Sciences
Geol./Soils Rpt.	14-333-22	04/25/2014	Applied Earth Sciences

The Grading Division of the Department of Building and Safety has reviewed the 07/15/2015 and 09/22/2015 referenced reports providing recommendations for an alternative trimming of the bedrock slope between the driveway and rear yard on Lot 26 above the garage wall and retaining wall between the garage and residence to eliminate the intermediate retaining wall, in excess of the number of retaining walls allowed.

The site is located in a designated seismically induced landslide hazard zone as shown on the "Seismic Hazard Zones" map issued by the State of California. The previously approved reports included an acceptable seismic slope stability evaluation and the Code requirements for evaluation of seismically induced landslide hazards have been satisfied.

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2239 / 2243 N. Laurel Canyon Boulevard

The 07/15/2015 and 09/22/2015 reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2008 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. Grading Plan may be revised as recommended in said 07/15/2015 and 09/22/2015 reports. Revised grading plans shall be reviewed and approved as required in Condition 5 of said 12/23/2014 Department letter (Log # 84395-02)
2. Cut slope shall be no steeper than 1½:1, as recommended.
3. Foundation setback from face of descending slope for upper retaining walls shall be maintained.
4. All recommendations of the reports which are in addition to or more restrictive than the conditions contained herein or in the 12/23/2014 Department letter (Log # 84395-02) shall be incorporated into the plans.
5. All conditions of the 12/23/2014 Department letter (Log # 84395-02) shall be incorporated into the plans shall apply except as specifically indicated otherwise herein.



CURTIS DIETZ
Geotechnical Engineer I

Log No. 89303-01
(213) 482-0480

cc: Applied Earth Sciences
LA District Office

LADBS.000218

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GEOLOGY AND SOILS REPORT APPROVAL LETTER

December 23, 2014

Log # 84395-02
SOILS/GEOLOGY FILE - 2
LAN

Sol Shaolian
5161 Veloz Avenue
Tarzana, CA 91356

TRACT: 8799
LOT(S): FR 26 / FR 27
LOCATION: 2239 / 2243 N. Laurel Canyon Boulevard

<u>CURRENT REFERENCE REPORT/LETTER(S)</u>	<u>REPORT NO.</u>	<u>DATE(S) OF DOCUMENT</u>	<u>PREPARED BY</u>
Response Rpt. (Lots 26+27)	14-333-22	11/20/2014	Applied Earth Sciences
<u>PREVIOUS REFERENCE REPORT/LETTER(S)</u>	<u>REPORT NO.</u>	<u>DATE(S) OF DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Corr. Ltr. (Lots 26 & 27) Response Rpt. (Lots 26+27)	Log # 84395-01 14-333-22	10/01/2014 08/18/2014	LADBS Applied Earth Sciences
Dept. Corr. Ltr. (Lots 26 & 27) Geol/Soils Rpt. (Lots 26 & 27)	Log # 84395 14-333-22	07/22/2014 04/25/2014	LADBS Applied Earth Sciences
Dept. Corr. Ltr. (Lot 26) Soil Report (Lot 26)	Log # 58623 NE6222	07/27/2005 04/26/2007	LADBS Nuñez Engineering
Geology Report (Lot 26) Dept. Appr. Ltr. (Lot 27)	SE-1481-GS Log # 44108	08/21/2006 07/13/2004	Schroeter Env. LADBS
Geology/Soils Report Dept. Appr. Ltr. (Lot 27)	JB19772-T Log # 33686	05/21/2004 09/14/1993	The J. Byer Group LADBS
Response Report (Lot 27) Dept. Corr. Ltr. (Lot 27)	15545-B Log # 33275	08/13/1993 08/03/1993	The J. Byer Group LADBS
Geology/Soils Rpt. (Lot 27)	15545-B	06/29/1993	The J. Byer Group

The referenced 2014 reports providing recommendations for the proposed construction of two new three-story single-family residences with detached garages and associated retaining/basement walls on lots 26 and 27 of Tract 8799, have been reviewed by the Grading Division of the Department of Building and Safety. Please refer to the referenced previous reports and associated review letters

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concerning work as previously proposed and presented and the content of the department's review letters.

Currently, the dwellings are proposed on the lower portion of the overall N/NE-facing slopes that ascend above Laurel Canyon Boulevard. Slope heights measured from the rear of the properties, exceed 350 feet, per the City Navigate LA Maps. It is currently anticipated (see pg. 3 in the referenced 04/25/2014 report) that soldier piles to temporarily support the excavations during construction, will be permanently incorporated into the permanent retaining wall systems for the proposed dwellings.

The current report was able to demonstrate that the slope above and impacting the site has at least the Code required surficial slope stability. However, the report recommends that debris fences and a minimum freeboard height on the rear retaining walls below ascending slopes be 3 feet and be designed for a minimum equivalent fluid pressure of 125 pcf. The granitic bedrock below the existing fill and soil colluvium is the recommended bearing material.

Be advised that verification of compliance with the wall height and other requirements in the zoning code (including the recommended freeboard height of 3 feet), will be a part of the future structural plan check and permitting process.

The site is located in a designated seismically induced landslide hazard zone as shown on the "Seismic Hazard Zones" map issued by the State of California. The above reports include an acceptable seismic slope stability evaluation and the Code requirements for evaluation of seismically induced landslide hazards have been satisfied.

The 2014 reports by Applied Earth Sciences referenced are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2011 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. A supplemental report shall be submitted for review to the Grading Division, if the final plans vary significantly from the construction as proposed and presented in the referenced 11/20/2014 report. **Note:** This letter is based on the proposed construction shown on the map and sections in the referenced 11/20/2014 report.
2. Approval shall be obtained from the Department of Public Works, Bureau of Engineering, Constituent Service Division for the proposed removal of support and/or retaining of slopes and the proposed development adjoining Laurel Canyon Boulevard. (3307.3.2)
201 N. Figueroa Street 3rd Floor, LA (213) 482-7045
3. As recommended (see map, sections and pgs. 7, 9, 10 & 15 in the referenced 04/25/2014 report), all retaining walls supporting ascending slopes shall be provided with a paved drain and a minimum protective freeboard height of 36 inches designed for a minimum equivalent fluid pressure of 125 pcf, and debris fences installed, as shown.


4. Buildings adjacent to ascending slopes shall be set back from the toe of the slope a level distance equal to one half the vertical height of the slope, but need not exceed 15 feet in accordance with Code Section 1808.7.1.
5. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans which clearly indicates that the geologist and soils engineer have reviewed the plans prepared by the design engineer and that the plans include the recommendations contained in their reports. (7006.1)
6. All recommendations of the reports which are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
7. 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. Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit. (7006.1)
8. A grading permit shall be obtained for all structural fill and retaining wall backfill. (106.1.2)
9. All new graded slopes shall be no steeper than 2:1 (H:V). (7010.2 & 7011.2)
10. Prior to the issuance of any permit, an accurate volume determination shall be made and included in the final plans, with regard to the amount of earth material to be exported from the site. For grading involving import or export of more than 1000 cubic yards of earth materials within the *grading hillside area*, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Grading Division. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.
11. Existing uncertified fill shall not be used for support of foundations, concrete slabs or new fill.
12. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction. (7013.12)
13. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cu yd. (7007.1)
201 N. Figueroa Street Room 770, LA (213) 977-6063
14. All loose foundation excavation material shall be removed prior to commencement of framing. Slopes disturbed by construction activities shall be restored. (7005.3)
15. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the State Construction Safety Orders enforced by the State Division of Industrial Safety. (3301.1)

16. Construction of trenches or excavations which are 5 feet or deeper and into which a person is required to descend requires a permit from the State Division of Industrial Safety prior to obtaining a grading permit. (3301.1)
17. Where any excavation would remove lateral support (as defined in 3307.3.1) from a public way or adjacent property or structure, unshored excavations are not allowed and the excavation shall be shored as recommended.
18. Prior to the issuance of any permit which 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)
19. All temporary excavations shall be shored as recommended and specified (see pgs. 3, & 10 - 12 in the referenced 04/25/2014 report), or sloped as specified on pg. 10. Where soldier piles are to be part of the permanent basement retaining wall system, piles shall be designed for the most critical of the required basement/retaining conditions.
20. Final plans shall show all areas to be shored.
21. Foundations shall derive all vertical and lateral support in competent bedrock, as recommended and approved by the geologist and soils engineer by inspection.
22. Frictional and passive resistance of end bearing foundations may be combined, provided the passive bearing resistance does not exceed two-thirds of the allowable passive bearing.
23. Foundations adjacent to a descending slope steeper than 3:1 in gradient shall be a minimum distance of one-third the vertical height of the slope but need not exceed 40 feet measured horizontally from the foundation bottom to the face of the bedrock slope. (1808.7.2)
24. Piles, caisson and/or isolated foundation shall be provided with seismic ties as required by Code Sections 1809.13 and/or 1810.3.13. Exceptions and modification to this requirement are provided in Information Bulletin P/BC 2014-030.
25. Pile and/or caisson shafts shall be designed for a lateral load due to creep of 1000 pounds per linear foot of shaft exposed to uncertified fill, and soil over bedrock. (P/BC 2011-050)
26. The report specifies a depth into competent bedrock that pile may be assumed "fixed" for the calculation of pile moments under lateral loading. For permanent piles, design moment(s) shall not be less than those determined structurally based on the laterally applied loads and the resulting passive pressure reaction(s).
27. The LABC Soil Site Class Type underlying the site is C. Plan checker shall determine that design spectral response acceleration parameters utilized are determined in conformance with Department requirements.

28. Retaining walls shall be designed for lateral earth pressures no less than specified in the section titled "Retaining Walls" starting on page 14 of the 04/25/2014 report. All surcharge loads shall be incorporated into the design.
29. Retaining/basement walls shall be designed for a lateral load less than that due to the equivalent fluid pressure (EFP) specified in Table 1 of Information Bulletin P/BC 2008-083 for sloping retained grade.
30. Retaining/basement walls exceeding a height of 6 feet shall be designed for additional lateral pressure due to earthquake motions consisting of an inverted triangular distribution due to an EFP of 25 pcf, as recommended on page 14 of the 04/25/2014 report. (1803.5.12)
31. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted to the street in an acceptable manner and in a non-erosive device. (7013.11)
32. All retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall, as recommended. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soil report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record.
33. Prefabricated drainage composites (Miradrain) (Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.
34. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector. (7008.2 & 108.9)
35. Basement walls and floors shall be waterproofed/dampproofed with an L.A. City approved "Below-grade" waterproofing/dampproofing material with a research report number. (1703)
36. Where no hydrostatic pressure will occur, basement walls and floor slabs-on-grade shall be dampproofed (1805.2).
37. The dwellings shall be connected to the public sewer system.
38. All roof and pad drainage shall be conducted to the street in an acceptable manner. Water shall not be dispersed on to descending slopes without specific approval from the Grading Division and the consulting geologist and soils engineer.
39. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS.
40. Prior to excavation, an initial inspection shall be called at which time the sequence of shoring, sequence of construction, all site grading, protection fences and dust and traffic control will be scheduled.
41. The geologist and soil 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. (7008.3 & 7008.2)

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42. Any recommendations prepared by the geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Grading Division of the Department for approval prior to utilization in the field. (7008.3 & 7008.2)
43. Both the geologist and the soils engineer shall inspect and approve all fill and subdrain placement areas prior to placing fill. (7008.2, 7008.3 and 7011.3)
44. Installation of shoring and all site grading shall be performed under the inspection and approval of the soils engineer and deputy grading inspector.
45. 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 (D1556). Placement of gravel in lieu of compacted fill is allowed only if complying with Section 91.7011.3 of the Code.
46. Prior to the placing of compacted fill, a representative of the consulting soils engineer shall inspect and approve the bottom excavations. He shall post a notice on the job site for the LADBS Grading Inspector and the Contractor stating that the soil inspected meets the conditions of the report, but that no fill shall be placed until the LADBS Grading Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be filed 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. The engineer's certificate of compliance shall include the grading permit number and the legal description as described in the permit.
47. Prior to the pouring of concrete, a representative of the consulting soils engineer shall inspect and approve the foundation excavations. He shall post a notice on the job site for the LADBS Building Inspector and the Contractor stating that the work so inspected meets the conditions of the report, but that no concrete shall be poured until the LADBS Building Inspector has also inspected and approved the foundation excavations. A written certification to this effect shall be filed with the Department upon completion of the work. (108.9 & 7008.2)


STEPHEN DAWSON
Engineering Geologist II


CURTIS DIETZ
Geotechnical Engineer I

Log # 84395-02
(213) 482-0480

cc: Applied Earth Sciences
LA District Office

LADBS.000226

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CITY OF LOS ANGELES
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ERIC GARCETTI
MAYOR

Attachment 1

DEPARTMENT OF
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201 NORTH FIGUEROA STREET
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FRANK M. BUSH
GENERAL MANAGER
SUPERINTENDENT OF BUILDING

OSAMA YOUNAN, P.E.
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GEOLOGY AND SOILS REPORT APPROVAL LETTER

October 10, 2017

LOG # 99838
SOILS/GEOLOGY FILE - 2
LAN

Tigran Sargsyan
6228 Fulton Avenue
Van Nuys, CA 91401

TRACT: 8799
LOTS: FR 26 / FR 27
LOCATION: 2239 / 2243 N. Laurel Canyon Boulevard

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Addendum Report	14-333-22	08/09/2017	Applied Earth Sciences

<u>PREVIOUS REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Request for Modification	25353	10/10/2017	LADBS
Dept. Approval Letter	89303-01	10/19/2015	LADBS
Geol./Soils Response Report	14-333-22	09/25/2015	Applied Earth Sciences
Geol./Soils Supplemental Report	14-333-22	07/15/2015	Applied Earth Sciences
Dept. Approval Letter	84395-02	12/23/2014	LADBS
Response Report	14-333-22	11/20/2014	Applied Earth Sciences
Response Report	14-333-22	08/18/2014	Applied Earth Sciences
Geology/Soils Report	14-333-22	04/25/2014	Applied Earth Sciences

The Grading Division of the Department of Building and Safety has reviewed the 08/09/2017 addendum report providing additional recommendations for revised rear yard retaining wall freeboard and non-habitable garage (Lot 26) building setback from the toe of a 1.5H:1V slope. The revision to the rear yard freeboard recommendations is due to retaining wall height restrictions. The consultants recommend to revise the rear yard retaining walls to have 18 inches of freeboard with a 3 foot minimum height debris fence above. The consultants also recommend that the non-habitable garage at the toe of an approximately 12 foot high bedrock cut slope have a minimum freeboard of 2 feet.

Please note that the previous Department letter dated 10/19/2015 inadvertently referred to the 09/25/2015 report by Applied Earth Sciences as 09/22/2015. The referenced reports are acceptable, provided the following conditions are complied with during site development:

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

1. All conditions of the above referenced Department approval letters dated 12/23/2014 (Log #84395-02) and 10/19/2015 (Log #89303-01) shall apply except as specifically modified herein.
2. A request for modification (Mod # 25353) to allow a non-habitable garage with the roof designed as a structural deck designed for an additional gravity load equivalent to 400 pounds per square foot and 2 feet of freeboard at the toe of a 1.5H:1V bedrock has been granted by the department. A covenant and agreement has been recorded with the county recorder's office that the garage will forever be a non-habitable storage structure.
3. Except as allowed for in the granted request for modification, buildings adjacent to ascending slopes steeper than 3H:1V in gradient shall be setback from the toe of the slope a level distance measured perpendicular to slope contours equal to one-half the vertical height of the slope, but need not exceed 15 feet (1808.7.1).
4. The rear yard retaining walls shall be provided with a minimum freeboard of 18 inches and an additional 3 foot high debris fence, as recommended. The recommended equivalent fluid pressure (EFP) for the proposed retaining wall shall apply from the top of the freeboard to the bottom of the wall footing.



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GLEN RAAD
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