

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

GEOLOGY AND SOILS REPORT CORRECTION LETTER

November 21, 2014

LOG # 83343
SOILS/GEOLOGY FILE - 2
AP

To: Jim Tokunaga, Deputy Advisory Agency
Department of City Planning
200 N. Spring Street, 7th Floor, Room 750

From: Pascal Challita, Geotechnical Engineer III
Department of Building and Safety

Tentative Tract: 72370
LOT(S): 1 Master Lot and 10 Airspace Lots
LOCATION: 8150 W. Sunset Boulevard

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE(S) OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Geology Report	123-92034-02	01/27/2014	Golder Associates
Soils Report	123-92034	10/03/2014	"

The Grading Division of the Department of Building and Safety has reviewed the Tentative Tract 72370 with Los Angeles Department of City Planning receipt stamp dated and the referenced reports that provide recommendations for a proposed multi-level residential and commercial development, including one building with a 9-story and a 16-story portion and a separate 3 story building. Two subterranean levels are proposed. According to the reports, the site gently slopes to the south and is occupied by commercial developments. All of the existing structures are to be removed to accommodate the proposed development. The earth materials at the subsurface exploration locations consist of alluvium.

The property is located within a now official Alquist-Priolo Earthquake Fault Zone (APEFZ) that was established (November 6, 2014) by the California Geological Survey for the Hollywood fault on the USGS 7.5 minute Hollywood Quadrangle. The APEFZ shows the trace of the Hollywood fault northwest of the site. The edge of the APEFZ traverses the southeast corner of the site. A surface fault rupture hazard assessment report (dated 01/27/2014) was prepared to determine if the site is impacted by active faults. The fault investigation included a transect of CPT soundings and continuous core borings. Young (Holocene) alluvium was encountered to a depth of about 47-70 feet, which represent deposits of the Laurel Canyon alluvial fan. Older (Pleistocene) alluvium underlies the Laurel Canyon alluvial fan deposits. Age assessments of the geologic units were made by radio carbon dating and observations of pedological development. The subsequent 10/03/2014 report provided geotechnical recommendation for design of the proposed construction.

The review of the subject reports can not be completed at this time and will be continued upon submittal of an addendum to the report which shall include, but not be limited to, the following:

(Note: Numbers in parenthesis () refer to applicable sections of the 2014 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 exploratory transect, which included 14 CPT soundings and 2 continuous core borings, extended from the southwest corner of the site and along Havenhurst Drive on the west side of the site. This exploration covered the area from the southwest edge of the APEFZ to the northwest corner of the site. The exploration did not extend 50 feet beyond the property boundary. As such, the Department policy is that the presence of an active fault must be considered to exist just beyond the property line.

The consultants argue that the setback or reinforced foundations are not necessary. The argument is primarily based on a fairly recent paper by Petersen and others titled "Fault Displacement Hazard for Strike-Slip Faults", published in the Bulletin of the Seismological Society of America (BSSA), Vol. 101, No. 2, pages 805 to 825. In general, the paper presents a methodology, data and regression equations to calculate the potential for off-fault deformations near steeply-dipping strike-slip faults that are well developed and regularly active. This type of faulting, however, does not apply to the Hollywood fault, which is not well developed and overlain by thick un-faulted young alluvium. Paleoseismic data is also very sparse for the Hollywood fault.

Based on the above, the nature of what is known about Hollywood fault seems to apply to the caveats discussed at the end of the Peterson and others BSSA paper. In sum, there are too many epistemic and aleatory uncertainties regarding the Hollywood fault to warrant disregarding the required setback.

2. Provide a revised map and transect cross sections (01/27/2014 fault study report) to reflect a standard engineer's scale. This would be helpful in comparing the interpretive figures/cross sections with the field data.
3. Review and provide the pertinent data from the investigation that was performed just to the southwest of the site at 1433-1437 Havenhurst Drive (West Hollywood reference fault study 17).
4. Clarify either that no artificial fill was encountered in borings, or indicate fill on the boring log and include in the discussion (10/03/2014 soils report).
5. Provide a geotechnical map for the 10/03/2014 soils report, at an appropriate scale showing the location of the proposed buildings. Provide cross sections where basements, retaining walls, or temporary/permanent excavations are existing or proposed. The geotechnical map and cross sections shall clearly show the site boundaries, location and size of all existing and proposed buildings and structures, the location of all exploratory excavations, earth material contacts, and the extent of the proposed grading work. The map shall be legible and reproducible. (P/BC 2014-113)

6. Provide justification for recommended bearing capacities in Tables 2 and 3 on page 11 in the 10/03/2014 soils report, and justification that static settlements will not exceed 1" for the most critical footings. It is noted that no direct shear test data was provided in said report.
7. The 10/03/2014 soils report recommends that footings may alternatively be founded in compacted fill. It shall be noted that the Department requires that compacted fill for the support of foundations extend laterally beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings or a minimum of 3 feet whichever is greater (1809.2, 7011.3). Where recommendations are provided for a lesser lateral overexcavation, the Department requires that analyses be provided demonstrating that the proposed compacted fill and adjacent undocumented fill and native soils will have the lateral and vertical bearing capacities recommended.
8. Under section 4.3.2.2 titled "Lateral Resistance" in the 10/03/2014 soils report, continuing on page 12, an ultimate base friction factor of 0.50 is recommended. The Department requires a minimum factor of safety of 1.50 on lateral sliding and does not allow it to be based directly on the ultimate base friction. Provide clarification/correction.
9. Under section 4.3.3.1 titled "Axial Capacity", clarify what is meant by "unfactored" (ultimate?) compressive capacity, and demonstrate that the recommended friction capacity will not result in a factor of safety on the supporting soils less than 2.0 as allowed per Code section 1810.3.3.1.7
10. Discuss the low blow count data for the predominately granular soils encountered in the borings, which appears to imply loose to medium dense deposits the full depth explored. It is unclear how the consultant has calculated bearing capacities. The Department generally requires that bearing capacities and skin friction resistance be based on direct shear test data.
11. The Department requires that saturated shear strengths and unit weights of earth materials be utilized in long-term slope stability and retaining wall analyses where these result in more critical computed factors of safety. Provide direct shear test data on the earth material to be retained.
12. Where basement/retaining walls exceed 6 feet in retained height, the Code requires a determination of static lateral earth pressures on foundation and retaining walls with a factor of safety against failure, no less than 1.50, on the retained earth.
13. Where basement/retaining walls exceed 6 feet in retained height, the Code requires a determination of dynamic seismic lateral earth pressures on foundation and retaining walls due to design earthquake ground motions (1803.5.12). The Department requires that the acceleration to be applied to the retained mass not be less than $\frac{1}{2}$ of $\frac{2}{3}$ of the PGA_M (*Maximum Considered Earthquake-Geometric Mean, MCE_G adjusted for site effects, ASCE 7-10 Eq. 11.8-1*).
14. Provide recommendations for temporary excavations. Where an excavation would remove lateral support (as defined in Code Section 3307.3.1) from an adjacent public way, property or structure, it shall be noted that unbraced/unshored excavations are not allowed and excavations need to be shored or made by the ABC slot-cut method. Analysis shall

demonstrate that slot-cut excavations or shoring have an acceptable factor of safety ($FS \geq 1.25$) against failure based on the shear strength parameters of the earth materials in which the excavation is made or the shoring is to support, at the most critical degree of saturation that is expected to occur. All surcharge loads shall be considered. (P/BC 2014-113)

It is noted that the soils encountered appear to be cohesionless or to have little cohesion, and do not appear suitable for slot-cut excavations which require the soil to be able to stand vertically.

15. Where laboratory data utilized in engineering analysis is provided by another firm, the consultant shall provide a statement that he has reviewed the laboratory data, concurs with the results and accepts responsibility for use of said data. (P/BC 2014-113). The Department requires that the statement include the phrase "concurs with". Provide said statement.

The laboratory data shall be appended to the consultant's report on the data sheets/letterhead of the approved laboratory with a cover letter from the same signed by the responsible licensed engineer.

The geologist and soils engineer shall prepare a report containing the corrections indicated in this letter. The report shall be in the form of an itemized response. It is recommended that once all correction items have been addressed in a response report, to contact the report review engineer and/or geologist to schedule a verification appointment to demonstrate compliance with all the corrections. Do not schedule an appointment until all corrections have been addressed. Bring three copies of the response report, including one unbound wet-signed original for microfilming in the event that the report is found to be acceptable.


DCS/CD:dcs/cd
Log No. 83343
213-482-0480

cc: AG SCH 8150 Sunset Boulevard Owner, L.P., Owner
Michael Nytzen, Applicant
Golder Associates, Project Consultant
LA District Office