



March 3, 2000

4742 San Fernando Rd.  
Glendale, CA 91204

Mr. Vahik Ovasapian  
8520 Tujunga Avenue  
Sun Valley, California 91352  
768-8904 768-9988 (f)

(818)552-6000

Subject      Proposal-Geotechnical Investigation  
                 Proposed Single Family Residence  
                 Existing vacant Lot Across The Street From  
                 The Existing Single Family Residence Located At  
                 3744 Avenida Del Sol  
                 Studio City, California

Dear Mr. Ovasapian:

#### INTRODUCTION

As requested, and following our telephone conversation, we are pleased to submit this proposal to perform the subject geotechnical investigation. The investigation will be performed in order to provide recommendations for design and construction of foundations for the subject project.

It is believed that the proposed project will consist of construction of a single family residence. The residence is expected to be a 2 story wood frame building with garage established at or near the street level.

#### SCOPE OF WORK

We propose to provide the necessary personnel, equipment and materials to explore the site, perform laboratory testing, provide engineering evaluation and analysis, and prepare a Geotechnical Investigation Report for the subject project. Some 4 test holes will be excavated on the lot. The maximum depths of the test hole will be about 15 feet. The purpose of these test holes will be to evaluate the consistency of various soils deposits beneath the subject site. Relatively undisturbed samples of the subsoil will be obtained from the test holes in order to determine the engineering properties of the subsurface materials.

Each of the test holes will be sampled at regular intervals of depth and at changes in the subsurface materials. The samples will then be tested in the laboratory to determine the engineering properties of the subsurface soils. Laboratory testing may include, but not necessarily be limited to the following:

- 1) Moisture and Density
- 2) Direct Shear
- 3) Consolidation
- 4) Expansion

The soil data obtained from the field and laboratory testing program will be evaluated. Engineering and geologic evaluation and analysis will be performed. Consultation with the involved design professionals will be provided during all phases of investigation and prior to the written report preparation. Our final reports will include the following items:

1. A site plan showing site surface geology and the location of borings;
2. Cross section showing subsurface geology;
3. A discussion of the materials encountered in the borings and their engineering properties;
4. Graphical log of the exploratory borings summarizing the subsurface conditions encountered and the results of laboratory testing;
5. Evaluation of slope stability; and
6. Recommendations for design and construction of retaining walls, foundation, lateral load supporting capacities and any settlement effects due to structural loads.

### **PROJECT COSTS**

Our consulting services will be provided on the basis of time and expense. For budgeting purposes, we estimate that the total charges for the services described herein for two projects, including drilling cost will be on the order of \$3,250. In order to defray a portion of the investigation costs, we will require a retainer fee for an amount of \$600 with a signed copy of this proposal.


### **PROJECT SCHEDULE**

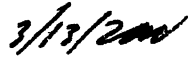
The scope of work presented above would be completed within four weeks from the date we receive authorization to proceed. Preliminary results of our findings, however, will be presented as they develop during the course of our investigation; normally within one week after completion of the field work.

Thank you for the opportunity to be of service on this project. If you have any questions regarding this proposal, please call the undersigned. If it is acceptable as written, please sign where indicated and return a copy of this proposal to us as our official approval to proceed with the investigation.

Respectfully submitted,

**Applied Earth Sciences**

  
\_\_\_\_\_  
Caro J. Minas, Geotechnical Engineer  
GE, 601

  
\_\_\_\_\_  
Date

Approved By:

\_\_\_\_\_  
Name & Title

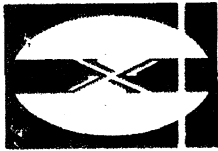
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April 19, 2000

00-363-02

FROM MACK

Mr. Vahik Ovasapian  
8520 Tujunga Avenue  
Sun Valley, California 91352

Subject Preliminary Findings  
Geotechnical Investigation  
Proposed Single Family Residence  
3741 Avenida Del Sol  
Studio City, California

Dear Mr. Ovasapian:

We are pleased to submit this letter presenting the results of our preliminary geotechnical investigation findings for the subject project. Our final report will be issued within 2 to 3 weeks from the date we receive a topographic survey map of the subject property showing the proposed grades and approximate locations of the proposed building. For the purpose of this letter, it is assumed that the street occurs to the east of the subject lot.

We now have completed the field exploration and major portion of the laboratory testing for the subject project. We are currently performing office engineering and geology work.

The results of our field investigation (consisting of drilling four test holes) indicated that the subject lot is underlain by variable thickness soil. The soil within the northern portion of the site (closer to the existing construction site) was found to be unusually thick (more than 20 feet thick). The soils cover within the southern portion of the lot was found to have normal thickness (less than 5 feet).

The existing soil was found to be porous and inadequate for foundation support. Therefore, all structural foundations should be established in bedrock.

Based on the above, it is our opinion that, although considerable amount of excavation will be made in order to create the proposed finished grades of the residence and the backyard, the final grades within the northern portion of the site is expected to expose soil. Therefore, the proposed single family residence, in the area of deep soil should be supported through deep foundations consisting of cast-in-place concrete friction piles. The deep foundations, should be extended through and soils and be established in bedrock. The deep foundations may need to be designed, not only for gravity loads of the proposed building, but also against lateral creep effects by the remaining soil at the base of the proposed building. Therefore, the pile foundations which can have lengths of as much as 30 feet or more, are expected to be considerably more expensive than normal conventional spread footings.

In our original report, we had stated that the maximum test hole depth would be on the order of 15 feet (normal for typical hillside lot that occurs on the upslope side). So far, we have made as deep as 20 feet of test hole and have not found bedrock in the northern portion of the lot. Therefore, the cost of field exploration has exceeded our previous estimated budget by at least \$750. As part of completion of our field work, at least one additional boring will be required within the northern portion of the subject lot (preferably near the center of the north property line). This will require additional budget of about \$1,000.

While we believe that the unusual soil thickness is related to presence of a natural drainage course within the subject property, we do not rule out the presence of other geologic hazards, such as ancient slides or unstable (creep prone) soils. Therefore, it is recommended that, before the close of the escrow, a topographic survey map of the site be submitted to our office so that we may prepare accurate cross sections for analysis.

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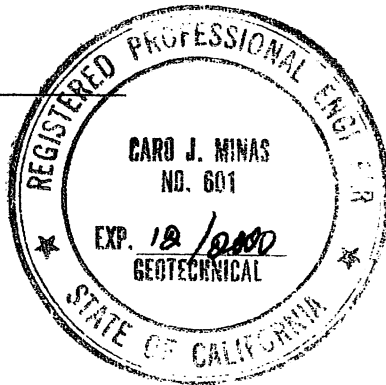
Should you have any questions regarding this letter, or wish to discuss the project further, please do not hesitate to call this office.

Respectfully Submitted,

**APPLIED EARTH SCIENCES**



Caro J. Minas  
Geotechnical Engineer,  
GE 601



CJM/rd

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