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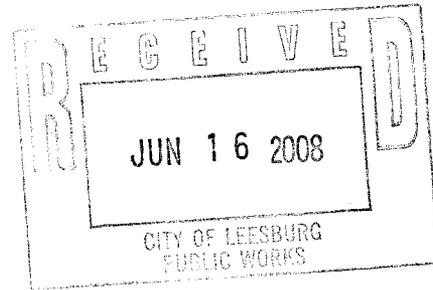
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May 27, 2008

City of Leesburg
P. O. Box 490630
Leesburg, Florida 34749

Attention: Mr. Jimmy Feagle

Reference: Preliminary Geotechnical Exploration
Girl Scout Building, Venetian Way
Leesburg, Lake County, Florida
Report No. 686239



Dear Mr. Feagle:

Universal Engineering Sciences, Inc. (UES) carried out a Preliminary Geotechnical Exploration at the Girl Scout Building located on Venetian Way in Leesburg, Lake County, Florida.

1.0 SCOPE

The subject property consists of a timber A-framed building used by the Girl Scouts. The building is showing evidence of structural distress.

As requested, we have carried out exploratory hand auger borings to determine near surface soil and groundwater conditions. We understand that you require an assessment of soil bearing capacity to determine whether the ground conditions are contributing to the structural distress.

2.0 SITE CONDITIONS

The subsurface conditions were explored with three (3) hand auger borings advanced to depths of 9-feet while carrying out the Dynamic Cone Penetration Test (DCP). Research has shown that the DCP test can be effectively used in auger holes to depths of 15 to 20 feet before energy losses and rod inertia begin to affect the test results. Correlations have been developed to evaluate the level of compaction of soils. A DCP penetration resistance of 10 blows per increment is approximately equivalent to 10 blows per foot of the SPT penetration resistance "N" which is approximately equivalent to a soil compaction on the order of 95 percent for predominantly granular soil.

No site survey was available for our field exploration. Our drilling crew located the borings to the front and sides of the building.

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The results of our field exploration, together with pertinent information obtained from the borings, such as soil profiles and measured groundwater levels, are shown on the boring logs included in Appendix A.

The soil profiles were prepared from field logs after the recovered soil samples were classified by a member of our geotechnical staff. The stratification lines shown on the boring logs represent the approximate boundaries between soil types, and may not depict exact subsurface soil conditions. The actual soil boundaries may be more transitional than depicted. Also, the soil conditions at locations other than the borings may differ from the boring profiles.

To summarize the findings of the borings, a soil profile consisting of an upper layer of orange clayey SAND [SC] to a typical depth of 2-feet from grade underlain by a black and gray fine SAND with silt [SP-SM] containing traces of roots to a depth of 3-feet, beneath which was a grey fine SAND [SP] to the full depth of exploration. Groundwater depth was between 6 and 7-feet below grade at the time of our exploration.

We also performed a cursory inspection to determine the dimensions of the existing foundation. Exploration along the north side of the building indicated a 12" thick, 24" wide thickened edge to the approximately 4" thick slab. The thickened edge protrudes approximately 4" beyond the edge of the A-frame.

3.0 PRELIMINARY RECOMMENDATIONS

3.1 GENERAL

The recommendations are made based upon a review of the attached soil test data and experience with similar projects and subsurface conditions. Please note that this exploration is preliminary in nature, and has been designed to provide you information on general subsurface conditions and identify potential causes of structural distress related to ground and / or groundwater conditions.

If subsurface conditions are encountered during construction that differ from those encountered in the borings, report those conditions immediately to us for observation and recommendations.

3.2 GROUNDWATER CONDITIONS

The groundwater table will fluctuate seasonally depending upon local rainfall. The rainy season in Central Florida is normally between June and September. Based upon our review of U.S.G.S. data, Lake County Soils Survey, recent rainfall data, our experience in the general area, the regional hydrogeology and the findings of our borings, the seasonal high groundwater table is estimated to be **within 3 feet of original site grades** at the boring locations. The existing ground water levels at each boring location appear in Appendix B: Boring Logs.



It should be noted that the estimated seasonal high water levels do not provide any assurance that groundwater levels will not exceed these estimated levels during any given year in the future. Should impediments to surface water drainage be present, or should rainfall intensity and duration, or total rainfall quantities, exceed the normally anticipated rainfall quantities, groundwater levels might exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during any future re-construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project. We recommend all remedial foundation designs incorporate the seasonal high groundwater conditions.

3.3 DEWATERING

Temporary dewatering may be required at the site during construction operations during the dry season, and **will** be required during the wet season, especially for foundation and utility excavations. We recommend the contract documents provide for determining the depth to the groundwater table just prior to construction, and for any required remedial dewatering. Further, we recommend the groundwater table be maintained at least 24 inches below all earthwork and compaction surfaces.

3.4 FOUNDATIONS

The equivalent N values of the soils explored in our borings ranged between 5 and 14 blows per foot. These values correspond to relative densities of loose to medium dense soils. It is our professional opinion that the site soils are generally capable of supporting the foundation loads from the current building.

It appears that the upper layer of clayey sand may be artificial fill, used to raise site grades and stabilize the formation. The black coloration and presence of root traces beneath the clayey sand are probably representative of a former topsoil / subsoil horizon. We did not find organic material in sufficient volume to suggest that the compression of organic soils is a cause of the structural distress.

4.0 CLOSURE

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549

David Wilshaw M.S., P.G.
Manager - Geotechnical Services

Girl Scout Building, Leesburg
UES Report No.: 686239



DW: ts

Cc: Client (3)

Attachments:

Appendix A: Log of Borings

Appendix B: Constraints and Restrictions

Appendix C: General Conditions

LOG OF BORINGS
Girl Scout Building, Leesburg
Lake County, Florida

AUGER BORING AB-1, 5-feet from Front of Building						
Depth (feet)		Soil Description	USCS Class.	DCP Test Depth (feet)		DCP Test Result, Equiv. SPT "N"
0	1.0	TOPSOIL	N/A	0	1	NR
1.0	2.0	Loose orange sandy CLAY	SC	1	2	9
2.0	3.0	Loose black and orange fine SAND with silt and traces roots	SP-SM	2	3	10
3.0	4.0	Loose black and gray fine SAND	SP	3	4	6
4.0	7.0	Loose gray fine SAND	SP	4	5	6
				5	6	8
				6	7	9
7.0	9.0	Loose to medium dense dark brown fine SAND	SP	7	8	9
				8	9	12
GWT found at 7 feet						

AUGER BORING AB-2, 5-feet from Front Right Corner						
Depth (feet)		Soil Description	USCS Class.	DCP Test Depth (feet)		DCP Test Result, Equiv. SPT "N"
0	1.0	TOPSOIL	N/A	0	1	NR
1.0	2.0	Brown to orange sandy CLAY	SC	1	2	NR
2.0	3.0	Loose black and grey fine SAND with silt and traces roots	SP-SM	2	3	5
3.0	4.0	Loose black and gray fine SAND	SP	3	4	5
4.0	7.0	Loose gray fine SAND	SP	4	5	9
				5	6	7
				6	7	8
7.0	9.0	Loose to medium dense light brown fine SAND	SP	7	8	9
GWT found at 6.5 feet						



AUGER BORING AB-3, Left Side of Building						
Depth (feet)		Soil Description	USCS Class.	DCP Test Depth (feet)		DCP Test Result, Equiv. SPT "N"
0	1.0	TOPSOIL	N/A	0	1	NR
1.0	2.0	Loose orange sandy CLAY	SC	1	2	10
2.0	3.0	Loose black and orange silty fine SAND with traces roots	SM	2	3	6
3.0	4.0	Loose black and gray fine SAND	SP	3	4	6
4.0	7.0	Loose gray fine SAND	SP	4	5	6
				5	6	9
				6	7	9
7.0	9.0	Loose to medium dense dark brown fine SAND	SP	7	8	14
				8	9	8
GWT found at 6.5 feet						

CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.



CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.



LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of field activities. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.