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Goleta Valley Cottage Hospital
Pueblo at Bath Street
Santa Barbara, California 93105
Attention: Mr. Scott Allen

October 19, 2020

Reference: 04.00178249

Subject: **Geotechnical Consulting Services, Response to City of Goleta Review Comments, Hollipat Parking Lot Improvements, Goleta Valley Cottage Hospital, Goleta, California**

Dear Mr. Allen,

Fugro is pleased to provide this letter providing geotechnical engineering information in response to comments from the City of Goleta regarding proposed improvements at the Goleta Valley Cottage Hospital's Hollipat Parking Lot located at the southeast corner of Hollister Avenue and Patterson Avenue in Goleta, California.

Background

On the basis of discussions and information from Robert Schmidt of Flowers & Associates, Inc., and review of the project plans, we understand that the proposed improvements to the parking lot will involve developing a shallow, approximately 13,000-square-foot, surface water infiltration basin, slurry seal resurfacing, local cut-out reconstruction, restriping of the parking lot, and other miscellaneous hardscape improvements. We understand the infiltration basin was designed using soil infiltration testing performed by Pacific Materials Laboratory and summarized in their letter (Pacific Material Laboratory 2020)[1].

The parking lot was originally developed in 2008 as a temporary parking lot that was used during the construction and expansion of the Goleta Valley Cottage Hospital and we understand the intended improvements are proposed to make the parking lot a permanent facility. Images available on Google

[1] Pacific Materials Laboratory (2020), "Infiltration Tests, Goleta Valley Cottage Hospital, Stormwater Control Plan, Hollipat Center Drive, Goleta, California," report prepared for Cottage Health Care System, dated (revised) September 3.

Earth indicate the site was undeveloped (and possibly used for agricultural purposes in the past) until the temporary parking lot was developed in the late 2000's.

We understand that plans for the proposed improvements were prepared and submitted to the City of Goleta. As part of their review process, the City of Goleta Public Works Division issued comments to the project team in January 2020 regarding the proposed improvements. One of the comments requested that a geotechnical engineering report be provided that "*include description of the earthwork of 1,600 cubic yards of soil moved as indicated in the Environmental Questionnaire*" and that the report "*shall be provided with the soil design criteria for any structures or embankments required to meet the proposed grading; however, the requirement can be exempted with a building official authorization*."

On the basis of discussions with Mr. Schmidt, we understand that Goleta Valley Cottage Hospital is requesting Fugro provide information to respond to the City of Goleta's comment outlined above.

Interpreted Geotechnical Site Conditions

We understand that site-specific geotechnical data are not available or were not acquired for the development of the temporary parking lot.; however, Fugro has provided geotechnical engineering services for past projects in the vicinity of the Hollipat Parking Lot consisting of:

- Goleta Valley Hospital Aquatic Center Project, located west of Patterson Avenue about 1,000 feet southwest of the Hollipat Parking Lot (Fugro, 2020)[2]; and
- Goleta Valley Cottage Hospital Replacement Project located about 500 feet west-southwest of the Hollipat Parking Lot (MNS Engineers, 2009).[3]

On the basis of data from these past studies and our interpretation of work performed for the development of the temporary parking lot, we interpret the general conditions at the parking lot to consist of the following:

- Artificial Fill – Estimate that a nominal thickness of undocumented artificial fill is present beneath the parking lot. The fill was likely derived from onsite soils and presumably consists of loose to medium dense silty sand, clayey sand or medium stiff silt and sandy lean clay. We estimate the thickness of till to be less than about 3 to 5 feet.
- Alluvium – Estimate that interbedded alluvial soils consisting of coarse- and fine-grained strata. Strata thicknesses likely range from 5 to 20 feet with the coarse-grained soils consisting of medium dense silty sand and clayey sand and the fine-grained soils consisting of medium stiff to stiff silt and sandy lean clay.

[2] Fugro (2020), "Geotechnical Engineering Report, Goleta Valley Cottage Hospital Aquatic Center Project, Goleta, California", report prepared for Goleta Valley Cottage Hospital, dated April 24.
[3] MNS Engineers (2009), "Geotechnical Engineering Report for Proposed Replacement Hospital, Goleta Valley Cottage Hospital, Goleta, California", report prepared for Santa Barbara Cottage Hospital, dated March 31.

- Groundwater – Estimate that groundwater is present at the site at depth of about 15 to 20 feet below the ground surface.

Proposed Earthwork

We anticipate the project will involve relatively limited grading consisting of minor excavation and subgrade preparation in areas of new/reconstructed pavement and the concrete walkway. In addition, the work will involve excavation of existing soils in the infiltration basin to a depth of about 5 feet and backfilling the excavated area with 0.5 feet of gravel, 1.5-foot-high modular raintank layer, overlain by 2 feet of imported sand/compost mix.

Subgrade preparation for the new pavements and concrete walkway noted on the plans consist of scarification and recompaction to 95 percent relative compaction. Where fill materials are required in the pavement and walkway areas, plans indicate the fill will also be compacted to 95 percent relative compaction. We expect that subgrade preparation and fill placement (if needed) will be observed and tested by the geotechnical engineer of record.

Closure

We appreciate the opportunity to provide consulting services to Goleta valley Cottage Hospital to develop a response to the City of Goleta's review comment. It should be noted that our input was developed based on existing geotechnical data obtained by Fugro for the proposed Aquatic Center (Fugro, 2020) and data at acquired for the Goleta Valley Cottage Hospital expansion project (MNS Engineers, 2009). No project-specific exploration or testing was performed as part of our work.

This letter has been prepared for the exclusive use of Goleta Valley Cottage Hospital and their agents with respect to the proposed improvements for the Hollipat Parking Lot. Although information contained in this report may be of some use for other purposes, it may not contain sufficient information for other parties or uses. If any changes are made to the project as described in this report, the conclusions and recommendations in this report shall not be considered valid unless the changes are reviewed, and the conclusions and recommendations of this report are modified or validated in writing by Fugro.

In performing our professional services, we have used generally accepted geologic and geotechnical engineering principles and have applied the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineers currently practicing in this or similar localities. No other warranty, express or implied, is made as to the professional advice included in this report.

Users of this report should recognize that the construction process is an integral design component with respect to the geotechnical aspects of a project, and that geotechnical engineering is inexact due to the variability of natural and man-induced processes, which can produce unanticipated or changed conditions. Proper geotechnical observation and testing during construction is imperative in allowing the geotechnical engineer the opportunity to verify assumptions made during the design process. Therefore, we recommend that Fugro be retained during construction to observe compliance with project plans and

specifications and to recommend design changes, if needed, in the event that subsurface conditions differ from those anticipated.

If you have any question or require additional information, please do not hesitate to contact me via email at gdenlinger@fugro.com.

Sincerely,

Gregory Denlinger
Principal Engineer