

January 24, 2023

KA Project No. 022-19021

Mr. Steve Doctor
SASD Enterprises
1895 Pacific Highway
San Diego, California 92110

**RE: Geotechnical Engineering Investigation Update
Proposed VA Community Outpatient Facility
Knudsen Drive near Olive Drive
Bakersfield, California**

Dear Mr. Doctor:

In accordance with your request, we are providing this Update to our Geotechnical Engineering Investigation for the above-referenced project site. Krazan & Associates, Inc. had previously completed a Geotechnical Engineering Investigation report (KA Project No. 022-19021), dated May 6, 2019, and a Seismic Design Requirements Update, dated May 4, 2022. The purpose of the Seismic Design Requirements Update was to provide additional information to conform to seismic design requirements of the 2019 California Building Code (2019 CBC). It is understood this project is being designed and will be constructed in accordance with the 2019 CBC. Therefore, the seismic design parameters provided in the previous Seismic Design Requirements Update remain valid.

At the time of our recent site visit on January 19, 2023, the subject site was vacant and contained a short dense growth of native grasses and weeds, which will need to be removed prior to commencement of site grading activities. The site essentially remained unchanged from the time of our previous investigation. Based on the observations made during our recent site visit, the recommendations presented in the previous report shall remain applicable to the currently proposed construction, including the previously recommended site preparation, allowable soil bearing pressures and lateral earth pressures.

In addition to the above, the following recommendations are included to comply with the 2019 CBC and shall supersede the recommendations of the previous report where applicable. All previous references to the 2016 CBC shall now be revised to refer to the 2019 CBC.

Drainage and Landscaping

The ground surface should slope away from building pad and pavement areas toward appropriate drop inlets or other surface drainage devices. In accordance with Section 1804 of the 2019 California Building Code, it is recommended that the ground surface adjacent to foundations be sloped a minimum of 5 percent for a minimum distance of 10 feet away from structures, or to an approved alternative means of drainage conveyance. Swales used for conveyance of drainage and located within 10 feet of foundations

should be sloped a minimum of 2 percent. Impervious surfaces, such as pavement and exterior concrete flatwork, within 10 feet of building foundations should be sloped a minimum of 1 percent away from the structure. Drainage gradients should be maintained to carry all surface water to collection devices and/or facilities and off-site. These grades should be maintained for the life of the project.

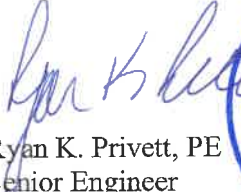
Dynamic Seismic Lateral Earth Pressure

The 2019 CBC requires determination of dynamic seismic lateral earth pressures on foundation walls and retaining walls supporting more than 6 feet of backfill height due to design earthquake ground motions. The Site Modified Peak Ground Acceleration (PGA_M), based on ASCE/SEI 7-22 and information from the SEAOC and OSHPD Seismic Design Maps website (<https://seismicmaps.org>), is 0.471. We recommend an incremental seismic lateral pressure of 21 pcf be included in the stability analyses for retaining walls as needed. The incremental seismic lateral pressure should be applied in a reverse triangular distribution at the back side of the wall.

The recommendations and limitations provided in our previous Geotechnical Engineering Investigation report and Seismic Design Requirements Update, dated May 6, 2019, and May 4, 2022, respectively, will apply to this Update letter. If you have any questions or if we may be of further assistance, please do not hesitate to contact our office at (661) 837-9200.

Respectfully submitted,

KRAZAN & ASSOCIATES, INC.


Ryan K. Privett, PE
Senior Engineer
RCE No. 59372



RKP:ht