January 15, 2018

RSCCD Facility Planning, District
Construction and Support Services
2323 N. Broadway, Suite 112
Santa Ana, CA 92706

Attn: Ms. Allison Coburn
Facilities Project Manager
P: (714) 480-7530
E: Coburn_allison@rsccd.edu

Re: Addendum 3 to Geotechnical Engineering Report
Proposed Johnson Student Center - Santa Ana College
1530 West 17th Street, Santa Ana, California
Terracon Project No. 60145100

Dear Ms. Coburn,

Terracon Consultants, Inc. (Terracon) previously prepared a Geotechnical Report for this project dated November 21, 2016, Addendum Letter 1 dated March 24, 2017, and Addendum Letter 2 dated August 11, 2017. Based on conversations with the design team and comments received on the plan review by DSA, it is our understanding that there are several items that need clarification from a geotechnical perspective.

Item 1: *What is the lateral extent beyond the exterior edge of the footing for overexcavation and building pad preparation?*

Response Item 1: The lateral extent for the proposed overexcavation and preparation of the building pad should include the limits of the proposed structure plus a lateral distances of 3 feet beyond the edges.

Item 2: *What is the horizontal distance over which the seismic differential settlement of ¼ " is anticipated.*

Response Item 2: The seismically induced differential settlement is anticipated to be ¼ inch over 50 feet.

Item 3: *Clarify removal depth of existing drilled shafts beneath proposed structures. Clarify the slurry type for backfill of the removed foundations.*

Response Item 3: The original report recommended demolition depths assuming existing foundations were not overlapping proposed foundations. However the majority of the existing building is supported on drilled shaft foundations. As such these shafts will induce differential settlement and point stresses on proposed foundation. To reduce the stresses and differential settlement associated with the drilled shafts we recommend they be completely removed and replaced with a one-sack slurry. In the event the shafts cannot be completely removed we recommend that the shafts be removed to a minimum

depth of 10 feet below bottom of footing or 2 times the width of the proposed footing, whichever is greater. This portion of the removed caisson can be backfilled with one-sack slurry. A minimum depth of 3 feet below the bottom of footing from the top of slurry should be maintained and should be backfilled with engineered fill.

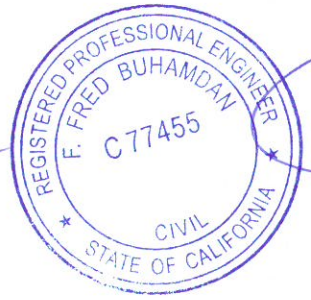
In the event the contractor elects to overexcavate the entire footprint of the building, the on-site materials can be utilize as backfill and can be placed in accordance with the compaction requirements specified in the original geotechnical engineering report (Terracon Report No. 60145100 dated November 21, 2016).

As a minimum the fill placed within 3 feet below the bottom of proposed footings should be comprised of low volume change soils, as detailed in our Addendum Letter 1 dated March 24, 2017.

All other recommendations presented in our original report remain applicable to this project and this letter should be considered a part of that report.

If you have any inquiries or comments on this report, please do not hesitate to contact the undersigned at (949) 261-0051.

Sincerely,
Terracon Consultants, Inc.



Joshua R. Morgan, P.E
Project Engineer

F. Fred Buhamdan, P.E.
Principal