



Geotechnical Engineering
Coastal Engineering
Maritime Engineering

Project No. 2086
August 8, 2019

Mr. Gene Matter, Assistant Director
Transportation & Storm Water Department
CITY OF SAN DIEGO
2781 Caminito Chollas, Mail Station 44
San Diego, California 92105

TEXT CLARIFICATION
COASTAL EROSION ASSESSMENT AND
CAVE SOLUTION FEASIBILITY ANALYSIS
COAST BOULEVARD AND COOK'S CRACK SEA CAVE
SAN DIEGO, CALIFORNIA

Dear Mr. Matter:

During our meeting with City Staff today specific to the stability of the Cook's Crack Sea Cave, we made a presentation summarizing the results of our June 17, 2019, Coastal Erosion Assessment report for the Cook's Crack sea cave. In the Conclusions section of our report, we stated, "It is our opinion that within a few years, there is a high probability of collapse of additional supporting roof rock resulting in the formation of voids or sinkholes under Coast Boulevard, causing damage to the street and utilities that overlie the Cook's Crack Sea Cave and/or injury or death due to a vehicle or pedestrian falling into a sinkhole. Based on our studies, the most feasible alternative would be to seal and infill the sea cave."

As we discussed today during our presentation, and as shown on Photo 3 of our June 17 report, this possibly 5,000-pound block that has become dislodged within the adjacent fault joints, along with both the groundwater and overlying terrace deposits that are now falling from the roof, creates a very unstable condition, and this block could in fact, collapse at any time. Moreover, any seismic tremor, or even a break of the City's water main that runs over the roof of the sea cave, could cause an imminent and catastrophic collapse. We have attached Photo 3 from our June 17, 2019, report to remind the reader that this overhanging block, although temporarily wedged into the parallel joint sets associated with this fault, could fall out at any time, thereby completely removing support for the overlying loose and friable terrace deposits. The relatively substantial seepage

exposed in the sidewalls of the cave (visible in Photo 3) is an additional cause for concern, as the seepage, along with the failure of the block, could trigger an immediate and catastrophic collapse, resulting in a rather large linear sinkhole into which a vehicle or pedestrian could fall, possibly resulting in serious injury.

The words used in our June 17 report, namely, “within a few years,” was a measured description of the urgency to stabilize the site, and should not have been construed to suggest that there is **not** a very real concern that this collapse could occur at any time, and particularly after a small seismic tremor or waterline break.

If you would like to discuss this issue further, please feel free to give me a call. After normal business hours, I can be reached on my cell phone at (619) 540-9257.

Very truly yours,

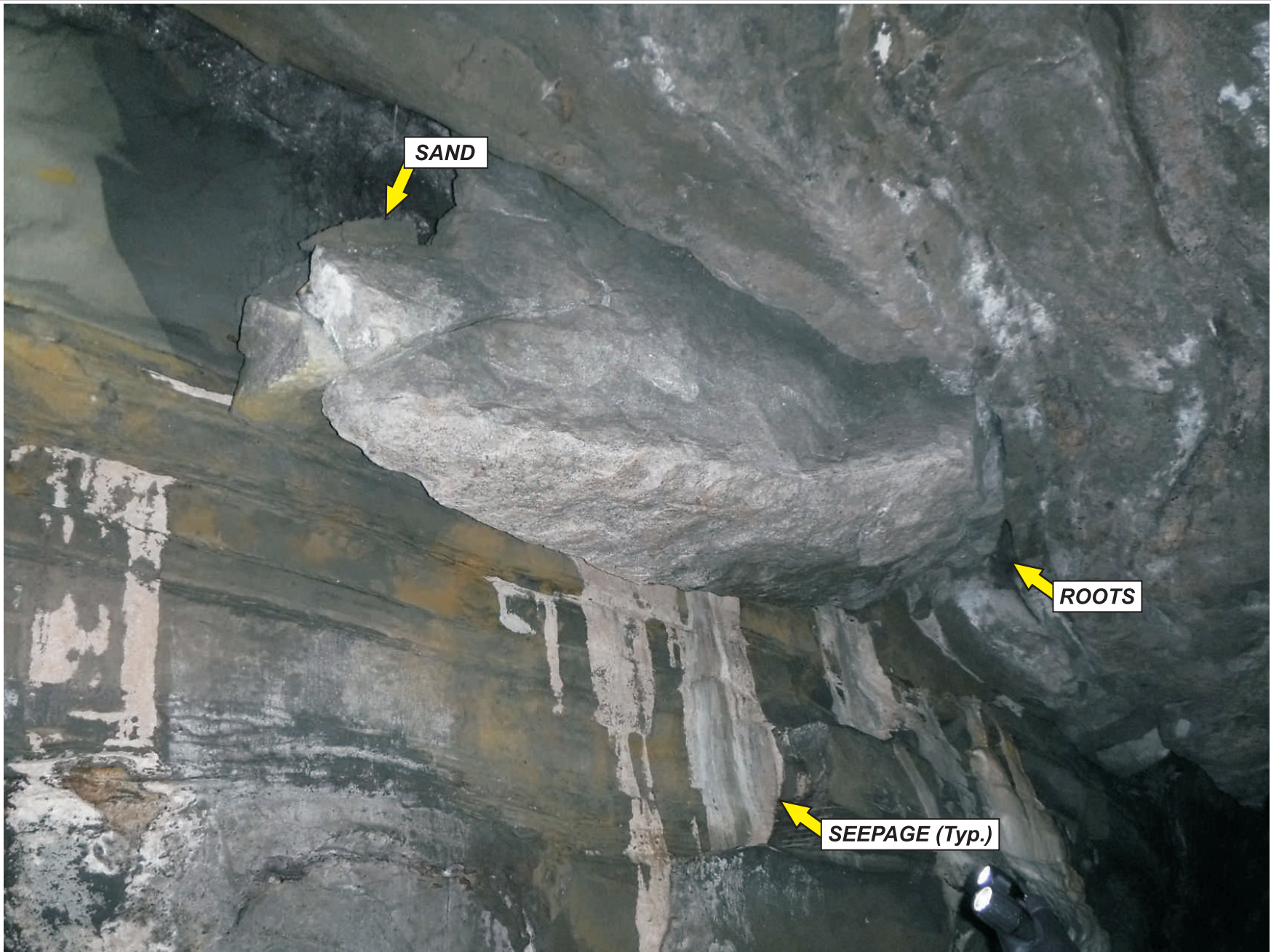
TERRACOSTA CONSULTING GROUP, INC.



Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

WFC/jg
Attachment





DATE OF PHOTO: MARCH 5, 2019



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PROJECT NO.:
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PROJECT NAME:
COOK'S CRACK SEA CAVE

PHOTO NO.:
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