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April 13, 2021

Atlas No. 180385N Report No. 9R

DR. IHOR LYS C/O SUSAN SMITH EDUCATION LAB ARCHITECTS, LLC 7248 ENCELIA DRIVE LA JOLLA, CALIFORNIA 92037

Subject: Response to Comments – Geissler Engineering Proposed Residences – 7248 Encelia Drive and 7231 Romero Drive La Jolla, California

- References: 1) Geotechnical and Fault Hazard Investigation, Proposed Residences 7248 Encelia Drive and 7231 Romero Drive, La Jolla, California, prepared by SCST, dated June 21, 2019 (SCST Project No. 180385N-04).
 - 2) Letter from The Law Office of Julie M. Hamilton, 2021, RE: Mitigated Negative Declaration, 7248 Encelia/7231 Romero Project No. 624464, dated March 24.
 - Subject Property: 7248 Encelia Drive, La Jolla, CA, Reference Property: 7231 Romero Drive, La Jolla, CA, prepared by Geissler Engineering, dated April 3, 2019 (Geissler Engineering Project No. E19-3965-1).

Dear Dr. Lys:

In accordance with your request, Atlas Technical Consultants (formerly SCST) has reviewed the correspondence from Ms. Hamilton regarding the Geology/Soils portion of the project's Mitigated Negative Declaration (MND) and the enclosures from her consultant, Dr. Peter Geissler. Our responses are as follows.

BACKGROUND

Development at the 7231 Romero Drive property began in 2009 when the former owner began grading for construction of a planned single-family residence without geotechnical observation. The grading resulted in a landslide on the Romero Drive property, and the adjacent, upslope residence at Encelia Drive experienced structural distress. Geotechnical engineers recommended placing reinforced concrete shear pins and tie-back anchors to stabilize the landslide. In 2014, reinforced concrete shear pins and tie-back anchors were installed via an emergency CDP. The shear pins were structurally tied together with a reinforced concrete grade beam. Each tie-back anchor was proof-tested or performance-tested before being locked into place. Additional grading and fill placement took place on the Romero Drive property to provide further stabilization.



PURPORTED LANDSLIDE BY GEISSLER

Dr. Geissler states that there is a "deep-seated landslide" that has not been assessed by either SCST or GeoKinetics. We wish to point out that based on previous correspondence from Geissler, Atlas addressed this postulation specifically in our 2019 geotechnical subsurface evaluation. But that effort was not recognized in the recent correspondence from the offices of Julie M. Hamilton and Dr. Geissler. We addressed it as such:

- In our report dated June 21, 2019 we included data from our Boring B-1. As noted above, this boring was emplaced specifically to address Dr. Geissler's purported "deep-seated landslide." As shown on the attached Figure 1, our 2019 Boring B-1 penetrated by at least 25 feet the landslide surface postulated by Dr. Geissler. Our geologist entered the boring and was lowered down over 60 feet into the boring to carefully assess the geologic strata and look for the postulated landslide failure zone. As noted in our log of this boring, no evidence of shear features indicative of landsliding or soil movement were observed. Further, Boring B-2 was excavated near the toe of the purported "deep-seated landslide" (Figure 1). This boring was excavated by hand to a depth of approximately 17 feet and our geologist also entered this boring to log the geologic strata. Again, we penetrated several feet below the landslide surface postulated by Dr. Geissler. Once again, no evidence of shear features indicative of landsliding or soil movement were observed. Therefore, we are unclear on a basis for this postulated landslide.
- Dr. Geissler opined that the cracks in Encelia Drive pavement are tension cracks, which are further evidence of a "deep-seated landslide." However, as shown on the attached aerial photos, pavement cracks are ubiquitous in the area (Attachment 1). The attached aerial photos document similar cracks in County Club Drive (west of the site), Romero Drive (south of the site and oriented downslope at an angle that does not coincide with the postulated "deep-seated landslide"), elsewhere on Encelia Drive (north of the site), Brodiaea Way (north of the site and oriented downslope at an angle that does not coincide with the putative "deep-seated landslide"), and Remley Place (north of the site oriented downslope at an angle that does not coincide with the postulated "deep-seated landslide"). Further, during our 2019 evaluation a registered geotechnical engineer and a pavement expert from Atlas visited the area of the pavement cracking called out by Dr. Geissler and indicated that the cracking is not related to tension of the ground, but rather shrinkage cracking of aging pavement, similar to that found in other nearby streets, and found commonly in streets in a given area. Therefore, in our opinion, the presence of pavement cracks in Encelia Drive is not indicative of ground tension cracks or a "deep-seated landslide."
- Dr. Geissler opined that GeoKinetics' reason to deepen the caisson shear pins during the repair of the 2009 landslide changed the landslide repair but was not recognized. We agreed that the change warranted reevaluating the slope stability, and therefore in 2019, SCST evaluated not just the translational or planer ("shear failure") surface as evaluated



by GeoKinetics, but also a circular (rotational failure) potential surface that would be coincident with the deeper clay seam/shear zones observed in the deepened caisson excavations (reference analysis in Appendix V of the 2019 SCST report). Based on the analysis, the critical, circular failure surface exhibits a factor of safety above 1.5, thus in agreement with the project goal after development of the proposed project. Therefore, although GeoKinetics did not reevaluate the stability after finding the deeper clay seam as Dr. Geissler and SCST would prefer, the effect of deepening the reinforced concrete shear pin caissons has improved the global slope stability to the degree needed for the subject development. These shear pin caisson logging also proved to be a valuable check on whether deeper landslide surfaces are present, as none were found nearly 20 feet below the lowest found clay seam.

SOIL SUBSIDENCE

Soil subsidence due to dewatering is a phenomenon that can particularly affect sites where adjacent structures are supported by deep, saturated clays. The subject site is supported instead on dense, cemented conglomerate. The geologic deposit underlying the site is not subject to dewatering settlement. Still, our recommendation to incorporate measures to ensure the dewatering does not induce settlement of adjacent improvements is for good measure in reminding the contractor of their responsibility, particularly since we expect the excavation will expose perched groundwater. Soil subsidence due to dewatering is addressed, outlined, and monitored as part of a deferred submittal by the contractor's shoring engineer. The geotechnical engineer reviews that submittal for agreement prior to construction, and monitors the contractor's performance for conformance to the submittal. Therefore, in our opinion, it is not appropriate to address mitigation measures for soil subsidence due to dewatering in the MND as the geologic deposit is not subject to dewatering settlement. Rather, localized measures should be taken by the contractor to protect adjacent property.

MITIGATED NEGATIVE DECLARATION ERRATA

With regard to Dr. Geissler's proposed changes to the MND by City of San Diego staff (Mitigated Negative Declaration Errata dated March 16, 2021), we offer the following comments.

- Under item (i), Dr. Geissler indicated that on Page 14 of the MND "Geology/Soils" should be marked with an "X" under "Environmental Factors Potentially Affected." However, we disagree and, based on the arguments presented above, do not recommend that an "X" should be placed indicating that "Geology/Soils" are among the "Environmental Factors Potentially Affected." As presented in our Response 1 above we indicate that our explorations did not reveal evidence of a "deep-seated landslide" as postulated by Dr. Geissler.
- 2. Under item (ii), Dr. Geissler indicated that an "X" should be marked in the column representing "Potentially Significant Impact" on Page 27 of the MND. However, we disagree and recommend the "X" being placed in the column representing "No Impact."



Again, as presented in our Response 1 above we indicate that our explorations did not reveal evidence of a "deep-seated landslide" as postulated by Dr. Geissler.

- 3. Continuing under item (ii), Dr. Geissler recommends replacing verbiage indicating that: "Per staff review, the geotechnical consultant has adequately addressed the soil and geologic conditions potentially affecting the proposed project" with verbiage indicating that (and we summarize)"...an observed failure surface is at least 15 feet deeper than shown in SCST Soils Report..." However, as noted in our Response 1, Borings B-1 and B-2 penetrated several feet below the "deep-seated landslide" postulated by Dr. Geissler and <u>no</u> shear features indicative of landsliding or soil movement were noted.
- 4. Continuing under item (ii), Dr. Geissler recommends replacing verbiage indicating that: "Per staff review, the geotechnical consultant has adequately addressed the soil and geologic conditions potentially affecting the proposed project" with verbiage indicating that (and we summarize):
 - a. "On 3 April 2019, Geissler Engineering recommended that the theoretical failure surface considered...be revised to reflect the fact that the observed failure surface is at least 15 feet deeper than shown in SCST report." Again, as noted in our Response 1, both Borings B-1 and B-2 penetrated below the "deep-seated landslide" postulated by Dr. Geissler and no shear features indicative of landsliding or soil movement were observed. Please recall that Boring B-1 penetrated approximately <u>25 feet below</u> Dr. Geissler's postulated "deep-seated landslide."
 - b. "City Geology staff failed to act on two recommendations by Geissler Engineering" regarding the depth of the failure surface and "tension cracks in pavement along Encelia Drive suggests that the landslide is much larger than expected." As we noted in our Response 2 pavement cracking is ubiquitous in the project area and is not indicative of a "deep-seated landslide" at this site.
 - c. "The mitigation measures implemented by Geokinetics are ineffective at stabilizing a landslide with a deeper failure surface..." As noted in Response 1, we conclude that there is no deeper failure surface based on evidence from our Borings B-1 and B-2.
- 5. Dr. Geissler indicates under item (iii) that VII(a)(iv) on page 27 of the MND should be marked with an "X" to indicate that there is a "Potentially Significant Impact". We disagree and as previously stated recommend that the "X" should be placed in the column representing "No Impact."
 - a. We agree with Dr. Geissler that a landslide has been identified at the project site.
 - b. We disagree with Dr. Geissler contention that "No impact would occur" is untrue.As indicated in our report, we conclude that, provided recommendations in our



report of June 21, 2019 are incorporated in the construction of the project, no impact would occur.

6. Finally, Dr. Geissler states under "BE FURTHER ADVISED THAT: (we summarize) there is a significant risk of landslide and soil subsidence problems at the (upslope property)...as a result of proposed excavations and construction activity at the (downslope property). However, we disagree as noted above, we believe that, provided recommendations in our report of June 21, 2019 are incorporated in the construction of the project, no impact would occur.

We appreciate the peer review comments provided and agreed that they warranted further evaluation. This evaluation was conducted in 2019 during our site-specific subsurface explorations and slope stability analysis. We evaluated the possibility of a "deep-seated landslide" on this property and concluded that none was found as purported. For that reason, we concluded the site is suitable for the proposed development and will not destabilize or result in settlement of adjacent properties. We look forward to continuing to analyze the project development plans and construction exposures to check our conclusions.

If you have any questions, please call us at (619) 280-4321.

Respectfully submitted, Atlas Technical Consultants LLC No. 2767 Exp. 6/30/202 Ex. 10/31/2 OFCA Emil Rudolph, GE 2767 Jonathan Goodmacher, CEG 2136 **Principal Geologist** Principal Engineer ER:JG:ds Figure 1 – Exhibit - Purported Landslide Slip Surface in Relation to SCST Exploratory Attachments: Borina Attachment 1 – Aerial Photographs of Vicinity Pavements Distribution: Dr. Ihor Lys via e-mail: ihor.lys@gmail.com

Ms. Susan Smith via e-mail: ssmith.educationlab@gmail.com Mr. Walter Smith via e-mail: wsmith.educationlab@gmail.com

ATTACHMENT 1 REVISED FIGURES FROM THE GEOTECHNICAL REPORT

Reference: Basemap: Geissler Engineering (Undated)



ATTACHMENT 2 EXHIBIT – PURPORTED LANDSLIDE SLIP SURFACE IN RELATION TO SCST EXPLORATORY BORING









