Appendix E4: Suggested Contingency Factor for Estimation of Soil Excavation Quantity During Grading Proposed Multi-Family Residential Development Vesting Tentative Tract Map 74147, Lot 1 Hawthorne Boulevard and Via Valmonte, Torrance, California

Appendices

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GEOCON
WEST, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. A9201-06-01E
June 11, 2018

Mr. Derek Empey
Sr.Vice President of Development
Reylenn Properties, LLC
444 South Cedros Avenue
Solana Beach, California 92705

Subject: SUGGESTED CONTINGENCY FACTOR FOR
ESTIMATION OF SOIL EXCAVATION QUANTITY DURING GRADING
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
VESTING TENTATIVE TRACT MAP 74148, LOT 1
HAWTHORNE BOULEVARD AND VIA VALMONTE
TORRANCE, CALIFORNIA

References: Geocon West, Inc., 2017, *Preliminary Geotechnical Investigation, Proposed Multi-Family Residential Development, Hawthorne Boulevard and Via Valmonte, Torrance, California, Prepared for Reylenn Properties, LLC, Solana Beach, California*, Project No. A9201-06-01E, June 30, 2017.

Dear Mr. Empey:

At your request, this letter has been prepared to provide our suggestion for a contingency factor to be applied to the estimation of the quantity of soil to be excavated during mass grading. Based on discussions during a meeting with the City of Torrance, it is suggested that a contingency factor of 10 percent be applied to estimate the quantity of soil anticipated to be excavated. This contingency factor is intended to account only for areas of additional excavation that may be to comply with the intent of the recommendations of the referenced Geotechnical Report dated June 30, 2017.

If you have any questions regarding this letter or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

REGISTERED PROFESSIONAL ENGINEER
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Email: Addressee

GEOCON
WEST, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. A9201-06-01E
June 19, 2018

Mr. Derek Empey
Sr. Vice President of Development
Reylenn Properties, LLC
444 South Cedros Avenue
Solana Beach, California 92705

Subject: POTENTIAL FOR DIATOMACEOUS SOILS TO BE EXPOSED DURING GRADING
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
VESTING TENTATIVE TRACT MAP 74148, LOT 1
HAWTHORNE BOULEVARD AND VIA VALMONTE
TORRANCE, CALIFORNIA

Dear Mr. Empey:

In response to staff comments, we have prepared this revised letter that summarizes the potential for diatomaceous soils to be encountered during the proposed grading operations at the site. Geocon West is the geotechnical engineer of record for the proposed development and we have performed multiple investigations at the site since 2014 that include a site-specific geotechnical investigation and site-specific fault rupture hazard investigation for the proposed residential development. The following is a list of reports we have prepared:

Geocon West, Inc., 2017, *Preliminary Geotechnical Investigation, Proposed Multi-Family Residential Development, Hawthorne Boulevard and Via Valmonte, Torrance, California, Prepared for Reylenn Properties, LLC, Solana Beach, California*, Project No. A9201-06-01E, June 30, 2017.

Geocon West, Inc., 2016, *Fault Rupture Hazard Investigation, Proposed Multi-Family Residential Development, Hawthorne Boulevard and Via Valmonte, Torrance, California,* January 21, 2016.

Geocon West, Inc., 2014, *Preliminary Geotechnical Evaluation, Proposed Multi-Family Residential Development, Hawthorne Boulevard and Via Valmonte, Torrance, California,* November 11, 2014.

Our geotechnical investigation included the drilling of 31 borings within the proposed building area (Lot 1), including 19 borings within the area of the deep fill (former mining pit). The borings within the area of deep fill were drilled and sampled to depths up to 120½ feet beneath the existing ground surface. Also, select borings were downhole logged by a certified engineering geologist to observe the composition of the deep fill materials. We have also performed a fault rupture hazard investigation at the site that included excavation and logging of 3 exploratory trenches within Lot 1. The trenches totaled approximately 500 feet in combined length and were excavated to a maximum depth of approximately 12½ feet.

We have reviewed our geologic map for the site and the vesting tentative tract map, site surveys, and the grading plans and sections for the proposed development dated April 24, 2017. These include:

- Figure 2A, Geologic Map (Geocon West, Inc.- June, 2017)
- Vesting Tentative Tract Map No. 74148 (2 Sheets)
- ALTA/NSPS Land Title Survey (2 Sheets)
- Preliminary Grading Plan, Sheets C5 through C20 (16 Sheets)

Based on the referenced grading plans and cross sections, the proposed grading at the site will be confined to Lot 1. Grading will consist of lowering the grades in the eastern portion of the site, removal and recompaction of the upper soils in the western portion of the site, as well placing fill on top of existing grades in a localized area adjacent to the north-facing slope to construct a maintenance bench in the southwestern portion of Lot 1. No grading is planned in Lot 2.

Based on our investigations at the site, the materials encountered within Lot 1 are predominantly artificial fill and Pleistocene age sediments consisting of Marine Sand and San Pedro Sand. The artificial fill generally consists of silty sand and sand with lesser amounts of clayey sand, sandy clay, sandy silt, and silt. The Pleistocene age formations consist primarily of sand, silty sand and sandy silt. Slough is locally present along the southern boundary of Lot 1 where it abuts Lot 2. The slough is comprised of debris derived from the Monterey Formation bedrock exposed on the north-facing slope within Lot 2. Also, in the southwestern portion of Lot 1, there is a localized exposure of Monterey Formation. The Monterey Formation is composed of interbedded sandstone, siltstone, and diatomaceous siltstone. The diatomaceous siltstone that occurs within this formation is composed of predominantly silt and clay with varying amounts diatoms in the form of amorphous silica.

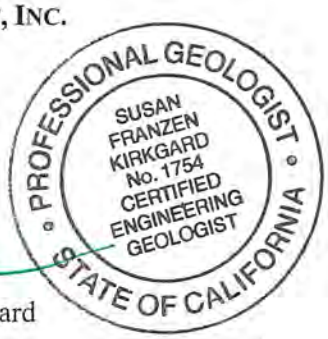
The attached exhibit, Geologic Overlay Reference Exhibit (dated June 19, 2018), illustrates the distribution of the geologic materials at the site relative to the Lot 1 boundaries. As shown on the attached exhibit, there are very limited exposures of Monterey Formation or slough (potential diatomaceous soils) within Lot 1. Based on the grading plans, the majority of these exposures will either 1) have fill placed over them or 2) will be left in place and not disturbed. There is only one localized area (at the southwest corner of the proposed parking structure) where approximately 3 to 6 feet of the slough will be disturbed (excavated) as part of the planned grading operations. Elsewhere, the proposed grading within Lot 1 will locally encroach into the slough only a few horizontal feet where the slough will be "smoothed out" to join existing grades at the southern daylight line (see attached exhibit).

Therefore, we conclude that only very minor, localized areas of potentially diatomaceous soils will be disturbed as part of the proposed grading. Considering the negligible volume of diatomaceous soils that may be disturbed during grading operations, specific mitigation for dust control in these areas can be designed and implemented by the grading contractor to reduce the potential for airborne materials.

If you have any questions regarding this letter or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.



Susan F. Kirkgard
CEG 1754

Neal Berliner
GE 2576

GRADING QUANTITY ESTIMATE:

CUT = 0 C.Y.	TOTAL SITE CUT	120,915 C.Y.
FILL = 69.0 C.Y.	TOTAL SITE FILL	1,646 C.Y.
CUT = 10.0 C.Y.	TOTAL NET	119,270 C.Y.
FILL = 0 C.Y.	SITE EXPORT	119,270 C.Y.
CUT = 1.0 C.Y.	MAX. CUT HEIGHT =	51.2'
FILL = 0 C.Y.	MAX. FILL HEIGHT =	2.5'

VIA VALMONTE

HAWTHORNE BLVD.

LOT 2
(6.00 ACRES)

LOT 1

LOT 2
(6.00 ACRES)

LOT 3
(12.92 ACRES)

LIMITS OF ALL CONSTRUCTION WORK

MAINTENANCE ROAD

EX. P/L

FUTURE P/L

EX. R/W

FUTURE R/W

af/Qsp

af/Qm and Qsp

af

Qsp

Slough

Tm

LEGEND

af	Artifical Fill
af/Qsp	Artificial Fill over Qsp
af/Qm and Qsp	Artificial Fill over Qm and Qsp
Qm	Marine Sand
Qsp	San Pedro Sand
Tm	Monterey Formation
- - - - -	Geologic Contact - Dashed where approximate, querried where uncertain
— — —	Soil Type Boundaries
—— - ——	Existing Property Line/Right-of-Way
——	Future Property Line
	Diatomaceous material to be filled over/capped
	Grading of diatomaceous material will occur
	Proposed 2:1 cut slope grading may encroach into diatomaceous material

RECEIVED
JUL 19 2018
CITY OF TORRANCE
COMMUNITY DEVELOPMENT DEPT.

0 15 30 60 90

SCALE: 1"=30' DATE: 7/13/18

SOLANA

REYLENN PROPERTIES, LLC

GEOLOGICAL MAP OVERLAY REFERENCE EXHIBIT

TORRANCE, CALIFORNIA

PREPARED BY:
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CONSULTING ENGINEERS/SURVEYORS/PLANNERS
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