Leighton and Associates, Inc.
A LEIGHTON GROUP COMPANY

April 6, 2017

Project No. 10618.002

Newland Sierra, LLC
9820 Town Centre Drive, Suite 100
San Diego, California 92121

Attention: Ms. Rita Brandin

Subject: Groundwater Resources, Newland Sierra, San Diego County, California

References: Leighton and Associates, 2015, Preliminary Geotechnical Investigation, Newland Sierra, San Diego County, California, Project No. 10618.002, dated November 6, 2015

In accordance with your request, we have prepared this letter to address groundwater resources in relation to onsite geological units at the Newland Sierra project site located in northern San Diego County, California (Figure 1). The purpose of this letter is to address the groundwater recharge potential of the subject site.

Based on our subsurface explorations and geological mapping of site (Leighton 2015), the primary bedrock unit onsite is Cretaceous-aged Granitic rocks (monzogranite), although Jurassic-aged Metavolcanic Rock is present along the western margin. These units are in turn overlain by surficial units consisting of shallow veneers of colluvium, alluvium, slopewash and minor undocumented fill soils. In addition, it should be noted that a small sliver of mapped young alluvial deposits encroaches at the southwestern boundary of the proposed project. The approximate aerial extent of these units are depicted on the attached Regional Geology Map (Figure 2).

Specifically, the Cretaceous-aged Granitic Rock unit that underlies the majority of the site is very hard, moderately weathered, slightly fractured and exhibits steep topographic relief. In addition, our seismic refractions indicate accelerations averaging over 11,000 feet per second at a depth of 15 to 25 feet below the exiting ground surface within the Granitic Rock unit. Therefore, in our professional opinion, the likelihood of this very hard

Granitic Rock unit which underlies the majority of the site serving as an area where a significant amount of groundwater recharge occurs is very low. Instead, given these geologic conditions on the site, the majority of rainfall that occurs on the site would be expected to drain to the lowest elevations of the site and to valley areas offsite before entering the groundwater table. In addition, if groundwater were to exist within fractures of the Granitic Rock unit, it is our opinion that potential recharge rates would be very low.

If you have any questions regarding our letter, please contact this office.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

Robert Stroh, CEG 2099
Associate Engineering Geologist
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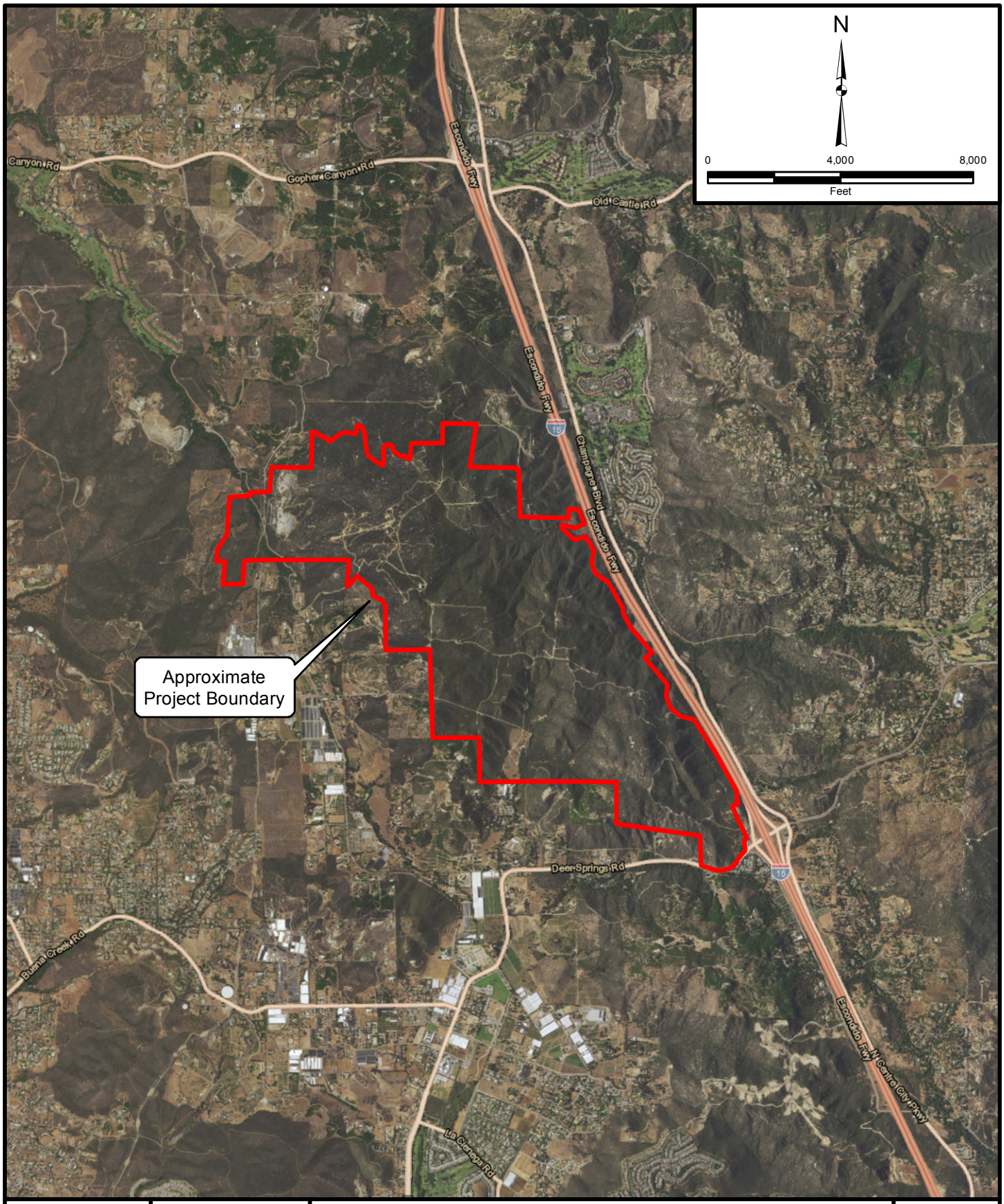
Distribution: (1) Addressee via electronic PDF
(1) Newland Real Estate Group, LLC; Attention: Mr. Scott Molloy

Attachments: Figure 1 – Site Location Map
Figure 2 – Regional Geology Map



Project: 10618.002	Eng/Geol: WDO/RCS
Scale: 1 " = 4,000 '	Date: April 2017
Base Map: ESRI ArcGIS Online 2017 Author: mmurphy (mmurphy)	

SITE LOCATION MAP

Newland Sierra
San Diego, California

Figure 1

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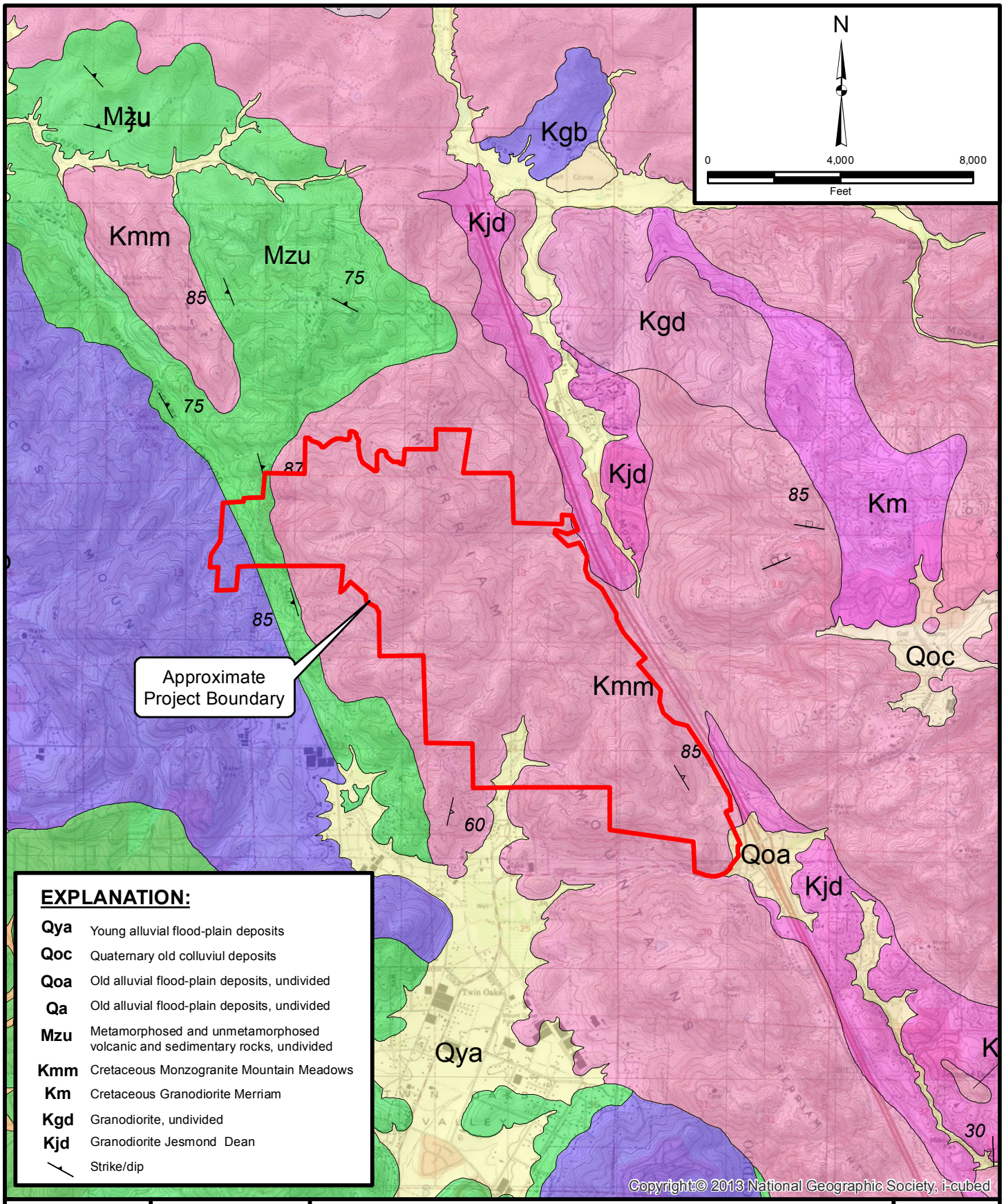

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Geoogy map: Map of the Oceanside 30'x60' quadrangle, California, compiled by Michael P. Kennedy and Siang S. Tan, 2008

Author: mmurphy (mmurphy)

REGIONAL GEOLOGY MAP

Newland Sierra
San Diego, California

Figure 2

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