SANTA ROSA, CA 95403 FACSIMILE (707) 528-2837

July 2, 2018

Job No. 103.2.13

Airport Business Center 414 Aviation Boulevard Santa Rosa, CA 95403 Attention: Patrick Imbimbo

> Report Soil Engineering Consultation Baywood Village Petaluma, California

As requested, this report presents the results of our soil engineering consultation concerning the Baywood Village apartment project in Petaluma, California. Site development plans and plan notes indicate that the proposed 14½-acre development will consist of the construction of 312 apartment units distributed over 30, three-story, buildings served by asphalt-paved roadways and underground utilities. A 0.6-acre park is planned in the southern portion of the site.

Giblin Associates performed a soil investigation for future development of the site, anticipated to consist of the construction of two- and/or three-story, wood-frame apartment buildings, and the results were presented in their report dated May 16, 2008. In general, their recommendations for foundation support included criteria for spread footings bottomed on properly compacted fill of low expansion potential. Recommendations for slab-on-grade floor support included criteria for a compacted fill pad of low expansion potential.

The results of their soil engineering observation and testing services during backfilling of excavations created by removal of slabs, foundations and underground vaults or tanks at the site (formerly occupied by the Royal Tallow & Soap Company) were presented in their report dated December 10, 2008. Our principal engineer served as the engineer in responsible charge of Giblin Associates' office during the investigation and co-authored that report and the subsequent soil engineering services report referenced above. We provided soil engineering consultation and review of preliminary wetlands fill and surcharge grading plans for a previously proposed development at the site and the results were presented in our reports dated May 3, 2011 and June 6, 2011, respectively.



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Based on our recent site observations, review of the previous soil investigation report, report of soil engineering observation and testing services and our subsequent consultation reports, we conclude that, in general, the recommendations contained in the above referenced reports would be applicable to the proposed construction. However, we believe that design and construction of the currently proposed development should incorporate the following updated seismic design criteria as required by the more recently adopted 2016 California Building Code (CBC).

We have determined the seismic ground motion values in accordance with procedures outlined in Section 1613 of the 2016 California Building Code (CBC). Mapped acceleration parameters (S_S and S_1) were obtained by inputting approximate site coordinates (latitude and longitude) into earthquake ground motion software made available for use by the United States Geological Survey (USGS) for the determination of CBC ground motion values. Based on our review of available geologic maps and our knowledge of the subsurface conditions, we judge that the site can be classified as Site Class D, in accordance with "Chapter 20 of the American Society of Civil Engineers (ASCE) Publication ASCE 7-10." Using corresponding values of site coefficients for Site Class D and procedures outlined in the CBC, the mapped acceleration parameters were adjusted to yield the design spectral response acceleration parameters S_{DS} and S_{D1} . The following earthquake design data summarize the results of the procedures outlined above.

2016 CBC Ground Motion Parameters

Site Class

D

Mapped Spectral Response Accelerations:

 S_{S}

1.782g

 S_1

0.710g

Design Spectral Response Parameters:

 S_{DS}

1.188g

 S_{D1}

0.710g

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We trust this provides the information needed at this time. If you have questions or wish to discuss this in more detail, please do not hesitate to contact us.

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Yours very truly,

REESE & ASSOCIATES

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