

## APPENDIX G

### **Soils Report**

*(Reese and Associates, Inc.; July 17, 2025)*

July 17, 2025

Job No. 1660.4.3

Dry Creek Rancheria  
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Report  
Soil Engineering Consultation  
and Report Update  
Bi'Du Khaale Phase 2  
Cloverdale, California

As requested, this report presents the results of our soil engineering consultation and soil investigation report update for the proposed Bi'Du Khaale Phase 2 Development in Cloverdale, California. The site is located at 27821 Dutcher Creek Road, southeast of Phase 1 of the subdivision. The proposed development will consist of the construction of multi-family housing units and an event center/commercial building. The planned buildings will be one- and/or two-story, wood-frame structures with concrete slab-on-grade floors.

We performed a soil investigation for the project, and the results were presented in our report dated August 13, 2019. Recommendations for foundation and slab support included criteria for spread footings and concrete slab-on-grade floors underlain by properly compacted fill of low expansion potential. We have reviewed our investigation report and performed an additional seven (7) test pits on Phase 2 of the planned development at the approximate locations shown on the attached Plate 1. Based on our review and the conditions exposed in the test pits, we conclude that the general conclusions and recommendations contained in our soil investigation report would still be applicable to Phase 2. Satisfactory foundation support can be obtained from spread footings bottomed on properly compacted fill. However, the design and construction of the currently planned development should incorporate the following updated seismic design criteria, as required by the 2022 California Building Code (CBC), and updated rough grading recommendations.

## EXISTING CONDITIONS

The site was previously used as an area for stockpiling soil, which resulted in placement of imported fill from various sources over the entirety of the site. The test pits performed recently indicate that imported fill extends to depths of about 5 to 9½ feet below the existing ground surface. Giblin Associates (GA), Consulting Geotechnical Engineers, provided observation and testing services for fills placed in the central and south portion of the project site. Summaries of their soil engineering services are presented in their final reports dated January 19, 1998 and October 18, 2006. The fill is primarily composed of stiff to very stiff, sandy clay with gravel and sandy silts of low expansion potential. That is, the soils would tend to undergo low strength and volume changes with seasonal changes in moisture content. Underlying the fills, we observed weakly cemented sandstone for the remainder of the pits.

## RECOMMENDATIONS

### Site Grading

The site should be cleared of obstructions, grass and vegetation. Areas to be graded then should be stripped of the upper few inches of soil containing root growth and organic matter, where necessary. We anticipate that the depth of stripping needed would average about 3 inches. The strippings should be removed from the site, stockpiled for reuse as topsoil or be mixed with at least five parts of soil and used as fill at least 10 feet away from structures, walkways and paved areas.

After clearing and stripping, excavation should be performed, as necessary. For use of spread footings and concrete slab-on-grade floors, the upper 18 inches of existing fill should be removed and replaced as properly compacted fill. Overexcavations in such areas should extend at least 5 feet beyond the building perimeter, 3 feet beyond the edge of building foundations, or 3 feet beyond adjacent exterior concrete slabs that abut the building, whichever is greater. Overexcavation depths then should be adjusted, as needed, to provide space for at least 12 inches of approved compacted fill below all footings and floor slabs.

The surfaces exposed by stripping or overexcavation should be scarified to a depth of at least 6 inches, moisture conditioned to near optimum and compacted to at least 90 percent relative compaction.<sup>1</sup> Approved on-site or imported fill of low expansion potential then should be spread in 8-inch-thick loose lifts, moisture conditioned and similarly compacted.

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<sup>1</sup> Relative compaction refers to the in-place dry density of fill expressed as a percentage of maximum dry density of the same material determined in accordance with the American Society for Testing and Materials (ASTM) Standard ASTM D1557 laboratory compaction test procedure. Optimum moisture content refers to the moisture content at maximum dry density.



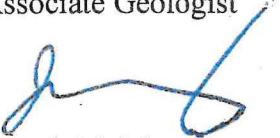
We trust this provides the information needed at this time. If you have questions or wish to discuss this in more detail, please do not hesitate to contact us.

Yours very truly,

REESE & ASSOCIATES



Brian F. Piazza  
Associate Geologist



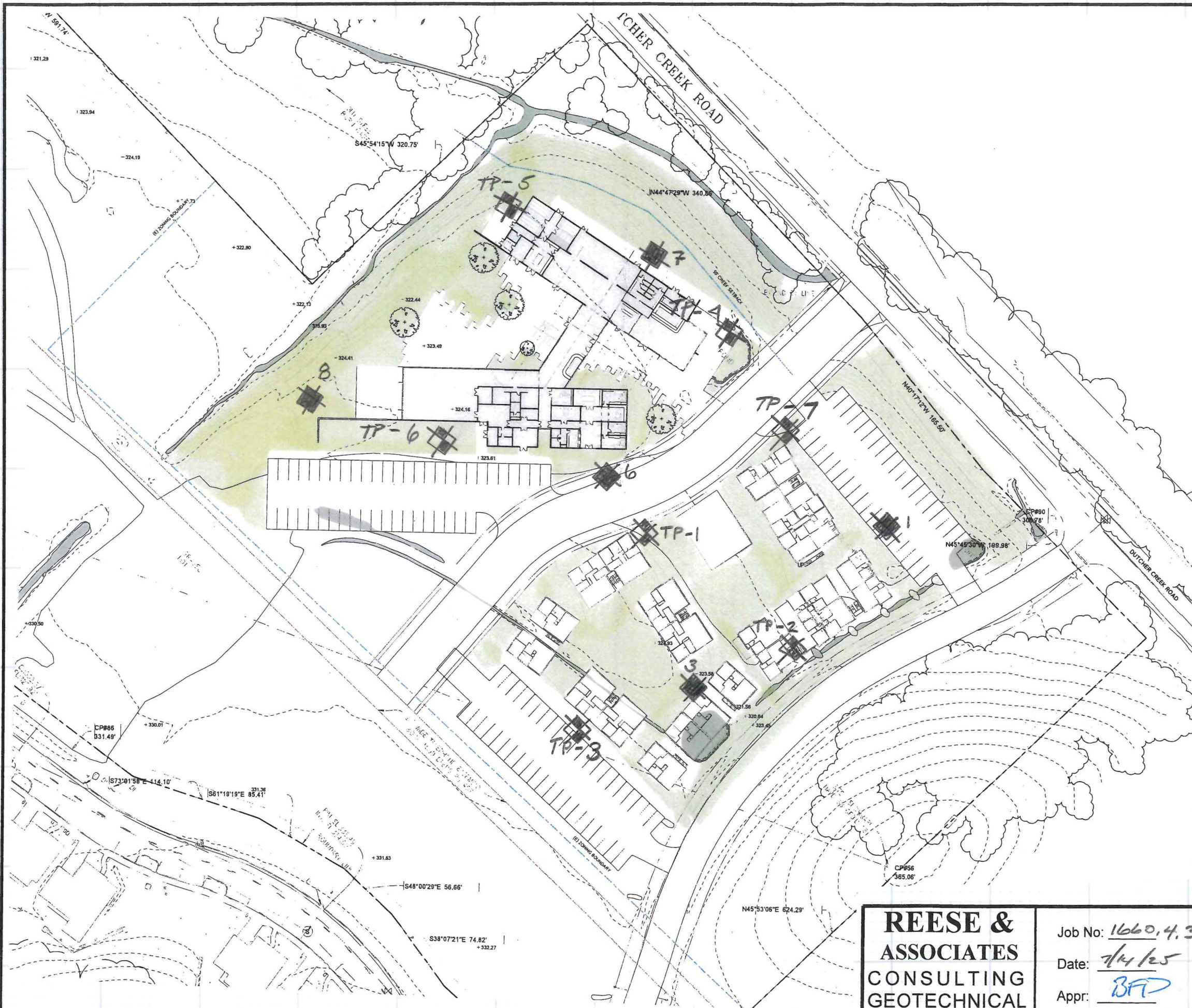
Joseph M. Mauney  
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Copies Submitted: 1

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 APPROXIMATE TEST PIT  
 Location: R2A 2019  
 2  
 APPROXIMATE TEST PIT  
 Location: R2A 2025  
 TP-4

**REESE &  
 ASSOCIATES**  
 CONSULTING  
 GEOTECHNICAL  
 ENGINEERS

Job No: 11060.4.3  
 Date: 7/14/25  
 Appr: BFD

TEST Pit Location Plan  
 Bi'DUL KHAALAH PH. 2  
 Clovevale, CALIFORNIA

PLATE  
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