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Geotechnical / Civil Engineer

City of Lake Forest Park

RECEIVED

c/o Ground Evolution, LLC

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City of Lake Forest Park

**Geotechnical Response to City of L.F.P. Comments**

**re: 3636 NE 195<sup>th</sup> St. # 2018-SP-0004**

This engineering letter responds to geotechnical issues raised by the City of L.F.P. reviewers for the proposed project at 3636 NE 195<sup>th</sup> St. site. Short Plat # 2018 – SP – 0004.

**References:** - Proposed project plans.

- Geotechnical report by D. Bruce, P.E. dated April 20, 2018.
- Geotechnical Addendum Memo by D. Bruce, P.E. dated Nov. 30, 2018.

**Background:** Extensive geotechnical investigations and analysis have verified the stability of the site. The existing house (at the north portion of the overall property) is to remain with no changes, and is situated southeast of a slope. See plans for location, alignment, and setback distances from the slope. The slope is geotechnically stable. No alteration, no grading, no clearing, nor any impact is proposed to the slope.

This Engineer understands that Ground Evolution, Inc. is proposing to Short Plat the central and southern portions of the overall property (where the current historic tennis court is located).

The central and southern portions of the overall property are essentially flat – with no adverse geotechnical conditions.

The review process by the City of L.F.P. has requested geotechnical clarity with regard to the L.F.P. Code pertaining to designated “Critical Areas” (see Jan. 24, 2019 Consistency Review letter).

SOILS FOUNDATIONS SITE DEVELOPMENT INSPECTION DRAINAGE DESIGN & PERMIT LEGAL

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### Classification of Critical Areas:

The site has been evaluated for the presence of Critical Area as defined in LFPAC 16.16.040

See attached pertinent Code Sections and written comments by this Engineer.

The northwest slope does meet the Code qualifications for 16.16.040 J.1b. Class II (see attachments). "Class II Landslide Area" per LFPAC.

Code Section 16.16.040 (G) "Erosion Hazard Area" : The geotechnical evaluation verified site stability. The slope is densely vegetated with no evidence of any erosion, no uncontrolled water discharge, nor any grading activities. Stable.

Code Section 16.16.040. J. 2d The slope does have declination greater than 40 % and an overall vertical relief greater than 10 ft.

However, the geotechnical evaluation has verified slope stability and no Landslide Hazard exists. No alteration, nor any impact to the slope is proposed.

Code Section 16.16.040 U : "Seismic Hazard" designation does not apply since the subgrade soils are NOT underlain by low strength fill, nor floodplain deposits, nor are any adverse groundwater conditions present.

Code Section 16.16.040 W : Slope. Yes, the northwest slope does contain portions exceeding 40 % . See topographic survey. The geotechnical investigation verified slope stability.

The northwest slope (where no alteration is proposed) does repose at a declination greater than 40 % (see survey). This slope is underlain by stable soils. See geotechnical reports.

The Slope and its Buffers as shown on the Plat Map do meet the Code definition of a Critical Area – as defined by LFPAC. However, the geotechnical investigation verified slope stability. The proposed project will have No Advers Impacts to the "Critical Area".

The proposed short plat project will not impact the slope. No alteration of the slope is proposed. Geotechnical recommendations include: Maintain existing vegetation on the slope face, No direct stormwater discharge onto the slope, No excavation on the slope face.

Code Section 16.16.280 Erosion Hazard Areas. The discussion of "Permitted Alterations" presents valid geotechnical factors and criteria. None of these apply since No Alteration of the slope is proposed. Geotechnical inspections by this Engineer during construction will verify compliance.

Code Section 16.16.290 Landslide Hazard Areas. The discussion regarding "Permitted Alterations" does not apply – since No Alteration of the slope is proposed.

The existing house (near the top of northwest slope) is well founded with no evidence of any geotechnical distress. The existing house foundation setback distance from the top of slope is geotechnically approved "as-built". No alteration of the existing house foundation is proposed. A geotechnical buffer of 15 ft. is recommended. The existing house meets this 15. Ft. buffer distance.

Code Section 16.16.300 Seismic hazard areas – permitted alterations: No alterations of the slope are proposed.

Code Section 16.16.310 Steep slope hazard areas – permitted alterations: No alterations of the slope are proposed.

### **Summary:**

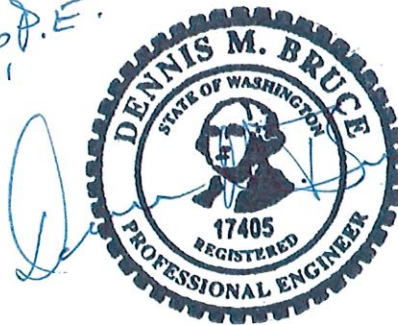
- The proposed Short Plat project entails construction of new SFR in the current (flat) Tennis Court section of the overall property.
- Geotechnical investigations have verified dense native subgrade soils for the new SFR foundations
- The existing house (at the north) is to remain as-is.

- The "steep slope" at the northwest portion of the site is geotechnically stable.
- No alteration of the slope is proposed.
- The Short Plat project comports with the City of L.F.P. Code requirements for potential hazardous areas – including the buffers shown on the Plat Map.
- Geotechnical inspections by this Engineer during construction are required.

If there are any questions, please contact this Engineer.

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Geotechnical / Civil Engineer



P.E.  
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