

# Exhibit 8

December 28, 2020

Lauren Anderson  
Planner  
Community Planning and Development (CPD)  
City of Mercer Island

Re: Constantine Short Plat  
8817 SE 44<sup>th</sup> St  
Mercer Island, Washington  
SUB 20-004

This letter is provided at your request to comment on whether there is a seismic hazard at the subject property and confirm that the proposed building pad locations minimize the disturbance of the existing, natural topography.

The following documents were reviewed in making our assessment.

City of Mercer Island GIS

Cobalt Geosciences, LLC., Limited Geotechnical Investigation, Proposed Residences, 8813 SE 44<sup>th</sup> Street, Mercer Island, Washington, November 5, 2020.

Offe Engineers, Constantine Short Plat, 8813 SE 44<sup>th</sup> Street, Mercer Island, Washington, Land Use File #20-XXX, November 5, 2020, 7 plan sheets. (SUB 2 review plan set)

Project Narrative (undated) submitted in SUB1 package

Troost, Kathy G. and Wisher, Aaron P., Geologic Map of Mercer Island, Washington, October 2006.

## Seismic Hazard

The City of Mercer Island GIS indicates a seismic hazard present at this property. This designation appears to be associated with the presence of the geologic unit of Q<sub>vi</sub> or Vashon Ice Contact deposits (Troost, 2006) at the site. The soils in this geologic unit can have a variable soil gradation but is usually loose and granular.

The subsurface information provided in the geotechnical report (Cobalt Geosciences, November 5, 2020) indicated the following conditions:

“The test pits encountered approximately 6 inches of topsoil and vegetation underlain by approximately 2.5 to 3 feet of loose to medium dense/stiff, silty-fine to fine grained sand trace gravel (Weathered Ice Contact Deposits – Till Like). These materials were underlain by very stiff/dense, silty-fine to fine grained sand (Ice Contact Deposits – Till Like), which continued to the termination depths of the explorations.

We also reviewed three boring logs that were drilled for the library just west of the site. These borings encountered local fill and weathered till-like soils underlain by very dense glacial till. These borings are consistent with the findings of our site investigation.”

No groundwater was encountered in the test pits. The report indicated that “Seasonal perched groundwater should be expected between the weathered and unweathered glacial till.”

The geotechnical report presents these conclusions: “At this site, the soils are consistent with very fine grained till-like materials that consist of a weathered zone overlying relatively dense to very dense, fine-

Constantine Short Plat  
8817 SE 44<sup>th</sup> Street  
Mercer Island, WA  
SUB 20-004  
December 28, 2020  
Page 2 of 2

grained soil materials. The risk of liquefaction and ground amplification is low in very fine grained and relatively dense soils." "Based on our review of geologic mapping in conjunction with the results of our field investigation, it is our opinion that the site is not located within a seismic hazard area."

This information concurs with our assessment that the property is not within a seismic hazard area as defined in MICC 19.16 as an area subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction or surface faulting.

It is noted that the Pacific Northwest is in a seismically active area and therefore requires seismic loading to be included in building designs. The geotechnical report provides a Site Class designation recommendation in accordance with the International Building Code.

### **Building Pad Locations**

The topographic site plan provided in the plan set (Offe Engineers, November 5, 2020) indicates less than a 2-foot elevation change across the site. The conceptual grading/utility plan shows limits of excavations confined to distances ranging from 2 to 7 feet away from proposed building pads and utility locations.

Based on this information, it is our opinion that the proposed building pad locations minimize the disturbance of the existing, natural topography.

One area to note however is the location of the proposed side sewer along the east property line that will connect to the existing sewer line in SE 44<sup>th</sup> Street. The sewer manholes in SE 44<sup>th</sup> Street have invert elevation information ranging from 380 to 378 feet (east to west). This is 10 to 12 feet deeper than the existing site grade of elevation 390 feet.

The proposed location of the side sewer is only two feet from the east property line. To connect to the existing sewer line in SE 44<sup>th</sup> Street, the depth of the side sewer may be 10 feet or more. An open cut excavation conforming to the geotechnical engineer's recommendation of no steeper than 1 horizontal to 1 vertical (1H:1V) would require a construction easement from the property owner to the east or temporary excavation shoring so as not to encroach on the adjacent property.

This geotechnical review is provided for the SUB2 plan set and associated files.

Should further information be required, feel free to contact me.

Sincerely,

**City of Mercer Island - CPD**



Michele Lorilla, P.E.  
Geotechnical Peer Reviewer