



## HWA GEOSCIENCES INC.

*Geotechnical & Pavement Engineering • Hydrogeology • Geoenvironmental • Inspection & Testing*

January 31, 2018

HWA Project No. 2018-143-21

Otak, Inc.

11241 Willows Road NE, Suite 200

Redmond, Washington 98052

Attn: Mandi Roberts, P.E.

Subject: **3<sup>RD</sup> PARTY REVIEW FOR CITY OF MOUNTLAKE TERRACE SOUND TRANSIT  
PERMIT  
Mountlake Terrace, Washington**

Ms. Roberts:

In accordance with your request, HWA GeoSciences Inc. (HWA) has reviewed information provided by Sound Transit (ST) related to their reasonable use exception application for properties in Mountlake Terrace affected by the proposed ST Lynnwood Link Extension (LLE) project. HWA was provided the City of Mountlake Terrace Critical Areas Report by HNTB-Jacobs, dated September 7, 2018. Our scope of work was a review of the Geologic Hazard Areas addressed in the previously referenced report

### **ADDITIONAL DOCUMENTS**

In addition to the previously mentioned Critical Areas Report, HWA was provided and reviewed the following documents:

- Guideway Narrative Conditional Use Permit and Site Development Plan Application (including Attachments) by Sound Transit, undated.
- Site A through Site M Narrative Conditional Use Permit and Site Development Plan Application (including Attachments), by Sound Transit, undated.
- Sound Transit Geotechnical Considerations Report, by GeoEngineers, dated June 15, 2019
- Sound Transit LLE Contract 300 Geotechnical Recommendations Report, by HNTB-Jacobs, dated September 7, 2018.
- L300 Geotechnical Data Report, by HNTB-Jacobs, dated April 6, 2018
- City of Montlake Terrace Municipal Code Chapter 16.15, Critical Areas, Adopted June 18, 2018.

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**REVIEW PROCEDURE**

HWA read through the City of Mountlake Terrace Critical Areas Report and cross referenced the information in this report with the other provided documentation. HWA also reviewed readily available geologic, topographic, and hazard maps for the areas in question. In addition, HWA visited easily accessible areas along the proposed alignment to observe the actual site conditions.

**REVIEW COMMENTS**

Based on our review, it is our opinion that the geologic hazards section of the City of Mountlake Terrace Critical Areas Report appears to adequately portray the code requirements for the City of Mountlake Terrace in addition to the mapped and observed geologic conditions and hazards along the proposed LLE alignment through Mountlake Terrace. However, HWA offers one comment that we recommend be considered and clarified:

In Section 2.4.2 on page 51 of the report under the heading Geologic Hazard Area Study Results, the report states the following:

*“Two seismic hazard areas are mapped at the north and south ends of the LLE alignment, near Hall Lake and near McAleer Creek. However, borings completed in these areas for the LLE project indicate no potentially liquefiable soils are present in the immediate vicinity of the LLE alignment in this study corridor.”*

While HWA agrees that potentially liquefiable soils were not observed in the borings along the alignment, this not mean that the alignment and construction areas are free of liquefiable soils. It is possible that some liquefiable materials may be encountered in some areas along the alignment outside of the locations of the explorations, most likely near the extreme north and south ends of the Mountlake Terrace section. While HWA finds it unlikely that substantial amounts of liquefiable soil will be present, and the proposed pile foundations will likely be deep enough to mitigate any potentially liquefiable soils observed, the presence of liquefiable soils on the site should not be completely ruled out.

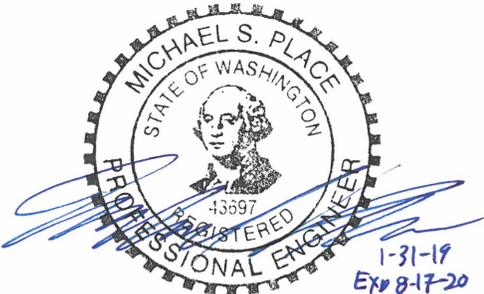


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We appreciate the opportunity to provide geotechnical services on this project. Should you have any questions, or if we may be of further service, please call.

Sincerely,

**HWA GEOSCIENCES INC.**



Michael S. Place, P.E.  
Senior Geotechnical Engineer