

April 21, 2020
Project No. 2018-015

Ms. Melissa Yang
c/o Mr. Steve Long
Studio 19 Architects
207½ 1st Avenue S, Suite 300, Seattle, WA 98104

**Subject: Response to Review Comments for Sub3
Proposed Residence
7431 East Mercer Way, Mercer Island, WA
Permit # 1907-103**

Dear Ms. Yang,

This letter responds to comments outlined in the City of Mercer Island latest Review (Sub3). The following is a summary of our response to the review comments pertinent to the geotechnical study.

#1 CATCHMENT WALL HEIGHT

Response: The original catchment height of 10 feet is commonly used and is considered to be conservative. The catchment wall height was reduced to 6 feet to conform with the land used code. However, the wall location also moved about 5 feet to the east, which will compensate the lost storage area. In our opinion, the current design will provide needed storage for the near-surface shallow colluvial slide and sloughing, if it occurs. Any soils accumulated on the upper hill side of the wall should be cleaned, and the catchment wall should maintain a minimum 5 feet of freeboard height on the upfill side.

#2 CATCHMENT WALL DESIGN

Response: Based on further review of the soil data, we concur that the passive resistance provided in our report is aggressive. We recommend the following revised passive pressures be used in the revised design:

Passive Resistance in the upper 6 feet = 250 pcf (ignore upper 2 feet)

Passive Resistance below 6 feet = 300 pcf

Min. Pile Embedment = 12 feet

The 500 psf uniform impact load is based on the past accepted value for the similar projects, assuming a slow-moving soil mass impacting the catchment wall.

CLOSURE

We appreciate the opportunity to work on this project. Please call if there are any questions.

Sincerely,



4/21/2020

H. Michael Xue, P.E.

Principal Geotechnical Engineer