



Cobalt Geosciences, LLC  
P.O. Box 1792  
North Bend, WA 98045

Updated December 18, 2025

MacPherson Construction and Design  
Attn: Mr. Dan Buchser  
[dan@macphersonconstruction.com](mailto:dan@macphersonconstruction.com)

**RE: Plan Review**  
Proposed Additions/Remodel  
5320 and 5330 Butterworth Road  
Mercer Island, Washington

In accordance with your authorization, Cobalt Geosciences, LLC has prepared a plan review letter for the project.

We have reviewed the architectural plans by MacPherson Construction and Design dated April 1, 2025, civil plans by Ethos Civil dated October 1, 2024, and structural plans by Mulhern Kulp dated October 22, 2024 and updated March 27, 2025. We have also reviewed the updated structural plans by Mulhern Kulp dated December 17, 2025 which includes the battered piles for lateral spread mitigation/risk reduction. The plans appear to include relevant information from the geotechnical report. We have no comments at this time.

We must be on site to observe pile placement and other aspects of earthwork construction as noted in the previous geotechnical report and letters.

The following section was in the previous plan review letter and may or may not be required at this time (if already reviewed and approved).

Discussion of mitigation sequencing is as follows:

Except as otherwise provided in this chapter, an applicant for a development proposal or activity shall implement the following sequential measures, listed below in order of preference, to avoid, minimize, and mitigate impacts to environmentally critical areas and associated buffers. Applicants shall document how each measure has been addressed before considering and incorporating the next measure in the sequence:

A. Avoiding the impact altogether by not taking a certain action or parts of an action. The applicant shall consider reasonable, affirmative steps and make best efforts to avoid critical area impacts. However, avoidance shall not be construed to mean mandatory withdrawal or denial of the development proposal or activity if the proposal or activity is an allowed, permitted, or conditional use in this title. In determining the extent to which the proposal should be redesigned to avoid the impact, the code official may consider the purpose, effectiveness, engineering feasibility, commercial availability of technology, best management practices, safety and cost of the proposal and identified changes to the proposal. Development proposals should seek to avoid, minimize and mitigate overall impacts based on the functions and values of all of the relevant critical areas and based on the recommendations of a critical area study. If impacts cannot be avoided through redesign, use of a setback deviation pursuant to section [19.06.110\(C\)](#), or because of site conditions or project requirements, the applicant shall then proceed with the sequence of steps in subsections B through E of this section;

We have analyzed liquefaction risks and provided recommendations for deep foundations, similar to what is currently present. Mitigation of liquefaction risks was not avoidable due to the geologic conditions.

B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, using a setback deviation pursuant to section [19.06.110\(C\)](#), using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

Pile installation is the least impactful method to create a stable building pad and foundation system.

C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

Not applicable. Piles reduce the impact by transferring building loads to deeper bearing strata.

D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

Not applicable.

E. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or

Not applicable.

F. Monitoring the impact and taking appropriate corrective measures to maintain the integrity of compensating measures.

Monitoring would include observation of pile installation and load testing. Post construction monitoring is not required.

Sincerely,

**Cobalt Geosciences, LLC**



12/18/2025  
Phil Haberman, PE, LG, LEG  
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