PanGEO
INCORPORATED
Geotechnical & Earthquake
Engineering Consultants

July 7, 2025
PanGEO File No. 25-137

Chris and Harmony Long
3424 76th Pl SE
Mercer Island, WA 98040

Subject: Response to Mercer Island Review Letter CAO25-008
3424 76th Place Southeast, Mercer Island, WA 98040

Dear Chris and Harmony,

Outlined below are our responses to the comments made by the Geotechnical Peer Reviewer and Planning Reviewer in the review letter dated 5/30/2025. Our responses are provided below:

Geotech Peer Review

1. *It is the opinion of the peer reviewer that the requirements of MICC 19.07.160.B.2.(b) and (c) have not been met by the proposed development with supporting geotechnical engineering analyses and design. As such the reviewer disagrees with the statements of risk (Criterion A and D of the outdated code section) provided on page 11 of the geotechnical report.*

   Response: PanGEO has prepared a revised geotechnical report dated 7/7/2025 that includes additional slope stability analysis for the static, seismic, and post-liquefaction conditions to assess the slope stability at the site, and liquefaction analysis to address the potential seismic hazard at the site. Based on the results from our analysis, the site is globally stable. However, we recommend that the proposed development be supported by pin piles to mitigate the potential for seismically induced settlement. As such, it is our opinion that the site meets the criteria provided in MICC

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19.07.160.B.2 for development standards in landslide and seismic hazard areas. Additionally, the site meets the statement of risk Criteria B from MICC 19.07.160B.3, as stated in our revised geotechnical report:

> *The landslide hazard area or seismic hazard area will be modified or the development has been designed so that the risk to the site and adjacent property is eliminated or mitigated such that the site is determined to be safe;*

2. *Other Comments – Liquefaction Analysis*

Response: See Section 5.2 of our revised geotechnical report for the results from our liquefaction analysis at the site. Atterberg limits were not performed on samples from the medium stiff clay layer since the clay was encountered generally below 12 feet deep and will not be encountered during excavation activities, is not considered a risk to liquefaction due to its fines content, and the proposed developments will be supported by pin piles driven into bearing soil to mitigate the risk for liquefaction induced settlements.

3. *Other Comments – Slope Stability Analysis*

Response: See Section 5.1 of our revised geotechnical report.

4. *Other Comments – Foundation Settlement*

Response: Our revised geotechnical report includes recommendations for pin piles to support the proposed developments to mitigate the risk for foundation settlement.

Planning

1. *Provide a Disclosure and Notice on Title recorded with the King County Recorder's Office and submit a copy.*

Response: Response by others.

2. *A landscaping plan is required that includes the landscaping of all disturbed areas outside of the building footprints and installation on hardscape, prior to final inspection per MICC 19.07.160(B)(2)(d)*

   Response: Response by others.

3. *Have your Geotech update their report or provide a memo addressing mitigation sequencing. See MICC 19.07.100- Mitigation sequencing, address each measure listed specifically.*

   Response: Below is the list of mitigation sequencing per MICC 19.07.100 and our subsequent response to each measure listed

   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;

      - Based on the results of our analysis provided in our revised geotechnical report, it is our opinion that the proposed developments will not adversely

impact the critical areas present on the project site and the proposed developments will mitigate the impact of the critical area on the project site and adjacent properties, provided our recommendations in our revised geotechnical report are incorporated into the project plans.

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;

- The use of pin piles for foundation support provide the least amount of ground disturbance for building foundations by limiting excavations and minimize the impact to the site while mitigating the risk for the mapped geologic hazards.

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

- The proposed developments should mitigate the risk for the geologic hazard areas present at the site, provided our recommendations presented in our report are properly implemented during design and construction. Recommendations to rectify other critical areas, such as fish and wildlife habitat, watercourses, and wetlands, should be addressed by others.

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

- The proposed developments should be constructed using best management practices presented in our report to reduce the risk of erosion and instability during construction, thereby reducing the impact on critical areas during the life of the "action."

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

- The proposed developments should provide permanent erosion control for the site such that there is no risk for long-term erosion at the site.

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

- A representative from PanGEO may be retained to verify the implementation of our recommendations during construction such that the proposed development mitigates/eliminates the risk for the geologic hazards at the site.

We trust that the information outlined in this letter meets your needs at this time. Please call if you have any questions.

Sincerely,

PanGEO Inc.

7/7/2025

Bryce Townsend, P.E.
Senior Geotechnical Engineer