

Ages Engineering, LLC

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January 9, 2019
Project No. A-1328

Warren and Nancy Appleton
P. O. Box 1532
Mercer Island, WA. 98040

Subject: Plan Review
Appleton Residence
2742 – 71st Avenue SE
Mercer Island, Washington
Parcel Number: 2174501880

Reference: 1. Geotechnical Evaluation, Appleton Residence, prepared by Ages Engineering, LLC and dated March 23, 2017.
2. City of Mercer Island Comment Response, Appleton Residence, prepared by Ages Engineering, LLC and dated May 17, 2017.

Dear Warren and Nancy,

As requested, we have completed a review of the current project plans for the subject site located at 2742 – 71st Avenue SE in Mercer Island, Washington. We reviewed the following nine sheets of project plans:

Architectural Plan Sheets:

- Sheet 1 through 5, dated October 10, 2018.

Structural Engineering Plans

- Sheet S1.0 and S3.0 dated November 26, 2018.
- Sheet S2.0 dated December 3, 2018.
- Sheet S4.0 dated July 13, 2018.

Based on the plans provided to us, we understand the project will consist of a remodel to the existing single-family residence on the site. The newly remodeled residence will be a three-story wood-framed structure and will maintain the same footprint as the original structure. The front door will be on the northern side of the main level and will face northwest. The newly enclosed garage will occupy the existing carport located along the western end of the existing structure. The main level will be at an average elevation of 295.27. The original foundations were designed for an allowable bearing capacity of 1,500 pounds per square foot (psf). Supplemental support for the existing foundations will be provided through the use of 2-inch diameter Pin Piles. The 2-inch Pin Piles have a design capacity of 4 kips. A four-inch diameter perforated foundation drain pipe will be installed around the perimeter of the structure. Site access will remain from 71st Avenue SE located along the western end of the site.

A total of 26 Pin Piles have already been installed around the perimeter foundations of the existing structure. A representative from Ages engineering, LLC observed the installation of the previously installed Pin Piles. All of the previously installed piles were driven to the specified refusal criteria of 1 minute per inch. The 26 previously installed piles were located as follows:

- 2 piles were installed under the NE building corner.
- 2 piles were installed under the SE building corner.
- 2 piles were installed under the SW building corner.
- 12 piles were evenly spaced along the northern wall perimeter line.
- 8 piles were installed in the carport area located in the western end of the structure. 2 under each of the four columns.

The plans indicate a total of 30 additional piles will be installed around the building perimeter and along the interior of the structure.

CONCLUSIONS AND RECOMMENDATIONS

Based on our review, the plans are in conformance with the project specifications and the recommendations provided in the referenced Geotechnical Evaluation Report and City of Mercer Island Comment Response letter.

Minimal Risk Statement

Based on our review of the plans provided to us, with the project developed as planned, it is our opinion the site is currently stable and expected to remain so after construction and the risk for instability that may occur on the subject site to affect the adjacent properties is minimal.



We trust this information is sufficient for your current needs. If you have any questions, or require additional information, please call.

Respectfully Submitted,
Ages Engineering, LLC

Bernard P. Knoll, II, P.E.
Principal

BPK:bpk



1-9-2019