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MEMORANDUM

RECEIVED

FEB 18 2020

CITY OF MUKILTEO

DATE: February 14, 2020

TO: Mr. Ben Zhang – Cove Club, LLC

CC: Mr. Fred Baxter – Fred Baxter & Associates

FROM: Khaled M. Shawish, PE
Lee S. Bellah, LG

RE: Supplemental Geotechnical Memorandum
Zhang Residence Development
7908 – 53rd Avenue West
Mukilteo, Washington
NGA File No. 9365B16



This memo presents the our supplemental geotechnical recommendations for the proposed Zhang Family Residence project located at 7908 – 53rd Avenue West in Mukilteo, Washington.

INTRODUCTION

We previously prepared a geotechnical engineering evaluation for this site dated June 16, 2016. We also prepared a supplemental geotechnical letter dated February 8, 2017. For our use in preparing this memo, we were provided with a landscaping site plan titled "*Zhang Family LLC New Residence,*" dated *February 6, 2020.*

In our previous reports, we concluded that that the proposed site development is feasible from a geotechnical standpoint. In our previous evaluations, we recommended that any proposed structures be located a minimum of 75-feet from the top of the steep west-facing slope and 50-feet from the top of the steep east-facing slope. A light structure setback of 50-feet from the top of the steep west-facing slope was also recommended. In our previous geotechnical report, we also recommended that vegetation within the recommended setback areas not be removed. We understand that the City of Mukilteo has requested our opinions and recommendations regarding the most recent landscaping plan for the proposed development.

The setback areas along the top of the steep slopes generally consist of gently sloping grass yard areas and existing landscaping plants. Based on our review of the provided landscaping plan, we understand that the areas within the recommended steep slope setback areas are proposed to be revegetated with low-lying native vegetation and grass yard areas. As a result, the existing landscaping plants and grass yard areas will need to be removed to allow these areas to be revegetated. We do not anticipate significant grading activities taking place between the top of the steep slopes and the recommended setback areas as a part of the overall development. No vegetation or trees are to be removed from the steep slope areas.

OPINION

In our opinion, removal of the existing low-lying vegetation and grass within the steep slope setback areas is feasible and should not adversely impact the existing steep slope stability conditions provided that these areas are revegetated and covered as described in the landscaping plan and this memo. No significant grading or filling should be performed within the recommended 50-foot setback areas. Disturbed areas within the 50-foot steep slope setback area should be promptly revegetated and covered with bark, mulch or grass after the existing vegetation has been removed. Low-lying native vegetation as described in the landscaping plan should then be placed within the steep slope setback area and maintained until established. No bare soils should remain after the existing vegetation is removed. No vegetation or trees should be removed from the steep slope areas below the top of the slopes. All other recommendations provided in our previous evaluations should be strictly followed during construction.

CLOSURE

We recommend that NGA be retained to provide monitoring and consultation services during construction to confirm that the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should the conditions revealed during the work differ from those anticipated, and to evaluate whether or not earthwork activities comply with contract plans and specifications.

We trust this memorandum should satisfy your needs at this time. Please contact us if you have any questions or require additional services.

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