



**NELSON GEOTECHNICAL
ASSOCIATES, INC.**
GEOTECHNICAL ENGINEERS & GEOLOGISTS

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APR 20 2018
CITY OF MUKILTEO

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MEMORANDUM

DATE: February 28, 2018

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 Comment Memorandum
Zhang Residence Development
7908 – 53rd Avenue West
Mukilteo, Washington
NGA File No. 9365B16



This memo presents our updated opinions and recommendations for the previously recommended pervious pavements for the proposed Zhang Family Residence project located at 7908 – 53rd Avenue West in Mukilteo, Washington.

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. In the supplemental letter, we concluded that traditional on-site infiltration systems on this site are were feasible. However, shallow low-impact development infiltration systems such as pervious pavements could be utilized within the upper central portion of the site provided they could be designed in accordance with the City of Mukilteo regulations and the approved stormwater manual. We have since been informed that due to the overall site constraints that pervious pavement systems have been deemed infeasible for the proposed development.

We concur with the design team's conclusion. We recommend that all runoff generated from the proposed development, including roof drains, pavements, footing and yard drains be directed to flow into an approved discharge point. We understand that all runoff generated within this site is to be directed into

a new HDPE pipe that will descend over the steep west-facing bluff and discharge along the toe of the bluff.

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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