SOIL-MAT ENGINEERS & CONSULTANTS LTD.

www.soil-mat.com info@soil-mat.on.ca TF: 800.243.1922

Hamilton: 130 Lancing Drive L8W 3A1 T: 905.318.7440 F: 905.318.7455
Milton: 20 - 348 Bronte Street South L9T 5B6 T: 905.875.3228 F: 905.875.4426

PROJECT NO.: SM 145938-G

March 3, 2016

LOSANI HOMES LTD.
430 McNeilly Road, Suite 203
Stoney Creek, Ontario
L8E 5E3

Attention: Michael Commerford
Project Coordinator, Land Development

SUPPLEMENTARY GEOTECHNICAL COMMENTS
PROPOSED RESIDENTIAL DEVELOPMENT
398 NORTH SERVICE ROAD
GRIMSBY, ONTARIO

Dear Mr. Commerford,

Further to your recent email correspondence and discussion with Mr. Paul Brown of Urbantech Consulting, SOIL-MAT ENGINEERS is pleased to offer the following supplementary geotechnical comments. These comments are in addition to our original site geotechnical investigation [SM 156461-G, dated January 15, 2016] and should be read in conjunction with that report.

SLOPE ASSESSMENT CONSIDERATIONS

It is understood that a review of the existing shoreline of Lake Ontario has been conducted, and based on that report it is proposed to construct new shoreline protection works. SOIL-MAT ENGINEERS was provided with a copy of the 'Shoreline Hazard Assessment" report prepared for the development by Shoreplan Engineering Limited [File No. 15-2298, dated January 14, 2016]. The report provides an expert assessment of the shoreline and design recommendations for the shoreline protection works.

The proposed shoreline protection works will consist of a large armour stone revetment, at an inclination of 2 horizontal to 1 vertical, or combination of revetment and retaining wall. The grade above the proposed revetment will be flattened to 3 horizontal to 1 vertical. Our geotechnical investigation report noted above, along with our past experience on several other similar properties along the shoreline of Lake Ontario in the area, indicates the subsurface soils to consist of very stiff to hard silty clay till. The silty clay till transitions to Queenston Shale bedrock at depths on the order of approximately 4 to 11 metres across the site, and likely on the order of 12 metres approaching the shoreline, roughly at or just below the ground surface at the shoreline.

The assessment of the erosion hazard presented by Shoreplan Engineering was noted to make use of a stable slope allowance of 2 horizontal to 1 vertical. Table 4.3 of the Ministry of Natural Resources publication "Geotechnical Principles for Stable Slopes" indicates stable slope inclinations in glacial till to range from 1.5 horizontal to 2 horizontal to 1 vertical. It is our opinion, based on our observations during our geotechnical investigation and experience in the area, that a stable slope inclination of 2 horizontal to 1 vertical would be considered appropriate for use in the design of the shoreline protection works. It is our opinion that, with the shore protection works implemented as per Shoreplan's recommendations and design, that the slope would remain sufficiently stable in the long-term and that further detailed analyses of the slope would not be warranted.

We trust that these supplemental geotechnical comments are sufficient for your present requirements. Should you require any additional information or clarification as to the contents of this document, please do not hesitate to contact the undersigned.

Yours very truly,
SOIL-MAT ENGINEERS & CONSULTANTS LTD.

Ian Shaw, P.Eng.
Senior Engineer

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