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September 25, 2020

Reference No. 2009-S160

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Millford Development Limited  
P.O. Box 215  
Newmarket, Ontario  
L3Y 4X1

Attention: Mr. Frank Orsi

**Re: Geotechnical Letter of Opinion  
Proposed Townhouse Development  
55 Eagle Street  
Town of Newmarket**

Dear Sir:

Further to your request, we have reviewed the Functional Servicing and Stormwater Management Report (FSR) prepared by Masongsong Associates Engineering Limited together with the geotechnical investigation report, Reference No. 0409-S004 and offer the following opinion.

The geotechnical report revealed that beneath a topsoil/topsoil fill veneer or topsoil and earth fill layers, the site is underlain predominantly by strata of sandy silt till and silty clay. In places, strata of silty sand till, fine to coarse sand, silt or sandy silt and silty clay till were encountered. Groundwater was detected at depths ranging from 5.5 to 7.9 m from the ground surface.

A valley bank slope of a creek is located north of the property. Through a slope stability study, it was determined that the LSRCA staked top of bank can be considered the Long-Term Stable Top of Bank (LTSTOB) incorporating both the stable slope allowance and toe erosion allowance. A development setback of 6.0 m from the LTSTOB was recommended, which formed the development limit of the project.

A review of the FSR and associated engineering drawings show that all the elements of the proposed development fall behind the development limit except for a storm outlet which runs down to the creek at the northeast sector of the property. It is understood that this outlet will be properly designed during the design stage of the project.



The proposed townhouses typically would be founded on shallow spread and strip footings. The revealed native soil below the topsoil and earth fill is suitable for supporting the house footings. The existing earth fill can be upgraded to or replaced with engineered fill for foundation support.

A stormwater storage tank will be constructed near the northeast area of the development with the bottom of tank elevation at 255.20 m. Since the tank will be sitting at almost the same elevation as the bottom of the slope, it will not have any negative impact to the stability of the slope.

A grassed swale is proposed to run along the inside of the northern development limit. It is design to drain in a west and east direction. Provided that it does not channel the surface runoff to drain directly over the slope to the north, it should not have any negative impact to the stability of the slope.

Based on the above, it is our opinion that the proposed townhouse development as presented in the FSR and associated engineering drawings are geotechnically suitable.

We trust this meets your present requirements. Should you have any queries, please feel free to contact the undersigned.

Yours very truly,  
**SOIL ENGINEERS LTD.**

Bernard Lee, P.Eng.  
BL:dd



c. Soil Engineers Ltd. (Newmarket)  
Mr. Stephen Lee, Branch manager

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