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**Site Visit Report**  
**Slope Stability Assessment**  
**469 Queen Street East, St. Marys, ON**

GRIT Engineering Inc. was retained by Raezor's Inc. to conduct a slope stability assessment at 469 Queen Street East, St. Marys on March 9, 2022. The slope from Queen Street East north to the Creek on the subject the property was assessed using the Ontario Ministry of Natural Resources Slope Stability Rating Chart. There is an existing residence, pool, small retaining walls, and shed on the property. It is understood the property owner would like to construct a new garage along the north property line, in the area of the existing garage.

The slope throughout the property was generally inclined shallower than 3.0 horizontal to 1.0 vertical and there was no evidence of groundwater seepage at the time of the site visit. The slope is vegetated with manicured grasses. The lower slope, north of the property, was vegetated with large trees. There was no evidence of tension cracks, scarps, bulges, ridges or bent trees on the slope face. There was also no evidence of erosion on the slope face.

All surface run-off must be directed away from slopes in order to prevent gullies from forming or expanding. No drainage tiles should be directed to the slope. It appears drainage from Queen Street East is not directed to the slope and any water it limited to localized overland drainage.

Based on the Quaternary Geology of Ontario map prepared by the Ontario Geological Survey (OGS), the Site is predominantly situated on till comprising stone-poor sandy silt to silty sand-textured till on Paleozoic terrain. The south portion of the Site is situated on glaciofluvial deposits comprising gravelly deposits.

The Ministry of Natural Resources (MNR) Slope Instability Rating is '22' indicating low potential for slope instability. A site inspection, confirmation and letter report are required with this rating.

During construction of the new garage no fill should be placed at the crest or face of the existing slopes and no stockpiles of soil or material and machinery shall be placed on the top of slope. The basement walls should be designed to resist the lateral earth pressure on the side of the

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slope. For calculating the lateral earth pressure, the coefficient of earth pressure (K) may be assumed as 1.0 for silt and clay.

Mitigation measures that are recommended to be installed to prevent any potential slope impacts include installing a perimeter drainage tile and using free draining backfill for the foundation walls to decrease porewater pressure within the soil.

It is further recommended a footing subsoil inspection be completed during construction to ensure soil conditions are consistent with the Ontario Geological Survey mapping and suitable bearing capacity.

It is our opinion the new garage would have no detrimental impacts to the short term or long term stability of the slope.

We trust this information satisfies the reporting requirements of the Upper Thames River Conservation Authority and Ministry of Natural Resource Slope Stability Guidelines. If you have any questions or concerns please do not hesitate to contact GRIT Engineering Inc.

Sincerely,



Montana Wilson, M.Eng, P.Eng, PMP  
Founder & CEO  
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Encl. Photographs 1 to 3



Photograph 1 – Looking south at area of existing garage.



Photograph 2 – Looking southeast at area of proposed garage



Photograph 3 – Looking west along lower top of slope (behind area of existing/proposed development).