



December 12, 2024

1000062217 Ontario Inc.  
12 Trotter Court  
Barrie, Ontario  
L4N 5S4

Attn: Mr. Dave Seaman

**RE: Supplemental Geotechnical Review - Revision 2  
Proposed Armstrong Estates Residential Subdivision  
Mansfield, Ontario  
Project No. 2204585**

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GEI Consultants Canada Ltd. has been retained by 1000062217 Ontario Inc. to provide geotechnical consulting services for the proposed Armstrong Estates Residential Subdivision, Mansfield, Ontario.

The project package has been submitted for draft of subdivision approval. Comments were received back on the submission and there are some comments that require geotechnical input.

It is noted that previous geotechnical reports for the project were completed by others and were provided for GEI's review, as listed below:

- *“Geotechnical/Hydrogeological Investigation Proposed Residential Development, 937045 Airport Road, Mansfield, Ontario”, by Peto MacCallum Ltd., PML Ref.:21BF019, Report 1, Revised, dated September 21, 2021.*
- *“Geotechnical/Hydrogeological Investigation Proposed Residential Development, 937045 Airport Road, Mansfield, Ontario”, by Peto MacCallum Ltd., PML Ref.:21BF019, Report 1, Revision 2, dated November 3, 2021.*

In addition, the Functional Servicing Report (FSR) for the project was provided to GEI for review.

Supplemental geotechnical confirmation was requested by the Client to address the following two comments (Comments 4 and 5) from the Nottawasaga Valley Conservation Authority (NVCA):

- ***Comment 4:*** *Please provide an existing conditions erosion hazard limit drawing that is signed and sealed by the qualified professional. Please include with a legend that clearly identifies the separate components of the slope erosion hazard limit assessment, including a clearly defined long-term stable top of slope limit line from the assessment, plus a separate 6 m access allowance limit line. This separate information is not clear in several*

locations on the proposed conditions Draft Plan, considering the text provided with the line types.

**GEI Response to Comment 4:** A PDF of the requested drawing is attached as Figure 1. It is noted that the “Top of Bank” coincides/exceeds the Erosion Access + Stable Slope Allowance component for all slopes on both sides of the creek, shown on the drawing.

- **Comment 5:** Please confirm that the report references the preliminary design of the SWM measures including enhanced roadside swales and dry ponds has been reviewed and determined to be suitable considering soils and groundwater.

**GEI Response to Comment 5:** No detailed plans for the SWM measures are available at this time. The concepts provided in the FSR were reviewed with the geotechnical reports provided.

Two SWM facilities are proposed due the division created by the watercourse creek. South of the creek a smaller SWM pond is proposed and north of the creek a larger facility is proposed. The storm sewers will carry the storm water from paved areas to the ponds and house lot and park drainage will be conveyed to the SWM facility via ditching. It is understood that both ponds will be dry ponds. The large north pond will be about 2 m deep (top of the berm is proposed at Elev. 308 and the base of the pond is proposed at Elev. 306). Side slopes of 5H:1V are proposed. Based on the existing topographic information the pond will be constructed mainly through cut. The southern pond will have the same top of berm and pond base elevation. The southern pond will also be constructed mainly through cut. Side slopes of the southern pond are proposed at 3H:1V. Both ponds will outlet to the watercourse in a controlled fashion.

Based on the geotechnical reports provided, the northern pond will be constructed in sand/sand and gravel/silty sand soil with the groundwater table a minimum 1 m below the base of the pond. The southern pond will be constructed in sand and the groundwater table is more than 1 m below the proposed base of the pond. The design concept follows the general design parameters provided in the geotechnical report and is considered appropriate. Slightly flatter slopes may be required in the southern pond. Ditching is considered appropriate along the roads. It is noted that due to the sandy conditions at the site a large portion of the surface water run-off will infiltration in the ground before the ditching can carry the flow to the SWM ponds.

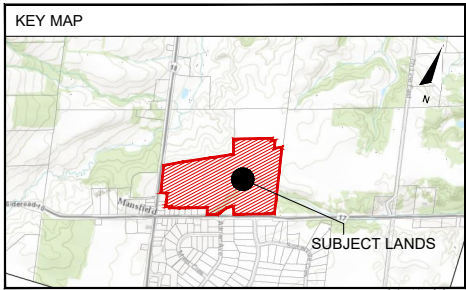
We trust this information is sufficient for your present purposes. Should you have any questions concerning the above, or can be of any further assistance, please do not hesitate to contact the undersigned.

Yours truly,  
**GEI Consultants Canada Ltd.**



A handwritten signature in blue ink, which appears to be "G.R. White", written over a horizontal line.

Geoffrey R. White, P.Eng.  
Barrie Office Branch Manager and  
Senior Geotechnical Engineer



**LEGEND**

- Creek
- Toe of Slope
- Toe Erosion Allowance
- Stable Slope/Top of Bank
- 6m Erosion Access Allowance
- NVCA Regulated Area



Notes:  
 1) Please note that the "Top of Bank" exceeds/coincides the Erosion Access+ Stable Slope Allowance component for all slopes on both sides of the creek, shown on the drawing.  
 2) Stamp only for Toe Erosion Allowance Line, Stable Slope Line and 6 m Erosion Access Allowance Line (Base Plan by others as noted below).

**DRAFT PLAN OF SUBDIVISION  
 ARMSTRONG ESTATES  
 OF MANSFIELD**

Part of Lot 11, Concession 7  
 East of Hurontario Street



**EROSION HAZARD LIMIT**

SOURCE:  
 1. PLAN BASED ON MAP PREPARED BY INNOVATIVE PLANNING SOLUTIONS, DATED DECEMBER 2024

Project 2204585

December 2024

Fig. 1