



Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing
Shoring Design & Monitoring

File No.: 1-15-0509

September 16, 2016

MMM Group Limited.

2655 North Sheridan Way, Suite 300
Mississauga, Ontario
N5K 2P8

Attention: Mr. Trevor Small, P.Eng.

**RE: FOUNDATION INVESTIGATION REPORT SMITH CREEK BRIDGE REPLACEMENT
SITE NO. 39E-014, GWP 5267-11-00, HIGHWAY 668
MINISTRY OF TRANSPORTATION, NORTHEASTERN REGION**

Dear Sirs:

We thank Mr. Michael Choy, P.Eng, and Mr. Ken Ahmad, P.Eng., for their thoughtful review and comments pertaining to our Draft Foundation Investigation Report. Our response to MTO's comments are provided herein and MTO's memorandum dated August 25, 2016 is attached for reference.

1. Geocres No. 42H-65 is added to the title page in the Final Foundation Report and Foundation Drawings.
2. Report text (Page 1) modified to "*The boreholes were drilled with a truck-mounted CME 55 drill rig supplied and operated by a specialist drilling contractor after the borehole locations were cleared for underground utilities*".
3. Report text (Page 6) modified to "*The laboratory test data is provided in Figures B19 & B20*". Information on I_{s50} values, test orientation (i.e. diametrically) and the correlation factor used to obtain the unconfined compressive strength are also provided on these figures.
4. Photos of the site were taken during the field investigations and two photographs are appended in the section titled Drawings & Site Photographs.
5. The Final Foundation Investigation Report is signed and sealed by two Professional Engineers licensed by PEO, one of whom is Terraprobe's MTO Foundation Designated Contact.

Yours truly,

Terraprobe Inc.

Rehman Abdul, P.Eng.
Principal, Senior Geotechnical Engineer



Michael Tanos, P.Eng.
Principal, MTO Designated Contact

Att: MTO Memorandum, August 25, 2016.

Terraprobe Inc.

Greater Toronto

11 Indell Lane
Brampton, Ontario L6T 3Y3
(905) 796-2650 Fax: 796-2250

Hamilton – Niagara

903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
(905) 643-7560 Fax: 643-7559

Central Ontario

220 Bayview Drive, Unit 25
Barrie, Ontario L4N 4Y8
(705) 739-8355 Fax: 739-8369

Northern Ontario

1012 Kelly Lake Rd., Unit 1
Sudbury, Ontario P3E 5P4
(705) 670-0460 Fax: 670-0558

www.terraprobe.ca

Ministry of Transportation

Pavements and Foundations
Section

Materials Engineering and
Research Office
145 Sir William Hearst Avenue
Room 232
Downsview ON M3M 0B6
Tel.: 416-235-3482
Fax: 416-235-3919

Ministère des Transports

Section des revêtements et des
fondations

Bureau de la recherche et du génie
en matière de matériaux
1201, rue Sir William Hearst
Bureau 232
Downsview ON M3M 0B6
Tél.: 416-235-3715
Télec.: 416-235-3919



Date: 25 August 2016

To: Raymond Hong
Area Manager, Highway Engineering
MTO NER Office

From: MERO – Pavements and Foundations Section
145 Sir William Hearst Ave., Room 223 – Downsview, Ontario

Re: GWP 5267-11-00 Smith Creek Bridge Replacement Project Site 39E-014 Hwy 668
~ *Review of Draft Preliminary Foundation Investigation Report*

We have reviewed the draft Preliminary Foundation Investigation Report (FIR) prepared by Terraprobe (their file ref no. 1-15-0509, dated 19 July 2016). Our comments are given below for your consideration. These notwithstanding, the accuracy of the information in the report remains with the Foundation Consultant:

1. The Geocres number that has been assigned for this report is **42H-65**. We request that this number be shown on the finalised report.
2. Please advise if checks were performed to determine if there were services in the area of the drilling. What were the results of these checks?
3. We request that the results of the point load index tests (Is_{50} values) be presented, together with details on how the tests were performed (diametrically, axially), and the correlation factor that was used to obtain the unconfined compressive strength.
4. If photos of the site were taken during the investigations, we would appreciate if they could be included in the report.

Last but not least, the FIR shall be signed and stamped by 2 Professional Engineers of Ontario, one of whom shall be the MTO Designated Contact. If there are any questions, our office can be contacted for clarification.

Michael Choy, P. Eng.
Foundation Engineer
for
Ken Ahmad, P. Eng.
Snr. Foundation Engineer