



Attention: Karen Landry

October 24, 2013

Township of Puslinch
7404 Wellington Road 34
Guelph, ON N1H 6H9

RE: Mammoet Puslinch Project

Subject: Sign By-Law Variance

On behalf of our client, Mammoet Canada Eastern Limited, Zehr Levesque Inc would like to submit a formal request for a variance to the Township of Puslinch's sign by-law as per Section 3 – Regulations, item 3.11 where the Mammoet signs located at the face of the shop on the south side of the building and the 'free-standing' sign near the main entry exceed the 9.0 square metres in display surface area.

Yours truly,

ZEHR LEVESQUE INC

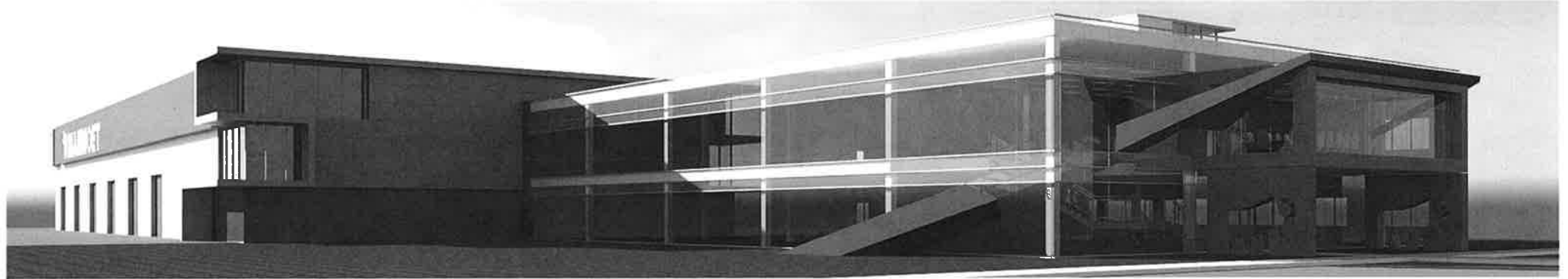
A handwritten signature in black ink that reads 'Joseph Rodrigues' is written over a horizontal line.

Joseph Rodrigues, B.A., C.E.T., GSC 
Project Manager

Cc: John Ham, Mammoet Canada Eastern Ltd
Tim Sittler, Mammoet Canada Eastern Ltd
Reg Levesque, Zehr Levesque Inc
Robert Kelly, Township of Puslinch

New Facilities for **MAMMOET Canada Eastern**

Puslinch Township, County of Wellington, Ontario



PROJECT MANAGER:

Z zehrlevesque
inc.

CONSULTANTS:

ROBERTSON SIMMONS architects inc.
ARCHITECT
MackINNON & ASSOCIATES
LANDSCAPE ARCHITECT
K. SMART ASSOCIATES LIMITED
CIVIL ENGINEER

TACOMA ENGINEERS
STRUCTURAL ENGINEER
M. A. BRYAN ENGINEERING inc.
MECHANICAL ENGINEER
ROMBALD inc.
ELECTRICAL ENGINEER

DRAWING INDEX:

ARCHITECTURAL DRAWINGS:

- A000 TITLE PAGE
- A001 OBC DATA, SUMMARY AND BARRIER FREE REQUIREMENTS
- A002 OBC FIRE SEPARATION AND TRAVEL DISTANCE PLANS
- A003 CONSTRUCTION ASSEMBLIES
- A004 SITE PLAN
- A005 SITE PLAN ENLARGEMENT

CIVIL DRAWINGS:

- C001 SITE PLAN EXISTING CONDITIONS
- C002 GRADING PLAN
- C003 SERVACING PLAN
- C004 SW1 DETAILS
- C005 WASTE WATER TREATMENT
- C006 WASTE WATER TREATMENT DETAILS
- C007 EROSION AND SEDIMENT CONTROL PLAN

ARCHITECTURAL DRAWINGS:

- A201 OVERALL FOUNDATION PLAN
- A202 OVERALL FIRST FLOOR PLAN
- A203 OVERALL SECOND FLOOR / MEZZANINE PLAN
- A204 OFFICE FOUNDATION PLAN
- A205 MAINTENANCE SHOP FOUNDATION PLAN
- A206 OFFICE FIRST FLOOR PLAN
- A207 OFFICE SECOND FLOOR PLAN
- A208 OFFICE ROOF PLAN
- A209 MAINTENANCE SHOP FIRST FLOOR PLAN
- A210 MAINTENANCE SHOP ROOF PLAN
- A211 FLOOR PLAN LAYOUTS
- A212 OFFICE FIRST FLOOR REFLECTED CEILING PLAN
- A213 OFFICE SECOND FLOOR REFLECTED CEILING PLAN
- A301 OVERALL EXTERIOR ELEVATIONS
- A302 OFFICE EXTERIOR ELEVATIONS
- A303 MAINTENANCE SHOP EXTERIOR ELEVATIONS
- A304 CROSS SECTIONS

ARCHITECTURAL DRAWINGS:

- A401 OFFICE HALL SECTIONS
- A402 OFFICE HALL SECTIONS
- A403 OFFICE AND MAINTENANCE SHOP HALL SECTIONS
- A404 MAINTENANCE SHOP HALL SECTIONS
- A405 MAINTENANCE SHOP HALL SECTIONS
- A406 SECTION DETAILS
- A407 SECTION DETAILS
- A408 STAIR A AND ELEVATOR HOISTWAY PLANS AND SECTIONS
- A409 STAIR B PLANS AND SECTIONS
- A410 STAIR C AND ROOF ACCESS LADDER PLANS, SECTIONS AND DETAILS
- A411 STAIR D PLANS AND SECTIONS
- A412 STAIR E PLANS AND SECTIONS
- A413 STAIR F PLANS AND SECTIONS
- A414 DOOR SCHEDULE AND ELEVATIONS
- A415 WINDOW/SCREEN SCHEDULE, ELEVATIONS AND FRAME DETAILS

STRUCTURAL DRAWINGS:

- S0.1 STRUCTURAL NOTES
- S0.2 TYPICAL DETAILS
- S0.3 FOUNDATION AND FRAMING SCHEDULES
- S1.1 OFFICE FOUNDATION PLAN
- S1.2 SHOP / MAINTENANCE FOUNDATION PLAN
- S1.3 FOUNDATION SECTIONS
- S1.4 TRENCH DRAIN FOUNDATION DETAILS
- S1.5 OFFICE SECOND FLOOR & MEZZ. FRAMING PLANS
- S1.6 CRANE RUNWAY PLAN AND DETAILS
- S1.7 OFFICE ROOF FRAMING PLANS
- S1.8 SHOP / MAINTENANCE ROOF FRAMING PLAN
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- S1.10 STRUCTURAL ELEVATIONS - SHOP
- S1.11 STRUCTURAL ELEVATIONS - OFFICE
- S1.12 SECTIONS
- S1.13 SECTIONS
- S1.14 SECTIONS AND DETAILS

MECHANICAL DRAWINGS:

- M101 BELOW SLAB DRAINAGE PLAN
- M102 FIRST FLOOR PLUMBING PLANS AND DETAILS
- M103 SECOND FLOOR PLUMBING PLANS
- M104 ENLARGED PLUMBING PLANS
- M105 MAINTENANCE SHOP HVAC - MAIN FLOOR PLAN
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MECHANICAL DRAWINGS:

- M201 ROOF MECHANICAL PLAN
- M202 MECHANICAL HYDRONIC HEATING PLANS & DETAILS
- M203 MECHANICAL EQUIPMENT SCHEDULES
- M204 MECHANICAL SPECIFICATION AND SCHEMATICS

ELECTRICAL DRAWINGS:

- E001 PARTIAL ELECTRICAL SITE PLAN & DETAILS
- E002 PARTIAL ELECTRICAL SITE PLAN & DETAILS
- E003 ELECTRICAL GENERAL NOTES & INFORMATION
- E004 OVERALL FIRST FLOOR POWER & SYSTEMS PLAN
- E005 OVERALL SECOND FLR. & MEZZ. POWER & SYSTEMS PLAN
- E006 OVERALL ROOF/MEZZ. PLAN POWER & SYSTEMS PLAN
- E007 OVERALL ELECTRICAL SHOP AREA ROOF PLAN
- E008 OVERALL SECOND FLOOR TELECOMMUNICATION PLAN
- E009 OVERALL FIRST FLOOR TELECOMMUNICATION PLAN
- E010 OVERALL FIRST FLOOR LIGHTING SYSTEMS PLAN
- E011 OVERALL SECOND FLR. & MEZZ. LIGHTING SYSTEMS PLAN
- E012 OVERALL ROOF/MEZZANINE LIGHTING SYSTEMS PLAN
- E401 ELECTRICAL DETAILS
- E402 ELECTRICAL DETAILS
- E403 ELECTRICAL DETAILS
- E404 ELECTRICAL DETAILS
- E405 ELECTRICAL DISTRIBUTION RISER
- E501 ELECTRICAL SPECIFICATIONS
- E502 ELECTRICAL SPECIFICATIONS
- E503 ELECTRICAL SPECIFICATIONS
- E504 ELECTRICAL SPECIFICATIONS
- E505 ELECTRICAL SPECIFICATIONS

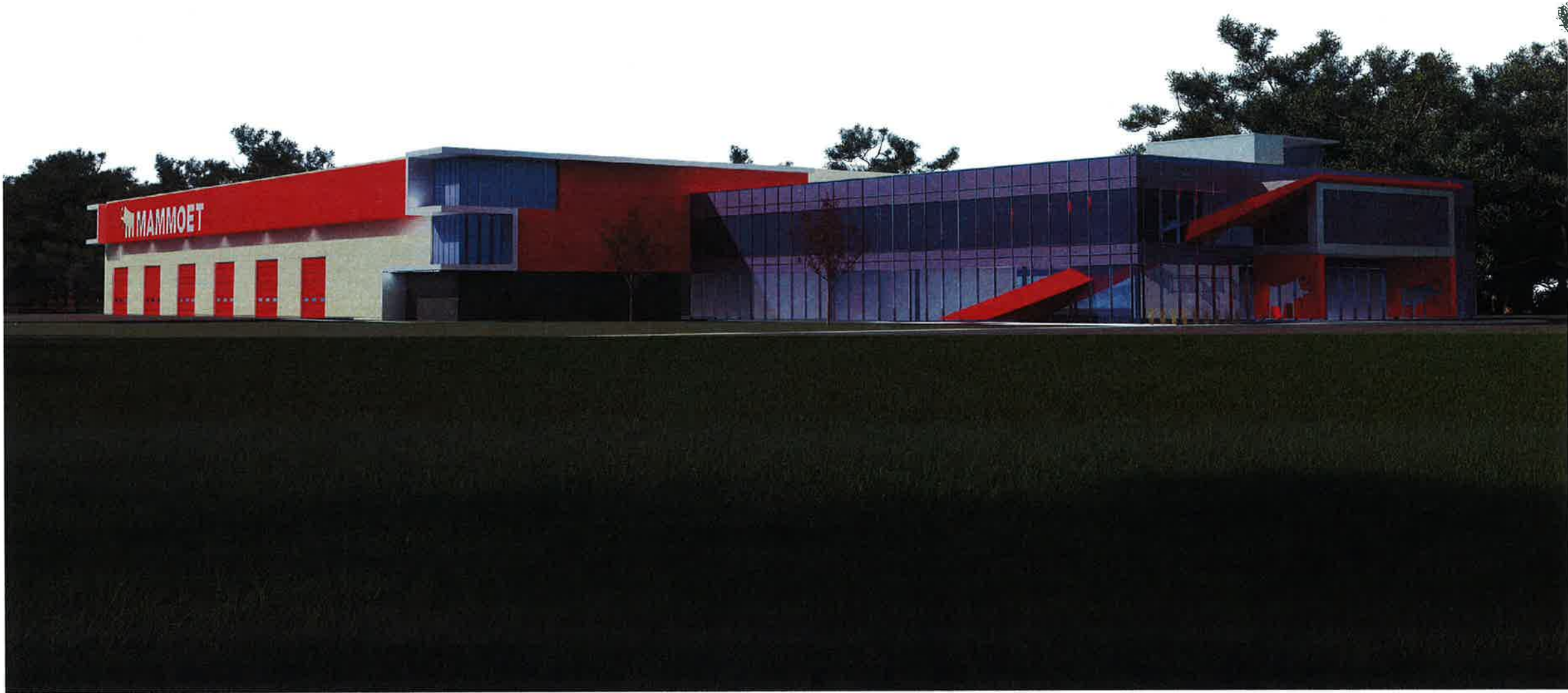
**ISSUED FOR
CONSTRUCTION**

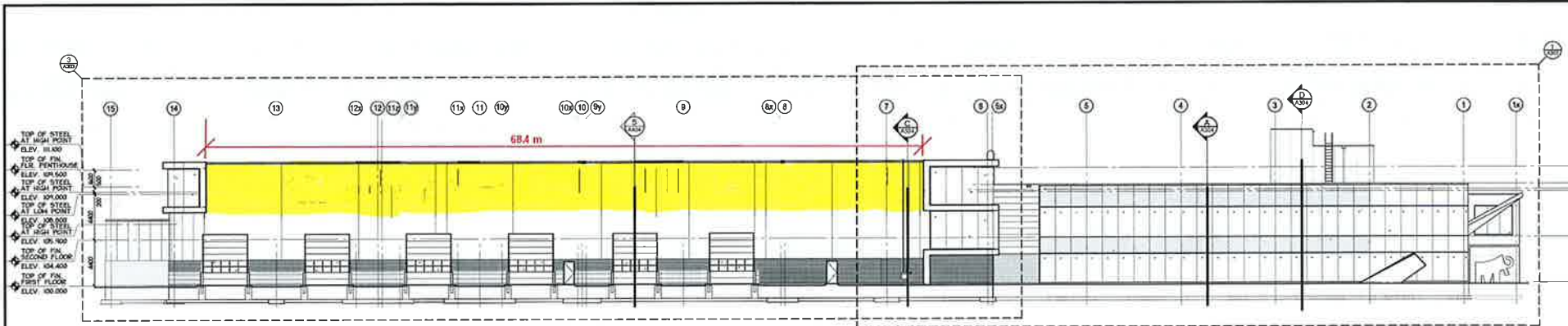
JULY 12, 2013

Robertson Simmons
architects inc.

SET No.

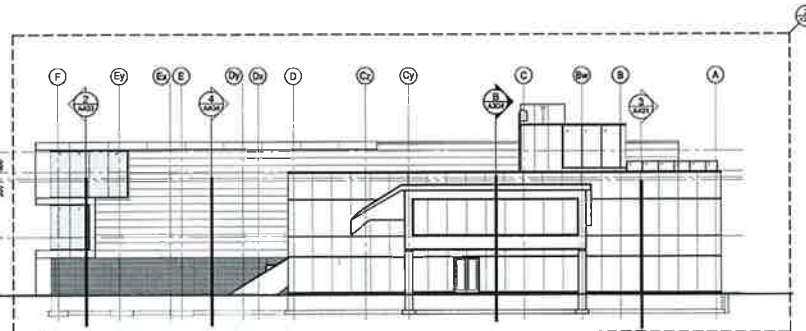
MAMMOET CANADA EASTERN 10047





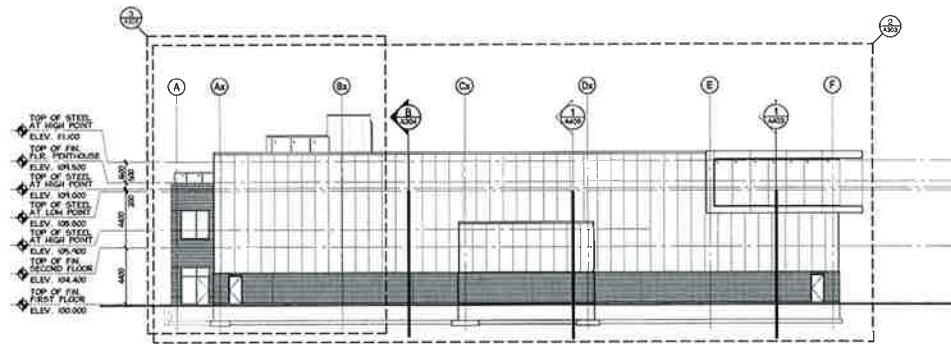
1 SOUTH ELEVATION

ASB1 SCALE: 1:200



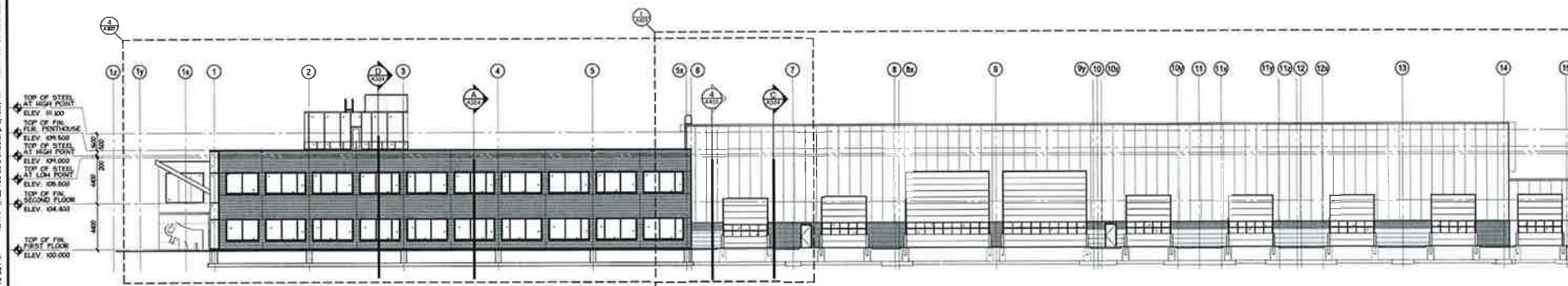
2 EAST ELEVATION

ASB1 SCALE: 1:200



3 WEST ELEVATION

ASB1 SCALE: 1:200



4 NORTH ELEVATION

ASB1 SCALE: 1:200

2 07/12/13 / CONSTRUCTION
1 05/17/13 / BUILDING PERMIT / BP No. 4
NO DATE SCALE

Robertson Simmons
architects inc.

130 WEBER STREET WEST, SUITE 100
KITCHENER, ONTARIO N2H 4A2
TEL: 519-745-4754 FAX: 519-745-0061

GO INTO SCALE THESE DIMENSIONS THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY UPON DISCOVERY OF THE WORK.
THESE DIMENSIONS ARE THE PROPERTY OF THE ARCHITECT AND SHALL BE KEPT CONFIDENTIAL AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

PROJECT
NEW FACILITIES FOR
MAMMOET CANADA EASTERN
MCLEAN ROAD, PUSLINCH TOWNSHIP
COUNTY OF WELLINGTON, ONTARIO

DRAWING
**OVERALL EXTERIOR
ELEVATIONS**

DRAWN BY: KED CHECKED BY: JM
DATE: JULY 12, 2013

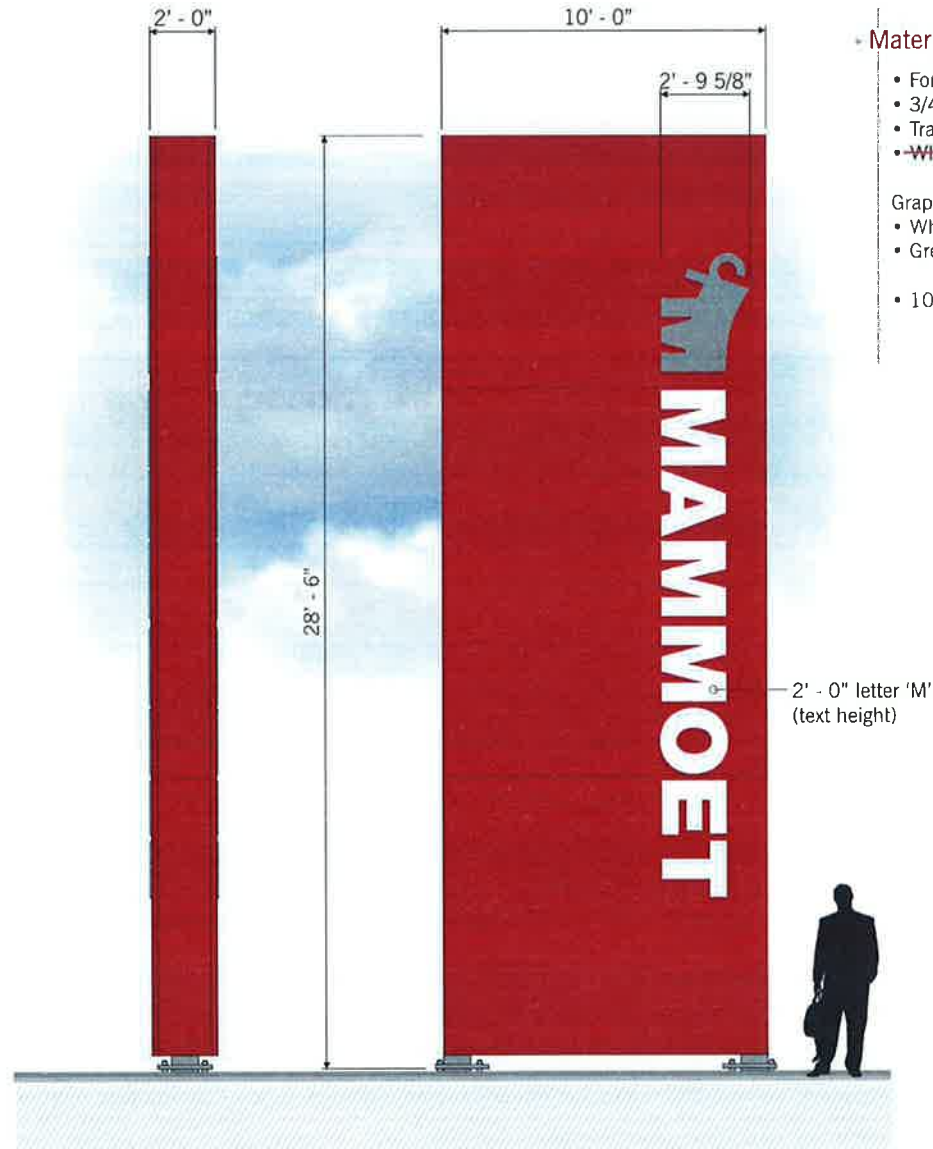
SCALE: 1:200 DRAWING NO: **A301**
PROJECT NO: 1594-1

2013.07.12 2:10:38 PM W:\102\108\08\Symba\proj\11\1584 - Mammoet Canada Eastern\1584_2\Drawings\1584_A301-4.dwg

Non

D/S Illuminated Pylon - 1 required

Scale: N.T.S.



Material Specifications

- Formed aluminum face and filler primed and painted red pms #1805c
- 3/4" clear acrylic graphics pushed thru routed face
- Translucent vinyl graphics applied to 1st and 2nd surface of clear acrylic
- ~~White LED illumination~~

Graphic Colours:

- White A9001-T
- Grey (*Colour Spec TBD)

- 10" x 10" HSS posts and baseplates primed and painted grey (*Colour Spec TBD)

Reverse Side



Drawing No. SC -PY000002.120A1

Refer to No. SC -MS000002

Electrical Requirements

120V

Graphic rendition is representative of specific signage. Colour / dimensional / material details should be verified using reference drawing specifications. PMS Signs Ltd. is not responsible for inherent variations caused by display and/or print variations.

Client Supplied Artwork:

Preliminary Artwork

Approved for Production

CLIENT APPROVAL

REVISION DATES:
June 4, 2013



THIS NETWORK IS THE PROPERTY OF PMS SIGNS INC. ANY REUSE OR MISUSE OF THIS NETWORK IS STRICTLY PROHIBITED. PMS SIGNS INC. 2013



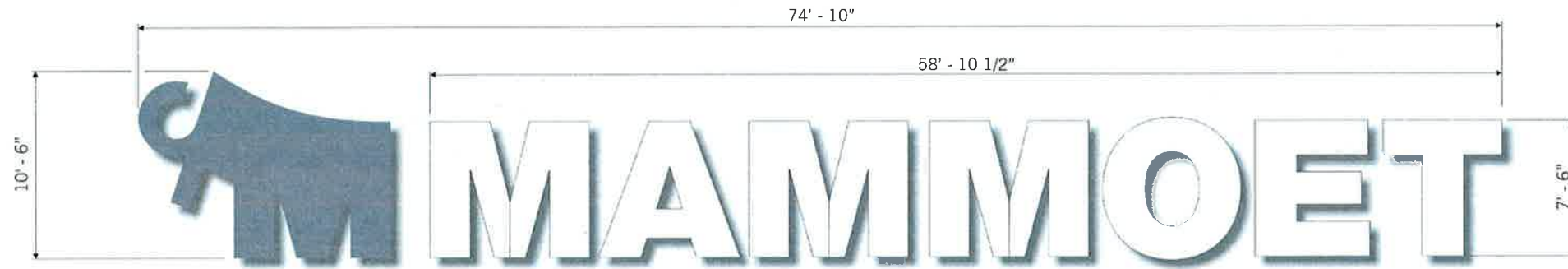
McLean Rd
Puslinch, Ontario



DRAWN BY: B. Guse
DATE: April 4, 2013

Non illuminated Channel Letters - 1 set required

scale: N.T.S.



acrylic shiplap seams as required

Material Specifications

Logo

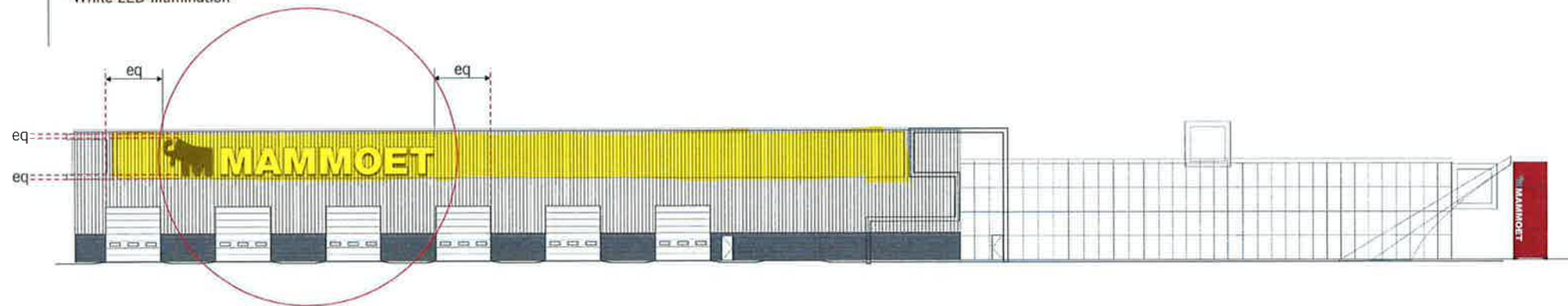
- 5" Formed aluminum returns and pts frameless retainer primed and painted Grey (*Colour spec TBD)
- White flex face with vinyl graphics applied to 1st surface (logo)
- White LED illumination

Graphic Colours:

- Grey (*Colour TBD)

"Mammoet"

- 5" Formed aluminum returns primed and painted White
- Pride PVC White 'F' trim
- 3/16" white acrylic face
- ~~White LED illumination~~



Drawing No
SC -CL000002.120A1

Refer to No:
SC -MS000002

Electrical Requirements

120V

Graphic rendition is representative of specific signage. Colour / dimensional / material details should be verified using reference drawing specifications. Prids Signs Ltd is not responsible for inherent variations caused by display and / or print variations.

Client Supplied Artwork:

- Preliminary Artwork
- Approved for Production

CLIENT APPROVAL

REVISION DATES:
April 8, 2013

B. Guse



THIS ARTWORK IS THE PROPERTY OF PRIDS SIGNS INC AND MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF PRIDS SIGNS INC.



McLean Rd
Puslinch, Ontario



DRAWN BY: B. Guse
DATE: April 4, 2013

6.2(a)

September 21, 2013

Telfer Glen Developments Inc.
27 Poplar Hts. Dr
Toronto, ON, M9A 5A1

Your Worship Mayor Dennis Lever
Township of Puslinch
7404 Wellington Road 34
Guelph, ON N1H 6H9

RECEIVED
SEP 25 2013
Township of Puslinch

Dear Mayor Lever:

**Subject: Telfer Glen Estates Phase 2, Morriston
Telfer Glen Developments Inc.**

Thank you for meeting with me on Monday, September 16th, 2013, to discuss the development of our remaining Telfer Glen Estates holdings in Morriston.

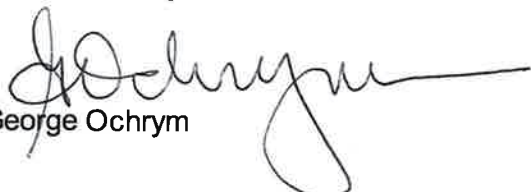
As discussed, it has always been our intention to proceed with Phase 2 of the Telfer Glen Estates subdivision once the Highway 6 by-pass alignment was established by the Ministry of Transportation (MTO). It was our understanding with the Township that Phase 2 of the development would be considered once the MTO alignment was established. We also note that the revised cul-de-sac terminus of Telfer Glen Street (as built) and "Proposed Future Expansion" area on a July 1988 Draft Plan reference the future Phase 2 development.

The Highway 6 realignment has now been established by MTO, and was registered in the County's Land Registry Office in 2010. In doing so, MTO has delineated the precise areas available for the Phase 2 subdivision. We note that this alignment bisects the western portion of our property. Telfer Glen Developments Inc. seeks to pursue Phase 2 of the Telfer Glen development at this time.

Our immediate next step is to engage with the Province through the 2015 Greenbelt Plan 10-year review, as much of the remaining Telfer Glen lands are now included in the Greenbelt Area. In our understanding of the Greenbelt Plan policies, removal of the Phase 2 lands from the Protected Countryside will only be considered in the context of a settlement expansion of a local municipality. In this case, we are seeking the logical expansion of Morriston to include the Telfer Glen Phase 2 lands. We respectfully request an audience with Council in the near future, and will ultimately seek a resolution from Council supporting this.

Please contact me with any questions. You can reach me at my office at (416) 236-2426 ext. 206, or by e-mail at gochrym@consultec.ca.

Yours sincerely,


George Ochrym

6.3(a).



September 9, 2013

Robert Kelley, Chief Building Official
Township of Puslinch
7404 Wellington Road #34
R.R. #3
Guelph, ON N1H 6H9

RE: New Cell Tower Installation at 16 Nicholas Beaver Road, Morriston, Ontario N0B 2C0

Dear Sir or Madam,

Enclosed, please find the notification packages that are being mailed to the local landlords within 180 meters of the site of the new tower (60 meters in height). A public notice was also published in the local paper, the Wellington Advertiser, on September 6, 2013. Please forward any comments or questions to:

Emily Adelman
49357 Pontiac Trail, Suite 206
Wixom, MI 48393
Fax: 1-888-745-4719
Email: eadelman@smj-llc.com

Respectfully,

A handwritten signature in cursive script that reads "Emily Adelman S.B.".

Emily Adelman
SMJ International, LLC, on behalf of SBA Canada

RECEIVED
SEP 18 2013
Township of Puslinch

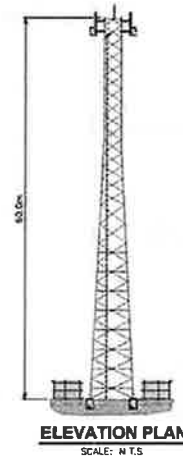
September 9, 2013

Russel Metals Inc Trustee
1900 Minnesota CRT Suite 210
Mississauga, ON L5N 3C9

RE: New Cell Tower Installation at 16 Nicholas Beaver Road, Morriston, Ontario N0B 2C0

Dear Sir or Madam,

SBA Canada proposes to construct a new cell tower at 16 Nicholas Beaver Road in Morriston (N43° 27' 43.9" W80° 07' 35.0). The facility will include mechanical equipment cabinets and fencing around the base of the tower. The tower will provide wireless voice and data services to the surrounding area.



SBA Canada attests that the radio installation described in this notification package will be installed and operated on an ongoing basis so as to comply with Health Canada's Safety Code 6, as may be amended from time to time, for the protection of the general public including any combined effects of nearby installations within the local radio environment.

SBA Canada attests that the radio antenna system described in this notification package is excluded from environmental assessment under the Canadian Environmental Assessment Act.

The proposed self-support tower will be 60 meters in height and will have four (4) antennas and three (3) microwave dishes located at the top of the tower. At the base of the tower, there will be a barbed wire fence surrounding the proposed 22.85m x 22.85m SBA leased area. There is also an existing fence to be used as the northwest and southwest boundary of the fenced compound. Please see enclosed tower drawing. The installation will respect good engineering practices including structural adequacy.

The tower proposal, on behalf of SBA Canada, has been granted approval from both Transport Canada and NAV Canada, having met all of the requirements from both agencies. Furthermore, SBA Canada will obtain any and all local land-use requirements from the Township of Puslinch where the site is located.

Please be advised that general information relating to antenna systems is available on Industry Canada's Spectrum Management and Telecommunications website at:
(http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf01702.html)

49357 Pontiac Trail • Suite 206 • Wixom, Michigan 48393 • Phone (616) 745-4777 • Fax (888) 745-4719
691 Ouellette Avenue • Windsor, Ontario, Canada N9A 4J4 • Phone (519) 915-1349 • Fax (888) 745-4719

Contact information for the Township of Puslinch and Industry Canada is provided below:

Robert Kelley, Chief Building Official
Township of Puslinch
7404 Wellington Road #34
R.R. #3
Guelph, ON N1H 6H9

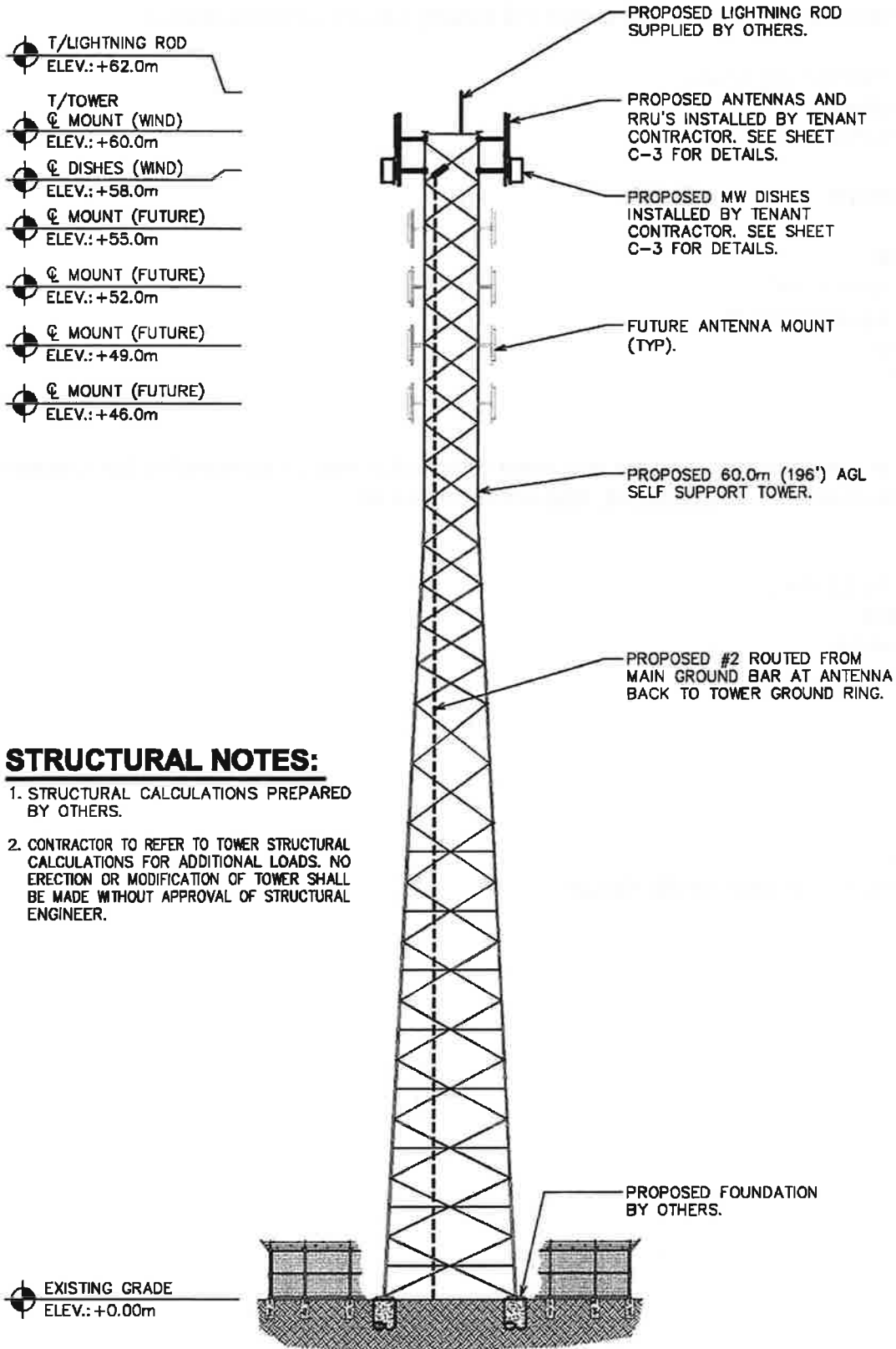
Industry Canada
Radiocommunications and
Broadcasting Regulatory Branch
300 Slater Street
Ottawa, Ontario
K1A 0C8

Any questions or comments regarding the new tower construction may be submitted to SBA Canada in writing. All comments must be made by **October 16, 2013** and submitted to:

Emily Adelman
49357 Pontiac Trail, Suite 206
Wixom, MI 48393
Fax: 1-888-745-4719
Email: eadelman@smj-llc.com

Respectfully,

Emily Adelman
SMJ International, LLC, on behalf of SBA Canada



Ministry of Transportation

Engineering Office
Environmental Section
West Region

659 Exeter Road
London, Ontario N6E 1L3
Telephone: (519) 873-4801
Facsimile: (519) 873-4800
Email: Karolina.Krol@ontario.ca

Ministère des Transports

Bureau du génie
Section de l'environnement
Région de l'Ouest

659, rue Exeter
London (Ontario) N6E 1L3
Téléphone: (519) 873-4827
Télécopieur: (519) 873-4800



October 15, 2013

Donna Tremblay
Deputy Clerk
Township of Puslinch
7404 Wellington Road #34
R.R. #3
Guelph, ON N1H 6H9

via email: dtremblay@puslinch.ca

Dear Ms. Tremblay:

**RE: Noise By-Law Exemption for Construction
Highway 6 Resurfacing from Highway 401 to Clair Rd.
City of Guelph, Township of Puslinch, Ontario
GWP 3112-10-00**

Further to our letter on Sept. 4, 2013, we are revising our letter as follows:

The Ministry of Transportation (MTO) is undertaking the resurfacing of Highway 6 (Hanlon Expressway) in 2014, subject to funding and approvals. The project limits are from Hwy 401 northerly to south of the Clair Rd. intersection and is currently scheduled to start on April 14, 2014 and be completed by December 31, 2014. We anticipate a total of 30 nights of work within the construction zone.

The work generally consists of milling the existing pavement followed by paving by echelon method (paving adjacent lanes simultaneously). This is a continuously progressing operation where construction activities will be moving along the highway and be localized for a relatively short period of time, so disturbance to local residents will be minimized. The noise generated from this project will be that associated with the operation of dump trucks, pavers, milling and rubber/steel rollers (including their backup warning devices).

To avoid potential traffic queues during the day, traffic through the active construction zone will be redirected to single lanes northbound and southbound at night. During this time MTO recommends the Brock Road interchange as an alternate route. The following intersections along Highway 6 will be affected by this work: Hwy 401 interchange, Wellington Rd 34, Maltby Rd. W/Concession 4, and Clair Rd W./ Cooper Dr.

MTO will provide advance notification of construction through signage and advisories along with direct correspondence to emergency service providers that operate within and in proximity to the area, including fire, police and ambulance services.

Please accept this as a formal request for the Township to grant a Noise By-Law exemption within the revised project limits noted above.

Sincerely,



**Karolina Krol, MSc, EIT
West Region**

- c: Ron Meertens, Project Manager, MTO**
- Adele Mochrie, Environmental Planner, MTO**
- Jennifer Graham-Harkness, Manger Operations, MTO**

6.5(a).



Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

September 13, 2013

Al Murray
Guelph Area Team Supervisor
Ministry of Natural Resources
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

CLERK'S DEPARTMENT	
TO	S.D.
Copy	
Please Handle	✓ Comments.
For Your Information	
Council Agenda	✓
File	

RECEIVED

SEP 17 2013

Township of Puslinch

Attention: Mr. Al Murray

**Re: Monthly Monitoring Report
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County**

Please find enclosed the required monitoring data for the month of August 2013. As indicated, there were no exceedences in this month.

If you have any questions, please do not hesitate to call.

Sincerely,

Ron Van Ooteghem
Site Manager

C.c.

Karen Landry (Township of Puslinch)
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Monthly Reporting
Mill Creek Aggregates Pit
August 2013

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
9-Aug-13	305.85	305.49	NO
14-Aug-13	305.83	305.49	NO
26-Aug-13	305.75	305.49	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Aug-13	306.33	305.85	0.48	0.10	NO
14-Aug-13	306.26	305.83	0.43	0.10	NO
26-Aug-13	306.15	305.75	0.40	0.10	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
9-Aug-13	305.27	305.17	NO
14-Aug-13	305.25	305.17	NO
26-Aug-13	305.22	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Aug-13	305.50	305.27	0.23	0.06	NO
14-Aug-13	305.44	305.25	0.19	0.06	NO
26-Aug-13	305.37	305.22	0.15	0.06	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
9-Aug-13	304.74	304.54	NO
14-Aug-13	304.71	304.54	NO
26-Aug-13	304.68	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Aug-13	305.60	304.74	0.86	0.58	NO
14-Aug-13	305.57	304.71	0.86	0.58	NO
26-Aug-13	305.56	304.68	0.88	0.58	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
9-Aug-13	304.20	303.50	NO
14-Aug-13	304.19	303.50	NO
26-Aug-13	304.20	303.50	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Aug-13	304.81	304.20	0.61	0.32	NO
14-Aug-13	304.81	304.19	0.62	0.32	NO
26-Aug-13	304.81	304.20	0.61	0.32	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
9-Aug-13	304.28	303.91	NO
14-Aug-13	304.26	303.91	NO
26-Aug-13	304.24	303.91	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Aug-13	305.02	304.28	0.74	0.23	NO
14-Aug-13	305.05	304.26	0.79	0.23	NO
26-Aug-13	305.05	304.24	0.81	0.23	NO

Date	DP5C (mASL)	Threshold Value (mASL)	Exceedance
9-Aug-13	303.13	302.79	NO
14-Aug-13	303.13	302.79	NO
26-Aug-13	303.17	302.79	NO

Date	OW5-84 (mASL)	DP5C (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Aug-13	303.57	303.13	0.44	0.25	NO
14-Aug-13	303.55	303.13	0.42	0.25	NO
26-Aug-13	303.48	303.17	0.31	0.25	NO

Note: No exceedances to report.

Monthly Reporting
 Mill Creek Aggregates Pit
 July 2013

		Max. Allowable as per PTTW- Main Pond										
		(Imperial Gallons)								(Litres)		
		2,500								per minute		
		1,800,000								per day		
										11,365		
										8,183,000		
Total Monthly Precipitation (mm):		52.4		Waterloo-Wellington Airport (August Actual)								
Total Monthly Normal Precipitation (mm):		89		Waterloo-Wellington Airport (30-year Normal)								
Date	Below Water Table Extraction (wet tonnes) Phase 2	Below Water Table Extraction (wet tonnes) Phase 3	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	SP3 Ext Level (mASL)	Exceedance Y/N (ABOVE 307.1 mASL) or (BELOW 304.85 mASL)
1-Aug-13	0	3300	1,700,362	2,145,800	306.76	NO	306.34	NO	305.20	NO	305.31	NO
2-Aug-13	0	2100	1,700,802	1,932,595	306.76	NO	306.34	NO	305.20	NO	305.31	NO
3-Aug-13	0	0	0	1,932,595	306.76	NO	306.34	NO	305.20	NO	305.31	NO
4-Aug-13	0	0	0	1,932,595	306.76	NO	306.34	NO	305.20	NO	305.31	NO
5-Aug-13	0	0	0	1,932,595	306.76	NO	306.34	NO	305.20	NO	305.31	NO
6-Aug-13	0	4200	1,710,481	2,271,622	306.76	NO	306.33	NO	305.20	NO	305.20	NO
7-Aug-13	0	6600	1,697,283	2,078,489	306.76	NO	306.34	NO	305.18	NO	305.18	NO
8-Aug-13	0	6600	1,681,005	2,303,958	306.76	NO	306.34	NO	305.18	NO	305.18	NO
9-Aug-13	0	3000	1,703,882	0	306.81	NO	306.33	NO	305.16	NO	305.16	NO
10-Aug-13	0	0	0	0	306.81	NO	306.33	NO	305.16	NO	305.16	NO
11-Aug-13	0	0	0	0	306.81	NO	306.33	NO	305.16	NO	305.16	NO
12-Aug-13	0	4800	1,700,802	0	306.77	NO	306.32	NO	305.18	NO	305.18	NO
13-Aug-13	0	6450	1,689,144	2,053,413	306.71	NO	306.31	NO	305.22	NO	305.22	NO
14-Aug-13	0	6000	1,724,119	1,507,889	306.72	NO	306.30	NO	305.20	NO	305.20	NO
15-Aug-13	0	6300	1,700,802	1,649,769	306.71	NO	306.29	NO	305.19	NO	305.19	NO
16-Aug-13	0	3300	1,700,362	13,858	306.70	NO	306.28	NO	305.16	NO	305.16	NO
17-Aug-13	0	0	0	0	306.70	NO	306.28	NO	305.16	NO	305.16	NO
18-Aug-13	0	0	0	0	306.70	NO	306.28	NO	305.16	NO	305.16	NO
19-Aug-13	0	0	1,684,085	0	306.64	NO	306.27	NO	305.20	NO	305.20	NO
20-Aug-13	0	0	1,683,865	1,727,419	306.63	NO	306.26	NO	305.14	NO	305.14	NO
21-Aug-13	0	0	1,683,425	0	306.59	NO	306.26	NO	305.28	NO	305.28	NO
22-Aug-13	0	0	1,672,866	1,184,754	306.57	NO	306.24	NO	305.25	NO	305.25	NO
23-Aug-13	0	0	1,669,567	0	306.56	NO	306.24	NO	305.22	NO	305.22	NO
24-Aug-13	0	0	0	0	306.56	NO	306.24	NO	305.22	NO	305.22	NO
25-Aug-13	0	0	0	0	306.56	NO	306.24	NO	305.22	NO	305.22	NO
26-Aug-13	0	0	1,653,729	0	306.56	NO	306.24	NO	305.22	NO	305.22	NO
27-Aug-13	0	0	1,660,328	0	306.56	NO	306.24	NO	305.23	NO	305.23	NO
28-Aug-13	0	0	1,077,629	0	306.56	NO	306.24	NO	305.23	NO	305.23	NO
29-Aug-13	0	0	1,669,347	0	306.56	NO	306.23	NO	305.15	NO	305.15	NO
30-Aug-13	0	0	1,662,968	1,871,278	306.56	NO	306.24	NO	305.24	NO	305.24	NO
31-Aug-13	0	0	0	0	306.56	NO	306.24	NO	305.24	NO	305.24	NO
Total	0	52650	34,826,851	26,538,630								
Avg./ day	0.0	1698.39	1,123,446.81	884,621.00	306.68	NO	306.29	NO	305.20	NO	305.22	NO

Note: No exceedences to report



Harden Environmental

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Phone: 519.826.0099 fax: 519.826.9099 www.hardenv.com

- Groundwater Studies
- Geochemistry
- Phase I / II
- Regional Flow Studies
- Contaminant Investigations
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- Water Quality Sampling
- Monitoring
- Groundwater Protection Studies
- Groundwater Modelling
- Groundwater Mapping

Our File: 0004

July 16, 2013

Township of Puslinch
R.R. 3
Guelph, ON
N1H 6H9

Attention: Karen Landry
CAO

Dear Mrs. Landry:

Re: Review of 2012 Mill Creek Aggregates Pit Report

We are pleased to submit a review of groundwater and surface water conditions at Mill Creek Aggregates site as presented in the 2012 Monitoring Report.

Genivar Response to Observed Changes to the Groundwater Flow System

The 2012 report includes a response to Harden Environmental's request for an interpretation of the observed water level changes at the site. In 2010 and 2011 Harden commented on the decrease in seasonal water level change observed in wetland monitors adjacent to the extraction area. The response by Genivar states that despite the change in magnitude, the seasonal water level change is within historical range and that recent biological investigations do not find that the change in the water level pattern is affecting plant growth or health. We are satisfied with the response provided and trust that future monitoring reports will comment on this issue.

Genivar Response to Stream Flow Measurement Issue

Historical streamflow measurements have included data that indicated less streamflow downstream of the Mill Creek Aggregates site than upstream. There should naturally be more flow downstream than upstream because of the increased watershed contribution area measured

at the downstream station. The Genivar response discusses limitations to the accuracy of streamflow measurements ($\pm 20\%$) and issues with ice-dams. We appreciate these limitations to stream flow measurements however, this does not provide any assurance that historical measurements or future measurements are meaningful.

Water levels 2012

Water levels obtained at SW2 and DP5A/DP5B/C record a significant low water level event in 2012. These stations are downgradient of the site within Mill Creek. Historic low water levels occur in several places at the site including groundwater monitors DP19, 92-15, BH7, 92-14 and 92-12. Historic low values can be expected within the pit as a result of the lake leveling effect within Phase 3. However, low values found at SW2 and DP5A/5B/C are not easily explained considering that groundwater levels west of Phase 3 are generally higher than historically observed. The growing body of water in Phase 3 should moderate water level changes in Mill Creek; however, this does not appear to be the case in 2012. We note that Silt Pond 1 was constructed between stations SW2, DP5A and the Phase 3 pond. We recognize that 2012 was a dry year; however, the observations of historically low water levels in Mill Creek downgradient of the site should be reviewed in case site activities are complicit.

Water Temperatures 2012

Groundwater temperatures are changing west of the Phase 3 Pond. Water moving from the Phase 3 pond towards Mill Creek is heated during the summer and cooled in the winter. The temperatures measured in groundwater monitors west of the Phase 3 pond clearly show the influence of thermal storage in the summer months and heat loss in the winter months. The temperature change is measured in groundwater monitors within 30 metres of the pond. The same temperature change is not observed in groundwater monitors approximately 100 metres from the pond. To date, temperature changes have not been observed in drive points within Mill Creek.

Streamflow

The streamflow monitoring station at SW2 was modified in 2012 and thus improvements to streamflow may not be apparent until the 2013 report is released.

Summary

The amount of data collected for this site is unprecedented with respect to aggregate sites in Ontario. The data collected in 2012 confirms that the volume of groundwater flow to Mill Creek is not diminishing and that a thermal impact to the creek has not occurred. The occurrence of historical low water levels at SW2 and DP5A should be evaluated for possible interference by Silt Pond 1.

Sincerely,

Harden Environmental Services Ltd.



Stan Denhoed, P.Eng., M.Sc.
Senior Hydrogeologist

6.7(a)



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Township of Puslinch

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Council Agenda	Nov 6/13
File	

- Groundwater Studies
- Geochemistry
- Phase I / II
- Regional Flow Studies
- Contaminant Investigations
- OMB Hearings
- Water Quality Sampling
- Monitoring
- Groundwater Protection Studies
- Groundwater Modeling
- Groundwater Mapping

Our File: 1006

November 1, 2013

Township of Puslinch
7404 Wellington Road 34
Guelph, Ontario, N1H 6H9

Attention: Karen Landry, CAO

Dear Ms. Landry;

Re: Pinebush/ County Road 32 and Townline Road Drainage

I am pleased to provide a summary of the meetings and discussions that have been held between the Township of Puslinch, represented by Stan Denhoed (Harden Environmental) and councillor Wayne Stokley, and the Regional Municipality of Waterloo (RMOW) represented by Gary MacDonald and MTE Consultants Inc.

Briefly, the Township was approached by the RMOW in 2010. The RMOW was interested in the Township's input in regards to engineering solutions to eliminate periodic flooding of the intersection at Townline Road and Pinebush Road. Despite efforts by the Township to dissuade the RMOW from including options that resulted in discharging storm water into the Puslinch Lake basin, the final solution preferred by the RMOW includes discharging water into the basin adjacent to the lake. On behalf of the Township, Harden Environmental participated in the discussions and ultimately assisted in the final design that minimizes, but does not eliminate drainage into the lake basin.

The summary of events leading to this final design goes as follows;

In late 2010, the Township was presented with an engineering report titled "County Road 32/Townline Road/Pine Bush Road Intersection Drainage Improvements Environmental Impact Study" (Natural Resource Solutions Inc. and MTE Consultants, September 2010), and "Scoped Hydrogeological Assessment" (MTE Consultants, September 2010).

The Environmental Impact Study presented seven solutions to address

the issue of periodic flooding of the intersection. The preferred solution (Option 6) included overland conveyance of storm water from the intersection into the Puslinch Lake basin. The storm water would be discharged into a wetland located west of the lake.

Stan Denhoed prepared a review of the report and included the following statements in an email send to Gary Macdonald on November 26, 2010.

1) The northwest corner of Pine Bush and Townline Road may be developed as a SUNCOR truck stop. There was a pre-hearing for the development on Tuesday this week. I have not reviewed drainage details of this site but several figures for Options 1 through 4 suggest that drainage from the NW corner passes under Pine Bush into the existing storm water management system for this area. Options 5, 6 and 7 do not show this conveyance or conveyance of water under Townline Road. It should be made clear whether or not the existing culvert beneath Townline Road will remain and if so, what is the total catchment area for water to be conveyed to wetland WL-1. What are the water quality ramifications if the NW corner is developed as a truck stop?

2) I have attached water quality results from water ponded at the intersection taken in March. The two main parameters of concern will be chloride and phosphorous although several metals also exceed PWQOs. Puslinch Lake already qualifies as a Policy 2 water way according to Water Management Guidelines, Policies, Objectives Provincial Water Quality Objectives (MOE, 1999). The addition of storm water to this kettle lake that is essentially a closed system will not be welcome. I understand that public safety should take precedence over environmental degradation, however, if there is a possibility of diverting the storm water to an infiltration gallery (natural or manmade) this would reduce potential impact to Puslinch Lake. Even if this option is made available, it may be problematic according to Source Water Protection legislation. I have not reviewed the capture zones for Townline wells or Pine Bush wells developed for or being developed by the RMOW.

3) The potential mass loading of salt should also be detailed in order to gain an appreciation of the mass of salt to be introduced to the lake environment.

4) Any additional separation between the outfall and Puslinch Lake is beneficial. Is Option 7 not better by providing additional contact time and retention prior to discharge to WL1 and then the lake?

On January 14, 2011 MTE prepared a response to Stan's comments and stated that the wetland into which the drainage will be discharged is not directly connected to Puslinch Lake and therefore contaminants (other than chloride) will likely be attenuated in the wetland. MTE also states that shallow groundwater flow is towards Puslinch Lake and

whether the chloride enters the groundwater system beneath the intersection or at the wetland, it will ultimately end up in Puslinch Lake. Option 6 remained the preferred solution.

On February 23, 2011 there was a meeting with the RMOW, the Township of Puslinch and the County of Wellington. The Township expressed continued concern with Option 6 and requested that the RMOW consider developing an infiltration basin at the intersection.

On April 20, 2011 the RMOW's consultants presented Option 8 that did not include an outlet to Puslinch Lake as requested by the Township. Option 8 was constructing a large infiltration gallery in the land between County Road 32 and Townline Road. MTE did not recommend this option as it did not provide a permanent drainage route away from the intersection.

Harden Environmental provided the following comments regarding Option 8.

Thank you for the addendum. I have had a chance now to review Option 8 and am surprised at how large the undertaking is. When I observe the flooded condition at the intersection, the total volume of water appears to be significantly smaller than the total volume capable of being detained in the proposed infiltration pond. Is Option 8 designed to accommodate water from the west side of Townline Road also?

As we discussed in the meeting, we are trying to avoid the transfer of stormwater from the intersection directly into the Puslinch Lake basin. The kettle lake basin is essentially a closed system and any chemical additions to the basin remain in the basin. The Puslinch Lake Conservation Association is working diligently to improve lake water quality and the addition of storm water from the intersection is not beneficial. To this end, Option 8 is the favoured option. Chloride is not the only contaminant of concern. Nutrients such as nitrogen, phosphorous and sulphur can also impact on the lake quality. The discharge of the water into a wetland adjacent to the lake does not mean that nutrients will not be remobilized during the spring freshet and carried into the lake. The MOE and GRCA have given the Township considerable resistance to discharging water near the PSW at the south end of Puslinch Lake. Any option but 5,6 or 7 may be required in order to eliminate impacts to wetlands in this same complex.

Options 5,6,7 and 8 allow for the transfer of stormwater from the west side of Townline Road into the Puslinch Lake basin. With the water drawn down to 312.3 m amsl in Option 6, how much water from DP-1, WL-5 and Stormwater Pond #2 will be diverted into the Puslinch Lake basin? Can this be avoided?

Thank you again for considering this alternative. I will discuss with Wayne Stokley and other members of council. Council will be looking for assurances that storm water from other basins is not allowed to discharge into the Lake basin.

On May 1, 2012, MTE Consultants provided a response to our comments and on May 17th, 2012 a meeting was held in the Township of Puslinch lunchroom. Option 8 was presented as not being favourable leading to discussions of how to minimize flow getting into the Puslinch Lake basin. A storm water management area developed in the southwest corner of the intersection was discussed as an area to accommodate the first flush of water for the majority of storms and only the larger storms would then contribute water to the lake basin.

In July of 2012 Harden Environmental established the elevation of the water table in the southwest corner of the intersection to verify that a pond could be excavated. Subsequently we expressed satisfaction to the RMOW that the addition of the storm water pond improved Option 6.

That was the last of the Township's involvement until October 2013 where the RMOW presented this amended Option 6 as the final solution to the Puslinch Lake Conservation Association. We understand that the RMOW presented this solution to the Grand River Conservation Authority for their approval and it was granted.

We will be pleased to address questions from council on this matter.

Sincerely,

Harden Environmental Services Ltd.

A handwritten signature in black ink, appearing to read 'S. Denhoed', written over a light grey rectangular background.

Stan Denhoed, M.Sc., P.Eng.
President