patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

Hydrogeological Assessment

Proposed Mixed-Use Development 936 March Road Ottawa, Ontario

Prepared For

Minto Communities 2559688 Ontario Inc.

August 12, 2020

Report PG4554-2R

Paterson Group Inc.

Consulting Engineers 154 Colonnade Road South Ottawa, Ontario Canada K2E 7J5

Tel: (613) 226-7381 Fax: (613) 226-6344 www.patersongroup.ca

TABLE OF CONTENTS

PAGE

1.0	INTF	TODUCTION
	1.1	Proposed Project
2.0	SITE	CONDITIONS
	2.1	Geology
	2.2	Hydrogeology
3.0	РОТ	ENTIAL IMPACTS
	3.1	Adverse Effects on Adjacent Structures
	3.2	Adverse Effects on Neighbouring Water Wells
	3.3	Soil and Groundwater
4.0	STA	TEMENT OF LIMITATIONS 10

APPENDICES

- Appendix 1 Figure 1 Key Plan Drawing PG4554-3 - MECP Water Well Location Plan
- Appendix 2 Soil Profile and Test Data PG4554-1 - Test Hole Location Plan
- Appendix 3 Stantec Geomatics Limited Draft Plan of Subdivision with Contours

1.0 INTRODUCTION

Paterson Group (Paterson) was commissioned by Minto Communities and 2559688 Ontario Inc. to prepare a hydrogeological assessment for the proposed mixed-used development to be located at 936 March Road in Ottawa, Ontario (refer to Figure 1 -Key Plan within Appendix 1).

Subsurface information was obtained from the geotechnical investigation carried out to determine the subsoil and groundwater conditions at the site by means of test holes.

The following report has been prepared specifically and solely for the aforementioned project which is described herein. It contains the investigation findings and includes hydrogeological assessments pertaining to the proposed program as understood at the time of writing this report.

1.1 Proposed Project

It is our understanding that the proposed mixed-use development, to be located on the east side of March Road and north of Maxwell Bridge Road, consists of the municipal address 936 March Road.

The subject site consists of an approximate 60 hectare mostly undeveloped property consisting of agricultural fields with some brush covered areas and mature treed areas. A farmstead with associated outbuildings is present within the southwest corner of the property. The site is trisected in an approximate northwest-southeast orientation by an existing railway track through the eastern portion of the site and an unnamed tributary of Shirley's Brook through the western portion of the site. The property generally slopes downward from southwest to northeast and is bordered to the north, east and west by a mixture of treed areas and agricultural fields and to the south by residential developments and March Road.

2.0 SITE CONDITIONS

Physical Setting

As previously noted, the subject site is located on the east side of March Road and contains a mixture of agricultural lands and densely treed areas. Site topography is relatively flat to gently rolling, with average elevations of 80 m above sea level (asl) along the southwest portion of the property and average elevations of 65 m asl along the northeast portion. Elevations provided for the unnamed tributary of Shirley's Brook that crosses the property indicates a northwest to southeast drainage direction, with elevations of approximately 78 m asl at the western side of the property and 76 m asl at the eastern side. There were no named water bodies known to exist on the subject site.

According to available mapping, the subject site is located in the Ottawa Valley Clay Plains physiographic region. The region is characterized by relatively flat clay plains interrupted by rock ridges, which is generally consistent with field observations at the subject site.

2.1 Geology

Surficial Geology

The field program for the geotechnical investigation was carried out between June and July 2018. A total of 41 boreholes were advanced to a maximum depth of 7.5 m below ground surface (bgs). The borehole locations were distributed in a manner to provide general coverage of the subject site. The approximate locations of the boreholes are shown on Drawing PG4554-1 - Test Hole Location Plan included in Appendix 2

Overburden soils identified during the geotechnical field investigation were generally consistent with available mapping for the area. Soils typically consisted of topsoil underlain by hard to firm brown silty clay that became grey with depth, which was further underlain by a glacial till deposit comprised of a silty sand/silty clay matrix with gravel, cobbles and boulders. A deposit of silty sand was noted above the silty clay layer at borehole locations within the central portion of the site. Where encountered, the silty sand deposit was typically 0.5 to 1.5 m in thickness.

Practical refusal to augering was encountered on the inferred bedrock surface at depths ranging from approximately 1.3 m bgs on the western portion of the site to approximately 7.8 m bgs on the eastern boundary of the site.

Specific details of the soil profile at each test hole location are presented on the Soil Profile and Test Data sheets included in Appendix 2.

Bedrock

Based on available geological mapping, the subject site is located in an area where the bedrock in the western portion of the site consists of interbedded sandstone and dolomite of the March formation, while the bedrock in the eastern portion of the site consists of dolomite of the Oxford formation. Overburden thickness in the area is estimated to range from 3 to 10 m.

Karst Features

The term "karst" refers to a geologic formation characterized by the dissolution of carbonate bedrock, such as limestone or dolostone. In order for karstification to occur, precipitation must be allowed to infiltrate the top of the bedrock to dissolutionally enlarge previously existing joints and bedding planes. Based on visual inspection of rock core samples taken from the subject site, and given the composition of surficial soils typically overlying the dolomite/limestone bedrock that are non-conducive to groundwater infiltration, it is unlikely that karstification is occurring.

2.2 Hydrogeology

Existing Aquifer Systems

Aquifer systems may be defined as geological media, either overburden soils or fractured bedrock, which permit the movement of groundwater under hydraulic gradients. In general, aquifer systems may be present in overburden soils or bedrock. Although groundwater has been observed within the overburden soils at the subject site, the composition of materials does not allow for the development of significant water supply wells. Water supply wells in the vicinity are instead likely found in bedrock aquifers.

Bedrock aquifer mapping, provided by Natural Resources Canada Urban Geology of the National Capital Region mapping, as well as the MECP water well record database, were reviewed as part of this assessment. Using these tools, two water supply aquifer systems were found to exist in the vicinity of the study area.

The March/Nepean formation aquifer system is located within the western portion of the study area. Because water well records do not differentiate between March and Nepean formation sandstone, the two units are considered as one for the purposes of

this assessment. Wells utilizing this aquifer system generally encountered water at depths ranging between 12 and 20 m bgs.

The Oxford formation aquifer system is typically encountered within the eastern portion of the study area. Water wells completed in this formation encountered water at depths of over 30 m bgs. Based on the limited stratigraphic information provided in the water well records, wells advanced through the Oxford formation to depths exceeding 30 m could have penetrated the formation and are potentially accessing water from the underlying March/Nepean formations.

Groundwater Levels

Groundwater was observed in the piezometers installed in the overburden at the borehole locations. Groundwater was also observed in the monitoring well installed in the bedrock where overburden thickness was minimal.

Groundwater levels at the subject site were observed to vary from 0.8 to 4.4 m bgs at the time of the geotechnical field investigation. It should be noted that groundwater levels may have been influenced by surface water infiltrating the backfilled boreholes. Subsequent groundwater level readings within the piezometers can be influenced by perched water in the backfill material within the borehole. Groundwater levels are also influenced by seasonal variations in temperature and precipitation. As such, long-term groundwater levels are also estimated based on other factors such as colour and consistency of the recovered soil samples. Based on these observations, the long-term groundwater level at the subject site is expected to range from 2.5 to 4.5 m bgs. The measured groundwater levels are summarized in Table 1 below and presented on the Soil Profile and Test Data sheets included in Appendix 1.

Table 1 - Sum	Table 1 - Summary of Groundwater Level Readings												
Test Hole Number	Ground Surface Elevation (m)	Groundwater Depth (m)	Groundwater Elevation (m)	Date									
BH 1	79.44	1.36	78.08	July 12, 2018									
BH 2	78.59	0.93	77.66	July 12, 2018									
BH 3	78.88	2.31	76.57	July 12, 2018									
BH 4	75.89	1.85	74.04	July 12, 2018									
BH 5	79.16	1.65	77.51	July 12, 2018									
BH 6	77.99	1.04	76.95	July 12, 2018									
BH 7	79.20	3.09	76.11	July 12, 2018									

pate	rsong	Iroup
Ottawa	Kingston	North Bay

Table 1 - Summary of Groundwater Level Readings (Continued)											
Test Hole Number	Ground Surface Elevation (m)	Groundwater Depth (m)	Groundwater Elevation (m)	Date							
BH 8	72.56	0.79	71.77	July 12, 2018							
BH 11	69.43	1.51	67.92	July 12, 2018							
BH 12	67.58	1.20	66.38	July 12, 2018							
BH 13	65.95	1.09	64.86	July 12, 2018							
BH 14	78.85	1.27	77.58	July 12, 2018							
BH 15	77.56	1.43	76.13	July 12, 2018							
BH 16	74.85	2.80	72.05	July 12, 2018							
BH 18	69.78	1.11	68.67	July 12, 2018							
BH 20	69.37	1.51	67.86	July 12, 2018							
BH 21	66.25	0.85	65.40	July 12, 2018							
BH 22	65.61	1.10	64.51	July 12, 2018							
BH 23	78.70	1.35	77.35	July 12, 2018							
BH 24	77.03	1.06	75.97	July 12, 2018							
BH 25	74.86	2.49	72.37	July 12, 2018							
BH 29	68.94	1.47	67.47	July 12, 2018							
BH 30	66.95	1.07	65.88	July 12, 2018							
BH 31	66.06	0.92	65.14	July 12, 2018							
BH 32	76.95	Dry	-	July 12, 2018							
BH 33	71.39	Dry	-	July 12, 2018							
BH 37	68.89	1.26	67.63	July 12, 2018							
BH 38	67.01	1.15	65.95	July 12, 2018							
BH 40*	79.19	4.44	74.75	July 12, 2018							
BH 41*	78.67	4.28	74.39	July 12, 2018							
BH 42*	73.50	4.04	69.46	July 12, 2018							
Note: - * Denotes	borehole instrumented	with a 51 mm diame	eter monitoring well.								

- The ground surface at the test hole locations is referenced to an assumed geodetic datum.



Hydraulic Gradients

Vertical hydraulic gradients were not measured at the subject site as the previous studies completed did not warrant the installation of monitoring well nests.

With respect to horizontal hydraulic gradients, due to the nature of the water levels obtained from field work conducted at the site (piezometers), the absolute direction of horizontal hydraulic gradients was not determined. However, using the available data, it was possible to approximate the horizontal hydraulic gradients in the overburden material given that the horizontal hydraulic gradient between any 2 points is the slope of the hydraulic head between those points:

$$i = \frac{h_2 - h_1}{L}$$

Where: i = horizontal hydraulic gradient

h = water level (m bgs)

L = horizontal distance between test hole locations

Using the above noted formula, the horizontal hydraulic gradient was observed to have an approximate northeast orientation and a magnitude ranging from approximately 0.01 to 0.002. Shallow groundwater flow in the vicinity of the subject site is expected to reflect local topography. Regional groundwater flow is considered to be in an easterly direction, towards the Ottawa River.

Hydraulic Conductivity

The hydraulic conductivity values were conservatively estimated based upon previous experience at similar sites in the area, information obtained from the results of the geotechnical field program and typical published values for similar stratigraphy. The values are interpreted to be approximately 1×10^{-7} to 1×10^{-10} m/sec for silty clay and 1×10^{-6} to 1×10^{-12} m/sec for limestone/dolomite bedrock.

Groundwater Recharge and Discharge

In general, groundwater will follow the path of least resistance from areas of higher hydraulic head to areas of lower hydraulic head. While upward and downward hydraulic gradients may be indicative of discharge and recharge, respectively, other factors must be considered.



Based on the hydraulic conductivity estimates obtained from previous studies and published literature, the silty clay overburden is generally considered to act as a confining layer. It is our interpretation that groundwater will generally flow laterally through the upper layer of silty sand/weathered brown silty clay, as opposed to vertically upwards or downwards through overburden soils with lower hydraulic conductivity such as the grey silty clay. While small amounts of groundwater recharge and discharge could potentially take place on a localized scale where overburden thickness is minimal, neither the topographical or geological conditions are suitable for recharge or discharge to be occurring on a large scale at the subject site.

Ottawa

POTENTIAL IMPACTS 3.0

3.1 Adverse Effects on Adjacent Structures

The overburden in the area generally consists of topsoil overlying a silty clay layer which is further underlain by a glacial till deposit comprised of a silty sand/silty clay matrix with gravel, cobbles and boulders. A deposit of silty sand was noted above the silty clay layer at boreholes located within the central portion of the site. The potential dewatering volumes required to accommodate the proposed development are anticipated to be low to moderate depending on the volume of perched water encountered within the silty sand overlying the silty clay. Additionally, given the nature of the development (low lying residential housing, commercial and institutional buildings, associated servicing, and a stormwater management facility), the duration of excavations at the site are expected to be short term in duration. As such, any effects related to ground surface settlement due to the water taking activities during construction are expected to be negligible.

3.2 Adverse Effects on Neighbouring Water Wells

A review of the MECP Water Well Records online mapping database indicates there are greater than 20 wells within 500 m of the subject site as depicted on Drawing PG4554-3 - MECP Water Well Location Plan included in Appendix 1. However, upon investigation it was determined that a number of the wells in the area are monitoring wells and not for water supply. It is also expected that several wells in the area are no longer in use, based on their installation dates and the availability of municipal water at certain locations.

Given the number of wells remaining in use in the surrounding area, and in the interest of public perception, a baseline subdivision sampling program was undertaken for the residences surrounding the development that were expected to remain on private water supply. The premise of the program was to obtain groundwater quality information from the water supply wells in the vicinity of the proposed development prior to the project commencing. This ensures that all parties involved (developer, homeowner and City of Ottawa) are protected should a concern arise during or after construction. The results of this study are available under separate cover.

3.3 Soil and Groundwater

A review of the MECP Brownfields Environmental Site Registry was conducted as part of the assessment of the site, neighbouring properties and the general area surrounding the site. A total of one recorded Brownfield site was located within 1 km of the subject site and has been identified as Record of Site Condition (RSC) registration number 63910. The Brownfield site and its respective registration number indicates there are no groundwater controls under the RSC, nor were there any groundwater remediations performed as part of a cleanup process. No concerns were identified in the review of the MECP Brownfields database.

It is anticipated that the material on site will be disposed of or re-used as per the MECP policy, *Management of Excess Soil - A Guide for Best Management Practices* dated January, 2014.

The groundwater that is pumped from site excavations must be managed in an appropriate manner. The contractor will be required to implement a water management program to dispose of the pumped water.

4.0 STATEMENT OF LIMITATIONS

The recommendations provided in this report are in accordance with our present understanding of the project.

A hydrogeological review of this nature is a limited sampling of a site. The recommendations are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around the test locations. Should any conditions at the site be encountered which differ from those at the test locations, we request notification immediately in order to permit reassessment of our recommendations.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Minto Communities, 2559688 Ontario Inc. or their agent(s) is not authorized without review by Paterson Group for the applicability of our recommendations to the altered use of the report.

Paterson Group Inc.

lil l

Michael Laflamme, P.Geo.

Michael S. Killam, P.Eng.



APPENDIX 1

Figure 1 - Key Plan

Drawing PG4554-3 - MECP Water Well Location Plan



FIGURE 1 KEY PLAN



Ottawa, Ont	ario K2E 7J5
Tel: (613) 226-7381	Fax: (613) 226-6344



APPENDIX 2

Soil Profile and Test Data

Drawing PG4554-1 - Test Hole Location Plan

patersongr		ır	Con	sulting	SOIL PROFILE AND TEST DATA						
154 Colonnade Road South, Ottawa, Ont		-	P	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario							
DATUM Ground surface elevations	prov	ided b	y Sta	ntec G		,			FILE NO.	PG4554	
REMARKS									HOLE NO.		
BORINGS BY CME 55 Power Auger				D	ATE	June 26,	2018	1		BH 1	
SOIL DESCRIPTION	PLOT		SAN	/IPLE		DEPTH (m)	ELEV. (m)		esist. Blo 0 mm Dia.		er
	STRATA	ТҮРЕ	NUMBER	* RECOVERY	N VALUE or ROD	4			Vater Cont		Piezometer Construction
GROUND SURFACE		×	-	Ř	4		-79.44	20	40 60	80	L C ∭ K ∭
<u>0.28</u>		AU SS	1 2	100	10	1-	-78.44				
Hard, grey SILTY CLAY		ss		1003	5	2-	-77.44		· · · · · · · · · · · · · · · · · · ·	22	29
2.97											
End of Borehole											
Practical refusal to augering at 2.97m depth											
(GWL @ 1.36m - July 12, 2018)											
								20 Shea ▲ Undist	40 60 ar Strengtl urbed △	9 80 10 n (kPa) Remoulded	b0

patersongr		ır	3	SOIL PROFILE AND TEST DATA						
154 Colonnade Road South, Ottawa, Ont		-		ineers	F	Geotechnic Prop. Resid Ottawa, Or	dential D	igation evelopment - 936 March Road		
DATUM Ground surface elevations	prov	ided b	y Sta	ntec G				FILE NO. PG4554		
REMARKS										
BORINGS BY CME 55 Power Auger	1			D	ATE	June 26,	2018	BH 2		
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m • 50 mm Dia. Cone	er on	
	STRATA	ТҮРЕ	TYPE NUMBER % RECOVERY N VALUE				(,	• Water Content %	Piezometer Construction	
GROUND SURFACE		×		<u></u>			-78.59			
0.28		AU SS	1	96	7	1-	-77.59		<u> </u>	
Very stiff to stiff, grey SILTY CLAY		ss	3	100	4	2-	-76.59			
						3-	-75.59			
GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders		ss	4	79	5		-74.59			
4.80		ss	5	71	50	F				
Practical refusal to augering at 4.80m depth										
(GWL @ 0.93m - July 12, 2018)										
								20 40 60 80 10 Shear Strength (kPa) ▲ Undisturbed △ Remoulded	00	

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. BH 3 BORINGS BY CME 55 Power Auger DATE June 27, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+78.88TOPSOIL 0.25 AU 1 XXX Loose, brown SILTY SAND 1.07 1+77.88SS 2 100 8 SS 3 100 9 2+76.88Stiff to firm, brown SILTY CLAY - grey by 2.3m depth SS 4 100 4 3+75.88 4+74.88 5+73.88 5.33 GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders 6+72.88 SS 5 79 2 6.70 End of Borehole (GWL @ 2.31m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. BH 4 BORINGS BY CME 55 Power Auger DATE June 26, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) N VALUE or RQD RECOVERY NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+75.89TOPSOIL 0.23 AU 1 Loose, brown SAND, trace silt 1 + 74.89SS 2 7 83 1.22 Stiff to firm, brown SILTY CLAY SS 3 100 4 2 + 73.892.29 GLACIAL TILL: Brown silty clay, SS 4 80 10 some sand, gravel, cobbles, boulders 2.82 End of Borehole Practical refusal to augering at 2.82m depth (GWL @ 1.85m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

patersongr		Ir	Con	sulting		SOIL PROFILE AND TEST DATA							
154 Colonnade Road South, Ottawa, Or		-	P	eotechnic rop. Resic ttawa, Or	dential D	tigation Development - 936 March Road							
DATUM Ground surface elevation	s prov	ided b	oy Sta	intec G				FILE NO. PG4554					
REMARKS								HOLE NO					
BORINGS BY CME 55 Power Auger	-1	1		D	ATE	June 26,	2018	BH 5					
SOIL DESCRIPTION	PLOT		SAN	MPLE		DEPTH	ELEV. (m)	Pen. Resist. Blows/0.3m • 50 mm Dia. Cone					
	STRATA 1	TYPE	NUMBER	% RECOVERY	VALUE r ROD	(m)		● 50 mm Dia. Cone ○ Water Content % 20 40 60 80					
GROUND SURFACE	S		Z	RE	N OL	0-	-79.16	20 40 60 80					
TOPSOIL0.2	5	ୡ AU	1			- 0-	-79.10						
		$\overline{\Lambda}$					70.40						
Very stiff, grey SILTY CLAY		ss	2	100	10	-	-78.16						
		ss	3	100	6			B					
		14				2-	-77.16						
2.5	9							199					
End of Borehole		T											
Practical refusal to augering at 2.59m depth													
(GWL @ 1.65m - July 12, 2018)													
								20 40 60 80 100 Shear Strength (kPa)					
								▲ Undisturbed △ Remoulded					

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. BH₆ BORINGS BY CME 55 Power Auger DATE June 1, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) N VALUE or RQD RECOVERY NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+77.99TOPSOIL AU 1 0.66 1 + 76.992 SS 92 4 SS 3 54 6 2+75.99Very stiff to stiff, grey SILTY CLAY 29 Δ 3+74.99 110 4+73.99 SS 4 42 22 4.42 GLACIAL TILL: Brown silty sand, some gravel, cobbles, boulders <u>4</u>.82 SS 5 50 +End of Borehole Practical refusal to augering at 4.82m depth (GWL @ 1.04m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

patersongr		ır	Con	sulting	SOIL PROFILE AND TEST DATA							
154 Colonnade Road South, Ottawa, Ont		-		ineers	Ρ	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario						
DATUM Ground surface elevations	prov	ided b	y Sta	ntec G		,			FILE NO.	PG4554		
REMARKS									HOLE NO.			
BORINGS BY CME 55 Power Auger	1			DA	TE	June 26,	2018	1		BH 7		
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.		esist. Blov 0 mm Dia.		- 5	
		TRATA TYPE UMBER % COVERY VALUE				(m)	(m) • •		Vater Conte	ent %	Piezometer Construction	
GROUND SURFACE	Ñ	-	N	RE	N 0 N		-79.20	20	40 60	80	e B B B B B B B B B B B B B B B B B B B	
TOPSOIL 0.25 Loose, brown SAND, some silt 1.52		AU SS	1 2	100	7		-78.20					
		ss	3	100	7	2-	-77.20					
Very stiff to stiff, grey SILTY CLAY						3-	-76.20	A			19 19 19	
						4-	-75.20					
5.33						5-	-74.20			•		
GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders		ss	4	71	8	6-	-73.20					
End of Borehole												
(GWL @ 3.09m - July 12, 2018)								20 Shei	40 60 ar Strength		00	
								▲ Undis	-	Remoulded		

patersongr		In	Con	sulting	SOIL PROFILE AND TEST DATA								
154 Colonnade Road South, Ottawa, On	Pi	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario											
DATUM Ground surface elevations	provi	ded b	y Sta	ntec G	ieom	atics Ltd.			FILE NC). PG4554			
REMARKS									HOLE N	0	•		
BORINGS BY CME 55 Power Auger	1 1			D	ATE	June 27,	2018	1		[©] BH 8			
SOIL DESCRIPTION	РГОТ	SAMPLE				DEPTH			lesist. B 50 mm Di	lows/0.3m ia. Cone	2		
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	VALUE r ROD	(m)	(m)	0	Nater Co	ntent %	Piezometer		
GROUND SURFACE	ŝ	•	ĨŇ	REC	N OL		-72.56	20	40	60 80	Pie Big		
TOPSOIL 0.30		AU	1				72.50			· · · · · · · · · · · · · · · · · · ·			
		ss	2	83	5	1-	-71.56						
/ery stiff, grey SILTY CLAY			-		U					•••••••••••••••••••••••••••••••••••••••			
						2-	-70.56	Δ			110 ▲		
2.29 ELACIAL TILL: Brown silty sand vith gravel, cobbles, boulders 2.59 and of Borehole		ss	3	85	50+		10.00						
Practical refusal to augering at 2.59m epth													
GWL @ 0.79m - July 12, 2018)													
								20 Sho			100		
								She ▲ Undis		gth (kPa) ∆ Remoulded			

patersongroup

SOIL PROFILE AND TEST DATA

Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario

154 Colonnade Road South, Ottawa, Ont	ario K	2E 7J	5			tawa, Or		evelopinel	IL - 930 IMA		
DATUM Ground surface elevations	provi	ded b	y Sta	ntec C	Geoma	atics Ltd.			FILE NO.	PG4554	
REMARKS									HOLE NO.	ВЦ Δ	
BORINGS BY CME 55 Power Auger				D	ATE .			BH 9			
SOIL DESCRIPTION	РІОТ		SAN	IPLE	1	DEPTH			esist. Blo 0 mm Dia.		r on
	STRATA I	ТҮРЕ	NUMBER	°% RECOVERY	N VALUE or RQD	(m)	(m)		Vater Cont	ent %	Piezometer Construction
GROUND SURFACE	STI	Ë	IUN	RECO	ч ло ло			20	40 60		Piez Con:
TOPSOIL 0.15		a AU	1			0-	-69.71				▩ छ
Loose, brown SILTY SAND, trace		a AU	2							· · · · · · · · · · · · · · · · · · ·	
Firm, grey SILTY CLAY		ss	3	100	3	1-	68.71				
<u>1.68</u>		$\overline{\nabla}$									
		ss	4	58	3	2-	-67.71				
GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders		ss	5	62	14						
3.10		ss	6	100	50+	3-	-66.71				
End of Borehole		- 00	0	100	50+						
Practical refusal to augering at 3.10m depth											
(GWL @ 2.4m depth based on field observations)											
								20 Shea ▲ Undist	40 60 ar Strengtl turbed △		00

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH10** BORINGS BY CME 55 Power Auger DATE June 28, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+69.60TOPSOIL 0.15 AU 1 XXX 2 AU Brown SILTY SAND, trace clay 0.71 1 + 68.60SS 3 100 6 SS 4 2 100 2+67.60Stiff, grey SILTY CLAY 3+66.60 4 + 65.604.57 SS 5 75 11 5+64.60 GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders SS 6 79 20 6+63.60 SS 7 71 68 6.70 End of Borehole (GWL @ 4.6m depth based on field observations) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH11** DATE July 3, 2018 BORINGS BY CME 55 Power Auger SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+69.43TOPSOIL AU 1 0.60 1 + 68.432 7 SS 96 SS 3 92 2 2 + 67.43Very stiff to stiff, brown SILTY CLAY 3+66.43 - grey by 3.8m depth 4+65.43 5+64.43 6+63.43 <u>6</u>.10 GLACIAL TILL: Grey silty sand, SS 4 73 50 +some gravel, cobbles, boulders, trace clay End of Borehole Practical refusal to augering at 6.38m depth (GWL @ 1.51m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH12** BORINGS BY CME 55 Power Auger DATE July 3, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+67.58TOPSOIL 0.28 AU 1 XXX Loose, brown SILTY SAND 0.76 1 + 66.58SS 2 7 96 Very stiff, brown SILTY CLAY SS 3 7 96 2 + 65.58- grey by 2.3m depth SS 4 6 3+64.584+63.58 ⅀ 4.57 5+62.58 GLACIAL TILL: Grey silty clay with SS 5 12 10 sand, gravel, cobbles, boulders 6+61.58 SS 6 75 25 6.70 End of Borehole (GWL @ 1.20m - July 12, 2018)

20

Undisturbed

40

Shear Strength (kPa)

60

80

△ Remoulded

100

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH13** BORINGS BY CME 55 Power Auger DATE July 2, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) N VALUE or RQD RECOVERY NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+65.95TOPSOIL 0.15 AU 1 1 + 64.95SS 2 88 8 Very stiff, brown SILTY CLAY SS 3 - grey by 1.8m depth 96 4 2 + 63.953+62.95 3.81 4+61.95 SS 4 69 9 GLACIAL TILL: Grey silty clay with SS 5 88 12 sand, gravel, cobbles and boulders 5+60.95 SS 6 62 18 5.94 End of Borehole (GWL @ 1.09m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

patersongr		ır	Con	sulting	SOIL PROFILE AND TEST DATA								
154 Colonnade Road South, Ottawa, On		-		ineers	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario								
DATUM Ground surface elevations	s prov	ided k	oy Sta	ntec G					FILE NO.	DO (55 (
REMARKS									HOLE NO	PG4554			
BORINGS BY CME 55 Power Auger				D	ATE	June 26,	2018	1		BH14			
	РІОТ		SAN	IPLE		DEPTH	ELEV.			esist. Blows/0.3m			
SOIL DESCRIPTION			R	RΥ	Ëe	(m)	(m)	• 5	0 mm Dia	. Cone	eter		
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or RQD				Vater Con		Piezometer Construction		
GROUND SURFACE		×		щ			-78.85	20	40 6	0 80			
0.28		AU	1										
Very stiff, grey SILTY CLAY		ss	2	100	10	1-	-77.85			······································			
		⊥ IX ss	3	100	50+								
1.85	f X				001					· · · · · · · · · · · · · · · · · · ·			
Practical refusal to augering at 1.85m depth													
(GWL @ 1.27m - July 12, 2018)													
									40 6 ar Strengt	h (kPa)	00		
								▲ Undist	turbed 🛆	Remoulded			

patersongroup					SOIL PROFILE AND TEST DATA								
154 Colonnade Road South, Ottawa, Ontario K2E 7J5					Pr	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario							
DATUM Ground surface elevations	-	-			FILE NO. PG4554								
REMARKS									HOLE NO.				
BORINGS BY CME 55 Power Auger DA						June 26,	2018		BH15				
SOIL DESCRIPTION	PLOT	TYPE NUMBER ************************************			DEPTH	ELEV.	Pen. Resist. Blows/0.3 • 50 mm Dia. Cone			, L			
	STRATA I			VALUE r RQD	(m)	(m)	• Water Content %			Piezometer Construction			
GROUND SURFACE	ν.		IN	REC	N O H		77 50	20	40 60	80	C Pie		
_ TOPSOIL 0.15		AU	1			- 0-	-77.56						
Very stiff, brown SILTY CLAY - grey by 1.5m depth		ss	2	100	11	1-	-76.56						
		ss	3	100	4	2-	-75.56			1			
						3-	-74.56			f () () () () () () () () () (
4.57						4-	-73.56			¶	69		
GLACIAL TILL: Grey sandy silt, some gravel, trace clay, cobbles, boulders 5.03 End of Borehole		∦ ss	4	85	50+	5-	-72.56						
Practical refusal to augering at 5.03m depth													
(GWL @ 1.43m - July 12, 2018)								20 Shot	40 60		00		
									ar Strength		⊣ 00		

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH16** BORINGS BY CME 55 Power Auger DATE June 27, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) N VALUE or RQD RECOVERY NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+74.85TOPSOIL AU 1 0.53 1+73.85 SS 2 100 8 SS 3 100 12 2+72.85 Very stiff, grey SILTY CLAY SS 4 100 10 Ţ 3+71.85 5 SS 100 8 SS 6 100 50+ 4+70.85 4.11 End of Borehole Practical refusal to augering at 4.11m depth (GWL @ 2.80m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

patersongroup Consulting Engineers						SOIL PROFILE AND TEST DATA							
154 Colonnade Road South, Ottawa, Ont	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario												
DATUM Ground surface elevations provided by Stantec Geomatics Ltd.										FILE NO. PG4554			
REMARKS									HOLEN	10			
BORINGS BY CME 55 Power Auger DATE June 27, 2018									BH17				
SOIL DESCRIPTION	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m • 50 mm Dia. Cone			Piezometer Construction			
	STRATA	TYPE TYPE NUMBER RECOVERY			N VALUE or RQD	(,	(,	0	Vater Co	Vater Content %			
		×		R	z ·		-69.99	20	40	60 80	ΞŪ		
TOPSOIL 0.30 GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders		AU	1	100	5		-68.99						
End of Borehole	<u>\^^^/</u>	<u>/</u>											
Practical refusal to augering at 1.37m depth													
(BH dry upon completion)													
								20 Shea ▲ Undis	ar Streng	60 80 1 gth (kPa) △ Remoulded	00		

patersongroup Consulting Engineers						SOIL PROFILE AND TEST DATA							
154 Colonnade Road South, Ottawa, Ont		-		ineers	P	Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario							
DATUM Ground surface elevations	prov	FILE NO. PG4554											
REMARKS													
BORINGS BY CME 55 Power Auger DATE June 27, 2018 BH18													
SOIL DESCRIPTION	PLOT	타 SAMPLE				DEPTH	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone					
GROUND SURFACE	STRATA	TYPE NUMBER ************************************		N VALUE or ROD	1	(,	● 50 mm Dia. Cone □ apaeueeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee						
TOPSOIL 0.28						- 0-	69.78						
Very stiff, grey SILTY CLAY		ss	1	100	2	1-	-68.78						
GLACIAL TILL: Grey clayey silt, some sand, trace gravel, cobbles, boulders		ss	3	100	50+		-67.78						
Practical refusal to augering at 2.74m													
depth													
(GWL @ 1.11m - July 12, 2018)													
								20 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded					

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario Ground surface elevations provided by Stantec Geomatics Ltd. DATUM

FILE NO.

PELLARKO										PC	G4554	
REMARKS									HOLE	^{E NO.} BH	19	
BORINGS BY CME 55 Power Auger					DATE	June 28,	2018					
		SAMPLE				DEPTH	ELEV.			Blows/0		_
SOIL DESCRIPTION	A PLOT		~	RY	Що	(m)	(m)	• 5	U mm	Dia. Con	le	otion
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	VALUE r RQD			0 V	Vater (Content	%	Piezometer Construction
GROUND SURFACE	L S	H	ŬN.	REC	N OF			20	40		80	Piez
TOPSOIL 0.15		⊠ AU	1			0-	-69.39					
Loose, brown SILTY SAND, trace		S AU	2									
0. <u>76</u>		8,	-									
		ss	3	0	6	1-	68.39					
		1										
		$\overline{\Lambda}$										
		ss	4	100	4	2-	-67.39					
						2	07.00					
Very stiff to stiff, grey SILTY CLAY												
						3-	-66.39					
								 				
						4-	65.39					24
						5-	-64.39			×		
5.33						5	04.39					
GLACIAL TILL: Grey silty clay, trace sand, gravel, cobbles,boulders												
End of Borehole												
Practical refusal to augering at 5.64m												
depth												
(GWL @ 4.6m depth based on field												
observations)												
								20	40	60	80 1	00
								Shea	ar Stre	ength (kP	Pa)	
								▲ Undist	lurbed	△ Remo	ulded	
SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH20** BORINGS BY CME 55 Power Auger DATE July 3, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+69.37TOPSOIL 0.28 AU 1 £ Compact, brown SILTY SAND, trace clay 1 + 68.37SS 2 79 11 1.37 SS 3 96 3 2 + 67.37Very stiff to stiff, brown SILTY CLAY - grey by 2.3m depth 3+66.37 4+65.37 5+64.37 5.18 GLACIAL TILL: Grey silty clay with sand, gravel, cobbles, boulders SS 50+ 4 100 5.69 End of Borehole Practical refusal to augering at 5.69m depth (GWL @ 1.51m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa)

Undisturbed

△ Remoulded

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH21** BORINGS BY CME 55 Power Auger DATE June 29, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 Water Content % \bigcirc **GROUND SURFACE** 80 20 40 60 0+66.25TOPSOIL 0.23 AU 1 1 + 65.252 SS 100 10 SS 3 100 4 2 + 64.253+63.25 Very stiff to stiff, grey SILTY CLAY 4+62.25 5+61.25 6+60.25 6.86 7+59.25 GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders <u>7.72 ^^</u> ∭a SS 4 100 50 +End of Borehole Practical refusal to augering at 7.72m depth (GWL @ 0.85m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup Geotechnical Investigation Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH22** BORINGS BY CME 55 Power Auger DATE July 3, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) N VALUE or RQD RECOVERY NUMBER TYPE o/0 Water Content % Ο **GROUND SURFACE** 80 20 40 60 0+65.61TOPSOIL 0.25 AU 1 1 + 64.61SS 2 96 10 Very stiff to stiff, brown SILTY CLAY - grey by 1.4m depth SS 3 96 5 2 + 63.613+62.61 4+61.61 5+60.61 6+59.61 7+58.61 🕅 SS 7.77 4 83 50 +End of Borehole Practical refusal to augering at 7.77m depth (GWL @ 1.10m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

natorsonar		ır	Con	sulting	3	SOIL	L PRO	FILE A	ND TES	ST DATA	
patersongr 154 Colonnade Road South, Ottawa, On		_		ineers	PI	eotechnic rop. Resic ttawa, Or	dential D		nt - 936 N	larch Road	
DATUM Ground surface elevations	prov	ided b	oy Sta	ntec G	ieom	atics Ltd.			FILE NO.	PG4554	
REMARKS									HOLE NO)	
BORINGS BY CME 55 Power Auger				D	ATE	July 3, 20)18	1		⁷ BH23	1
SOIL DESCRIPTION	PLOT		SAN			DEPTH (m)	ELEV. (m)		esist. Bl	ows/0.3m a. Cone	er ion
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or ROD	(,		0 1	Vater Cor	ntent %	Piezometer Construction
GROUND SURFACE TOPSOIL 0.20		8		8	Z V	0-	-78.70	20	40 6	60 80	
TOPSOIL 0.20 Very stiff, brown SILTY CLAY 1.52		SS	1	69	11	1-	-77.70				
GLACIAL TILL: Brown silty clay with gravel, sand, cobbles, boulders 2.23		ss	3	50	11	2-	-76.70				
End of Borehole											
Practical refusal to augering at 2.23m depth											
(GWL @ 1.35m - July 12, 2018)											
								20	40 6	io 80 1	00
									ar Streng		UU

patersongr		ır	Con	sulting		SOII	_ PRO	FILE AI	ND TES	ST DATA	
154 Colonnade Road South, Ottawa, Ont		-		ineers	P	eotechnic rop. Resid ttawa, Or	dential D		nt - 936 M	arch Road	
DATUM Ground surface elevations	prov	ided b	y Sta	ntec G	eom	atics Ltd.			FILE NO.	PG4554	
REMARKS									HOLE NO		
BORINGS BY CME 55 Power Auger				DA	TE	June 26,	2018			BH24	
SOIL DESCRIPTION	PLOT			NPLE 전		DEPTH (m)	ELEV. (m)		esist. Blo 0 mm Dia		ter tion
GROUND SURFACE	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE of ROD			0 V 20	Vater Con 40 6		Piezometer Construction
TOPSOIL 0.30		×					77.03				
Very stiff, brown SILTY CLAY		SS	1		6	1-	-76.03				
End of Borehole	MZZ.	4)									
Practical refusal to augering at 1.27m depth											
(GWL @ 1.06m - July 12, 2018)											
								20 Shea ▲ Undist	40 60 ar Strengt turbed △		⊣ 00

patersongr		ır	Con	sulting	1	SOII	L PRO	FILE AND TEST DATA
154 Colonnade Road South, Ottawa, Ont		-		ineers	P	eotechnic rop. Resid ttawa, Or	dential D	tigation evelopment - 936 March Road
DATUM Ground surface elevations	prov	ided b	y Sta	intec G	eom	atics Ltd.		FILE NO. PG4554
REMARKS								
BORINGS BY CME 55 Power Auger				DA	ATE	June 27,	2018	BH25
SOIL DESCRIPTION	PLOT			/PLE 것	ы .	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone
GROUND SURFACE	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or ROD			• 50 mm Dia. Cone • Water Content % 20 40 60 80
TOPSOIL		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	1			- 0-	-74.86	
<u>0.53</u>			1					
		ss	2	100	12	1-	-73.86	
Very stiff to stiff, grey SILTY CLAY		ss	3	100	10		70.00	
		<u>/</u> /				2-	-72.86	
3.00		ss	4	100	8	3-	-71.86	
Practical refusal to augering at 3.00m								
depth								
(GWL @ 2.49m - July 12, 2018)								
								20 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded

patersongr		Ir	Con	sulting	a	SOII	_ PRO	FILE A	NC) TES	ST C)ATA	
154 Colonnade Road South, Ottawa, On		-		ineers	PI	eotechnic rop. Resic ttawa, Or	dential D		ent -	936 M	arch	Road	
DATUM Ground surface elevations	prov	ided b	oy Sta	ntec C	ieom	atics Ltd.			F	ILE NO.	D	G4554	
REMARKS									н	OLE NO)		
BORINGS BY CME 55 Power Auger	1	1		D	ATE	June 27,	2018				BF	126	
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH (m)	ELEV. (m)			st. Blo nm Dia			La la
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or RQD	(,		0	Wat	er Cor	itent	%	Piezometer
GROUND SURFACE		×		8	z ⁰	- 0-	70.45	20	4	0 6	0 	80	
GLACIAL TILL: Grey silty clay with		AU	1										
sand, gravel, cobbles, boulders		∦ ss	2	100	50+	1-	-69.45						
End of Borehole													
Practical refusal to augering at 1.45m depth													
(BH dry upon completion)													
								20 Sha ▲ Undi		Streng		Pa)	00

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario Ground surface elevations provided by Stantec Geomatics Ltd. DATUM FILE NO. PG4554 REMARKS HOLE NO. **BH27** BORINGS BY CME 55 Power Auger DATE June 28, 2018 SAMPLE год Pen. Resist. Blows/0.3m DEPTH ELEV. 50 mm Dia Cono SOIL DESCRIPTION

	SOIL DESCRIPTION	ЪГ			1		DEFIN	ELEV.	• 50 mm Dia. Cone
	GROUND SURFACE	STRATA I	ТҮРЕ	NUMBER	°% RECOVERY	N VALUE or RQD	(m)	(m)	● 50 mm Dia. Cone ○ Water Content % 20 40 60 80
ł	TOPSOIL 0.18		🛱 AU	1			0-	69.66	
	Loose, brown SILTY SAND, trace clay0.76		AU	2					
			ss	3	100	2	1-	-68.66	
	Stiff, grey SILTY CLAY						2-	-67.66	
	<u>3.05</u>		ss	4	83	17	3-	-66.66	
	GLACIAL TILL: Grey silty clay with sand, gravel, cobbles, boulders 4.01		1	5	86	50+	4 -	-65.66	
Ī	End of Borehole		T				4	05.00	
	Practical refusal to augering at 4.01m depth (GWL @ 3.0m depth based on field observations)								

20

▲ Undisturbed

40

Shear Strength (kPa)

60

80

△ Remoulded

100

Construction

DATUM Ground surface elevations provided by Stantec Geomatics Ltd. SOIL PROFILE AND TEST DATA Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario Beotechnical Investigation Prop. Residential Development - 936 March Road

DATUM Ground surface elevations	provi	lueu b	iy Sla	mec c	Jeoma	alics Llu.			PG4554
REMARKS BORINGS BY CME 55 Power Auger				п	ATF .	June 28,	2018		HOLE NO. BH28
	ЪТ		SAN	- IPLE				Pen. Re	esist. Blows/0.3m
SOIL DESCRIPTION	А РІОТ		~	ХХ	що	DEPTH (m)	ELEV. (m)	• 50) mm Dia. Cone
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	VALUE r RQD			0 W	0 mm Dia. Cone Vater Content % 40 60 80
GROUND SURFACE	ν. Δ	L .	IN	REC	N O H		00.44	20	40 60 80 ⁰ O
		AU AU	1			- 0-	-69.44		
Loose, brown SILTY SAND, trace clay0.76	. . ·	S AU	2						
		ss	3	100	5	1-	68.44		
		\square							
						2.	-67.44	4	120
						2	07.44		
						3-	66.44		
								4	▲ · · · · · · · · · · · · · · · · · · ·
Very stiff to stiff, brown SILTY CLAY							05.44		1
						4-	-65.44	A	
						5-	64.44		
6.40						6-	-63.44		
End of Borehole		-							
(GWL @ 3.7m depth based on field observations)									
								20 Shea	40 60 80 100 r Strength (kPa)

▲ Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH29** BORINGS BY CME 55 Power Auger DATE June 29, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+68.94TOPSOIL 0.20 AU 1 2 AU Loose, brown SILTY SAND 0.91 1+67.94 SS 3 100 8 2 + 66.94Hard to very stiff, grey SILTY CLAY 3+65.94 129 3.35 GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders 4+64.94 SS 4 100 4 4.57 End of Borehole Practical refusal to augering at 4.57m depth (GWL @ 1.47m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH30** BORINGS BY CME 55 Power Auger DATE June 29, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+66.95TOPSOIL 0.23 AU 1 1 + 65.95SS 2 7 100 Very stiff, grey SILTY CLAY SS 3 100 4 2 + 64.95124 Δ 2.74 3+63.95 GLACIAL TILL: Grey silty sand, SS 4 100 19 trace clay, gravel, cobbles, boulders SS 5 100 50+ 4.06 4+62.95 End of Borehole Practical refusal to augering at 4.06m depth (GWL @ 1.07m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

patersongr		ır	Con	sulting		SOII	PRO		ND TES	T DATA	
154 Colonnade Road South, Ottawa, Oni		-		ineers	P	eotechnic rop. Resid ttawa, Or	dential De	igation evelopmen	nt - 936 Ma	arch Road	
DATUM Ground surface elevations	prov	ided b	oy Sta	ntec G					FILE NO.	PG4554	
REMARKS									HOLE NO.		
BORINGS BY CME 55 Power Auger	1	1		DA	ΔTE	June 29,	2018			BH31	1
SOIL DESCRIPTION	РГОТ		SAN	IPLE		DEPTH	ELEV.		esist. Blo 0 mm Dia.		- 5
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE of ROD	(m)	(m)		later Cont		Piezometer Construction
GROUND SURFACE		×		8	2 *		66.06	20	40 60	80	
<u>0.25</u>		AU SS	1	100	7	1-	-65.06				Ţ
						2-	-64.06			1	
Very stiff to stiff, grey SILTY CLAY						3-	-63.06	4		1	
						4-	-62.06				
						5-	-61.06		· · · · · · · · · · · · · · · · · · ·		
6. <u>10</u>						6-	-60.06				54
GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders		∑ss	3	100	50+	. 7-	-59.06				
End of Borehole											
Practical refusal to augering at 7.16m depth (GWL @ 0.92m - July 12, 2018)											
								20 Shea ▲ Undistu	40 60 ar Strengt		00

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH32** BORINGS BY CME 55 Power Auger DATE June 27, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+76.95TOPSOILB 0.30 AU 1 1 + 75.952 SS 100 10 Very stiff, grey SILTY CLAY SS 3 100 8 2+74.95SS 4 100 8 2.74 3+73.95 SS 5 50+ 71 GLACIAL TILL: Grey silty clay, trace sand, gravel, cobbles, boulders 4+72.95 4.14 End of Borehole Practical refusal to augering at 4.14m depth (BH dry - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

patersongr		ır	Con	sulting		SOII	_ PRO	FILE AI	ND TE	ST DATA	•
154 Colonnade Road South, Ottawa, On		-		ineers	P	eotechnic rop. Resic ttawa, Or	dential D		nt - 936 N	larch Road	
DATUM Ground surface elevations	prov	ided b	oy Sta	ntec G					FILE NO	PG4554	1
REMARKS									HOLE N	า	•
BORINGS BY CME 55 Power Auger		1		DA	ATE	June 27,	2018	1		⁵ BH33	
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.		esist. Bl 0 mm Di	ows/0.3m a. Cone	
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	VALUE r rod	(m)	(m)	• V	Vater Co	ntent %	Piezometer
GROUND SURFACE	ß		Ż	RE	N O L	0-	-71.39	20	40	60 80	Ë
TOPSOIL0.28		× AU	1				71.39				
Very stiff, grey SILTY CLAY 0.91			•								
GLACIAL TILL: Grey silty clay, trace sand, gravel, cobbles, boulders 1.40		∬ss	2	100	23	1-	-70.39				
End of Borehole											
Practical refusal to augering at 1.40m depth											
(BH dry - July 12, 2018)											
								20 Shea	40 ar Streng		⊣ 100
								▲ Undis		Remoulded	

SOIL PROFILE AND TEST DATA patersongroup Geotechnical Investigation Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH34** BORINGS BY CME 55 Power Auger DATE June 27, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) N VALUE or RQD RECOVERY NUMBER TYPE o/0 Ο Water Content % **GROUND SURFACE** 80 20 40 60 0+69.83TOPSOIL 0.28 AU 1 Very stiff, grey SILTY CLAY 0.76 GLACIAL TILL: Grey silty clay, trace sand, gravel, cobbles, boulders 1 + 68.83SS 2 10 <u>1.40</u> End of Borehole Practical refusal to augering at 1.40m depth (BH dry upon completion) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

SOIL PROFILE AND TEST DATA patersongroup Consulting Engineers Geotechnical Investigation Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario Ground surface elevations provided by Stantec Geomatics Ltd. DATUM FILE NO. PG4554

REMARKS BORINGS BY CME 55 Power Auger				D	ATE 、	June 28, 1	2018		HOLE NO	BH35	
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.		esist. Blo) mm Dia		. 5
	STRATA P	ТҮРЕ	NUMBER	° © © © © © ©	VALUE r RQD	(m)	(m)		ater Con		Piezometer Construction
GROUND SURFACE	<u>ب</u>	5,	IN	REC	N OR C		~	20	40 60	0 80	Co Ei
TOPSOIL0.28		S AU	1			0-	-69.58				
Loose, brown SILTY SAND, trace clay0.76		AU	2								
		ss	3	100	3	1-	-68.58			· · · · · · · · · · · · · · · · · · ·	
Stiff, grey SILTY CLAY						2-	-67.58	Δ		A	
2.29						2	07.30				
GLACIAL TILL: Grey silty clay, trace		ss	4	75	4	3-	-66.58				
sand, gravel, cobbles, boulders		ss	5	88	20	4-	-65.58				
4.78 End of Borehole		S SS	6	100	50+						
Practical refusal to augering at 4.78m depth								20	40 60) 80 10	00
								Shea	r Strengt	h (kPa) Remoulded	50

patersongroup

SOIL PROFILE AND TEST DATA

Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario

154 Colonnade Road South, Ottawa, On	tario k	(2E 7J	5			tawa, Or		e te te piner		
DATUM Ground surface elevations	provi	ded b	y Sta	ntec C	Geom	atics Ltd.			FILE NO. PG4554	Ļ
REMARKS									HOLE NO. DUIDO	
BORINGS BY CME 55 Power Auger				D	ATE	June 28,	2018	1	BH36	
SOIL DESCRIPTION	РГОТ		SAN	IPLE	1	DEPTH	ELEV.		esist. Blows/0.3m 0 mm Dia. Cone	ž
	STRATA	ТҮРЕ	NUMBER	° © © © © © © ©	VALUE r RQD	(m)	(m)	• v	Vater Content %	Piezometer Construction
GROUND SURFACE	ũ	-	Ā	RE	N OR			20	40 60 80	Pie Bie
TOPSOIL 0.23 Loose, brown SILTY SAND, trace 0.84 clay 0.84		ã AU ãã AU	1 2			- 0-	-69.60			
Stiff, grey SILTY CLAY		ss	3	100	5	1-	-68.60			
<u>1.8</u> 3		ss 7	4	100	7	2-	-67.60			
		∦ss ⊽	5	29	4	3-	-66.60			· · · · · · · · · · · · · · · · · · ·
GLACIAL TILL: Grey silty clay, some sand, gravel, cobbles, boulders		∦ss ∦ss	6 7	83	15 22	4-	-65.60			
		∬ ss	8	100	11	_				
5. <u>13</u> End of Borehole	<u>\^^^^</u> ^					5-	-64.60			-
Practical refusal to augering at 5.13m depth								20	40 60 80	100
									ar Strength (kPa)	

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Prop. Residential Development - 936 March Road 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Ottawa, Ontario DATUM Ground surface elevations provided by Stantec Geomatics Ltd. FILE NO. PG4554 REMARKS HOLE NO. **BH37** BORINGS BY CME 55 Power Auger DATE June 29, 2018 SAMPLE Pen. Resist. Blows/0.3m STRATA PLOT DEPTH ELEV. Piezometer Construction SOIL DESCRIPTION 50 mm Dia. Cone • (m) (m) RECOVERY N VALUE or RQD NUMBER TYPE o/0 \bigcirc Water Content % **GROUND SURFACE** 80 20 40 60 0+68.89TOPSOIL 0.18 AU 1 2 AU Loose, brown SAND, some silt 0.91 1 + 67.89SS 3 96 6 SS 4 100 4 Stiff to firm, grey SILTY CLAY 2 + 66.89Ą 3.05 3+65.89 SS 5 100 6 GLACIAL TILL: Grey silty clay, trace 4+64.89 sand, gravel, cobbles, boulders SS 6 100 5 SS 7 100 9 5+63.89 5.31 End of Borehole Practical refusal to augering at 5.31m depth (GWL @ 1.26m - July 12, 2018) 20 40 60 80 100 Shear Strength (kPa) Undisturbed △ Remoulded

			Con	sulting		SOII	L PRO	FILE A		ST DATA	
patersongr 154 Colonnade Road South, Ottawa, O		-		ineers	P	eotechnic rop. Resid ttawa, Or	dential D		nt - 936 N	larch Road	
DATUM Ground surface elevation	ns prov	rided b	oy Sta	intec G	_				FILE NO	PG4554	
REMARKS									HOLE N)	•
BORINGS BY CME 55 Power Auger				DA	ΔTE	June 29,	2018	1		BH38	
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH (m)	ELEV. (m)		lesist. Bl 50 mm Di	ows/0.3m a. Cone	on
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or RQD				Vater Co		Piezometer Construction
GROUND SURFACE	22	×		Ř	4		67.01	20	40	50 80	
0.2	23	AU SS	1	100	6	1-	-66.01				
Very stiff, grey SILTY CLAY						2-	-65.01	A			
3.5 End of Borehole Practical refusal to augering at 3.56m depth (GWL @ 1.15m - July 12, 2018)	56					3-	-64.01	A 20 She₁ ▲ Undis	ar Streng	50 80	

SOIL PROFILE AND TEST DATA patersongroup **Geotechnical Investigation** Due Decidential De ah Daad 000 N/1-154 (DATL

154 Colonnade Road South, Ottawa, C	Ontario I	K2E 7J	5			tawa, Or		evelopmer	n - 93			oau						
DATUM Ground surface elevation	ns prov	ided b	y Sta	ntec G	àeoma	atics Ltd.			FILE	NO.	PG4	1554						
REMARKS BORINGS BY CME 55 Power Auger				D	ATE .	July 4, 20	18		HOL	e no.	BH4	0						
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.	Pen. Re			vs/0.3 Cone		Well					
	STRATA I	ТҮРЕ	NUMBER	°. © © © © © ©	N VALUE or RQD	(m)	(m)				ent %		Monitoring Well Construction					
GROUND SURFACE		~	4	R	zř	0-	-79.19	20	40	60	80							
TOPSOIL 0.2 Compact, brown SILTY SAND, trace clay	<u>25</u>	AU	1															
1.	52	ss	2	71	11	1-	-78.19											
Stiff, brown SILTY CLAY, trace		ss	3	96	8	2-	-77.19											
sand		ss	4	96	7		70.40											
		ss	5	96	7	3-	-76.19											
- grey by 3.8m depth		ss	6	94	6	4-	-75.19					•••••••	 - 44044040 ▲ - 44044040 					
		ss	7	96	5	5-	-74.19		······	······································								
		ss	8	96	4													
			9	96	w	6-	-73.19											

7+72.19

20

▲ Undisturbed

40

Shear Strength (kPa)

60

80

△ Remoulded

100

2

96

6.86

7.62

SS

10

GLACIAL TILL: Grey silty clay with

sand, gravel, cobbles, boulders

(GWL @ 4.44m - July 13, 2018)

End of Borehole

DATUM Ground surface elevations provided by Stantec Geomatics Ltd. SOIL PROFILE AND TEST DATA Soil PROFILE AND TEST DATA Geotechnical Investigation Prop. Residential Development - 936 March Road Ottawa, Ontario

DATUM Ground surface elevations provided by Stantec Geomatics Ltd.									FILE NO. PG4554			
REMARKS	HOLE NO. BH41											
BORINGS BY CME 55 Power Auger				D	ATE .	July 4, 20	18					
SOIL DESCRIPTION		SAMPLE			DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m• 50 mm Dia. Cone					
	STRATA	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or RQD			Pen. Resist. Blows/0.3m ■ ● 50 mm Dia. Cone > ○ Water Content % > 20 40 60 80				
GROUND SURFACE	S S		N	RE	z ^o	0-	-78.67	20	40 60 80 ≚ Ö			
TOPSOILB0.25		× ×	1			0	/0.0/					
Compact, brown SILTY SAND, trace clay		¥ AU	I									
<u>1.5</u> 2		ss	2	75	12	1-	-77.67					
Stiff to firm, brown SILTY CLAY,		ss	3	21	6	2-	-76.67					
trace sand - grey by 2.3m depth		ss	4	54	8							
		ss	5	62	8	3-	-75.67					
		ss	6	88	3	4-	-74.67					
		ss	7	96	1	5-	-73.67					
6.04		ss	8	88	w	6-	-72.67					
End of Borehole							12.07					
Practical refusal to augering at 6.04m depth												
(GWL @ 4.28m - July 13, 2018)												
								20 Shea	40 60 80 100 ar Strength (kPa)			

Undisturbed

△ Remoulded

SOIL PROFILE AND TEST DATA Soil Prop. Residential Development - 936 March Road Ottawa, Ontario FILE NO. PG4554 HOLE NO. BH42

BORINGS BY CME 55 Power Auger			DATE July 4, 2018						BH42			
SOIL DESCRIPTION			SAM				ELEV.	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ≥ 2			Well	
	STRATA PLOT	ТҮРЕ	NUMBER	% RECOVERY	N VALUE or RQD	(m)	(m)	• Water Content %			Monitoring Well Construction	
GROUND SURFACE				8	2	0+7	3 50	20	40 6	0 80	≥o	
TOPSOIL 0 Compact, brown SILTY SAND, trace clay	18	AU	1				··· ··· ···					
	50	ss	2	21	10	1+72	2.50					
GLACIAL TILL: Brown silty sand 1 with gravel, cobbles, boulders	52			20	50+	2-7	1.50 -					
		RC	1	98	98	3-70	0.50				արերությունը ու հետությունը ու հետությունը։ Արերությունը ներերերունը ներերությունը ու հետությունը։	
BEDROCK: Grey limestone with shale seams		RC	2	98	79	4-69	9.50					
		RC	3	100	93	5-68	8.50 — 					
		RC	4	100	81	6-67	7.50					
7 End of Borehole	21					7-66	6.50					
(GWL @ 4.04m - July 13, 2018)												
								20 Shea ▲ Undist	ar Streng		100	



\autocad drawings\geotechnical\pg45xx\pg4554\pg4554-1

APPENDIX 3

Stantec Geomatics Limited - Draft Plan of Subdivision With Contours



ADAM BROWN, MANAGER DEVELOPMENT REVIEW- RURAL PLANNING, INFRASTRUCTURE AND ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



DRAFT PLAN OF SUBDIVISION

PART OF LOT 12 CONCESSION 4 (GEOGRAPHIC TOWNSHIP OF MARCH)

CITY OF OTTAWA

METRIC CONVERSION

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

GRID SCALE CONVERSION

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99992

BEARING NOTE

BEARINGS ARE DERIVED FROM PLAN 4R-XXXXX PREPARED BY OTHERS.

INFORMATION: REQUIRED UNDER SECTION 51 (17) OF THE PLANNING ACT R.S.O. 1990

- a. SEE PLAN b. SEE PLAN
- c. SEE PLANd. SEE PROPOSED LAND USE SCHEDULE (ABOVE)
- e. SEE PLAN f. SEE PLAN
- g. SEE PLAN
- h. CITY WATER AVAILABLE i. SEE SOIL REPORT
- j. SEE TOPOGRAPHICAL INFORMATION
 k. ALL CITY SERVICES AVAILABLE
 l. NO EASEMENTS REGISTERED ON TITLE

SURVEYOR'S CERTIFICATE

ΠΔTF

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE SUBJECT LANDS AND THEIR RELATIONSHIP TO ADJOINING LANDS HAVE BEEN ACCURATELY AND CORRECTLY SHOWN.

BRIAN J. WEBSTER ONTARIO LAND SURVEYOR Stantec Geomatics Ltd CANADA LANDS SURVEYORS Stantec ONTARIO LANDS SURVEYORS ONTARIO LAND SURVEYORS 1331 CLYDE AVENUE, SUITE 400 OTTAWA, ONTARIO, K2C 3G4 TEL. 613.722.4420 FAX. 613.722.2799 stantec.com

THE PLAN DATA IS COMPILED FROM OFFICE RECORDS OF STANTEC GEOMATICS LTD AND HAS NOT BEEN VERIFIED BY FIELD MEASUREMENTS. ALL DISTANCES ARE APPROXIMATE, TO BE VERIFIED BY FINAL REGISTERED PLAN(S).

