

Appendix E



Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Engineering, Inspection & Testing

January 15, 2019

File No. 1-19-0005-46
Brampton Office

Tribute (Danforth) Limited
1815 Ironstone Manor, Unit 1
Pickering, Ontario L1W 3W9

Attention: Mark Iogna and Steve Deveaux

**RE: HYDROGEOLOGICAL OPINION LETTER
286-294 MAIN ST & 144 STEPHENSON AVE
TORONTO, ONTARIO**

**ZONING BY-LAW AMENDMENT APPLICATION NO: 17 190766 STE 32 OZ
SITE PLAN APPLICATION NO. 17 190775 STE 32 SA**

1.0 INTRODUCTION

Terraprobe Inc. (Terraprobe) was retained by Tribute (Danforth) Limited to conduct a Hydrogeological Review of the proposed residential development located at 286 – 294 Main Street and 144 Stephenson Avenue in Toronto, Ontario (the “Site”). The site is located at the southwest quadrant of Danforth Avenue and Main Street.

The original Hydrogeological Review completed by Terraprobe in June 29, 2017 and was titled “*Hydrogeological Investigation, 286-294 Main Street, Toronto, Ontario*” file number 1-17-0005-46. For the original 2017 Hydrogeological Review the proposed redevelopment concept of the Site consisted of demolishing the existing structures and constructing a 30-storey residential tower over a mixed-use podium. Based on the architectural drawings by Turner Fleischer Architects Inc. (dated May 25, 2017), the structure will rest on a three (3) level underground parking structure beneath entire site, with the P3 lowest finished floor elevation (FFE) of approximately 121.1 ±masl, with a proposed underside of footing at 120.1 ±masl. The original proposed concept had the potential to produce significant ground water flows in the short term and during significant precipitation events in the long term, which were unlikely to be accommodated by the City of Toronto municipal sewer infrastructure.

Since the original Hydrogeological Review was conducted Tribute (Danforth) Limited has acquired an additional property located at 276 Main Street. Due to the larger development footprint area that proposed development concept has changed significantly. The revised proposed redevelopment concept of the Site consisted of demolishing the existing structures and constructing a 27-storey residential tower over a mixed-use podium. Based on the draft architectural drawings by Turner Fleischer Architects Inc., the structure will rest on a two (2) level underground parking structure beneath the entire site, with the P2 lowest finished floor elevation (FFE) of approximately 123.1 ±masl, with a proposed underside of footing at 122.1 ±masl. The result of the modification of the proposed development concept is a significant reduction in short and long term ground water flow from the site.

Terraprobe Inc.

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Appendix E

2.0 PRELIMINARY UPDATED HYDROGEOLOGICAL REVIEW

The following is the preliminary updated Hydrogeological Review information for the updated proposed redevelopment. It is noted that a complete Hydrogeological Review report that satisfies the City of Toronto's Terms of Reference will be required for this site. The following is not meant to take the place of the complete report, but is intended to convey the pertinent hydrogeological information for the updated concept.

The following updated information is provided for consideration.

Current Development						
Development Phase	Above Grade Levels	Below Grade Levels				Approximate Base of Footings (masl)
		Level #	Estimated Lowest Finished Floor			
			Depth (m)	Elevation (masl)		
<i>Mid-Rise Development</i>	5	P1	4.0	126.1	125.1	
Proposed Development						
Development Phase	Above Grade Levels	Below Grade Levels				Approximate Base of Footings (masl)
		Level #	Lowest Finished Floor			
			Depth (m)	Elevation (masl)		
<i>High-Rise Development</i>	27	P2	7.0	123.1	122.1	
Ground Water Elevations						
Well ID	Ground Surface (masl)	Well Depth (m)	Water Level (masl)			
			2017-02-23	2017-03-01	2017-10-10	2017-01-14
BH1	129.9	14.71	119.4	119.4	-	119.3
BH2	130.1	14.50	119.4	119.4	-	119.4
BH3	129.7	13.40	119.5	119.5	-	119.4
BH4	129.3	10.12	119.4	119.4	-	119.4
BH5	129.3	10.25	119.4	119.4	-	119.3
CMT BH1	129.0	12.00	-	-	119.5	119.3
CMT BH2	129.0	13.52	-	-	119.0	-
CMT BH3	129.0	13.64	-	-	118.9	118.8
CMT BH4	128.7	12.95	-	-	119.5	119.5

Appendix E

Site Stratigraphy			
Stratum/Formation	Depth Range (mbgs)	Elevation Range (masl)	Hydraulic Conductivity (m/s)
Earth Fill	0.1 to 3.0	129.0 to 128.9	1.0×10^{-5} *
Cohesionless sand	3.0 +	128.9 to 114.2 +	1.25×10^{-2} *

*Indicates conductivity was calculated by Slug Test

Ground Water Quality		
Sample ID	City of Toronto Storm Sewer Limits	City of Toronto Sanitary and Combined Sewer Limits
Untreated Ground Water (SW-UF)	Exceeds <ul style="list-style-type: none"> • TSS • Manganese • Chloroform 	Exceeds <ul style="list-style-type: none"> • TSS

Ground Water Control

Ground Water Quantity: Short Term (Construction) – S.F. 1.5 Used						
Location	Ground Water Seepage		25mm Design Rainfall Event		Total Volume	
	L/day	L/min	L/day	L/min	L/day	L/min
Total Site	0	0.00	102,000	70.8	102,000	70.8

Ground Water Quantity: Long Term (Post Construction) – S.F. 1.5 Used						
Location	Ground Water Seepage		Infiltration 25mm Design Rainfall Event		Total Volume	
	L/day	L/min	L/day	L/min	L/day	L/min
Total Site	0	0.00	2,000	1.38	2,000	1.38

Regulatory Requirements	
Environmental Activity and Sector Registry (EASR) Posting	Not Required
Short Term Permit to Take Water (PTTW)	Not Required
Long Term Permit to Take Water (PTTW)	Not Required
Short Term Discharge Agreement City of Toronto	Required
Long Term Discharge Agreement City of Toronto	Required

3.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are provided based upon the preliminary updated Hydrogeological Review information.

1. There is approximately 2.5 m separation between the underside of the footings and the static ground water table.
2. As such, the proposed development will not be in the static ground water table and will not capture significant ground water flows.
3. During construction storm water will have to be managed on the site. A 25 mm design storm event could produce approximately 102,000 L of storm water which will have to be managed.
4. Post construction the built form has to potential to capture approximately 2,000 L of infiltrated storm water into the building drainage system. This captured storm water must be dealt with appropriately.
5. All structures that may extend below the design ground water table elevations of 119.5 masl must be designed as water tight structures. This may include elevator cores and sump pits.
6. The native sand soil at the site is highly permeable. Combined with a static water table well below the proposed building structure, consideration should be given to the possibility of infiltrating storm water at this site. Given the results of the grain size analysis and the hydraulic conductivity testing design infiltration rates of greater than 60 mm/hour may be possible in the native sand soils.
7. Infiltration rates should be confirmed by percolation testing of the native soils.

4.0 CLOSURE

We trust this letter is sufficiently detailed at this time for your review. Should you have any questions concerning the above, please do not hesitate to contact the undersigned.

Yours truly,

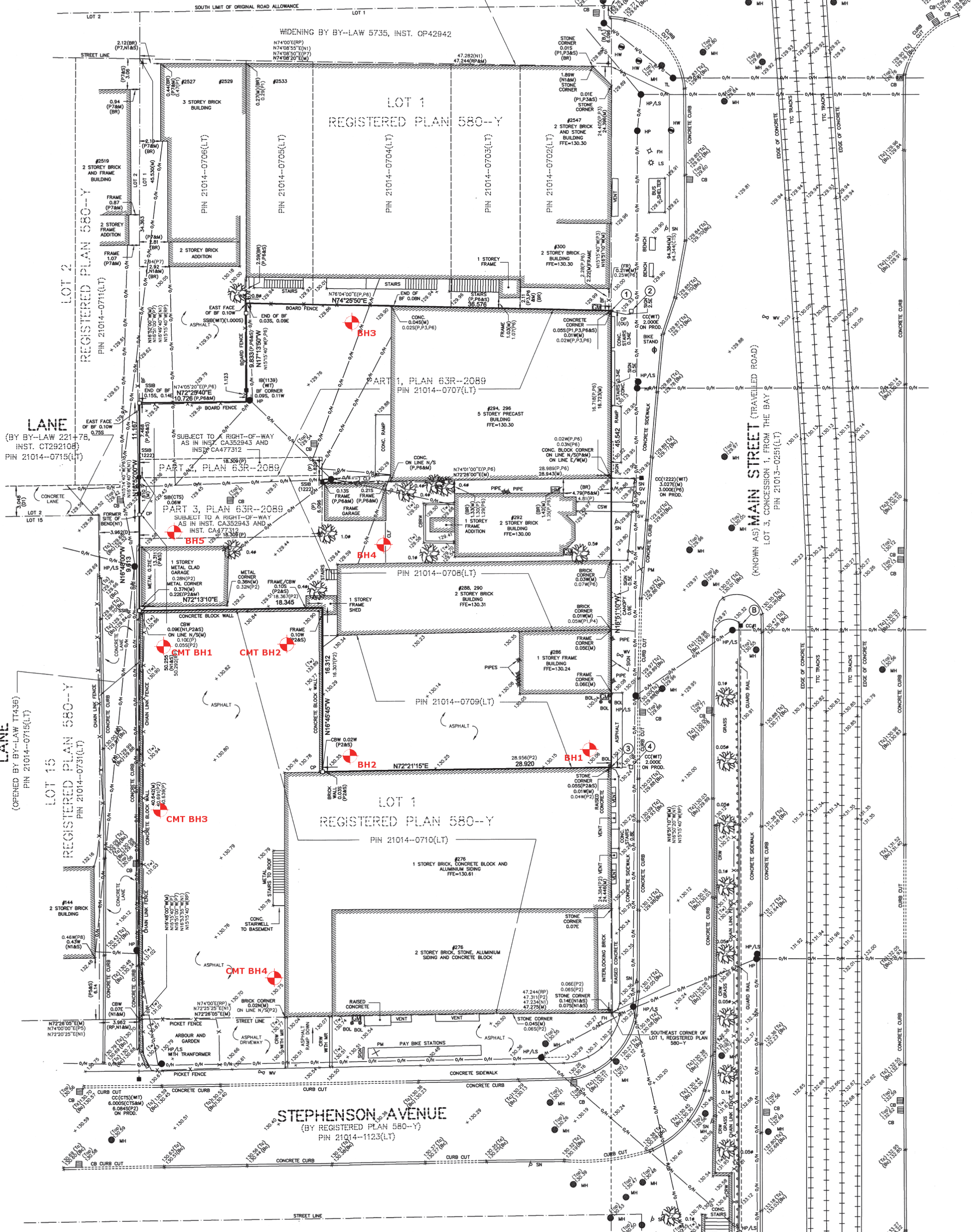
Terraprobe Inc.



Matthew J. Bielaski, P.Eng., QP_{RA}
Associate

Appendix E

DANFORTH AVENUE (NAME CHANGED BY BY-LAW 1526--UNREGISTERED)
(FORMERLY DON AND DANFORTH ROAD)
ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSIONS 1 AND 2, FROM THE BAY
PIN 10429-0658(LT)



Project No. : 1-17-0005-01

Client : Tribute (Danforth) Limited

Originated by : BR

Date started : February 13, 2017

Project : 286 to 294 Main Street

Compiled by : NN

Sheet No. : 1 of 2

Location : Toronto, Ontario

Checked by : JC

Position : E: 636868, N: 4838555 (UTM 17T)

Elevation Datum : Geodetic

Rig type : Truck-mounted

Drilling Method : Hollow stem augers

Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments	
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value							10
0	129.9	GROUND SURFACE											
		60mm ASPHALTIC CONCRETE											
		FILL , silty sand, trace gravel, trace brick fragments, trace cinders, trace rootlets, loose to compact, dark brown, moist		1	SS	9							
-1		...at 1.5 m, blackish brown		2	SS	6	129						
-2				3	SS	13	128						
				4	SS	5							
-3	126.9 3.0	SAND , trace to some silt, trace gravel, trace clay, compact to dense, brown, moist		5	SS	23	127						
-4				6	SS	37	125						
-5				7	SS	53	124						
-6		...at 6.1 m, very dense		8	SS	88 / 250mm	122						
-7				9	SS	50 / 125mm	121						
-8							120						

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Project No. : 1-17-0005-01

Client : Tribute (Danforth) Limited

Originated by : BR

Date started : February 13, 2017

Project : 286 to 294 Main Street

Compiled by : NN

Sheet No. : 2 of 2

Location : Toronto, Ontario

Checked by : JC

Position : E: 636868, N: 4838555 (UTM 17T)

Elevation Datum : Geodetic

Rig type : Truck-mounted

Drilling Method : Hollow stem augers

Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity			Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments	
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value			10	20	30				40
		(continued)													
11		SAND, trace to some silt, trace gravel, trace clay, compact to dense, brown, moist (continued) ...at 10.7 m, wet		10	SS	50 / 100mm	119								0 92 6 2 ...at 11.0m, wet
12				11	SS	50 / 140mm	118								0 84 13 3 SS11 Analysis: PHC
13							117								
14				12	SS	70	116								...at 13.7m, blow back
115.3 14.6															

END OF BOREHOLE

Borehole was dry and open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Feb 23, 2017	10.5	119.4
Mar 1, 2017	10.5	119.4

Project No. : 1-17-0005-01 Client : Tribute (Danforth) Limited Originated by : MC
 Date started : February 16, 2017 Project : 286 to 294 Main Street Compiled by : NN
 Sheet No. : 2 of 2 Location : Toronto, Ontario Checked by : JC

Position : E: 636845, N: 4838555 (UTM 17T) Elevation Datum : Geodetic
 Rig type : Truck-mounted Drilling Method : Hollow stem augers & drill fluid

Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity			Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments	
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value			10	20	30				40
		(continued)													
11		SAND, trace to some silt, trace gravel, trace clay, very loose, brown to brownish grey, moist (continued) ...at 10.7 m, wet		11	SS	79	119								...at 10.7m, drilling gel added SS11 Analysis: VOC, PHC
12				12	SS	57	118								
13							117								
14				13	SS	56	116								0 93 5 2
15							115								
114.4 15.7				14	SS	69									

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

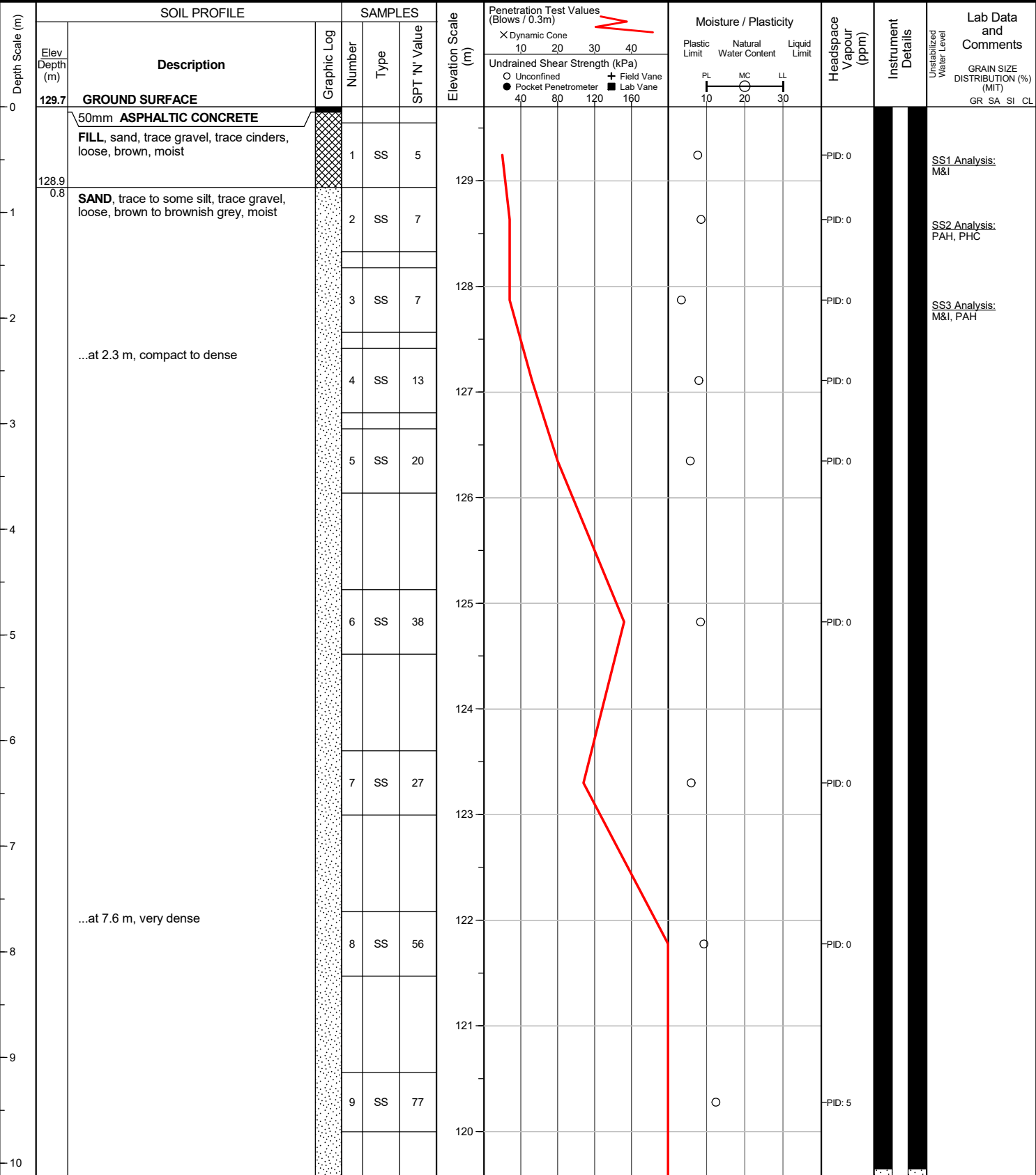
50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Feb 23, 2017	10.7	119.4
Mar 1, 2017	10.7	119.4

Project No. : 1-17-0005-01	Client : Tribute (Danforth) Limited	Originated by : BR
Date started : February 15, 2017	Project : 286 to 294 Main Street	Compiled by : NN
Sheet No. : 1 of 2	Location : Toronto, Ontario	Checked by : JC

Position : E: 636831, N: 4838585 (UTM 17T)	Elevation Datum : Geodetic
Rig type : Truck-mounted	Drilling Method : Hollow stem augers & drill fluid



file: 1-17-0005-01 bh_logs.gpj

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Project No. : 1-17-0005-01 Client : Tribute (Danforth) Limited Originated by : BR
 Date started : February 15, 2017 Project : 286 to 294 Main Street Compiled by : NN
 Sheet No. : 2 of 2 Location : Toronto, Ontario Checked by : JC

Position : E: 636831, N: 4838585 (UTM 17T) Elevation Datum : Geodetic
 Rig type : Truck-mounted Drilling Method : Hollow stem augers & drill fluid

Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value						
	(continued)											
11	...at 10.7 m, wet			10	SS	65	119					PID: 120 ...at 10.4m, 0.3m blowback ...at 10.7m, wet SS10 Analysis: VOC, PHC
12	...at 12.2 m, silty			11	SS	66	117					PID: 0 ...at 12.2m, drilling gel added 0 76 22 2
14				12	SS	90 / 250mm	116					PID: 0
15				13	SS	50 / 125mm	115					PID: 0

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Feb 23, 2017	10.2	119.5
Mar 1, 2017	10.2	119.5

Project No. : 1-17-0005-01

Client : Tribute (Danforth) Limited

Originated by : MC

Date started : February 17, 2017

Project : 286 to 294 Main Street

Compiled by : NN

Sheet No. : 1 of 2

Location : Toronto, Ontario

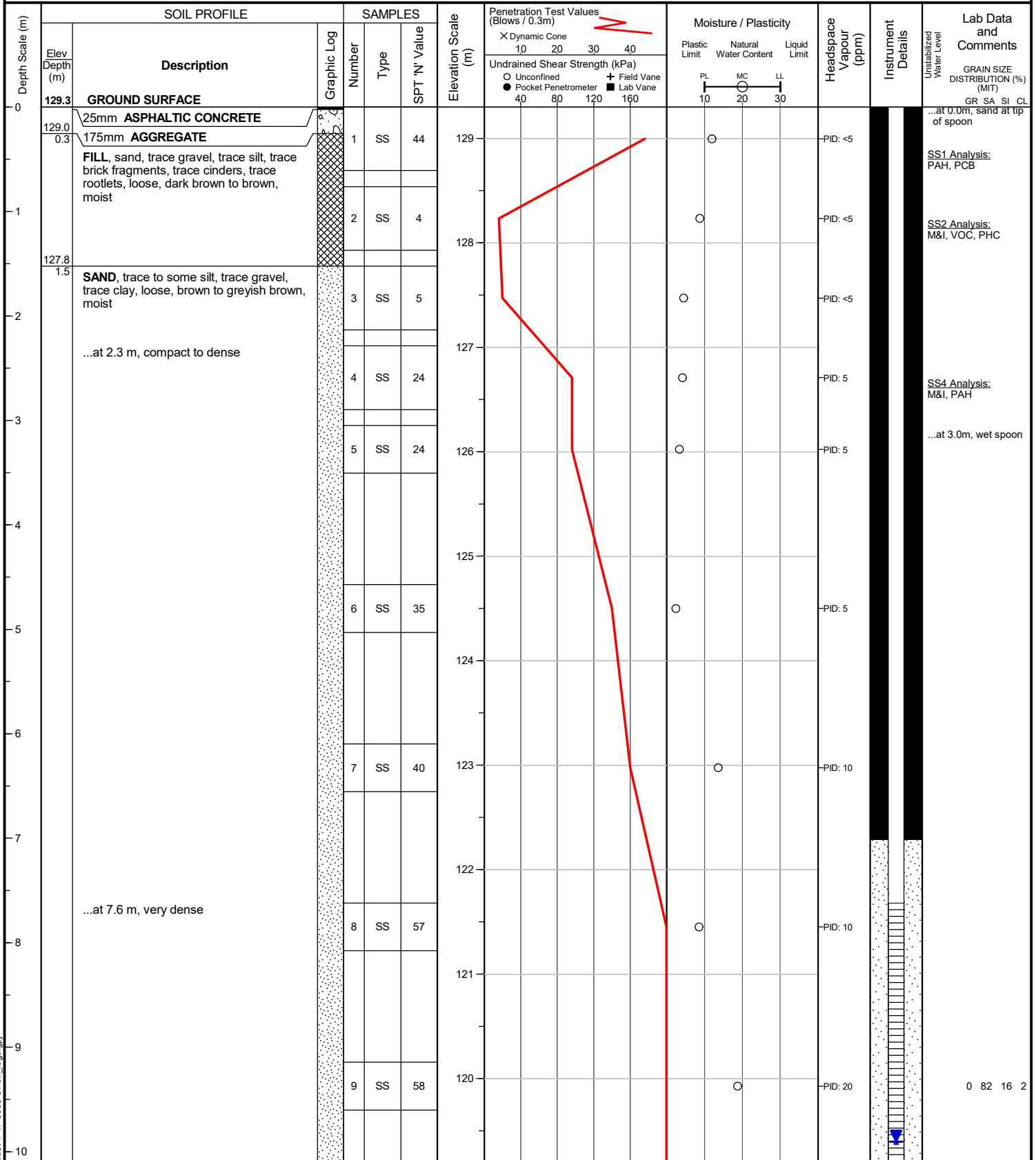
Checked by : JC

Position : E: 636830, N: 4838564 (UTM 17T)

Elevation Datum : Geodetic

Rig type : Truck-mounted

Drilling Method : Hollow stem augers





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Project No. : 1-17-0005-01 Client : Tribute (Danforth) Limited Originated by : MC
 Date started : February 17, 2017 Project : 286 to 294 Main Street Compiled by : NN
 Sheet No. : 2 of 2 Location : Toronto, Ontario Checked by : JC

Position : E: 636830, N: 4838564 (UTM 17T) Elevation Datum : Geodetic
 Rig type : Truck-mounted Drilling Method : Hollow stem augers

Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity			Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value			X Dynamic Cone	Plastic Limit	Natural Water Content			
	(continued)													
11	118.2 11.1	SAND, trace to some silt, trace gravel, trace clay, loose, brown to greyish brown, moist (continued) ...at 10.7 m, wet		10	SS	61	119							GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL SS10 Analysis: VOC, PHC

END OF BOREHOLE

Unstabilized water level measured at 10.4 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Feb 23, 2017	9.9	119.4
Mar 1, 2017	9.9	119.4

Project No. : 1-17-0005-01 Client : Tribute (Danforth) Limited Originated by : MC
 Date started : February 17, 2017 Project : 286 to 294 Main Street Compiled by : NN
 Sheet No. : 1 of 2 Location : Toronto, Ontario Checked by : JC

Position : E: 636819, N: 4838564 (UTM 17T) Elevation Datum : Geodetic
 Rig type : Truck-mounted Drilling Method : Hollow stem augers


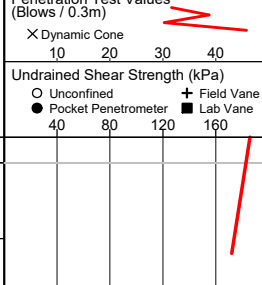
Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) X Dynamic Cone 10 20 30 40 Undrained Shear Strength (kPa) ○ Unconfined + Field Vane ● Pocket Penetrometer ■ Lab Vane 40 80 120 160	Moisture / Plasticity			Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments		
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value			Plastic Limit	Natural Water Content	Liquid Limit				Unstabilized Water Level	GRAIN SIZE DISTRIBUTION (%) (MIT)
0	129.3	GROUND SURFACE														
0.2	129.1	50mm ASPHALTIC CONCRETE		1	SS	42	129					PID: 5				SS1 Analysis: M&I, PAH, PCB
0.8	128.5	175mm AGGREGATE														
		FILL , silty sand, trace gravel, trace brick fragments, trace cinders, dense, blackish brown, moist														
		SAND , trace to some silt, trace gravel, trace clay, loose to compact, brown to greyish brown, moist		2	SS	5	128					PID: 5				SS2 Analysis: VOC, PHC
				3	SS	8	127					PID: <5				SS3 Analysis: M&I
				4	SS	24	126					PID: 5				SS4 Analysis: PAH
				5	SS	27	125					PID: 10				
		...at 4.6 m, dense to very dense		6	SS	47	124					PID: 10				
				7	SS	36	123					PID: 10				
				8	SS	65	122					PID: <5				0 82 16 2
				9	SS	62	121					PID: <5				
							120					PID: <5				

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Project No. : 1-17-0005-01 Client : Tribute (Danforth) Limited Originated by : MC
 Date started : February 17, 2017 Project : 286 to 294 Main Street Compiled by : NN
 Sheet No. : 2 of 2 Location : Toronto, Ontario Checked by : JC

Position : E: 636819, N: 4838564 (UTM 17T) Elevation Datum : Geodetic
 Rig type : Truck-mounted Drilling Method : Hollow stem augers

Depth Scale (m)	SOIL PROFILE			SAMPLES			Elevation Scale (m)	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity			Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value			Dynamic Cone	Plastic Limit	Natural Water Content			
11	118.2 11.1	(continued) SAND, trace to some silt, trace gravel, trace clay, loose to compact, brown to greyish brown, moist (continued) ...at 10.7 m, wet		10	SS	43	119	 X Dynamic Cone 10 20 30 40 Undrained Shear Strength (kPa) O Unconfined + Field Vane ● Pocket Penetrometer ■ Lab Vane 40 80 120 160	PL MC LL 10 20 30				GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL ...at 10.7m, wet spoon SS10 Analysis: VOC, PHC	

END OF BOREHOLE

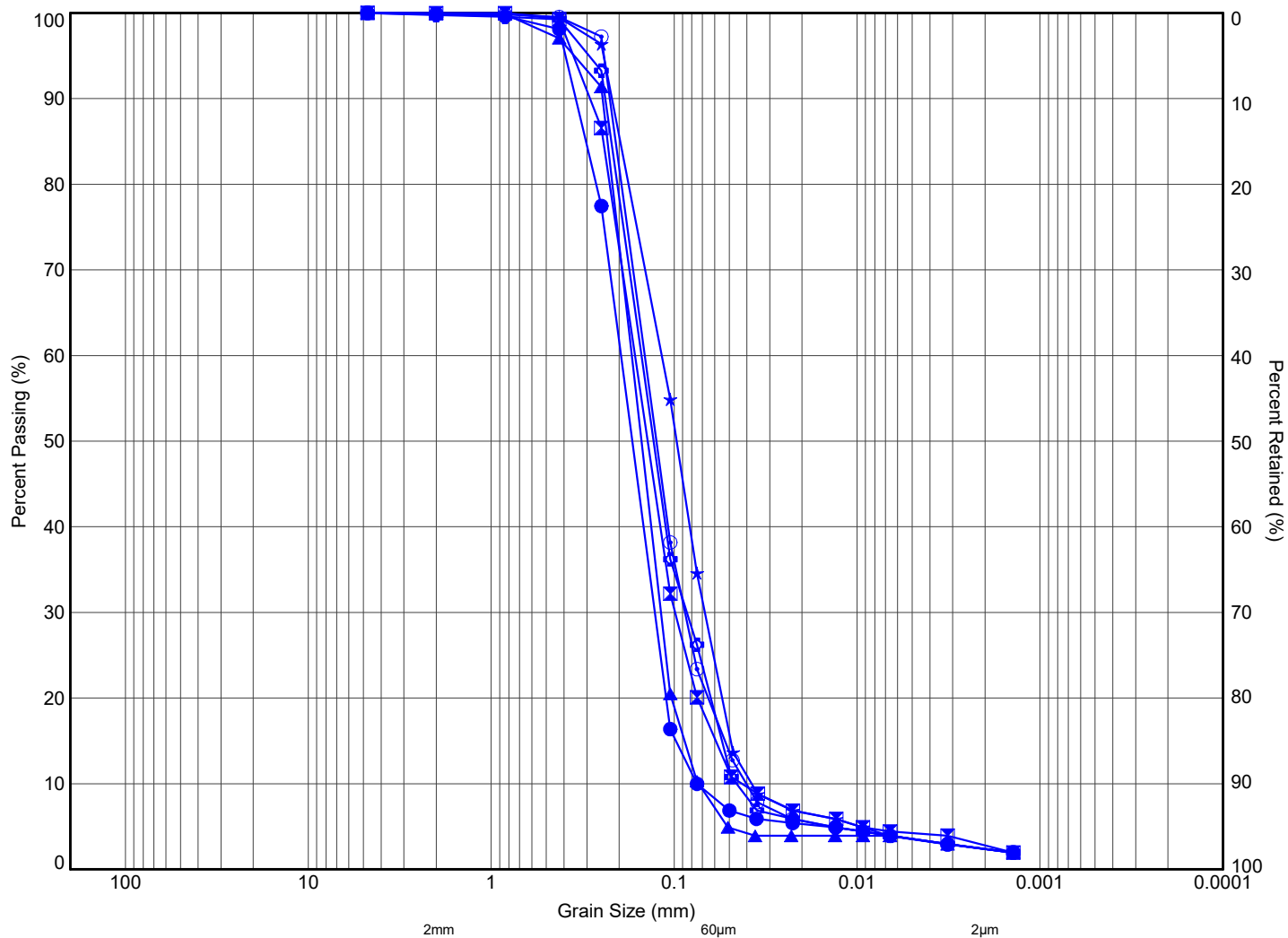
Unstabilized water level measured at 10.4 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Feb 23, 2017	9.9	119.4
Mar 1, 2017	9.9	119.4

Appendix E



MIT SYSTEM	COBBLES	GRAVEL			SAND			SILT	CLAY
		COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE		

MIT SYSTEM									
Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	(Fines, %)	
●	1	SS10	10.8	119.1	0	92	6	2	
⊠	1	SS11	12.3	117.6	0	84	13	3	
▲	2	SS13	13.9	116.2	0	93	5	2	
★	3	SS11	12.5	117.2	0	76	22	2	
⊙	4	SS9	9.4	119.9	0	82	16	2	
⊕	5	SS8	7.8	121.5	0	82	16	2	



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

Title:

**GRAIN SIZE DISTRIBUTION
SAND, TRACE SILT TO SILTY, TRACE CLAY**

File No.:

1-17-0005-01

Appendix E

BOREHOLE LOG

Borehole # BH/MW-1

Client: The House of Finland Society
 Project Location: 276 Main St., Toronto

Drilling Contractor: Landshark
 Drill Method: Hollow Stem Auger
 Logged by: BJL



Drill Date: September 25, 2017
 Ground Elevation: 99.675 m (Local)
 Top of Pipe Elevation: 99.545 m (Local)
 Job # - MBN17-526

Depth (m)	Elevation	Sample	Vapour Conc.	Soil Description	Lithology	Well Construction	Well Description and Sampling Notes
0		SS-1, N=10	H=10, I=0	Asphalt ~5 cm thick			Steel flushmount casing and J-plug installed at surface
-0.99		SS-2, N=5	H=10, I=0	Fill: SAND FILL, trace silt, medium to coarse grained, brown, compact, dry			Portion of soil sample SS-1, 0 - 0.45 m analyzed for EC/SAR/TH/ Metals
-1.98		SS-3, N=9	H=0, I=0	Fill: silty, some sand, brown, loose, damp, brick fragments			Portion of soil sample SS-2, 0.75 - 1.2 m analyzed for VOC/PHC/PAH
-2.97		SS-4, N=4	H=0, I=0	Sand: trace to some silt, fine to medium grained, brown, loose, damp			Soil sample SS-3, 1.5 - 1.95 m placed on HOLD at lab
-3.96		SS-5, N=3	H=10, I=0	becomes compact with trace to some gravel at 3.5 m			
-4.95		SS-6, N=25	H=10, I=0	becomes dense below 4.6 m			Borehole grouted 0.3 - 7.3 m
-5.94		SS-7, N=34	H=10, I=0				50 mm PVC riser pipe 0 - 9.1 m
-6.93		SS-8, N=28	H=10, I=0				
-7.92		SS-9, N=30	H=5, I=0	becomes very dense below 7.6 m			Bentonite seal 7.3 - 8.5 m
-8.91		SS-10, N=58	H=5, I=0				
-9.90		SS-11, N=59	H=0, I=0	free water noted at 10.4 m			Silica sand pack 8.5 - 12.2 m
-10.89		SS-12, N=69	H=10, I=0				50 mm PVC screen 9.1 - 12.2 m
-11.88							Static water level measured October 10, 2017
-12.87		SS-13, N=58	H=0, I=0				Groundwater sample MW-1 analyzed for VOC/PHC/PAH/ Metals/Cl-
-13.86				End of Hole = 12.6 m			Borehole caved 12.2 - 12.65 m

Appendix E

BOREHOLE LOG

Borehole #: BHM/W-2

Client: The House of Finland Society

Project Location: 276 Main St., Toronto

Drilling Contractor: Landshark

Drill Method: Hollow Stem Auger

Logged by: BJL

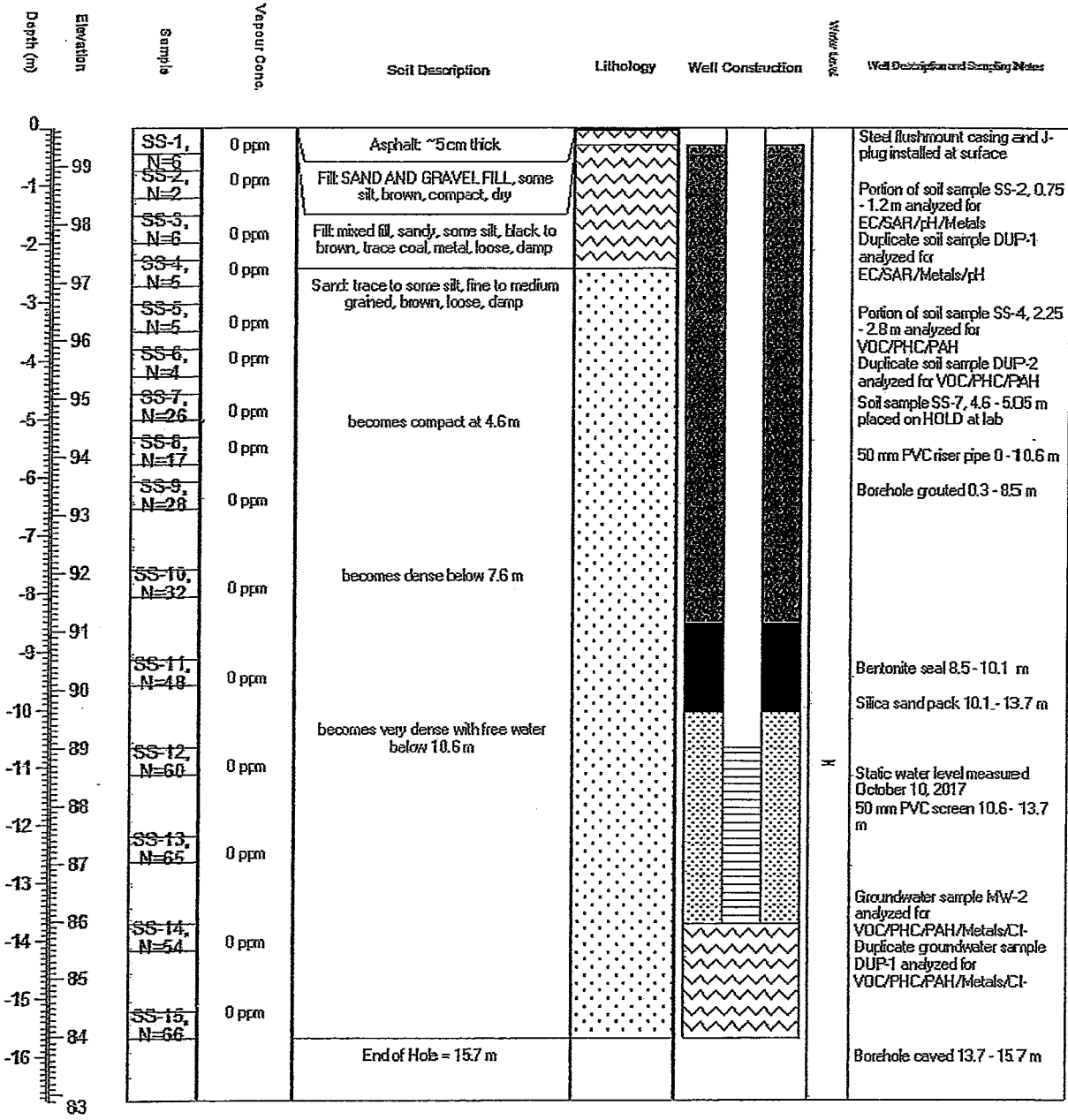


Drill Date: September 25, 2017

Ground Elevation: 99.660 m (Local)

Top of Pipe Elevation: 99.515 m (Local)

Job # - MBN17-526



Appendix E

BOREHOLE LOG

Borehole #: BHMW-3

Client: The House of Finland Society
 Project Location: 276 Main St., Toronto

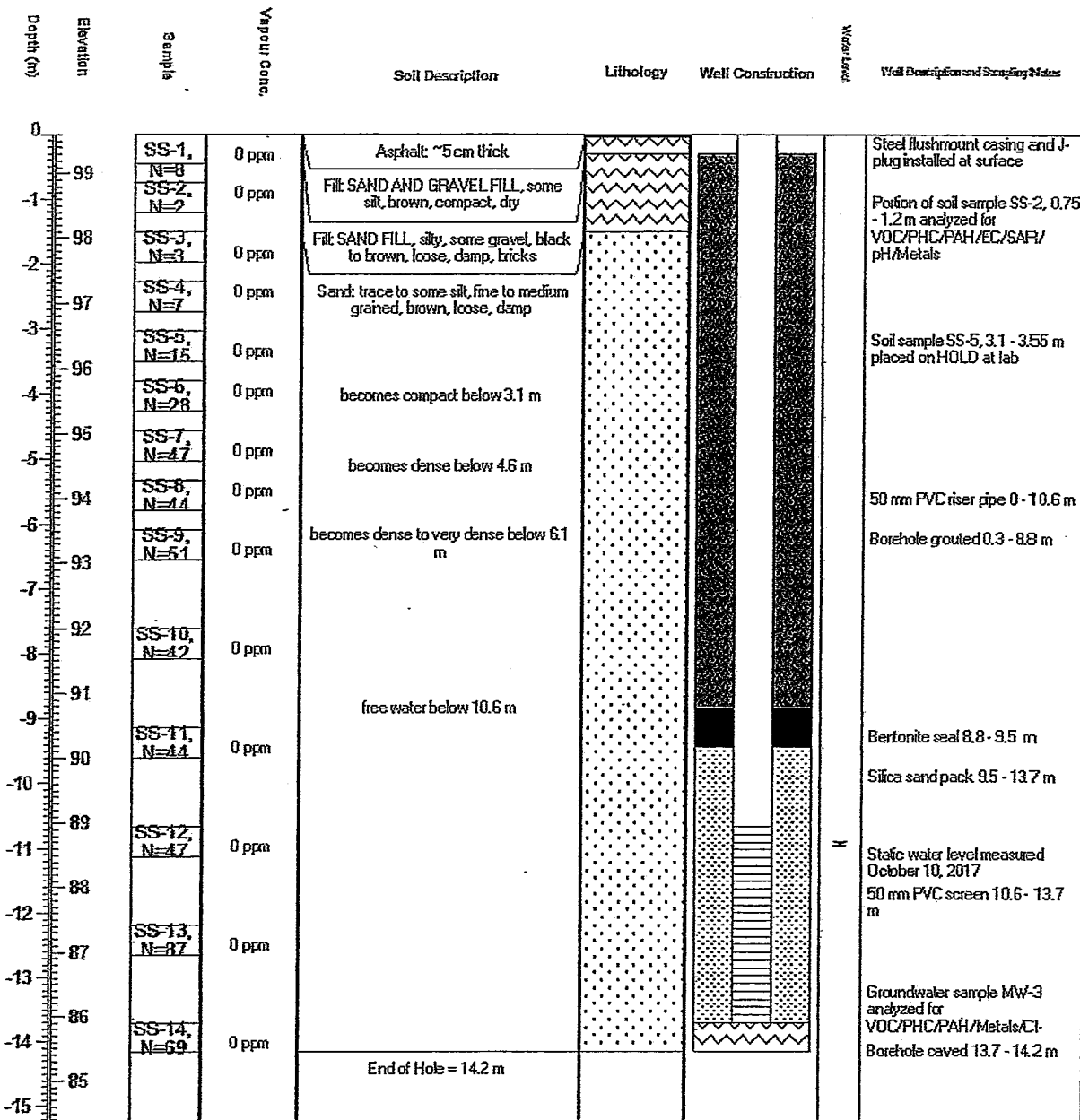
Drilling Contractor: Landshark

Drill Method: Hollow Stem Auger

Logged by: BJL



Drill Date: September 26, 2017
 Ground Elevation: 99.610 m (Local)
 Top of Pipe Elevation: 99.530 m (Local)
 Job # - MBN17-526



Appendix E

BOREHOLE LOG

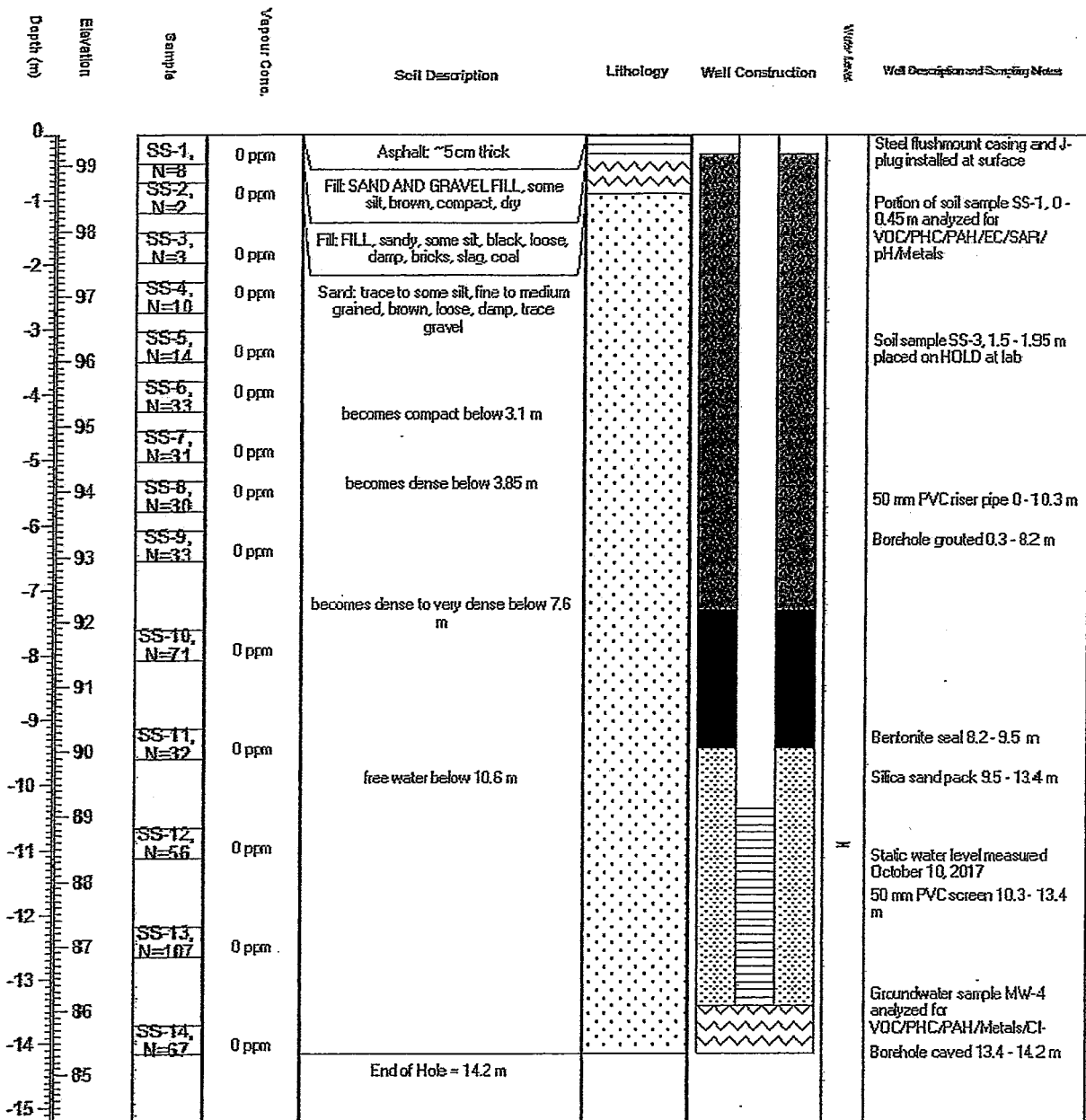
Borehole #: BHMW-4

Client: The House of Finland Society
 Project Location: 276 Main St., Toronto

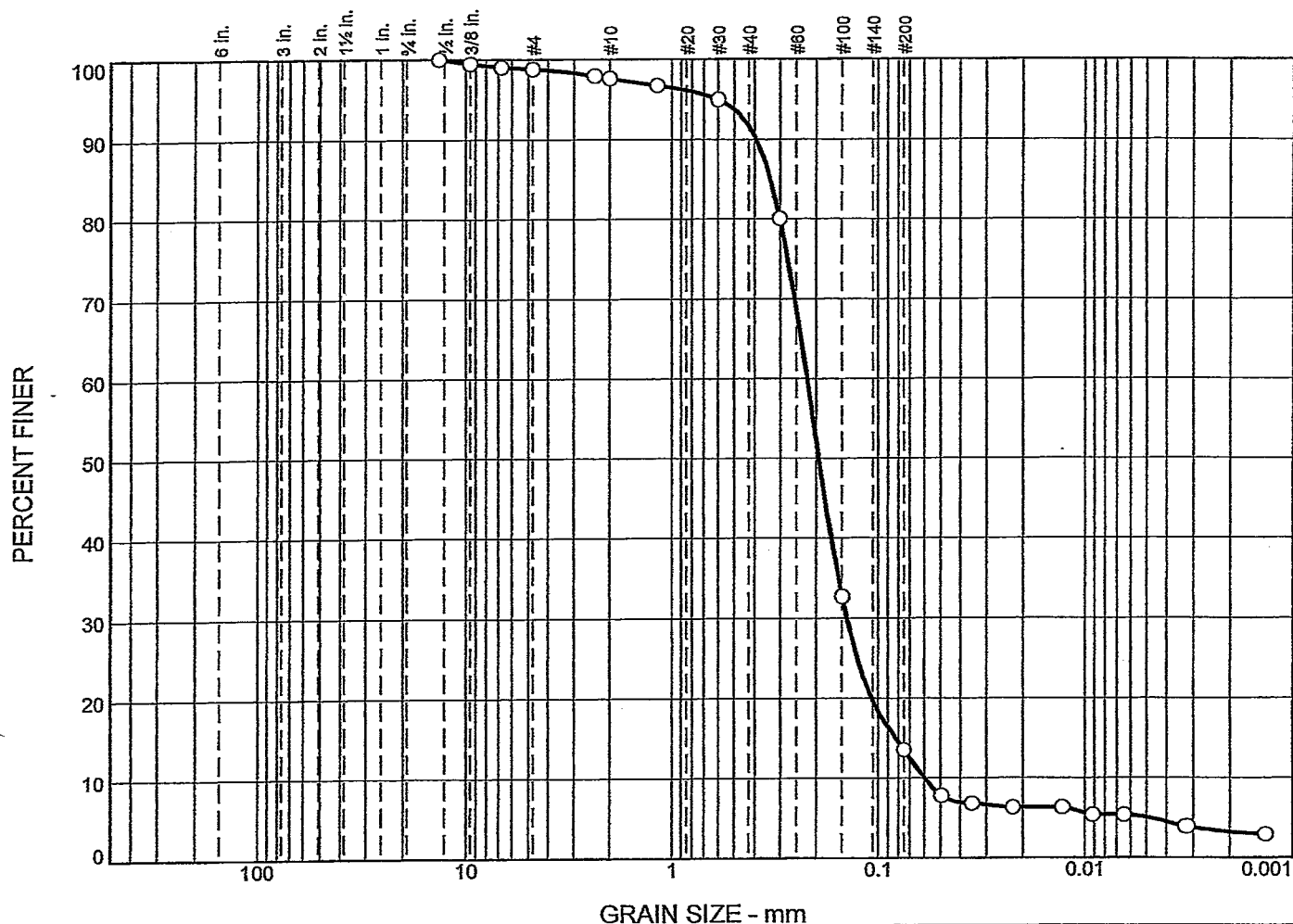
Drilling Contractor: Landshark
 Drill Method: Hollow Stem Auger
 Logged by: BJL



Drill Date: September 26, 2017
 Ground Elevation: 99.485 m (Local)
 Top of Pipe Elevation: 99.370 m (Local)
 Job # - MBN17-526



Particle Size Distribution Report



	% Cobbles	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.2	1.2	5.9	78.1	10.4	3.2

SOIL DATA					
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	BH2	7	4.6 - 5.1 m	sand, some silt, trace clay and gravel	SM
				Tested by EK of CMT Inc., October 12, 2017	
				Estimated Coefficient of Permeability $k = 3.56 \times 10^{-3}$ cm/sec	

Appendix E



Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Engineering, Inspection & Testing

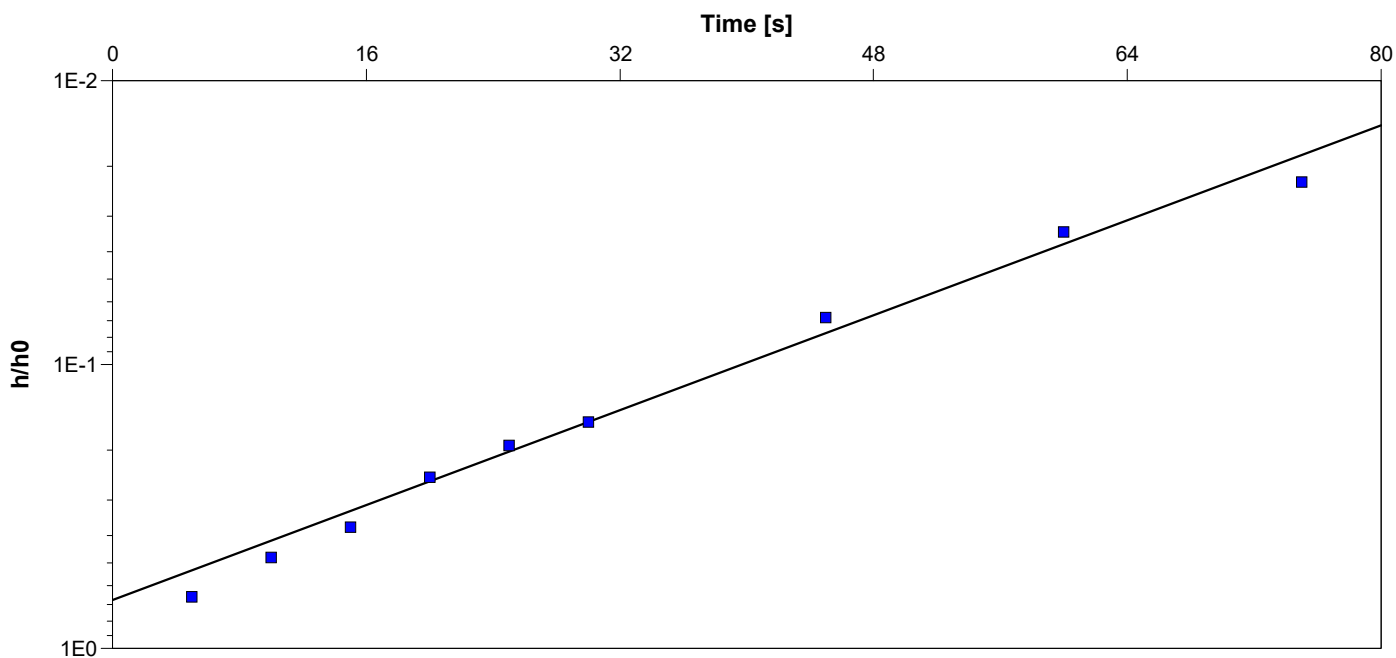
Slug Test - Analyses Report

Project: 286 to 296 Main Street

Number: 1-17-0005-46

Client: Tribute Acquisitions Ltd.

Location: Toronto	Slug Test: Rising Head Test - BH1	Test Well: BH1
Test Conducted by: TG		Test Date: 2/23/2017
Analysis Performed by: ZB	Rising Head Test - BH1	Analysis Date: 3/16/2017
Aquifer Thickness: 40.00 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH1	6.23×10^{-3}	

Appendix E



Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Engineering, Inspection & Testing

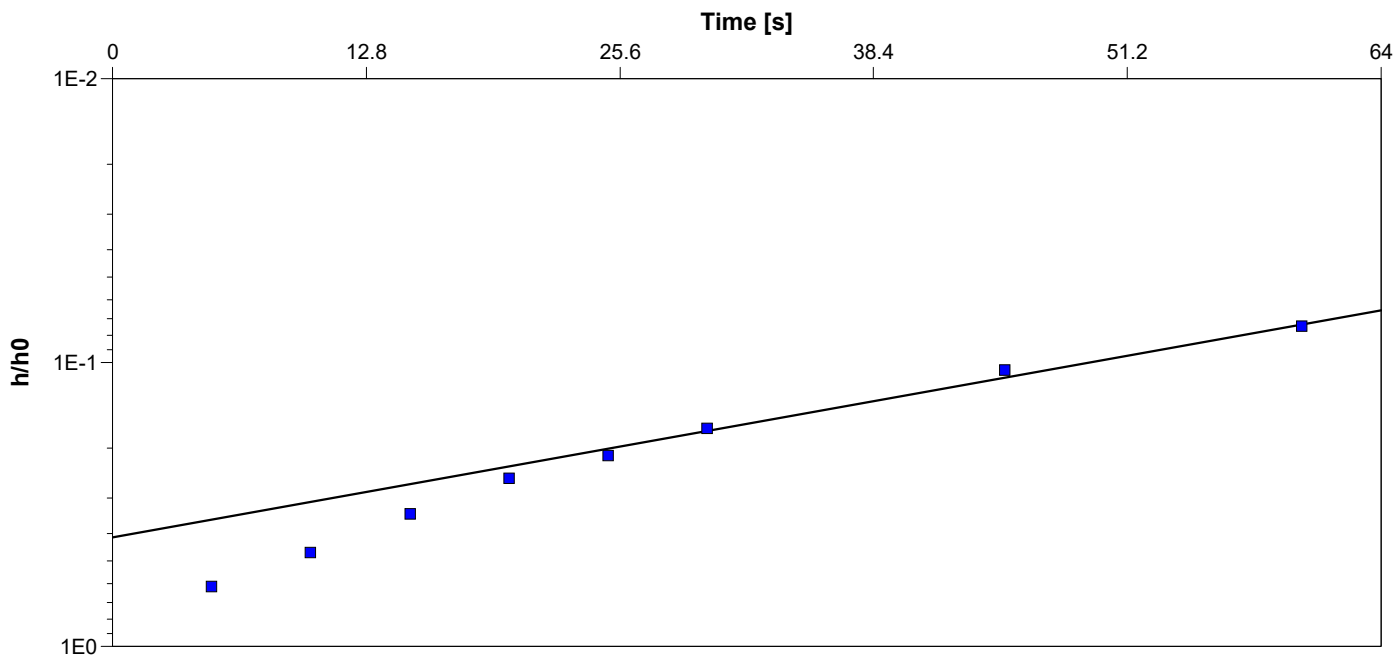
Slug Test - Analyses Report

Project: 286 to 296 Main Street

Number: 1-17-0005-46

Client: Tribute Acquisitions Ltd.

Location: Toronto	Slug Test: Rising Head Test - BH2	Test Well: BH2
Test Conducted by: TG		Test Date: 2/23/2017
Analysis Performed by: ZB	Rising Head Test - BH2	Analysis Date: 3/16/2017
Aquifer Thickness: 40.00 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH2	3.73×10^{-3}	

Appendix E



Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Engineering, Inspection & Testing

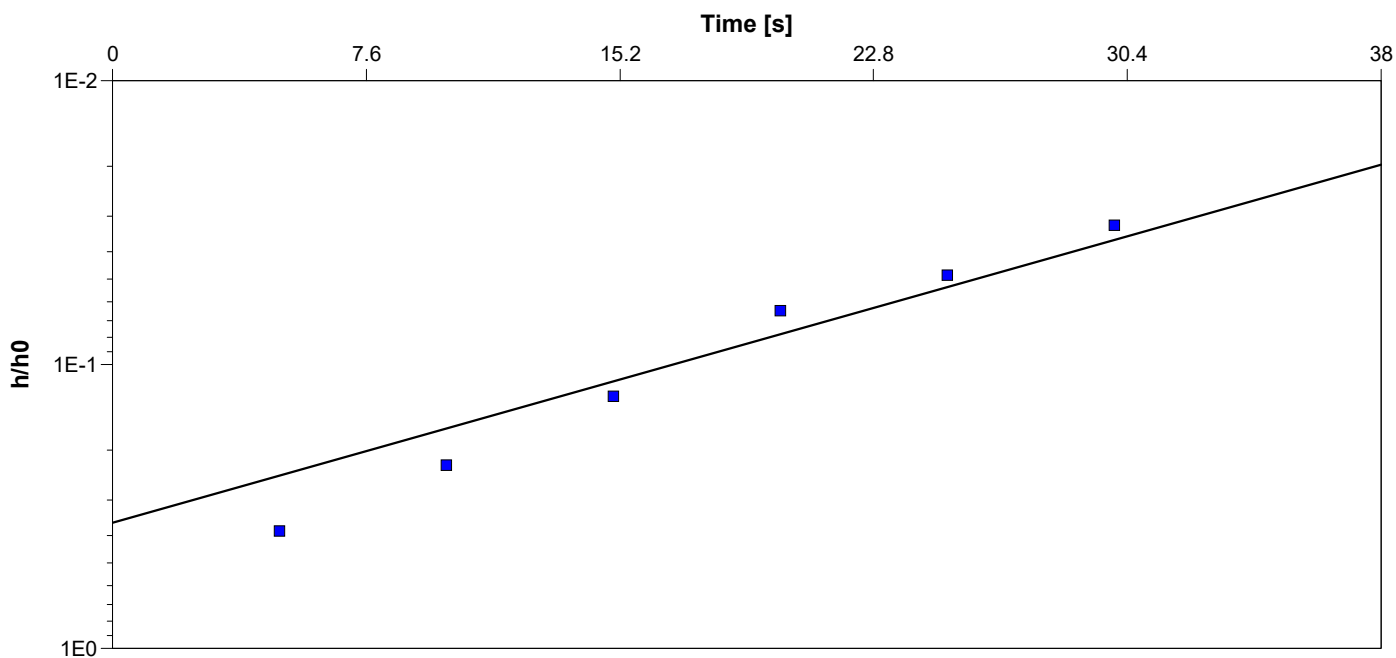
Slug Test - Analyses Report

Project: 286 to 296 Main Street

Number: 1-17-0005-46

Client: Tribute Acquisitions Ltd.

Location: Toronto	Slug Test: Rising Head Test - BH3	Test Well: BH3
Test Conducted by: TG		Test Date: 2/23/2017
Analysis Performed by: ZB	Rising Head Test - BH3	Analysis Date: 3/16/2017
Aquifer Thickness: 40.00 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH3	9.89×10^{-3}	