

APPENDIX 'A'

GEOTECHNICAL REPORT

APPENDIX 'A' - GEOTECHNICAL REPORT

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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

Geotechnical Report for Ferrier Street

Test Hole Locations



Summary of Core Samples

Depth (m)	Moisture Content, % (ASTM D2216)						
	TH 1	TH 2	TH 3	TH 4	TH 5	TH 6	TH 7
0.3	9.9	8.6	5.2	8.1	10.0	4.9	6.2
0.7	32.3	31.1	4.9	40.1	40.6	4.6	7.3
1.0	27.8	36.9	4.1	39.0	28.2	31.5	28.1
1.3	27.9	33.2	3.0	21.4	33.3	36.4	22.7
1.6	25.1	26.4	27.1	22.7	21.6	37.0	17.1
1.9	21.7	26.0	24.5	24.5	23.4	31.9	25.5
2.2	25.2	25.2	20.6	32.8	30.9	26.7	19.9
2.5	24.1	24.6	20.4	24.4	31.8	21.5	42.5
2.8	21.7	20.9	23.1	25.4	42.8	22.6	33.6
3.1	23.6	36.0	23.1	34.0	47.3	31.7	45.6
3.4	41.1	-	-	-	-	-	-

Depth (m)	Moisture Content, % (ASTM D2216)						
	TH 8	TH 9	TH 10	TH 11	TH 12	TH 13	TH 14
0.3	4.0	6.2	4.7	19.9	16.8	18.9	4.2
0.7	4.8	8.0	42.5	29.0	38.4	42.3	26.1
1.0	38.1	22.7	39.1	34.3	46.7	42.1	39.1
1.3	36.5	41.5	41.4	39.4	33.5	30.7	38.6
1.6	27.0	33.9	31.3	34.4	31.9	22.7	29.1
1.9	24.7	24.6	24.1	35.3	26.8	34.7	25.5
2.2	22.5	20.3	21.4	24.1	24.2	38.1	24.1
2.5	28.3	22.3	32.6	24.8	24.5	34.3	24.7
2.8	33.8	32.8	23.8	23.8	24.2	25.0	23.4
3.1	44.8	49.8	24.3	-	24.1	25.3	22.3

Test Hole No.	Depth (m)	Atterberg Limits (ASTM D4318)		
		Liquid Limit	Plastic Limit	Plasticity Index
10	0.70	65	24	40
4	1.0	63	23	40

Test Hole No.	Depth (m)	Particle Size Analysis (ASTM D422)				
		Soil Classification	Percent Composition			
			Gravel	Sand	Silt	Clay
10	0.7	Clay	0.0	2.4	15.6	82.0
4	1.0	Clay	0.0	1.0	27.0	72.0
9	1.9	Silt	0.0	7.9	73.1	19.0
6	2.5	Silt	0.2	4.4	84.5	11.0
13	2.5	Silty Clay	0	2.2	35.6	62

Test Hole Log for Borehole 1

LOG OF BOREHOLE 1

SOIL PROFILE				SAMPLES		GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE			"N" VALUES	FIELD SHEAR (kPa)				
		ASPHALT											Dry on completion.
		TAR & GRAVEL			AS								
		CLAY - black			AS								
		----- - dark grey			AS								
1		----- - Silty, trace gravel, dark brown			AS								
					AS								
					AS								
					AS								
2		SILT - Clayey			AS								
					AS								
					AS								
					AS								
3		CLAY - brown			AS								
		End of Borehole @ 3.6 m.											
4													

W TBT BOREHOLE 09-637 FERRIER ST.GPJ TBT.GDT 10/2/23



TBT Engineering Limited
 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
 PH: 204-633-6008
 FX: 204-633-6620
 Email: tbte@tbte.ca
 Web: www.tbte.ca

SAMPLE TYPE LEGEND

- AS Auger Sample
- SS Split Spoon Sample
- TW 70mm Thin Wall Tube
- CC Concrete/Asphalt Core
- RC Rock Core
- PS Ponar Sample
- SD Side Sample

ENCLOSURE 1

Test Hole Log for Borehole 2

LOG OF BOREHOLE 2

SOIL PROFILE				SAMPLES		GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT (W _p)	NATURAL MOISTURE CONTENT (W)	LIQUID LIMIT (W _L)	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE			"N" VALUES	FIELD SHEAR (kPa)				
		ASPHALT FILL - GRAVEL			AS								
		CLAY - black			AS								
		----- - dark brown			AS								
1					AS								
		SILT - Clayey			AS								
2					AS								
		SILT & CLAY - layers, mottled			AS								
					AS								
		SILT - Clayey			AS								
3					AS								
		End of Borehole @ 3.2 m.											
4													

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TBT Engineering Limited
 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
 PH: 204-633-6008
 FX: 204-633-6620
 Email: tble@tble.ca
 Web: www.tble.ca

SAMPLE TYPE LEGEND

AS	Auger Sample	RC	Rock Core
SS	Split Spoon Sample	PS	Ponar Sample
TW	70mm Thin Wall Tube	SD	Side Sample
CC	Concrete/Asphalt Core		

ENCLOSURE 2

Test Hole Log for Borehole 3

LOG OF BOREHOLE 3

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY			TYPE	"N" VALUES				
												GR SA SI CL
		CONCRETE										
		LIMESTONE - crushed			AS							
					AS							
					AS							
1					AS							
		CLAY & SILT - layered, mottled, dark brown			AS							
					AS							
2		SILT - Clayey, brown			AS							
					AS							
					AS							
3		CLAY - Silty, some sand, silt layers			AS							
					AS							
		End of Borehole @ 3.4 m.										
4												

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TBT Engineering Limited
 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
 PH: 204-633-6008
 FX: 204-633-6620
 Email: tble@tble.ca
 Web: www.tble.ca

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- TW 70mm Thin Wall Tube
- CC Concrete/Asphalt Core
- RC Rock Core
- PS Ponar Sample
- SD Side Sample

ENCLOSURE 3

Test Hole Log for Borehole 4

LOG OF BOREHOLE 4

SOIL PROFILE				SAMPLES		GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT (W _p)	NATURAL MOISTURE CONTENT (W)	LIQUID LIMIT (W _L)	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE			"N" VALUES	FIELD SHEAR (kPa)				
		FILL - SAND & GRAVEL - trace silt			AS								
		TOPSOIL - organic clay, black			AS								
1		CLAY - dark grey			AS							0 1 27 72	
		SILT - some sand & gravel			AS								
					AS								
					AS								
2		CLAY			AS								
		SILT - some gravel & sand			AS								
					AS								
3		CLAY			AS								
		End of Borehole @ 3.1 m.											
4													

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 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
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 FX: 204-633-6620
 Email: tbte@tbte.ca
 Web: www.tbte.ca

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SS	Split Spoon Sample	PS	Ponar Sample
TW	70mm Thin Wall Tube	SD	Side Sample
CC	Concrete/Asphalt Core		

ENCLOSURE 4

PAGE 1 OF 1

Test Hole Log for Borehole 5

LOG OF BOREHOLE 5

SOIL PROFILE				SAMPLES			GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT (kPa)	NATURAL MOISTURE CONTENT (kPa)	LIQUID LIMIT (kPa)	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE	"N" VALUES			FIELD SHEAR (kPa)	Lab Shear (kPa)				
		FILL - gravel & sand	[Pattern]		AS									
					AS									
		CLAY - organic, black	[Pattern]		AS									
		CLAY - trace silt, grey	[Pattern]		AS									
1					AS									
		SILT - some gravel & sand	[Pattern]		AS									
					AS									
2		CLAY - dark grey	[Pattern]		AS									
					AS									
					AS									
3		End of Borehole @ 3.1 m.			AS									
4														

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TBT Engineering Limited
 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
 PH: 204-633-6008
 FX: 204-633-6620
 Email: tbte@tbte.ca
 Web: www.tbte.ca

SAMPLE TYPE LEGEND

AS	Auger Sample	RC	Rock Core
SS	Split Spoon Sample	PS	Ponar Sample
TW	70mm Thin Wall Tube	SD	Side Sample
CC	Concrete/Asphalt Core		

ENCLOSURE 5

PAGE 1 OF 1

Test Hole Log for Borehole 7

LOG OF BOREHOLE 7

SOIL PROFILE				SAMPLES			GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE	"N" VALUES			DEPTH SCALE	FIELD SHEAR (kPa)				
								0 20 40 60 80 100	0 20 40 60 80 100				GR SA SI CL	
		FILL - SAND & GRAVEL	[Pattern]		AS									
		CLAY - trace sand & gravel, dark grey	[Pattern]		AS									
1		SILT - Clayey	[Pattern]		AS									
		CLAY - brown	[Pattern]		AS									
2		SILT - Clayey, trace sand & gravel	[Pattern]		AS									
		CLAY - dark grey	[Pattern]		AS									
3		End of Borehole @ 3.1 m.			AS									
4														

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TBT Engineering Limited
 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
 PH: 204-633-6008
 FX: 204-633-6620
 Email: tbte@tbte.ca
 Web: www.tbte.ca

SAMPLE TYPE LEGEND

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TW	70mm Thin Wall Tube	SD	Side Sample
CC	Concrete/Asphalt Core		

ENCLOSURE 7

Test Hole Log for Borehole 9

LOG OF BOREHOLE 9

SOIL PROFILE				SAMPLES		GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		WATER CONTENT (%)			REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE			"N" VALUES	FIELD SHEAR (kPa)	Lab Shear (kPa)	PLASTIC LIMIT	NATURAL MOISTURE CONTENT	
												GR SA SI CL	
		LIMESTONE - crushed			AS								
					AS								
		SILT & CLAY - layered, mottled			AS								
1		CLAY - dark brown			AS								
		CLAY - Silty, brown			AS								
		SILT - Clayey			AS							0 8 73 19	
2		CLAY - silt layered			AS								
					AS								
		----- - dark brown			AS								
3		End of Borehole @ 3.1 m.			AS								
4													

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TBT Engineering Limited
 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
 PH: 204-633-6008
 FX: 204-633-6620
 Email: tbt@tbt.ca
 Web: www.tbt.ca

SAMPLE TYPE LEGEND

AS	Auger Sample	RC	Rock Core
SS	Split Spoon Sample	PS	Ponar Sample
TW	70mm Thin Wall Tube	SD	Side Sample
CC	Concrete/Asphalt Core		

ENCLOSURE 9
 PAGE 1 OF 1

Test Hole Log for Borehole 10

LOG OF BOREHOLE 10

SOIL PROFILE				SAMPLES		GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT (W _p)	NATURAL MOISTURE CONTENT (W)	LIQUID LIMIT (W _L)	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE			"N" VALUES	FIELD SHEAR (kPa)				
		FILL - GRAVEL & SAND	[Hatched]		AS								
		CLAY - organic, black	[Diagonal lines]		AS								0 2 15 82
1			[Diagonal lines]		AS								
		SILT - some gravel & sand	[Vertical lines]		AS								
2			[Vertical lines]		AS								
		CLAY - grey	[Diagonal lines]		AS								
		SILT	[Vertical lines]		AS								
3			[Vertical lines]		AS								
		End of Borehole @ 3.1 m.											
4													

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CC	Concrete/Asphalt Core		

ENCLOSURE 10
 PAGE 1 OF 1

Pavement Core Photos



Ferrier Street TH #1
0 mm to 102 mm Asphalt



Ferrier Street TH #3
0 mm to 220 mm Concrete