

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 soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in 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 Living Prairie Park

Test Hole Locations



 THE NATIONAL TESTING LABORATORIES LIMITED <i>Established in 1923</i>	Project No. KGS-1006	Drawn by: AP	Figure: 1	2010 City of Winnipeg Active Transportation Program Living Prairie Park Winnipeg, Manitoba
	Date: March 27, 2010	Reviewed by: DF	Scale: NTS	

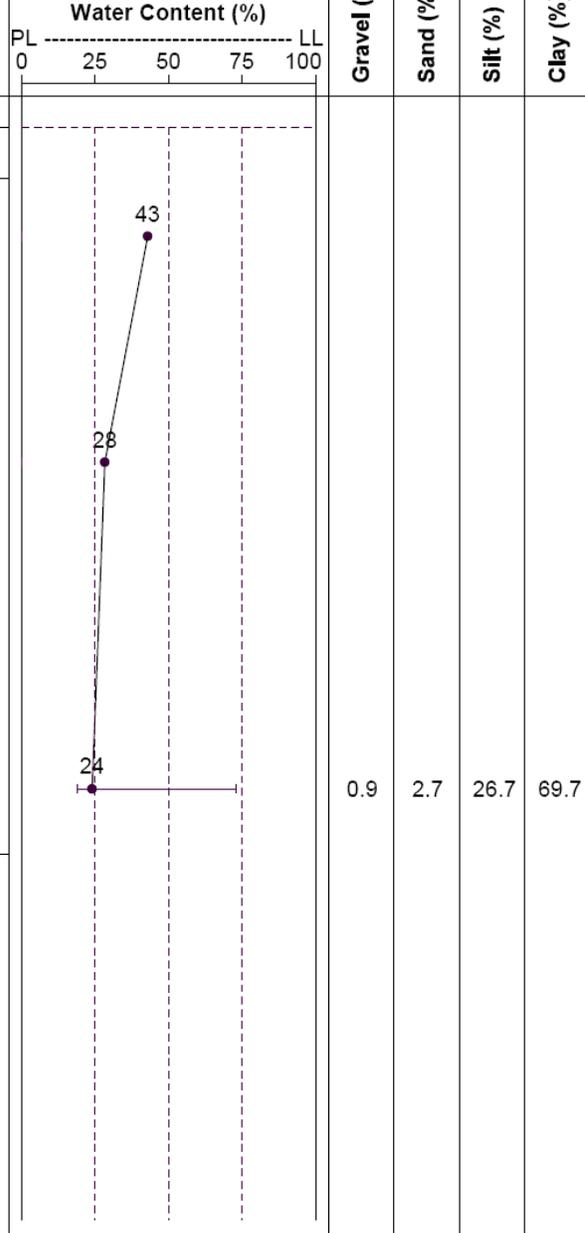
Summary of Core Samples

LIVING PRAIRIE PARK
2010 CITY OF WINNIPEG ACTIVE TRANSPORTATION PROGRAM

Testhole ID	Testhole Coordinates	Sample Description	Sample Depth (m)	Moisture Content (%)	Estimated CBR Value	Particle Size Analysis				Atterberg Limits		
						Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH1	14 U 623889 m E, 5528352 m N	Clay	0.9	24	2	0.9	2.7	26.7	69.7	73	19	54
TH2	14 U 623913 m E, 5528334 m N	Clay	0.6	37	2	0	2.8	28.7	68.5	78	21	57
TH3	14 U 623937 m E, 5528308 m N	Silt till	0.6	17	7	11.5	30.4	30.5	27.6	37	13	24
TH4	14 U 623961 m E, 5528285 m N	Silt till	0.9	6	10	0	40.7	47.1	12.2	non plastic		
TH5	14 U 624010 m E, 5528258 m N	Clay	0.6	29	2	0	11.2	18.3	70.5	72	20	52
TH6	14 U 624071 m E, 5528239 m N	Clay	0.9	25	2	0	4.5	17.8	77.7	82	20	62
TH7	14 U 624102 m E, 5528205 m N	Clay	0.9	24	2	0	7.0	21.5	71.5	82	21	61
TH8	14 U 624097 m E, 5528172 m N	Clay	0.6	35	2	0	8.0	18.6	73.4	85	24	61
TH9	14 U 624099 m E, 5528151 m N	Clay	0.6	28	2	0	8.9	20.6	70.5	77	21	56
TH10	14 U 624100 m E, 5528098 m N	Clay	0.6	24	2	1.6	7.4	23.9	67.1	78	19	59

Test Hole Log for TH1

TESTHOLE TH1											
Project Name: 2010 City of Winnipeg Active Transportation Program		Date Drilled: March 15, 2010		Client: KGS Group Inc.		Depth of Testhole: 1.0 m					
Site: Living Prairie Park		Logged by: Aron Piamsalee		Testhole Location: 14 U 623889 m E, 5528352 m N		Ground Elevation: 240.11 m					
Subsurface Profile				Laboratory Testing							
Elev. (m)	Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)
				PL	0	25	50				
240.11	0.0		Ground Surface								
239.88			Topsoil								
			Clay - black, firm, moist, high plasticity - trace organic material to 0.8 m - brown below 0.8 m								
	0.5										
	1.0										
236.83			<ul style="list-style-type: none"> No groundwater seepage or soil sloughing observed during or upon completion of drilling. Testhole terminated at 1.0 m. 								
	1.5										



Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.9	2.7	26.7	69.7

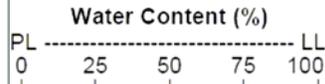
Test Hole Log for TH2

Subsurface Profile				Laboratory Testing					
Elev. (m)	Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
				PL	LL				
240.04	0.0		Ground Surface						
	0.0		Topsoil						
239.55			Clay - black, firm, moist, high plasticity - trace organic material to 0.8 m - brown below 0.8 m						
	0.5								
	1.0								
236.76	1.0								
	1.5		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing observed during or upon completion of drilling. Testhole terminated at 1.0 m. 						

Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
35					
37		0	2.8	28.7	68.5
36					

Test Hole Log for TH4

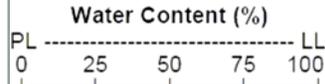
TESTHOLE TH4											
Project Name: 2010 City of Winnipeg Active Transportation Program		Date Drilled: March 15, 2010		Client: KGS Group Inc.		Depth of Testhole: 1.8 m					
Site: Living Prairie Park		Logged by: Aron Piamsalee		Testhole Location: 14 U 623961 m E, 5528285 m N		Ground Elevation: 240.22 m					
Subsurface Profile				Laboratory Testing							
Elev. (m)	Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)
				PL	25	50	75				
240.22	0.0		Ground Surface								
239.89			Topsoil								
			Clay - black, firm, moist, high plasticity - silty below 0.5 m								
237.60											
			Silt Till - tan, dry, non plastic - clayey, moist below 1.2 m - trace fine to coarse gravel below 1.5 m								
234.32											
	2.0		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing observed during or upon completion of drilling. Auger refusal at 1.8 m on suspected bedrock. 								



Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0	40.7	47.1	12.2

Test Hole Log for TH5

TESTHOLE TH5											
Project Name: 2010 City of Winnipeg Active Transportation Program Client: KGS Group Inc. Site: Living Prairie Park Testhole Location: 14 U 624010 m E, 5528258 m N				Date Drilled: March 15, 2010 Depth of Testhole: 1.0 m Logged by: Aron Piamsalee Ground Elevation: 239.71 m							
Subsurface Profile				Laboratory Testing							
Elev. (m)	Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)
				PL	25	50	75				
239.71	0.0		Ground Surface								
	0.0		Topsoil Clay - black, firm, moist, high plasticity - brown, silty below 0.8 m								
	0.5										
	1.0										
236.43	1.0		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing observed during or upon completion of drilling. Testhole terminated at 1.0 m. 								
	1.5										



Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0	11.2	18.3	70.5

Test Hole Log for TH6

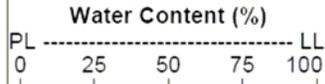
Subsurface Profile				Laboratory Testing							
Elev. (m)	Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)
				PL	LL	PL	LL				
239.76	0.0		Ground Surface								
			Topsoil Clay - black, firm, moist, high plasticity - trace organic material to 0.8 m - brown below 0.8 m								
	0.5										
236.48	1.0										
			<ul style="list-style-type: none"> No groundwater seepage or soil sloughing observed during or upon completion of drilling. Testhole terminated at 1.0 m. 								
	1.5										

TESTHOLE TH6



Project Name: 2010 City of Winnipeg Active Transportation Program
 Client: KGS Group Inc.
 Site: Living Prairie Park
 Testhole Location: 14 U 624071 m E, 5528239 m N

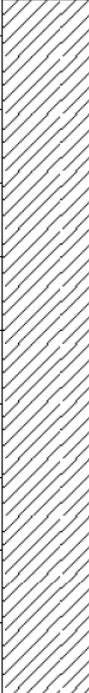
Date Drilled: March 15, 2010
 Depth of Testhole: 1.0 m
 Logged by: Aron Piamsalee
 Ground Elevation: 239.76 m



Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0	4.5	17.8	77.7

Test Hole Log for TH9

TESTHOLE TH9		
Project Name: 2010 City of Winnipeg Active Transportation Program Client: KGS Group Inc. Site: Living Prairie Park Testhole Location: 14 U 624099 m E, 5528151 m N		Date Drilled: March 15, 2010 Depth of Testhole: 1.0 m Logged by: Aron Piamsalee Ground Elevation: 239.76 m

Subsurface Profile				Laboratory Testing					
Elev. (m)	Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
				PL	LL				
				0	25	50	75	100	
239.76	0.0		Ground Surface						
239.60	0.0		Topsoil						
	0.5		Clay - black, firm, moist, high plasticity - grey to brown below 0.3 m - trace fine to coarse gravel below 0.3 m	37					
	1.0			28			0	8.9	20.6
236.48	1.0			24					
	1.5		<ul style="list-style-type: none"> • No groundwater seepage or soil sloughing observed during or upon completion of drilling. • Testhole terminated at 1.0 m. 						

