

APPENDIX 'A'

GEOTECHNICAL REPORT

16-0107-003 Corydon Avenue

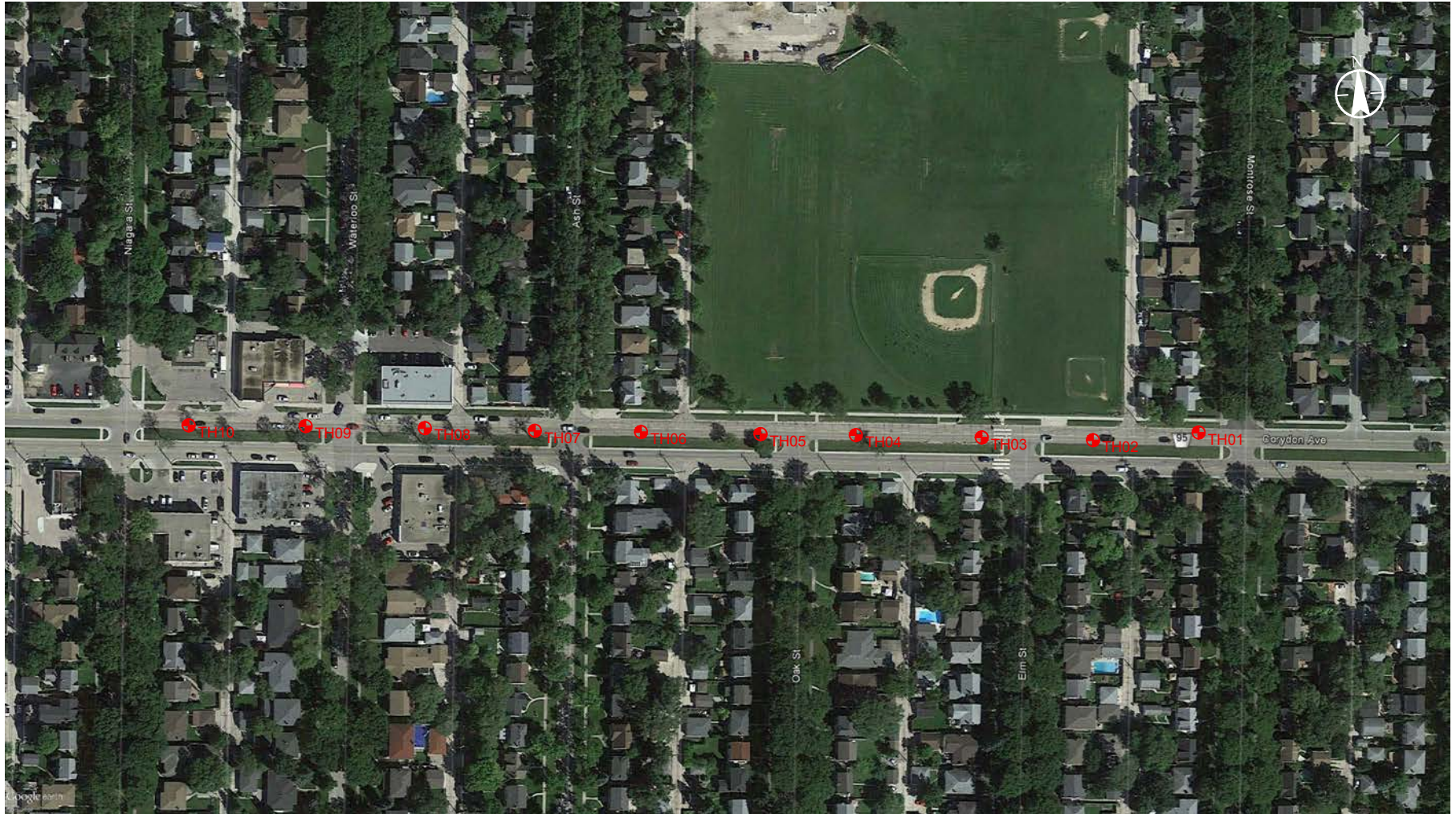
Geotechnical Investigation
Corydon Avenue Westbound
from Niagara Street to Montrose
Street



Prepared for:
KGS Group Inc.
3rd Floor – 865 Waverley Street
Winnipeg, MB
R3T 5P4

Prepared by:
Stantec Consulting Ltd.
500-311 Portage Avenue
Winnipeg, MB
R3B 2B9

April 4, 2016



ORIGINAL SHEET - ISO 8.5x11 H - v14.06

May, 2015
123312424



Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
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www.stantec.com

Legend

TESTHOLE

Notes

- IMAGE SOURCE:
GOOGLE EARTH
- CORYDON AVENUE WESTBOUND
FROM NIAGARA STREET TO
MONTROSE STREET

Client/Project

KGS GROUP INC.
16-0107-003 CORYDON AVENUE
WINNIPEG, MB

Figure No.

1

Title

TESTHOLE LOCATION PLAN

TABLE 1
16-0107-003 CORYDON AVENUE
CORYDON AVENUE WESTBOUND FROM NIAGARA STREET TO MONTROSE STREET
GEOTECHNICAL INVESTIGATION

Testhole ID	Testhole Location	Pavement Surface		Pavement Structure Material		Sample Description	Sample Depth (m)	Moisture Content (%)	Particle Size Analysis				Atterberg Limits		
		Type	Thickness (mm)	Type	Thickness (mm)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH01	Corydon Avenue Westbound 14.0 m West of Northwest corner Corydon Avenue and Montrose Street approximately 1.0 m South of North curb	Asphalt	100	-	-	Clay	0.9	42	0.0	2.0	7.1	90.9	93	26	67
		Concrete	300												
TH02	Corydon Avenue Westbound 60.0 m West of Northwest corner Corydon Avenue and Montrose Street approximately 1.5 m North of South curb	Asphalt	100	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	290												
TH03	Corydon Avenue Westbound 110.0 m West of Northwest corner Corydon Avenue and Montrose Street approximately 1.5 m North of South curb	Asphalt	65	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	205												
TH04	Corydon Avenue Westbound 160.0 m West of Northwest corner Corydon Avenue and Montrose Street approximately 1.5 m North of South curb	Asphalt	65	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	235												
TH05	Corydon Avenue Westbound 210.0 m West of Northwest corner Corydon Avenue and Montrose Street approximately 1.5 m North of South curb	Asphalt	60	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	255												
TH06	Corydon Avenue Westbound 30.0 m East of Northeast corner Corydon Avenue and Ash Street approximately 1.5 m North of South curb	Asphalt	70	-	-	Clay Fill	0.6	30	0.0	7.0	35.4	57.6	55	18	37
		Concrete	230												
TH07	Corydon Avenue Westbound 10.5 m West of Northwest corner Corydon Avenue and Ash Street 1.5 m North of South curb	Asphalt	50	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	220												
TH08	Corydon Avenue Westbound 30.0 m East of Northeast corner Corydon Avenue and Waterloo Street approximately 1.5 m North of South curb	Asphalt	50	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	225												
TH09	Corydon Avenue Westbound 10.0 m West of Northwest corner Corydon Avenue and Waterloo Street approximately 1.5 m North of South curb	Asphalt	50	-	-	Clayey Silt	0.9	21	0.0	9.9	69.2	20.9	26	17	9
		Concrete	230												
TH10	Corydon Avenue Westbound 28.0 m East of Northeast corner Corydon Avenue and Niagara Street approximately 1.5 m North of South curb	Asphalt	70	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	210												

TH01 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES		<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)		
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa		200kPa	
0	AS		Asphalt								0	
	CO		Concrete									
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X GS	35			○				2
	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X GS	37			○				
1			Particle Size Analysis at 0.9 m: 0.0% Gravel, 2.0% Sand, 7.1% Silt, 90.9% Clay	X GS	42			○				
				X GS	42			○				4
				X GS	43			○				
				X GS	48			○				6
2				X GS	52			○				
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street.									
			TESTHOLE LOCATION: 14.0 m West of Northwest corner Corydon Avenue and Montrose Street, approximately 1.0 m South of North curb.									8
			<ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Testhole terminated at a depth of 2.1 m. 									
3												10

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH02 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES		<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)			
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa		200kPa		
0	AS		Asphalt								0		
	CO		Concrete										
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X GS	33						2		
	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X GS	31							2	
1				X GS	40								
				X GS	29								4
				X GS	39								
				X GS	51								6
2				X GS	52						6		
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street.										
			TESTHOLE LOCATION: 60.0 m West of Northwest corner Corydon Avenue and Montrose Street, approximately 1.5 m North of South curb.										
			<ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Testhole terminated at a depth of 2.1 m. 										
3											10		

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH03 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)		
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa			
0	AS		Asphalt								0		
	CO		Concrete										
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X GS	32								
	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X GS	27							2	
				X GS	25								
				X GS	31								4
				X GS	35								
				X GS	46								6
2				X GS	43								
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street.										
			TESTHOLE LOCATION: 110.0 m West of Northwest Corydon Avenue and Montrose Street, approximately 1.5 m North of South curb.										
			<ul style="list-style-type: none"> • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m. 										
3											10		

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH04 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)		
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa			
0	AS		Asphalt								0		
	CO		Concrete										
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X	GS	44							
	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X	GS	42						2	
1				X	GS	35							
				X	GS	43							4
				X	GS	42							
2				X	GS	51							6
				X	GS	50							
	PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street. TESTHOLE LOCATION: 160.0 m West of Northwest corner Corydon Avenue and Montrose Street, approximately 1.5 m North of South curb. • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m.										8		
3											10		

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH05 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa	
0	AS		Asphalt								0
	CO		Concrete								
	CL ML		Soft tan CLAYEY SILT (CL-ML) - trace fine to medium sand	X GS	22						
				X GS	22						2
1				X GS	23						
	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X GS	37						4
				X GS	42						
2				X GS	40						6
				X GS	48						
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street. TESTHOLE LOCATION: 210.0 m West of Northwest corner Corydon Avenue and Montrose Street, approximately 1.5 m North of South curb. • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m.								8
3											10

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH06 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa	
0	AS		Asphalt								0
	CO		Concrete								
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X GS	31						
	FL		Particle Size Analysis at 0.6 m: 0.0% Gravel, 7.0% Sand, 35.4% Silt, 57.6% Clay	X GS	30						2
1	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X GS	33						
	CH			X GS	40						4
	CH			X GS	45						
2	CH			X GS	45						6
	CH			X GS	48						
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street.								
			TESTHOLE LOCATION: 30.0 m East of Northeast corner Corydon Avenue and Ash Street, approximately 1.5 m North of South curb.								8
			<ul style="list-style-type: none"> • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m. 								
3											10

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH07 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa	
0	AS		Asphalt								0
	CO		Concrete								
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X GS	21						
			Soft tan CLAYEY SILT (CL-ML) - trace fine to medium sand	X GS	23						2
1				X GS	22						
	CL ML			X GS	21						4
				X GS	23						
2				X GS	24						6
				X GS	24						
3			<p>PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street.</p> <p>TESTHOLE LOCATION: 10.5 m West of Northwest corner Corydon Avenue and Ash Street, approximately 1.5 m North of South curb.</p> <ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Testhole terminated at a depth of 2.1 m. 								10

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH08 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)	
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa		
0	AS		Asphalt								0	
	CO		Concrete									
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X GS	28			○				
	CH		Firm brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X GS	31			○			2	
1	CL ML		Soft tan CLAYEY SILT (CL-ML) - trace fine to medium sand	X GS	24			○			4	
				X GS	24			○			6	
2				X GS	25			○			10	
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street. TESTHOLE LOCATION: 30.0 m East of Northeast corner Corydon Avenue and Waterloo Street, approximately 1.5 m North of South curb. • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m.									8
Sample Type: GS - Grab Sample SPT - Standard Penetration Test ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough				Logged by: Sothea Bun Reviewed by: German Leal						10		

TH09 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa	
0	AS		Asphalt								0
	CO		Concrete								
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	GS	26						
	CL ML		Soft tan CLAYEY SILT (CL-ML) - trace fine to medium sand	GS	23						2
1	CL ML		Particle Size Analysis at 0.9 m: 0.0% Gravel, 9.9% Sand, 69.2% Silt, 20.9% Clay	GS	21						
	CL ML			GS	23						4
	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	GS	31						
2	CH			GS	40						6
	CH			GS	49						
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street.								
			TESTHOLE LOCATION: 10.0 m West of Northwest corner Corydon Avenue and Waterloo Street, approximately 1.5 m North of South curb.								8
			<ul style="list-style-type: none"> • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m. 								
3											10

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal



TH10 TESTHOLE RECORD

CLIENT KGS Group Inc. PROJECT No. 123312424
 PROJECT 16-0107-003 Corydon Avenue DATUM _____ NORTHING _____
 LOCATION Winnipeg, MB ELEVATION _____ EASTING _____
 DRILLING DATE March 14, 2016 DRILLING CO. Maple Leaf Drilling Ltd. DRILLING METHOD 125 mm SSA

DEPTH (m)	SOIL TYPE	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLES			<input type="checkbox"/> Insitu Shear Vane (kPa) <input type="checkbox"/> Torvane on Grab Samples (kPa) <input type="checkbox"/> Pocket Penetrometer (kPa)				DEPTH (ft)
				TYPE	NUMBER	MOISTURE CONTENT (%)	50kPa	100kPa	150kPa	200kPa	
0	AS		Asphalt								0
	CO		Concrete								
	FL		FILL: black to brown clay with trace fine to medium sand - some silt	X	GS	44					
	CL ML		Soft tan CLAYEY SILT (CL-ML) - trace fine to medium sand	X	GS	20					2
1	CH		Stiff brown fat CLAY (CH) - trace fine to coarse sand - trace silt	X	GS	31					
				X	GS	33					4
				X	GS	34					
2				X	GS	46					6
				X	GS	51					
			PROJECT LOCATION: Corydon Avenue Westbound from Niagara Street to Montrose Street. TESTHOLE LOCATION: 28.0 m East of Northeast corner Corydon Avenue and Niagara Street, approximately 1.5 m North of South curb. • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.1 m.								8
3											10

Sample Type: GS - Grab Sample SPT - Standard Penetration Test
 ST - Shelby Tube PT - Piston Tube VT - Shear Vane Test
 Piezometer Backfill Type: Bentonite Drill Cuttings Sand Slough

Logged by: Sothea Bun
 Reviewed by: German Leal





Photo 1 - TH01 Core

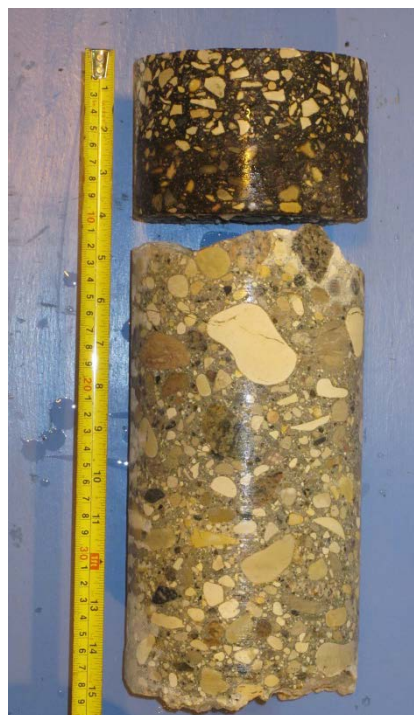


Photo 2 - TH02 Core



Photo 3 – TH03



Photo 4 – TH04



Photo 5 - TH05 Core



Photo 6 - TH06 Core



Photo 7 - TH07 Core

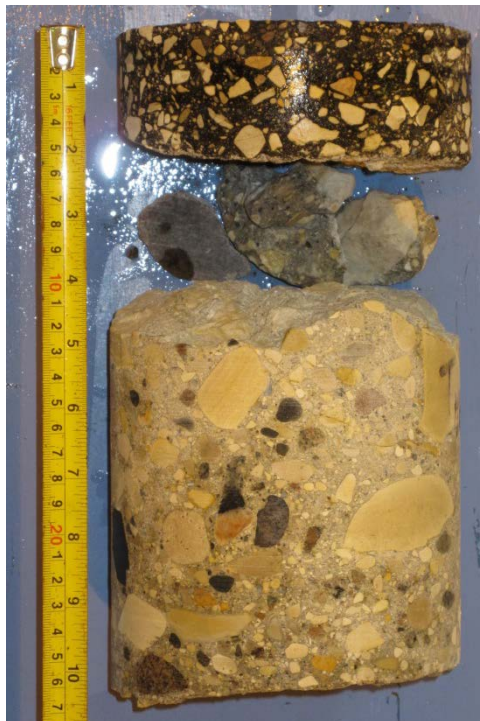


Photo 8 - TH08 Core



Photo 9 - TH09 Core



Photo 10 - TH10 Core



LABORATORY

199 Henlow Bay
 Winnipeg MB R3Y 1G4
 Tel: (204) 488-6999

**PARTICLE SIZE ANALYSIS
 ASTM D422**

KGS Group Inc.
 3rd Floor - 865 Waverley Street
 Winnipeg, Manitoba
 R3T 5P4

PROJECT: 16-0107-003 Corydon Avenue
 Corydon Avenue Westbound from
 Niagara Street to Montrose Street

Attention: Craig Rowbotham

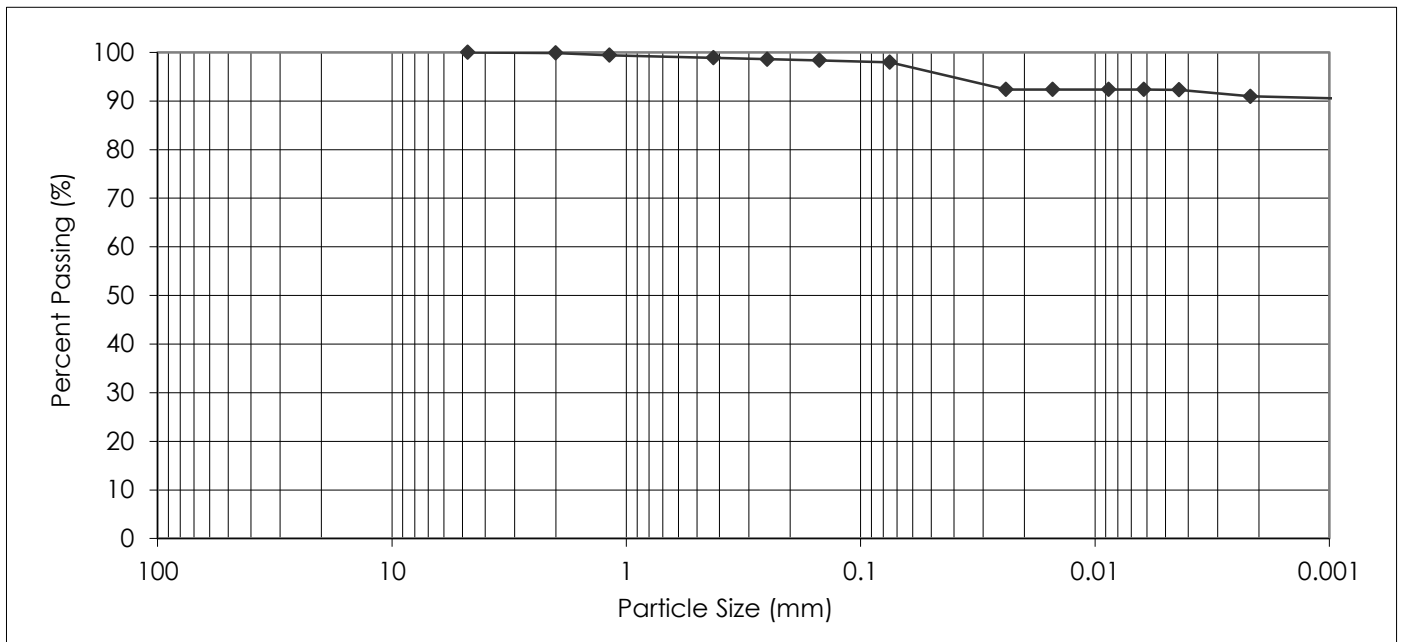
PROJECT NO.: 123312424

SAMPLED BY: Sothea Bun, C.E.T.

DATE RECEIVED: March 14, 2016

SAMPLE ID: TH01 @ 0.9 m

TESTED BY: Nestor Abarca



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	100.0
2.00 mm	99.9

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.4
0.425 mm	98.9
0.250 mm	98.6
0.150 mm	98.4
0.075 mm	98.0
0.005 mm	92.3
0.002 mm	90.9
0.001 mm	90.6

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.0	0.1	1.0	0.9	7.1	90.9	90.6

REPORT DATE: March 24, 2016



REVIEWED BY: German E. Leal, B.Sc., P. Eng.

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of the test results is provided only on written request. The data presented above is for the sole use of the client stipulated above. Stantec is not responsible, nor can be held liable, for the use of this report by any other party, with or without the knowledge of Stantec.



LABORATORY

199 Henlow Bay
 Winnipeg MB R3Y 1G4
 Tel: (204) 488-6999

**PARTICLE SIZE ANALYSIS
 ASTM D422**

KGS Group Inc.
 3rd Floor - 865 Waverley Street
 Winnipeg, Manitoba
 R3T 5P4

PROJECT: 16-0107-003 Corydon Avenue
 Corydon Avenue Westbound from
 Niagara Street to Montrose Street

Attention: Craig Rowbotham

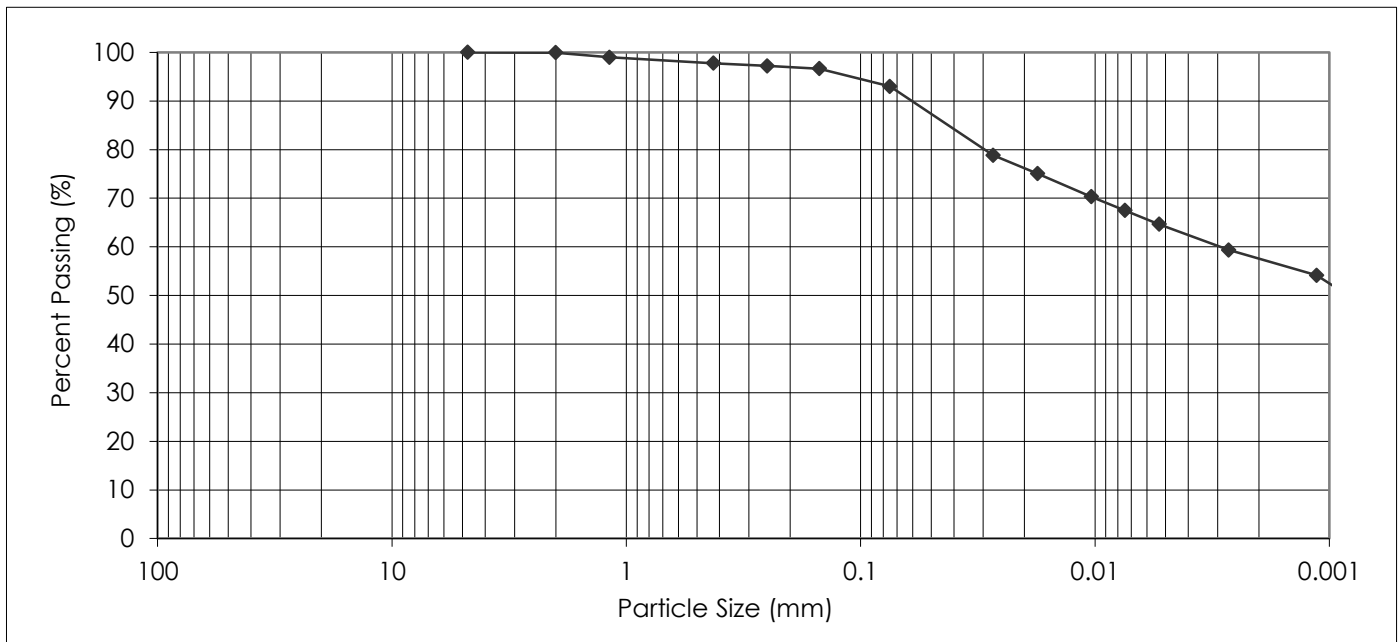
PROJECT NO.: 123312424

SAMPLED BY: Sothea Bun, C.E.T.

DATE RECEIVED: March 14, 2016

SAMPLE ID: TH06 @ 0.6 m

TESTED BY: Nestor Abarca



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	100.0
2.00 mm	100.0

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.0
0.425 mm	97.8
0.250 mm	97.2
0.150 mm	96.7
0.075 mm	93.0
0.005 mm	64.2
0.002 mm	57.6
0.001 mm	52.5

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.0	0.0	2.2	4.8	35.4	57.6	52.5

REPORT DATE: March 24, 2016



REVIEWED BY: German E. Leal, B.Sc., P. Eng.

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of the test results is provided only on written request. The data presented above is for the sole use of the client stipulated above. Stantec is not responsible, nor can be held liable, for the use of this report by any other party, with or without the knowledge of Stantec.



LABORATORY

199 Henlow Bay
 Winnipeg MB R3Y 1G4
 Tel: (204) 488-6999

**PARTICLE SIZE ANALYSIS
 ASTM D422**

KGS Group Inc.
 3rd Floor - 865 Waverley Street
 Winnipeg, Manitoba
 R3T 5P4

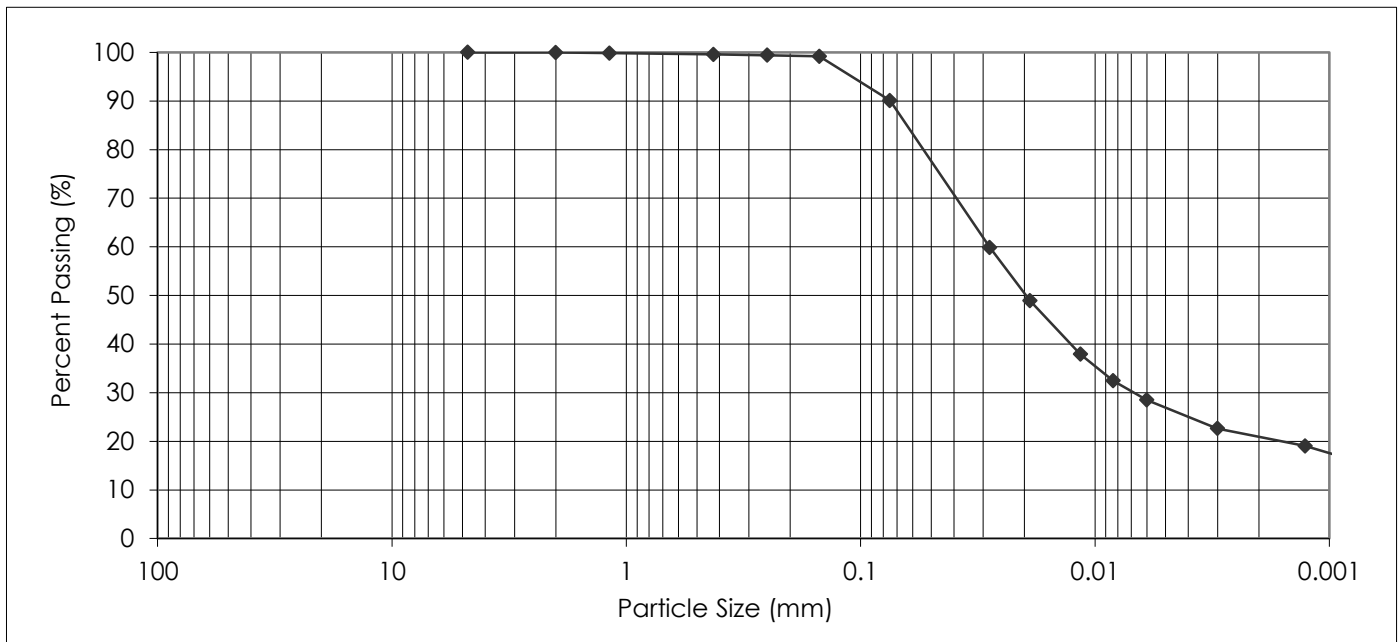
PROJECT: 16-0107-003 Corydon Avenue
 Corydon Avenue Westbound from
 Niagara Street to Montrose Street

Attention: Craig Rowbotham

PROJECT NO.: 123312424

SAMPLED BY: Sothea Bun, C.E.T.
 SAMPLE ID: TH09 @ 0.9 m

DATE RECEIVED: March 14, 2016
 TESTED BY: Nestor Abarca



PARTICLE SIZE		PERCENT PASSING		PARTICLE SIZE		PERCENT PASSING	
37.50 mm		100.0		1.18 mm		99.8	
25.00 mm		100.0		0.425 mm		99.6	
19.00 mm		100.0		0.250 mm		99.4	
16.00 mm		100.0		0.150 mm		99.2	
12.50 mm		100.0		0.075 mm		90.1	
9.50 mm		100.0		0.005 mm		26.9	
4.75 mm		100.0		0.002 mm		20.9	
2.00 mm		100.0		0.001 mm		17.6	
Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm	
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm				
0.0	0.0	0.4	9.5	69.2	20.9	17.6	

REPORT DATE: March 24, 2016



REVIEWED BY: German E. Leal, B.Sc., P. Eng.

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