# **APPENDIX 'A'**

# **GEOTECHNICAL REPORT**

# **APPENDIX 'A' - GEOTECHNICAL REPORT**

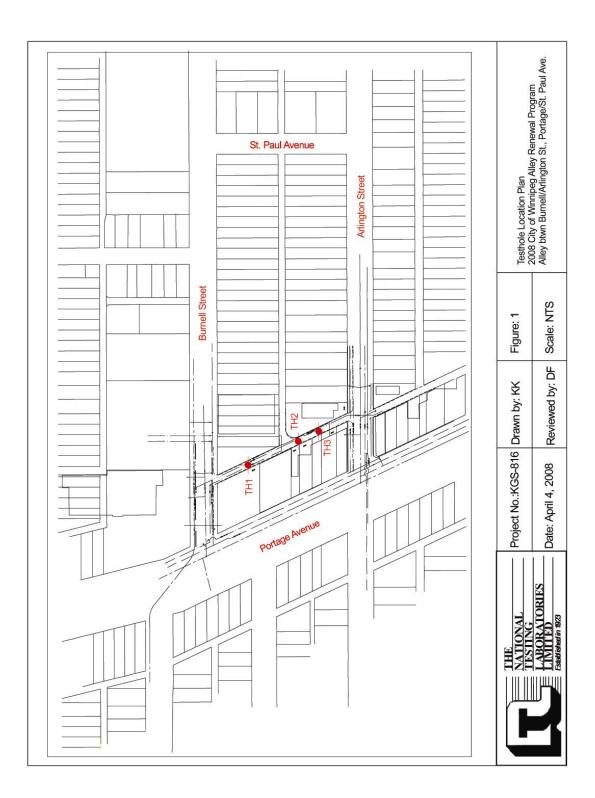
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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown

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 Portage Avenue North Alley

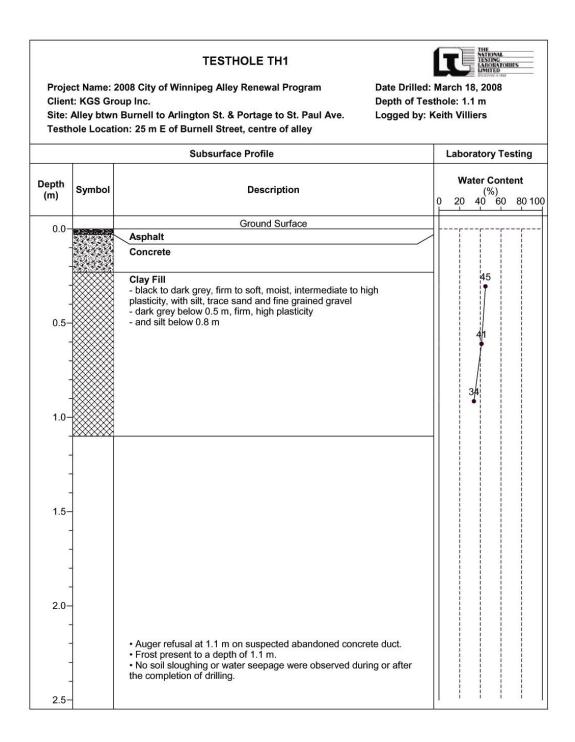
## **Test Hole Locations**



# **Summary of Core Samples**

#### Site 1 - South Contract 2008 City of Winnipeg Alley Renewal Program Burnell Street to Arlington Street / Portage Avenue to St. Paul Avenue

Teathele		Paveme	nt Surface	Pavement	Pavement Structure Material		Sample Sample M	Moisture	Particle Size Analysis				Atterberg Limits		
Testhole ID	Testhole Location	Туре	Thickness (mm)	Туре	Thickness (mm)			Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH1	25 m E of Burnell Street, centre of alley	Asphalt / Concrete	25 / 190	N/A	N/A	N/A	N/A	a,	5		8	ē		1	3
TH2	In line with property line of 893/899 Portage Avenue, centre of alley	Concrete	190	N/A	N/A	Clay Fill	0.9	41	0.0	5.8	20.8	73.4	72	23	49
тнз	6 m E of the property line of 893/885 Portage Avenue, centre of alley	Concrete	210	N/A	N/A	N/A	N/A			620	4	-			



		TESTHOLE TH2			Ĩ	I		DNAL ING HRATORIES TED					
Project Name: 2008 City of Winnipeg Alley Renewal Program       Date Drilled: March 18, 2008         Client: KGS Group Inc.       Depth of Testhole: 1.1 m         Site: Alley btwn Burnell to Arlington St. & Portage to St. Paul Ave.       Logged by: Keith Villiers         Testhole Location: In line with the property line of 893/899 Portage Avenue, centre of alley													
		Subsurface Profile	Laboratory Testing										
Depth (m)	Symbol	Description	<b>Wate</b> PL 0 25	r Conte	nt (%) LL 75 100	Gravel (%)	Sand (%)	Silt (%)	Clay (%)				
0.0-		Ground Surface Concrete											
0.5-		Clay Fill - black to dark grey, stiff, moist, high plasticity, with sand and fine grained gravel - trace sand and gravel below 0.5 m, some silt - grey below 1.0 m, firm, with silt	22	88 41	T	0.0	5.8	20.8	73.4				
1.5-				411 •									
2.0-		<ul> <li>Auger refusal at 1.1 m on suspected abandoned concrete duct.</li> <li>Frost present to a depth of 0.9 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>											

		TESTHOLE TH3	IT IN ALL ISTING
Proie	ct Name:	2008 City of Winnipeg Alley Renewal Program Date Drilled	d: March 18, 2008
	t: KGS Gr		esthole: 0.8 m
		The second s	Keith Villiers
		tion: 6 m E of property line of 893/885 Portage Avenue, centre of alley	
1630		tion. Office of property line of 030,000 Portage Avenue, centre of alley	
		Subsurface Profile	Laboratory Testing
Depth (m)	Symbol	Description	Water Content (%) 0 20 40 60 80 100
		0 20 40 60 80 100	
0.0		Ground Surface	
0.0-		Concrete	
0.5-		- black to dark grey, stiff, moist, high plasticity, some sand and fine grained gravel - trace sand and gravel below 0.5 m	
			\$7
1.0-	-		
	-		
1.5-	-		
	-		
	4		
2.0-			
	-	<ul> <li>Auger refusal at 0.8 m on suspected abandoned concrete duct.</li> <li>Frost present to a depth of 0.8 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>	
2.5-	-		

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# **Pavement Core Photos**



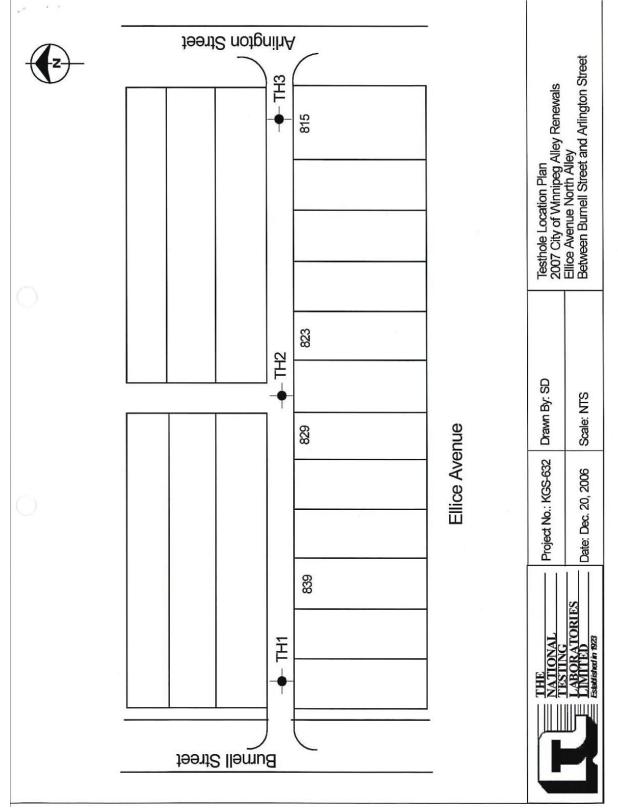




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# **Geotechnical Report for Ellice Avenue North Alley**

#### **Test Hole Locations**



# **Summary of Core Samples**

#### 2007 City of Winnipeg Alley Renewals Geotechnical Investigation Ellice Avenue North Alley Burnell Street to Arlington Street

		Pavement Surface		Pavement Structure Material			Sample	Moisture		Particle St	ze Analysis	2	Atterberg Limits		
Testhole ID	Testhole Location	Туре	Thickness (mm)	Туре	Thickness (mm)	Sample Description	Depth (m)	Content (%)	Gravel (%)	Sand (%)	Siit (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH1	1.5 m W of E property line of 835 Ellice Ave. N., 1.5 m N of S side of lane	Concrete	180	N/A		Clayey Silt	1.2	24.4	0.0	5.7	69.7	24.6	28	16	12
TH2	2.7 m E of W property line of 544 Arlington St., 1.6 m N of S side of lane	Asphalt/Concrete	20/150	Granular	50	Clay	0.9	40.1	0.0	0.6	8.0	91.4	103	27	76
тнз	15.5 m W of E property line of 544 Arlington St., 2.7 m S of N side of lane	Concrete	145	N/A		N/A		4				•			

Clie Site	nt: KGS ( : Ellice A	ve. N. Alley between Burnell St. to Arling	Is Date Drilled: December 7, 2006 Depth of Testhole: 2.1 m									
		Subsurface Profile	Laboratory Testing									
Depth (m)	Symbol	Description	Moisture Cor PL 0 25 50	ntent (%) 	Gravel (%)	Sand (%)	Silt (%)	Clay (%)				
0.0-	7:67:67.7:	Ground Surface Concrete										
0.5-		Clay Fill - black, moist, stiff, high plasticity, trace sand, trace fine grained gravel Clayey Silt - tan, moist, soft to firm, low plasticity			0.0	5.7	69.7	24				
1.5- - 2.0-		Clay - brown, moist, stiff, high plasticity End of testhole at 2.1 m below grade. No water seepage or soil sloughing were observed during or after the completion										

		TESTHOLE TH	2				I		HE ATIONA ESTING ABORAT IMITED Indiffaction 182	L ORIES			
	ject Name nt: KGS (	: 2007 City of Winnipeg Alley Renewals Group	Depth of Testhole: 2.1 m										
		ve. N. Alley between Burnell St. to Arlingt											
		ation: 2.7 m E of W property line of 544 A											
		Subsurface Profile	Laboratory Testing										
Depth (m)	Symbol	Description	PL.	Moistu 25	ire Con 50	Gravel (%)	Sand (%)	Silt (%)	Clay (%)				
		Ground Surface						-			-		
0.0-		Asphalt	1-										
-	0.4 0 4 5 0 1 0	Concrete		1		ł							
	20029	Granular Fill	-11	1	1	1							
)	7.7.77	- 50 mm maximum size	1		1	1							
_		Clay Fill - black/grey, moist, stiff, high plasticity, trace sand, trace fine grained gravel		Ī	1	1							
0.5-		Clay - brown, moist, stiff, high plasticity, varved with silt to 0.8 m											
-						1		0.0	0.6	8.0	91.4		
1.0-				/									
	-	Clayey Silt - tan, moist, firm, low plasticity, varved with clay		Í									
ノヨ				1		1							
1.5-		Clay - brown, moist, stiff, high plasticity											
				•									
2.0-													
		End of testhole at 2.1 m below grade.		1									
		No water seepage or soil sloughing were observed during or after the completion of drilling,											

Clie Site	ject Name: ent: KGS G e: Ellice Ave thole Loca	te Drilled: December 7, 2006 epth of Testhole: 2.1 m ggged by: Kurtis Kulchyski .7 m S of the N side of the lane	
		Subsurface Profile	Laboratory Testing
Depth	Symbol	Description	Water Content           (%)           0         20         40         60         80         100
0.0-		Ground Surface	
-	10 a 10 a 10	Concrete	
0.5-		Clay - black/grey, wet, soft, high plasticity - brown below 0.5 m, moist, firm	
1.0-			
1.5-		Clayey Silt - tan, moist to wet, soft, low plasticity	
2.0-		Clay - brown, moist, stiff, high plasticity	
2.5	-	End of testhole at 2.1 m below grade. No water seepage or soil sloughing were observed during or completion of drilling,	after the

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## **Pavement Core Photos**

ar 1 - 1 - 1

2007 City of Winnipeg Alley Renewals Ellice Avenue North Alley Burnell Street to Arlington Street



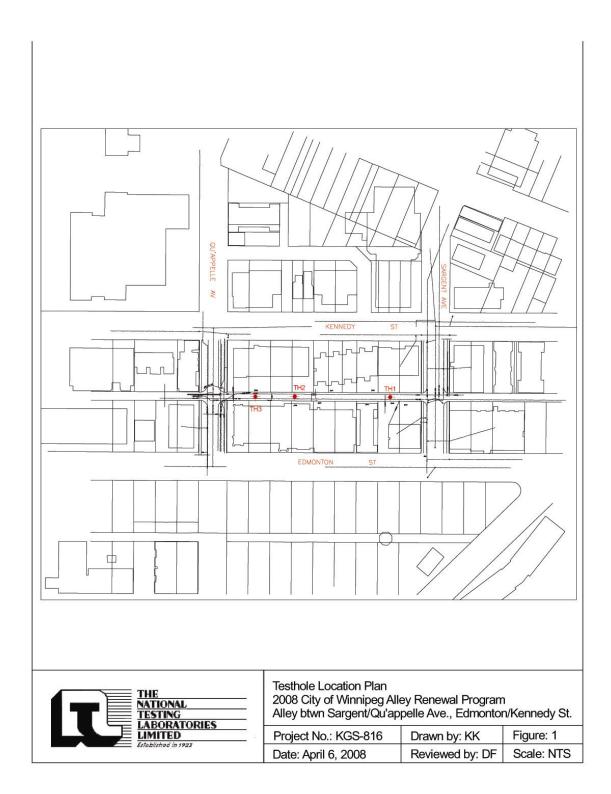






# Geotechnical Report for Kennedy Street / Edmonton Street Alley

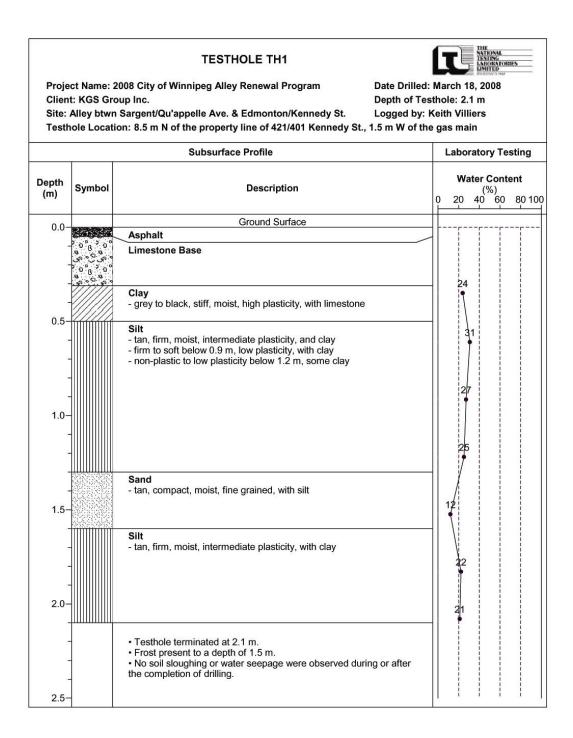
#### **Test Hole Locations**



# **Summary of Core Samples**

#### Site 2 - South Contract 2008 City of Winnipeg Alley Renewal Program Sargent Avenue to Qu'appelle Avenue / Edmonton Street to Kennedy Street

Margaret and a		Paveme	nt Surface	Pavement :	Pavement Structure Material		Sample Sample M	Moisture	Particle Size Analysis				Atterberg Limits		
Testhole ID	Testhole Location	Туре	Thickness (mm)	Туре	Thickness (mm)	Description Dep	Depth (m)	Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH1	8.5 m N of the property line of 421/401 Kennedy St., 1.5 m W of the gas main	Asphalt	50	Limestone	260	N/A	N/A	1	5	1071	÷	ē		<u>ت</u>	19
TH2	13 m S of the property line of 401/393 Kennedy St., 1.5 m W of the gas main	Asphalt / Concrete	50/160	Limestone	100	Clay	0.9	35	0.0	20.8	24.5	54.7	64	17	47
тнз	19 m N of the S property line of 393 Kennedy St., 1.5 m W of the gas main	Asphalt / Concrete	60/110	Limestone	140	N/A	N/A	ц.	-	620	-		1.0		-



		TESTHOLE TH2						I	LABO	INAL ING RATORIES TED	=		
Clien Site:	t: KGS Gro Alley btwr	2008 City of Winnipeg Alley Renewal Pro oup Inc. n Sargent/Qu'appelle Ave. & Edmonton// ion: 13 m S of the property line of 401/39	Cenne	edy St.	1	Date Dr Depth o Loggeo 5 m W o	of Test I by: K	hole: : eith V	2.1 m illiers	08			
		Subsurface Profile	Laboratory Testing										
Depth (m)	Symbol	Description	PL - 0	Wate	er Con	tent (%	) LL 110	Gravel (%)	Sand (%)	Silt (%)	Clay (%)		
0.0-		Ground Surface											
0.0-		Asphalt	7		ļ								
	S. 19	Concrete											
	, 0° 6, 0°	Limestone Base		3	5	-							
0.5-		Clay - black, stiff, moist, high plasticity - dark grey below 0.8 m, firm, with sand and silt layers		3	42	тт		0.0	20.8	24.5	54.		
1.0-		Silt - tan, firm to soft, moist, low plasticity, some clay		25									
2.0-		Clay - brown, stiff, moist, high plasticity, some silt layers		32	89								
	-	<ul> <li>Testhole terminated at 2.1 m.</li> <li>Frost present to a depth of 1.5 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>		•									

			-							
		TESTHOLE TH3	L	L	LABO LABO	INAL ING IRATORI TED	B			
Proje	ect Name:	2008 City of Winnipeg Alley Renewal Program Date Drilled	I: Ma	arch 1	8, 20	08				
Clien	t: KGS Gr	oup Inc. Depth of Te	sthe	ole: 1.	.1 m					
Site:	Alley btw	n Sargent/Qu'appelle Ave. & Edmonton/Kennedy St. Logged by:	Kei	th Vil	liers					
Test	nole Locat	tion: 19 m N of S property line of 393 Kennedy St., 1.5 m W of the gas	mai	n						
		Subsurface Profile		Labo	rator	y Tes	sting			
Depth (m)	Symbol	Description	Water Content (%) 0 20 40 60 801							
()				20	40	60	80 100			
0.0-		Ground Surface								
0.0		Asphalt								
15	52.62	Concrete			1	-				
	20°8'00 8008 8008	Limestone Base		13						
0.5-		Clay Fill - brown, stiff, moist, high plasticity, trace sand and gravel - brown to grey below 0.5 m, soft, intermediate plasticity, with silt		3	39					
1.0-		Silt Fill - tan, soft, low plasticity, with clay		2	В					
8	-									
5	-					1				
8	-					į.				
1.5-					1					
					1	ł				
	1				ł	ł				
1	-				1	1				
5	-				ł	1				
	4				-	1				
2.0-						1				
2.0-				ł	1	ł				
	1				ł	1				
8	-	Auger refusal at 1.1 m on a suspected abandoned concrete duct.			ł	1				
	-	<ul> <li>Frost present to a depth of 1.1 m.</li> <li>No soil sloughing or water seepage were observed during or after</li> </ul>				-				
	4	the completion of drilling.		!	1	1				
2.5-					-	1				
2.0-			1.4							

# **Pavement Core Photos**

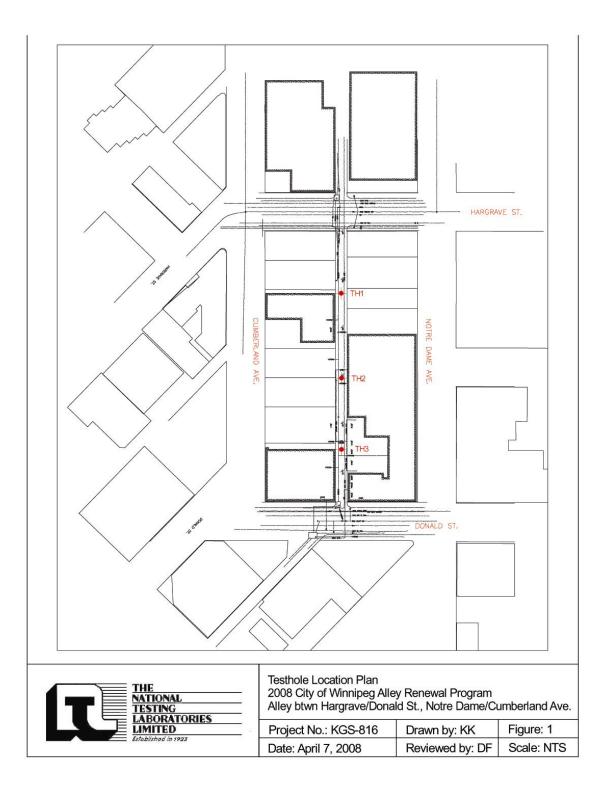






# Geotechnical Report for Notre Dame Avenue / Cumberland Avenue Alley

#### **Test Hole Locations**



# **Summary of Core Samples**

#### Site 3 - South Contract 2008 City of Winnipeg Alley Renewal Program Hargrave Street to Donald Street / Notre Dame to Cumberland Avenue

Margaret and a		Pavement Surface Pavement		Pavement :	Structure Material	Committee .	Sample	Moisture	Particle Size Analysis				Atterberg Limits		
Testhole ID	Testhole Location	Туре	Thickness (mm)	Туре	Thickness (mm)	Sample Description	Depth (m)	Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH1	35 m E of the E curb of Hargrave Street, center of the alley	Asphalt	130	Limestone	180	N/A	N/A	1	2	1071	÷	ē		<u>ت</u>	
TH2	79 m E of the E curb of Hargrave Street, center of the alley	Asphalt / Concrete	40 / 130	Limestone	140	Silty Clay	0.9	48	0.0	4.9	33.1	62.0	54	19	35
тнз	30 m W of the W curb of Donald Street, center of the alley	Asphalt	150	Limestone	160	N/A	N/A	u.		12	-	•	-		

		TESTHOLE TH1	LABORATORIES
Proje	ct Name:	2008 City of Winnipeg Alley Renewal Program Date Drill	ed: March 18, 2008
Clien	t: KGS Gr	roup Inc. Depth of	Testhole: 0.5 m
Site:	Alley btw	n Hargrave/Donald St., Notre Dame/Cumberland Ave. Logged b	oy: Keith Villiers
Testh	nole Locat	tion: 35 m E of the E curb of Hargrave St., centre of the alley	
		Subsurface Profile	Laboratory Testing
Depth	Symbol	Description	Water Content
(m)	- Cymbol	Description	(%) 0 20 40 60 80 100
17. 17. (19. (19. (19. (19. (19. (19. (19. (19		Ground Surface	
0.0-	20032	Asphalt	
17			
	20'6'0'	Limestone Base	
	مى 2 مى		28
		Clay Fill	
6		- brown, stiff, moist, high plasticity, trace sand and gravel	27
0.5-			
	1		
	-		
	4		
10			
1.0-	1		
	1		
	4		
8	1		
1.5-	-		
	4		
-	1		
8	-		
2.0-	4		
	1		
6	1	Auger refusal at 0.5 m on a suspected abandoned concrete duct.	
	-	<ul> <li>Frost present to testhole depth.</li> <li>No soil sloughing or water seepage were observed during or after</li> </ul>	
		the completion of drilling.	
		and Store	
2.5-	1		

Clien Site:	t: KGS Gr Alley btwr	TESTHOLE TH2 2008 City of Winnipeg Alley Renewal Pro oup Inc. h Hargrave/Donald St., Notre Dame/Cumb ion: 79 m E of the E curb of Hargrave St. Subsurface Profile	erla	nd Ave.	Dej Log	te Drill pth of gged b aborat	Test y: K	hole: 2 eith Vi	2.1 m Iliers	DAAL ING ARATORIES TED OCTATE 08	
Depth (m)	Symbol	Description	PL - 0	Water C		nt (%)	LL 100	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0-		Ground Surface Asphalt Concrete						-			
0.5-		Limestone Base Clay Fill - brown, stiff, moist, high plasticity, trace sand and gravel Silty Clay - brown, stiff, moist, high plasticity, trace sand	-	37				0.0	4.9	33.1	62.0
1.0- - - - 1.5- -		Silt - tan, soft, moist, low plasticity, with clay Clay - light brown, firm, moist, intermediate plasticity, with silt layers - intermediate to high plasticity below 1.7 m, trace silt	-	28							
- - 2.0-		Silt - tan, soft, moist, low plasticity, with clay		38 30							
- - 2.5-	-	<ul> <li>Testhole terminated at 2.1 m.</li> <li>Frost present to a depth of 1.5 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>									

		Hargrave/Donald St., Notre Dame/Cumberland Ave. Logged by on: 30 m W of the W curb of Donald St., centre of the alley	esthole: 2.1 m : Keith Villiers
		Subsurface Profile	Laboratory Testing
Depth (m)	Symbol	Description	Water Content (%) 0 20 40 60 80 10
		Ground Surface	
0.0-		Asphalt	
-	° دی می در می	Limestone Base	28
0.5-		Clay Fill - dark brown to grey, stiff, moist, high plasticity, with sand and fine grained gravel	31
- - - 1.0- - -		Clay - black to grey, firm, moist, intermediate to high plasticity, with silt inclusions - grey below 0.9 m, with silt layers and silt inclusions - light brown below 1.2 m - and silt layers below 1.5 m - brown below 1.8 m, stiff, high plasticity, trace silt layers	30
- - 1.5 -			31
- 2.0-			29
-		<ul> <li>Testhole terminated at 2.1 m.</li> <li>Frost present to a depth of 1.5 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>	

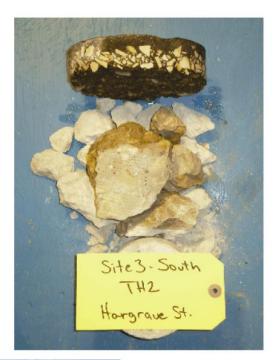
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## **Pavement Core Photos**





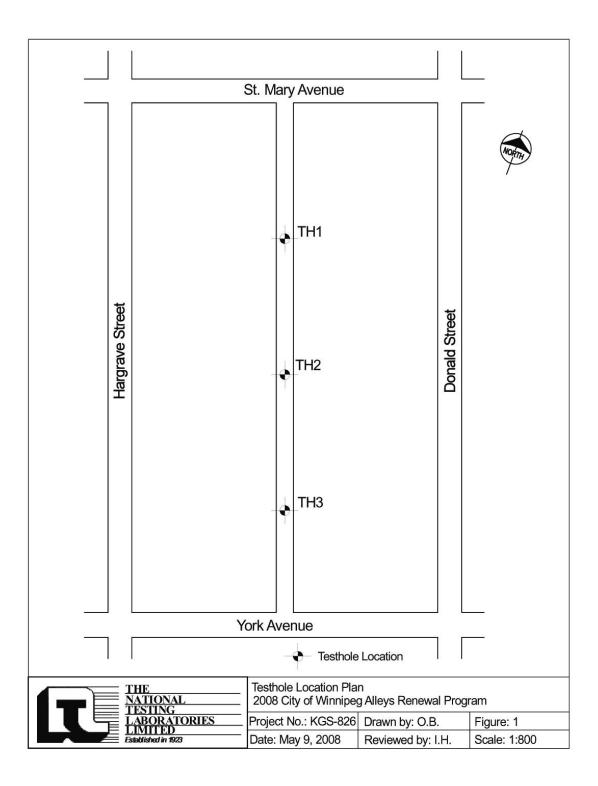






# Geotechnical Report for Hargrave Street / Donald Street Alley

#### **Test Hole Locations**



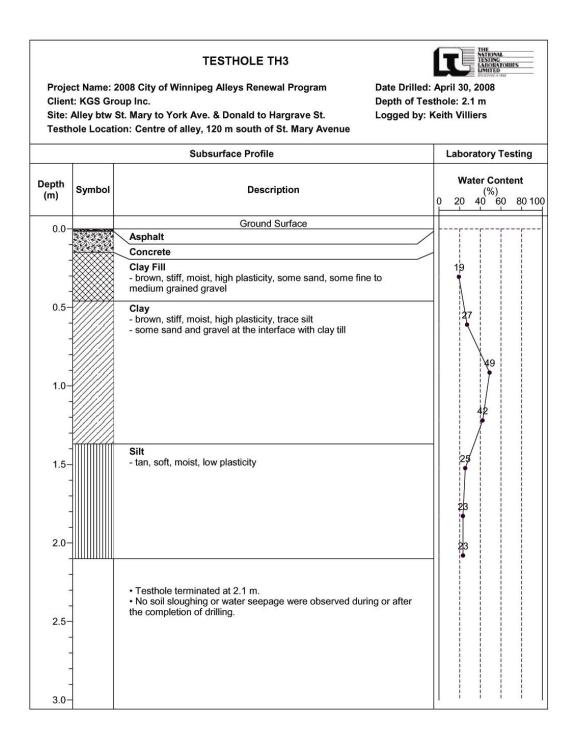
# **Summary of Core Samples**

#### 2008 City of Winnipeg Alley Renewal Program Alley between St. Mary to York Avenue & Donald to Hargrave Street

T		Pavement Surface		Pavement	Structure Material	6	Sample	Moisture	Pa	ticle Size	Analys	lis .	Atterberg Limits		
Testhole ID	Testhole Location	Туре	Thickness (mm)	Туре	Thickness (mm)	Sample Description	Depth (m)	Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
	Centre of alley, 40 m south of St. Mary Avenue	Concrete	140	N/A	N/A	Clay	1.5	33	0.0	1.3	26.9	71.8	89	27	62
	Centre of alley, 80 m south of St. Mary Avenue	Asphalt / Concrete	100/145	N/A	N/A	Clayey Silt	1.5	27	0.0	4.6	62.7	32.7	31	17	14
	Centre of alley, 120 m south of St. Mary Avenue	Asphalt / Concrete	15/135	N/A	N/A	N/A	N/A	-	~			ā.	-	(u)	

Clien Site:	t: KGS Gr Alley betw	veen St. Mary to York Ave. and Donald to ion: Centre of alley, 40 m south of St. Ma	Har	grave St.	D Lo	ate Dril epth of ogged I	Test by: K	hole: 2 eith Vi	2.1 m Illiers	NAL ING INATORIES IED 8		
	1 1	Subsurface Profile	Laboratory Testin							3		
Depth (m)	Symbol	Description	PL · 0	Water 25	50	ent (%) 75	LL 100	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	
0.0-		Ground Surface										
0.0		Concrete										
0.5-		Clay Fill - brown, stiff, moist, high plasticity, some sand, some fine to medium grained gravel		17								
1.0-		Clay - brown, stiff, moist, high plasticity, trace tree rootlets - some silt below 1.5 m		34	45							
1.5-		Silt		33			-	0.0	1.3	26.9	71.8	
2.0-	-	- tan, soft, moist, low plasticity - and clay below 1.8 m		24	41 •							
- 2.5- -		<ul> <li>Testhole terminated at 2.1 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>										
3.0-	-											

TESTHOLE TH2       Date Drilled: April 30, 2008         Client: KGS Group Inc.       Site: Alley between St. Mary to York Ave. and Donald to Hargrave St.       Date Drilled: April 30, 2008         Site: Alley between St. Mary to York Ave. and Donald to Hargrave St.       Laboratory Testinole: 2.1 m       Logged by: Keith Villiers         Subsurface Profile       Laboratory Testing       Logged by: Keith Villiers       Verter Content (%)       (%) <t< th=""></t<>											
		Subsurface Profile				Labora	tory	Testin	9		
	Symbol	Description						Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0-		Asphalt									
0.5- -		<ul> <li>brown, stiff, moist, high plasticity, some sand, some fine to medium grained gravel</li> <li>Clay</li> <li>brown, stiff, moist, high plasticity, trace</li> </ul>			0						
- 1.0- -		Clayey Silt - tan, soft, moist, low plasticity, some		35							
1.5- - -	-			27				0.0	4.6	62.7	32.7
2.0-				25							
- 2.5- -		<ul> <li>Testhole terminated at 2.1 m.</li> <li>No soil sloughing or water seepage were observed during or after the completion of drilling.</li> </ul>									
3.0-	-										



# **Pavement Core Photos**







Core sample from Testhole TH1



Core sample from Testhole TH2

The City of Winnipeg Bid Opportunity No. 457-2008 Template Version: C420080317

# **Pavement Core Photos**

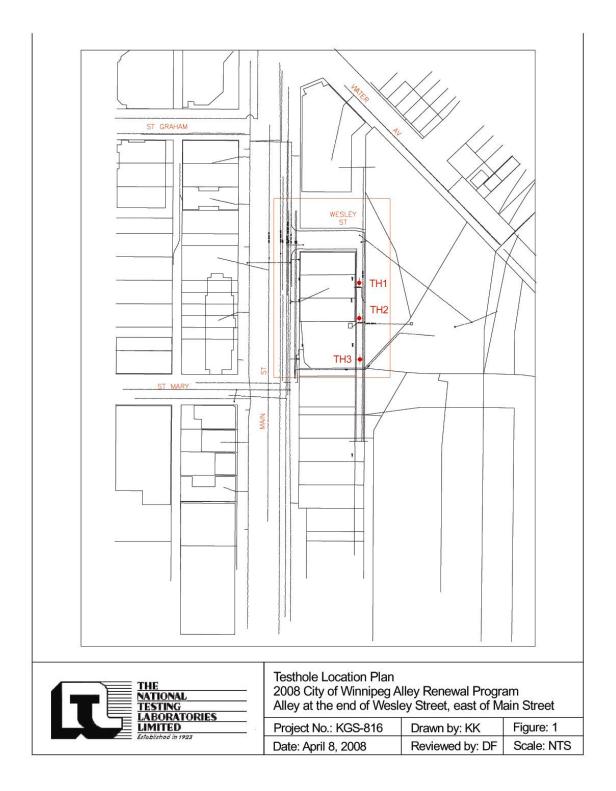




Core sample from Testhole TH3

# Geotechnical Report for Main Street East Alley at Wesley Avenue

#### **Test Hole Locations**

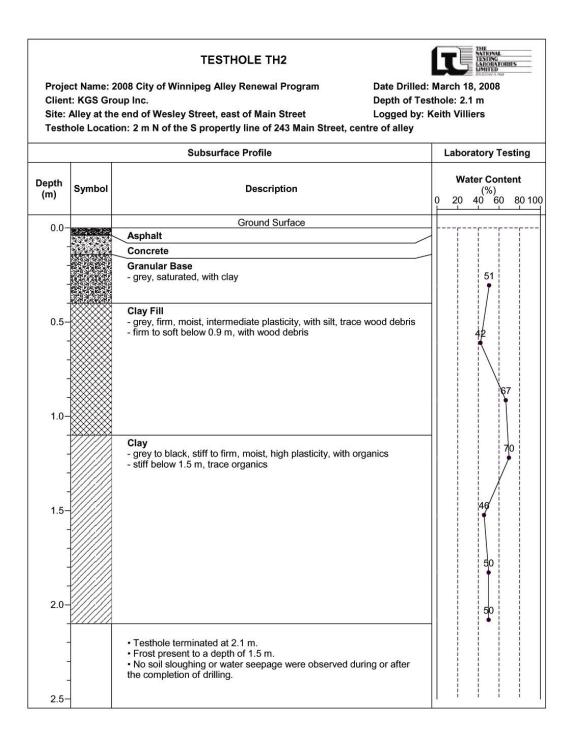


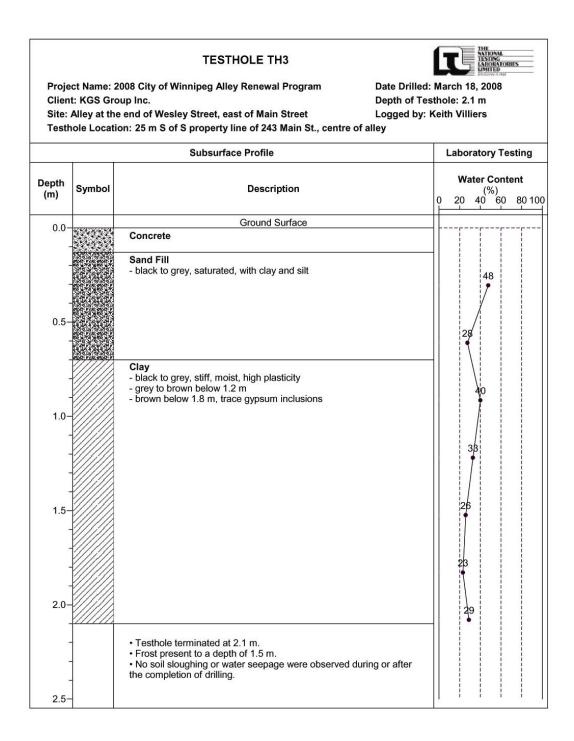
# **Summary of Core Samples**

#### Site 5 - South Contract 2008 City of Winnipeg Alley Renewal Program Alley at the end of Wesley Street, east of Main Street

		Paveme	nt Surface	Pavement S	tructure Material	Female	Sample	Moisture	Par	ticle Size	Analy:	sis	A	tterberg L	imits
Testhole ID	Testhole Location	hole Location Type Thickness (mm) Type Thickness (mm		Thickness (mm)	Sample Description	Depth (m)	Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index	
	21 m S of the N property line of 245 Main	Asphalt /	55/105	N/A	NA	Clay Fill	0.9	38	0.0	11.4	26.3	62.3	70	27	43
	Street, 1.6 m E of the W side of alley	Concrete	te 35/105	NIA	6/4	Silty Clay	2.1	36	0.0	4.3	49.7	46.0	44	17	27
TH2	2 m N of the S property line of 243 Main Street, centre of alley	Asphalt / Concrete	35/100	Granular Base	165	N/A	N/A		•				•		
тнз	25 m S of the S property line of 243 Main Street, centre of alley	Concrete	130	N/A	N/A	N/A	N/A				2	-	270	270	~

Clien Site:	t: KGS Gr Alley at th	TESTHOLE TH1 2008 City of Winnipeg Alley Renewal Pro oup Inc. e end of Wesley Street, east of Main Str ion: 21 m S of the N property line of 245	eet		D	ate Dri epth of ogged E of W	f Test by: K	hole: 2 eith Vi	2.1 m illiers	INAL ING RATORIES ED 08	
		Subsurface Profile			1	Labora	tory 1	restin	g		
Depth (m)	Symbol	Description	PL - 0						Sand (%)	Silt (%)	Clay (%)
0.0-		Ground Surface									
0.0-		Asphalt									
		Concrete									
		Sand Fill - black to grey, loose, saturated, with clay and silt		34							
0.5-		Clay Fill - grey to brown, stiff, moist, high plasticity, trace sand and fine grained gravel, trace wood debris - black to grey below 0.9 m, with silt, some sand			40						
1.0-				3	8	1		0.0	11.4	26.3	62
1.5-	-	Clayey Silt - tan, firm to soft, moist, low to intermediate plasticity, and clay		33							
2.0-		Silty Clay - light brown, firm to soft, moist, intermediate plasticity, and silt • Testhole terminated at 2.1 m. • Frost present to a depth of 1.5 m. • No soil sloughing or water seepage		33	6			0.0	4.3	49.7	46





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# **Pavement Core Photos**







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