

## **APPENDIX A**

### **TEST HOLE LOGS**

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-31
LOCATION: On Portage, 2.0 m South of North Curb, 12.0 m West of West Property Line Mount Royal Crescent		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 235.751
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		CONCRETE AND ASPHALT				
0 - 1		GRANULAR FILL - sand, gravel - granular base and sub-base intermixed				235
1 - 1.5		CLAY FILL - organics, trace roots - black				234
1.5 - 6.4		CLAY - silty - trace silt inclusions 10 mm diameter - brown - moist, firm - high plasticity				233
3.8 - 6.4		- till inclusions below 3.8 m	<input checked="" type="checkbox"/>	6G1		232
			<input checked="" type="checkbox"/>	6G2		231
			<input checked="" type="checkbox"/>	6G3		230
6.4 - 7.6		SILT TILL - tan/brown - damp, loose  - with cobbles below 6.4 m				229
			<input checked="" type="checkbox"/>	6G4		228
			<input checked="" type="checkbox"/>	6G5		227
7.6 - 8.0		END OF TEST HOLE AT 7.6 m IN TILL. SLOUGHING TO 7.0 m AT COMPLETION OF DRILLING.				

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA GDT 30/3/04



LOGGED BY: Darryl Schmidt	COMPLETION DEPTH: 7.62 m
REVIEWED BY: Darryl Schmidt	COMPLETION DATE: 27/2/04
PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-32
LOCATION: On Portage, 1.5 m South of North Curb, 112 m East of Centre Line Trail Ave.		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 234.949

SAMPLE TYPE  GRAB     SHELBY TUBE     SPLIT SPOON     BULK     NO RECOVERY     CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		CONCRETE AND ASPHALT				
		SAND FILL - tan				
1		CLAY - silty - trace silt inclusions 10 mm diameter - brown - moist, firm to soft - high plasticity	<input checked="" type="checkbox"/>	7G6		234
2		SILT - tan, damp, loose				233
		CLAY - silty - trace silt inclusions 10 mm diameter - brown - moist, firm to soft - high plasticity	<input checked="" type="checkbox"/>	7G7		232
4		TRANSITION TO SILT TILL - light brown - moist to wet, soft				231
5		SILT TILL - light brown - wet to moist, soft	<input checked="" type="checkbox"/>	7G8		230
6		- hard below 5.5 m - medium gravel below 5.5 m				229
		- moist to dry below 6.1 m - with medium gravel below 6.1 m	<input checked="" type="checkbox"/>	7G9		228
7			<input checked="" type="checkbox"/>	7G10		227
8		END OF TEST HOLE AT 7.6 m IN TILL. SLOUGHING TO 7.0 m AT COMPLETION OF DRILLING.				226

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA GDT 30/3/04



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PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-33
LOCATION: On Portage, 1.75 m South of North Curb, 3.0 m West of Property Line on West side of Trail Ave.	PROJECT NO.: 41-02-D265-096-03	
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 234.001
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		CONCRETE AND ASPHALT				
0 - 0.8		GRANULAR FILL - granular base course				
0.8 - 2.0		CLAY FILL - silty - some silt/sand inclusions - brown - moist, soft - medium plasticity	<input checked="" type="checkbox"/>	8G11		233
2.0 - 5.5		CLAY - silty - trace oxidization stains - brown - moist - medium plasticity	<input checked="" type="checkbox"/>	8G12		232
5.5 - 7.0		- grey below 5.5 m	<input checked="" type="checkbox"/>	8G13		230
7.0 - 7.6		SILT TILL - grey - dry, hard	<input checked="" type="checkbox"/>	8G14		229
7.6 - 7.62		END OF TEST HOLE AT 7.6 m IN TILL.	<input checked="" type="checkbox"/>	8G15		228
7.62 - 9.0						227
9.0 - 9.0						226

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA GDT 30/3/04



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PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-34
LOCATION: On Portage, 1.5 m South of North Curb, 1.0 m West of Property Line on West side of Davidson St		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 233.635
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		CONCRETE AND ASPHALT				
		GRANULAR FILL - gravel base course, 20 mm diameter				233
1		CLAY FILL - silty - trace gravel - brown - moist, soft - medium plasticity	<input checked="" type="checkbox"/>	9G16		232
2		CLAY - silty - trace silt inclusions, 5 mm diameter - brown - moist, soft - medium to high plasticity	<input checked="" type="checkbox"/>	9G17		231
3			<input checked="" type="checkbox"/>	9G18		230
4			<input checked="" type="checkbox"/>	9G19		229
5			<input checked="" type="checkbox"/>	9G20		228
6			<input checked="" type="checkbox"/>			227
7		SILT TILL - some gravel, 20 mm diameter - grey - damp, hard				227
8		END OF TEST HOLE AT 7.6 m IN TILL. SLOUGHING TO 5.8 m AT COMPLETION OF DRILLING.				226
9						225

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA GDT 30/3/04



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PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-35
LOCATION: In front of 270 Davidson, 7.6 m South of North Property Line (middle of lot), 3.9 m West of West Club		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 236.479
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE		

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		TOPSOIL AND SURFACE GRASS				236
		CLAY FILL - black - frozen				
1		SILT - tan - dry, loose - non-plastic				235
2		CLAY - silty - with silt layers - black to brown with depth - dry to moist with depth, soft - medium plasticity - brown below 2.1 m	<input checked="" type="checkbox"/>	10G21		234
3			<input checked="" type="checkbox"/>	10G22		233
4						232
5		CLAY AND SILT TILL - with gravel, 20 mm diameter - brown to tan - moist, loose - some cobbles below 5.2 m	<input checked="" type="checkbox"/>	10G23		231
6			<input checked="" type="checkbox"/>	10G24		230
		- orange below 6.4 m				
7		END OF TEST HOLE AT 6.9 m IN TILL. SLOUGHING TO 6.4 m AT COMPLETION OF DRILLING.	<input checked="" type="checkbox"/>	10G25		229
8						228
9						

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA.GDT 30/3/04



LOGGED BY: Darryl Schmidt	COMPLETION DEPTH: 6.86 m
REVIEWED BY: Darryl Schmidt	COMPLETION DATE: 27/2/04
PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-36
LOCATION: In front of 222 Davidson, 2.5 m South of North Property Line, 2.2 m West of West Curb		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 235.61
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		TOPSOIL AND SURFACE GRASS				235
0		CLAY FILL - black - frozen to 1.1 m				235
1						234
2		CLAY - silty - grey brown - moist, soft - medium to high plasticity - homogeneous	<input checked="" type="checkbox"/>	11G26		234
3			<input checked="" type="checkbox"/>	11G27		233
4						232
5						231
6		- trace till inclusions below 5.8 m	<input checked="" type="checkbox"/>	11G28		230
7			<input checked="" type="checkbox"/>	11G29		229
8		END OF TEST HOLE AT 7.6 m IN CLAY. SLOUGHING TO 5.8 m AT COMPLETION OF DRILLING.	<input checked="" type="checkbox"/>	11G30		228
9						227

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA.GDT 30/3/04



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PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-37
LOCATION: Across from 62 Mount Royal Crescent, 1.0 m North of North Curb		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 233.081
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE		

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		TOPSOIL AND SURFACE GRASS				233
0 - 1		CLAY FILL - trace roots - black - frozen - intermediate plasticity				232
1 - 2		CLAY - silty - trace gravel, trace silt inclusions, 3 to 5 mm diameter - black to brown with depth - moist, firm - medium plasticity - brown below 2.4 m	<input checked="" type="checkbox"/>	12G31		231
2 - 3			<input checked="" type="checkbox"/>	12G32		230
3 - 4						229
4 - 5			<input checked="" type="checkbox"/>	12G33		228
5 - 6						227
6		SILT TILL - grey - wet, very soft				227
6 - 7		END OF TEST HOLE AT 6.4 m IN TILL.				226
7 - 8						225
8 - 9						225

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA.GDT 30/3/04



LOGGED BY: Darryl Schmidt	COMPLETION DEPTH: 6.40 m
REVIEWED BY: Darryl Schmidt	COMPLETION DATE: 27/2/04
PROJECT ENGINEER: Jeff Tallin	Page 1 of 1



PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-38
LOCATION: 19.0 m East of West Property Line 32 Mount Royal Crescent, 1.0 m North of North Curb		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 233.041
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		TOPSOIL AND SURFACE GRASS				
		GRANULAR FILL - granular base course and silt intermixed				
1		CLAY FILL - black - moist to dry, firm - medium plasticity	<input checked="" type="checkbox"/>	13G35		232
2						231
3		SILT TILL - tan - dry, loose	<input checked="" type="checkbox"/>	13G36		230
4		- dense below 4.0 m				229
5		- with cobbles below 4.6 m	<input checked="" type="checkbox"/>	13G37		228
6		- very dense below 4.9 m - dry below 4.9 m				227
		- with large cobbles below 5.6 m.	<input checked="" type="checkbox"/>	13G38		227
		END OF TEST HOLE AT 6.1 m IN TILL. SLOUGHING TO 4.9 M AT COMPLETION OF DRILLING.	<input checked="" type="checkbox"/>	12G34		226
7						226
8						225
9						

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA.GDT 30/3/04



LOGGED BY: Darryl Schmidt	COMPLETION DEPTH: 6.25 m
REVIEWED BY: Darryl Schmidt	COMPLETION DATE: 27/2/04
PROJECT ENGINEER: Jeff Tallin	Page 1 of 1

PROJECT: Moorgate Strathmillan Sewer Relief	CLIENT: City of Winnipeg	TESTHOLE NO: TH-39
LOCATION: 5.6 m East of West Property Line 142 Trail Ave., 0.6 m South of South Curb		PROJECT NO.: 41-02-D265-096-03
CONTRACTOR: Maple Leaf Drilling	METHOD: Canterra, SS Auger	ELEVATION (m): 235.979
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	COMMENTS	ELEVATION (m)
0		TOPSOIL AND SURFACE GRASS				
0		CLAY - silty - trace silt inclusions - black - frozen to 1.2 m - medium plasticity				
1						235
2		- moist, very soft below 2.1 m	<input checked="" type="checkbox"/>	14G39		234
3						233
4		- trace gravel below 4.0 m				232
5		TRANSITION TO SILT TILL - grey - soft, loose				231
6		SILT TILL - grey - wet, very soft, loose				230
6			<input checked="" type="checkbox"/>	14G42		
7		END OF TEST HOLE AT 6.7 m IN TILL. SLOUGHING TO 5.8 m AT COMPLETION OF DRILLING.				229
7			<input checked="" type="checkbox"/>	14G43		
8						228
9						

LOG OF TESTHOLE TEST HOLE LOGS 2004.GPJ UMA.GDT 30/3/04



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REVIEWED BY: Darryl Schmidt	COMPLETION DATE: 27/2/04
PROJECT ENGINEER: Jeff Tallin	Page 1 of 1