

APPENDIX 'A'

NATIONAL TESTING LABORATORIES LIMITED GEOTECHNICAL REPORT - NOVEMBER 30, 2008

**GEOTECHNICAL INVESTIGATION FOR
BUS RAPID TRANSIT SYSTEM
SOUTHWESTERN TRANSIT CORRIDOR**

Prepared for
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November 30, 2008



**THE
NATIONAL
TESTING
LABORATORIES
LIMITED**
Established in 1923

Project No.: DIL-812

Drawn by: KK

Figure: 1

Testhole Location Plan
Bus Rapid Transit System
Southwestern Transit Corridor
Winnipeg, MB

Date: Nov 13, 2008

Reviewed by: DF

Scale: NTS



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Figure: 3

Date: Nov 13, 2008

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Testhole Location Plan
Bus Rapid Transit System
Southwestern Transit Corridor
Winnipeg, MB

TABLE 1
TESTHOLE LOCATIONS
BUS RAPID TRANSIT SYSTEM
SOUTHWESTERN TRANSIT CORRIDOR

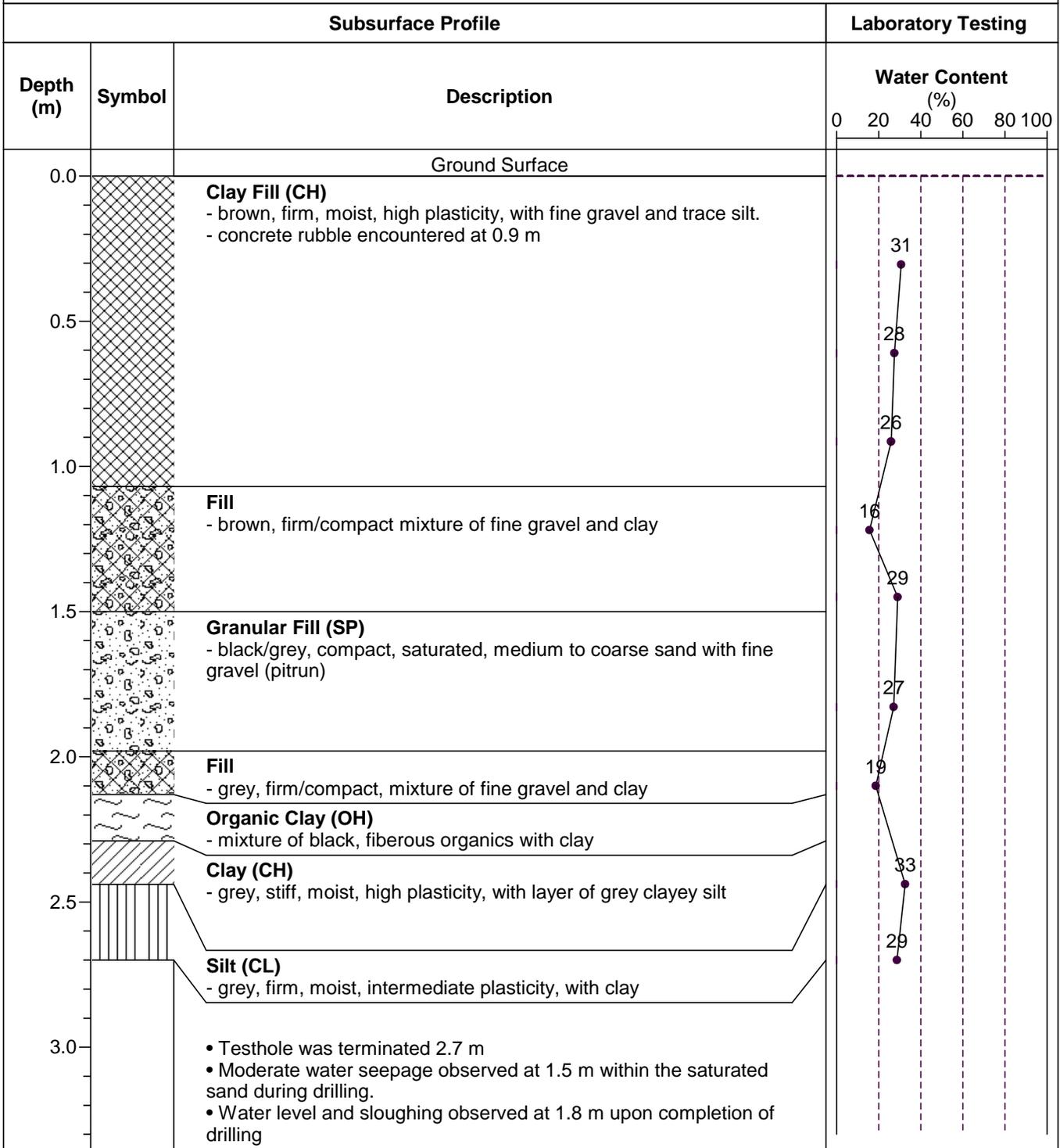
Testhole ID	UTM Co-ordinate	General Description
2008-1	632930 E / 5524146 N	Berwick Athletic Field (West side of Soccer Field)
2008-2	633076 E / 5524483 N	CNR Fort Rouge Yards
2008-3	633140 E / 5524665 N	CNR Fort Rouge Yards
2008-4	633207 E / 5524857 N	CNR Fort Rouge Yards
2008-5	633276 E / 5525020 N	CNR Fort Rouge Yards
2008-6	633471 E / 5525490 N	CNR Fort Rouge Yards
2008-7	633600 E / 5526274 N	Jessie Avenue
2008-8	633883 E / 5526945 N	Lagopoulos Way
2008-9	633974 E / 5527056 N	Between Stradbrook and CNR Rivers
2008-10	634096 E / 5527211 N	Between Stradbrook and CNR Rivers
2008-11	634169 E / 5527322 N	Between Stradbrook and CNR Rivers
2008-D1	633585 E / 5526390 N	Corydon Avenue
2008-D2	633669 E / 5526486 N	Donald Street
2008-D3	633641 E / 5526544 N	McMillan Avenue
2008-D4	633710 E / 5526587 N	Donald Street
2008-D5	633768 E / 5526749 N	Between Donald Street and CNR Rivers
2008-H1	633925 E / 5527037 N	Stradbrook Avenue
2008-H2	633981 E / 5527097 N	Stradbrook Avenue
2008-H3	634015 E / 5527134 N	Harkness Avenue

TESTHOLE 2008-4



Project Name: Bus Rapid Transit System
 Client: Dillon Consulting Ltd.
 Site: Southwestern Transit Corridor
 Testhole Location: 633207 E / 5524857 N - CNR Fort Rouge Yards

Date Drilled: October 22, 2008
 Depth of Testhole: 2.7 m
 Logged by: Kurtis Kulchyski



TESTHOLE 2008-5



Project Name: Bus Rapid Transit System
 Client: Dillon Consulting Ltd.
 Site: Southwestern Transit Corridor
 Testhole Location: 633276 E / 5525020 N - CNR Fort Rouge Yards

Date Drilled: October 22, 2008
 Depth of Testhole: 2.7 m
 Logged by: Kurtis Kulchyski

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
0.0 - 0.4		Granular Base (SW) - grey, dense, moist, fine to coarse sand with fine gravel						
0.4 - 0.6		Fill - brown, firm/compact mixture of fine gravel and clay						
0.6 - 1.5		Granular Fill (SM) - tan, compact, saturated, fine to medium sand, trace fine gravel (pitrun)	16	38	0	88.0	8.5	3.5
1.5 - 1.8		Organic Clay (OL) - mixture of black, fibrous organics with clayey silt	18					
1.8 - 2.6		Clay (CH) - light grey, stiff, moist, intermediate plasticity, with silt - high plasticity below 1.8 m - brown below 2.6 m	18	33				
2.6 - 2.7			27					
			30					
			37					
			41					
3.0		<ul style="list-style-type: none"> • Testhole was terminated 2.7 m • Heavy water seepage observed at 0.5 m within the saturated sand during drilling. • Water level and sloughing observed at 0.6 m upon completion of drilling 						

TESTHOLE 2008-6



Project Name: Bus Rapid Transit System
 Client: Dillon Consulting Ltd.
 Site: Southwestern Transit Corridor
 Testhole Location: 633471 E / 5525490 N - CNR Fort Rouge Yards

Date Drilled: October 22, 2008
 Depth of Testhole: 2.4 m
 Logged by: Kurtis Kulchyski

Subsurface Profile			Laboratory Testing	
Depth (m)	Symbol	Description	Water Content (%)	
			PL ----- LL	
0	25	50	75	100
0.0		Ground Surface		
		Granular Base (SW) - tan, dense, moist, fine to coarse sand with fine gravel		
		Clay Fill (CH) - black, stiff, moist, high plasticity, some fine gravel - brown with silt inclusions below 0.3 m		
0.5			23	
			42	
1.0			14	
		Clay (CH) - black/brown, stiff, moist, high plasticity		
			33	
1.5			16	
		Silt (CL-ML) - tan, firm, moist, low plasticity, some clay		
			19	
2.0			22	
		Clay (CH) - brown, stiff, moist, high plasticity, with trace layers of silt		
			34	
2.5		<ul style="list-style-type: none"> • Testhole was terminated 2.4 m • No water seepage or sloughing were observed during or upon completion of drilling 		
3.0				