

# **APPENDIX 'A'**

# **GEOTECHNICAL REPORT**

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

**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 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.**

**2008 CITY OF WINNIPEG STREET RENEWAL PROGRAM  
BARNES STREET  
BETWEEN BISON DRIVE & LEE BOULEVARD**

Prepared  
for  
**City of Winnipeg  
Public Works  
106-1155 Pacific Avenue  
Winnipeg, Manitoba  
R3E 3P1**

Prepared  
by  
**THE NATIONAL TESTING LABORATORIES LIMITED  
199 HENLOW BAY  
WINNIPEG, MANITOBA  
R3Y 1G4**

**May 7, 2008**

**2008 City of Winnipeg Street Renewal Program  
Barnes Street  
Between Bison Drive & Lee Boulevard**

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
TH1	1.5 m from E curb, 50 m S of Superstore N wall	Asphalt	100	Crushed Limestone Base Course	650	Clay	1.5	41	-	-	-	-	109	30	79
TH2	4.5 m from W curb, 90 m S of Superstore N wall	Asphalt	50	Granular Base Course	50	N/A	N/A	-	-	-	-	-	-	-	-
TH3	8 m from curb, 140 m S of Superstore N wall	Traffic Gravel	50	N/A	N/A	N/A	N/A	-	-	-	-	-	-	-	-
TH4	4.5 m from W curb, 195 m S of Superstore N wall	Asphalt	75	Granular Base Course	50	N/A	N/A	-	-	-	-	-	-	-	-
TH5	7.5 m from W curb, 237 m S of Superstore N wall	Concrete	210	Crushed Limestone Base Course	540	Clayey Silt	1.5	20	1.7	7.4	55.9	35.0	35	15	20

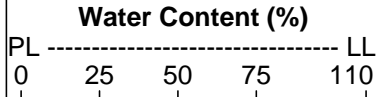
# TESTHOLE TH1



**Project Name:** 2008 City of Winnipeg Street Renewal Program  
**Client:** City of Winnipeg  
**Site:** Barnes Street, between Bison Drive and Lee Boulevard  
**Testhole Location:** 1.5 m from E curb, 50 m S of Superstore N wall

**Date Drilled:** April 30, 2008  
**Depth of Testhole:** 2.1 m  
**Logged by:** Keith Villiers

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
		Asphalt						
		Crushed Limestone Base Course						
0.5								
		Clay - brown, stiff, moist, high plasticity						
1.0								
1.5								
2.0								
		<ul style="list-style-type: none"> <li>• Testhole terminated at 2.1 m.</li> <li>• No soil sloughing or water seepage were observed during or after completion of drilling.</li> </ul>						
2.5								

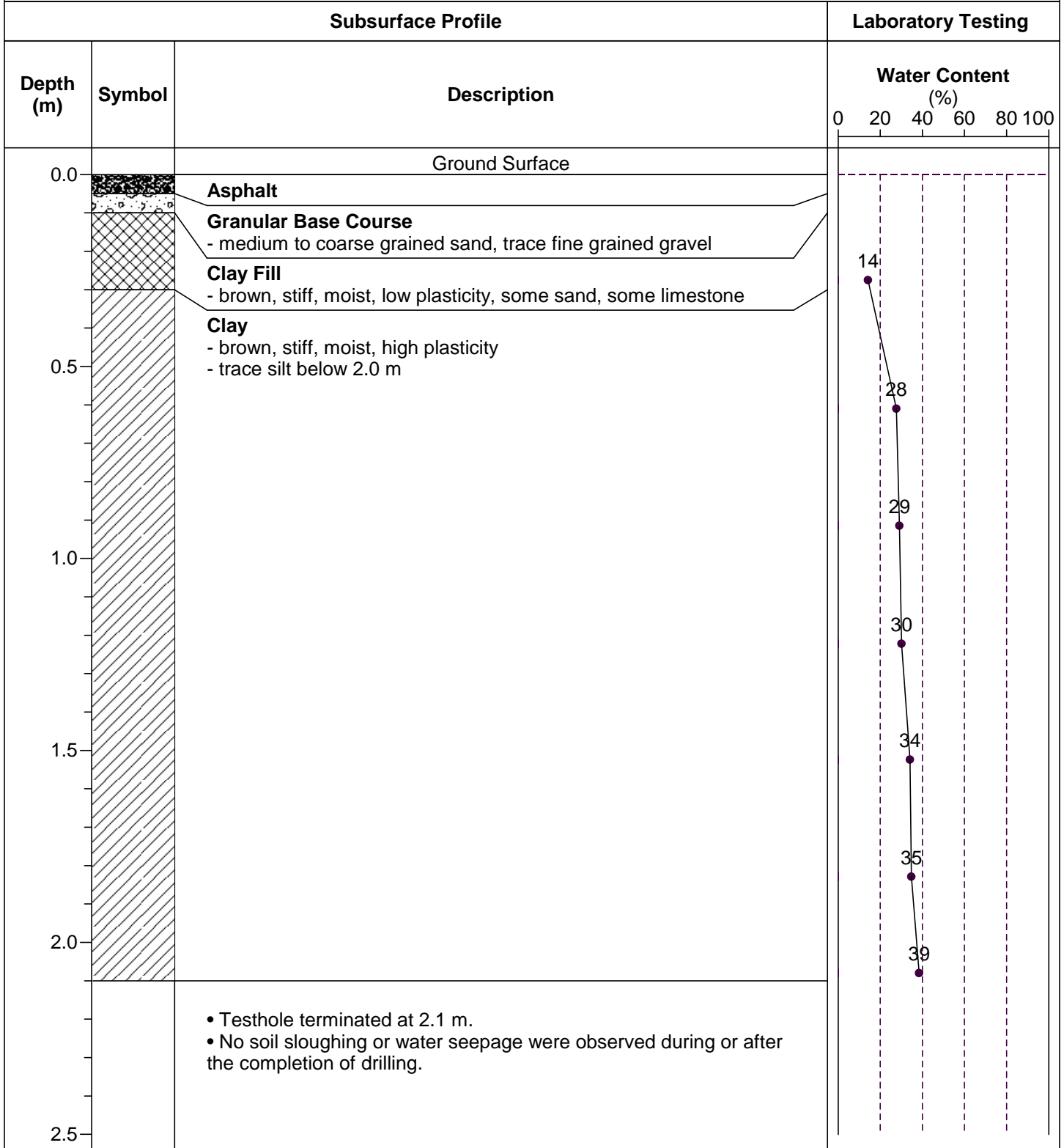


# TESTHOLE TH2



**Project Name:** 2008 City of Winnipeg Street Renewal Program  
**Client:** City of Winnipeg  
**Site:** Barnes Street, between Bison Drive and Lee Boulevard  
**Testhole Location:** 4.5 m from W curb, 90 m S of Superstore N wall

**Date Drilled:** April 30, 2008  
**Depth of Testhole:** 2.1 m  
**Logged by:** Keith Villiers

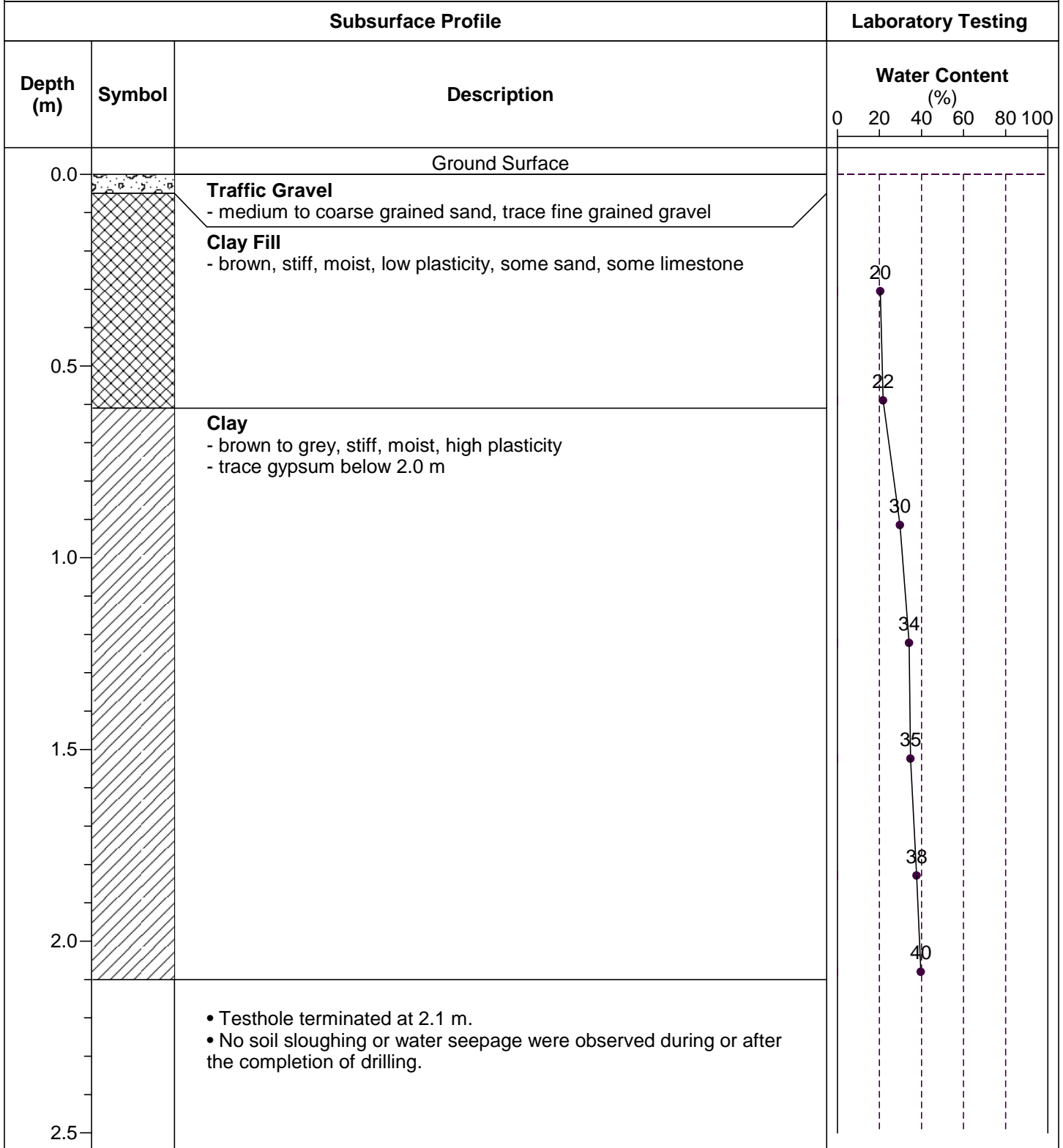


# TESTHOLE TH3



**Project Name:** 2008 City of Winnipeg Street Renewal Program  
**Client:** City of Winnipeg  
**Site:** Barnes Street, between Bison Drive and Lee Boulevard  
**Testhole Location:** 8 m from E curb, 140 m S of Superstore N wall

**Date Drilled:** April 30, 2008  
**Depth of Testhole:** 2.1 m  
**Logged by:** Keith Villiers

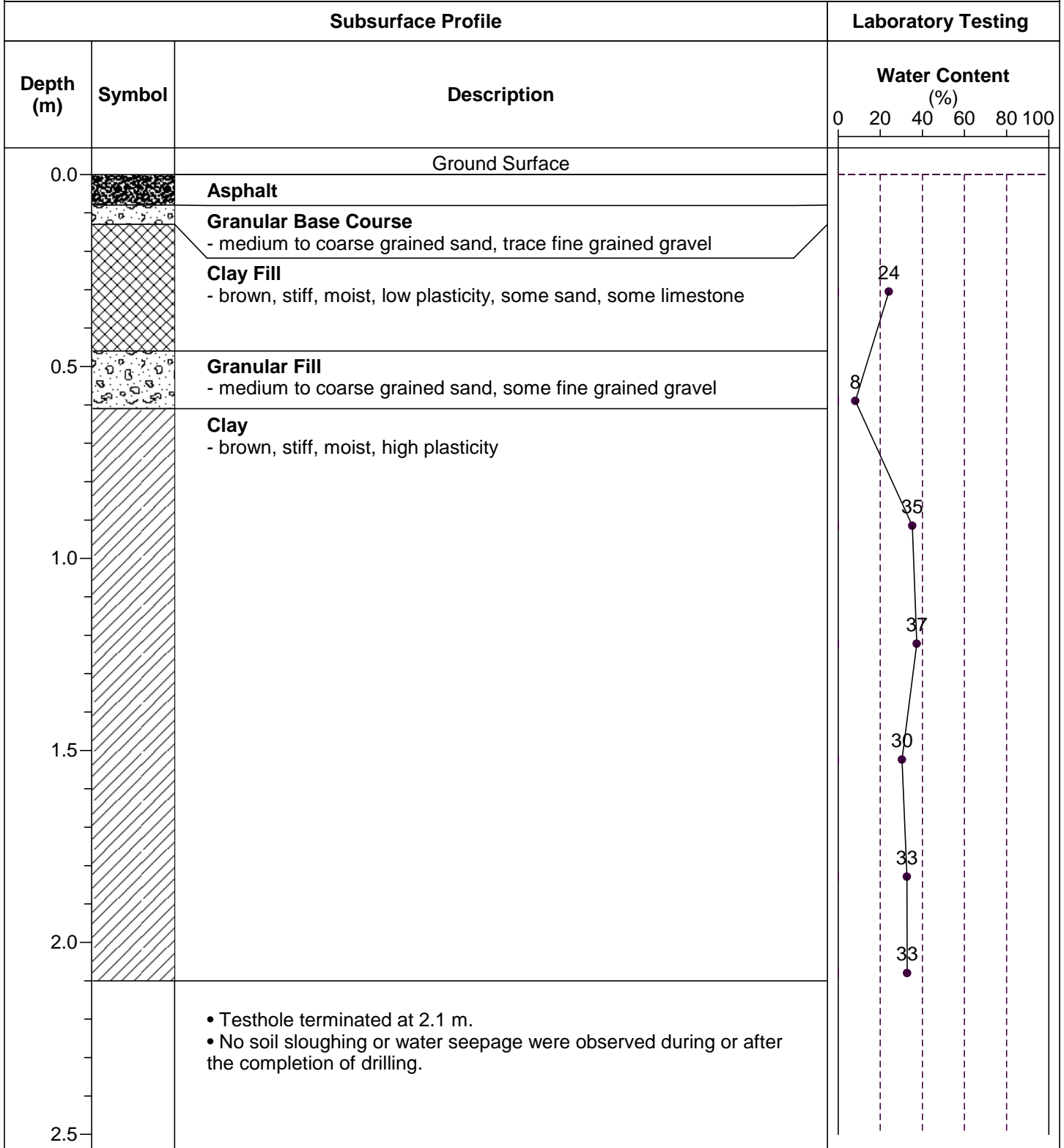


# TESTHOLE TH4



**Project Name:** 2008 City of Winnipeg Street Renewal Program  
**Client:** City of Winnipeg  
**Site:** Barnes Street, between Bison Drive and Lee Boulevard  
**Testhole Location:** 4.5 m from W curb, 195 m S of Superstore N wall

**Date Drilled:** April 30, 2008  
**Depth of Testhole:** 2.1 m  
**Logged by:** Keith Villiers





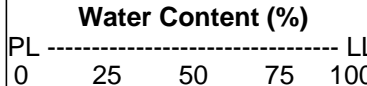
# TESTHOLE TH5



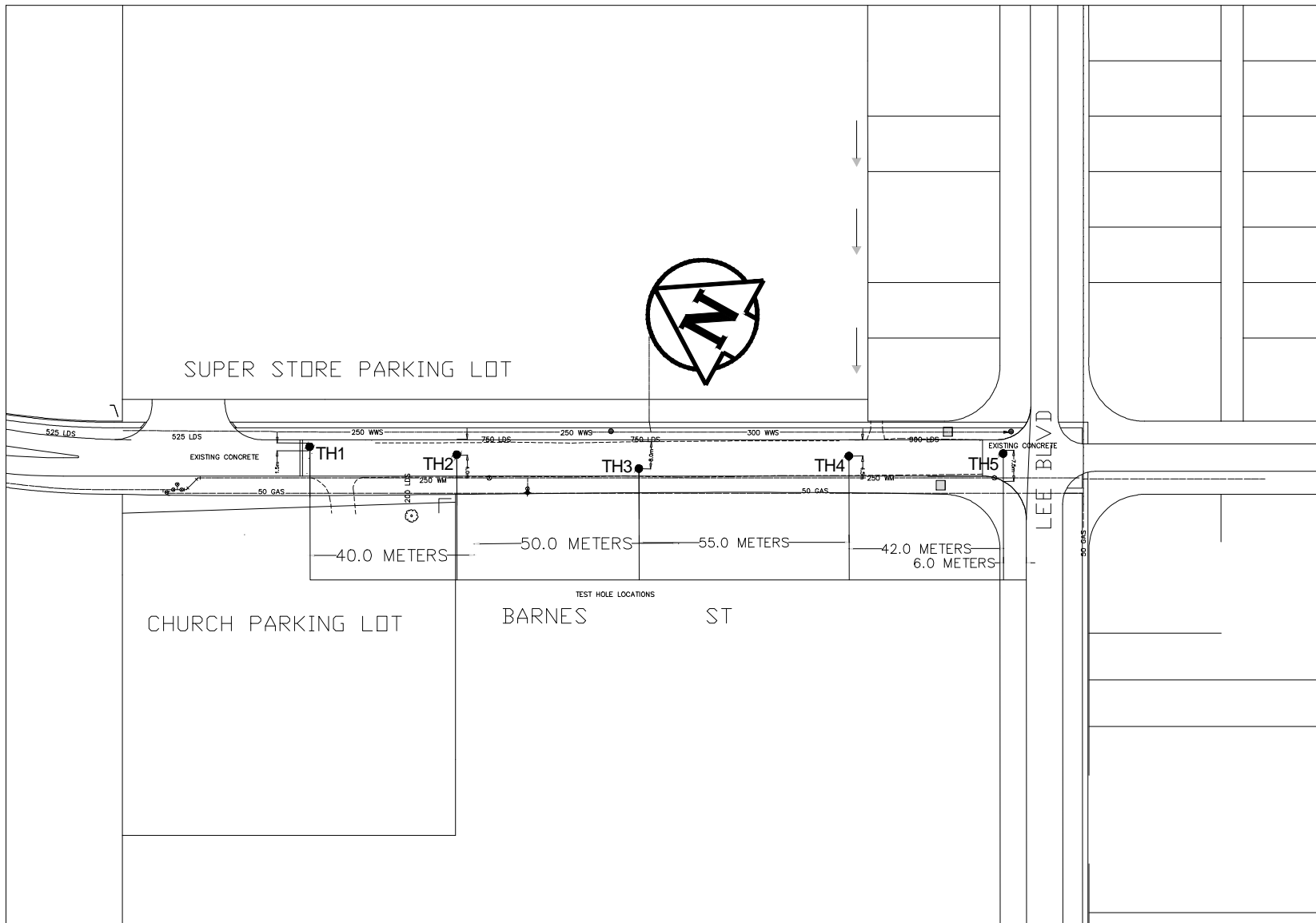
Project Name: 2008 City of Winnipeg Street Renewal Program  
 Client: City of Winnipeg  
 Site: Barnes Street, between Bison Drive and Lee Boulevard  
 Testhole Location: 7.5 m from W curb, 237 m S of Superstore N wall

Date Drilled: April 30, 2008  
 Depth of Testhole: 2.1 m  
 Logged by: Keith Villiers

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
		Concrete						
		Crushed Limestone Base						
0.5								
		Clay Fill - brown, stiff, moist, low plasticity, some sand, some gravel	3					
			3					
1.0								
		Clayey Silt - brown, firm to stiff, moist, low plasticity, with clay, trace sand						
1.5								
		Clay - brown, stiff, moist, high plasticity, trace silt						
2.0								
2.5		<ul style="list-style-type: none"> <li>• Testhole terminated at 2.1 m.</li> <li>• No water seepage was observed during or after the completion of drilling.</li> <li>• Testhole sloughed below 0.6 m after the completion of drilling.</li> </ul>						



Gravel (%)	Sand (%)	Silt (%)	Clay (%)
1.7	7.4	55.9	35.0



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

Project No.:COW-804

Drawn by: IH

Figure: 1

Date: May 7, 2008

Reviewed by: DF

Scale: NTS

Testhole Location Plan  
Barnes Street  
Bison Drive to Lee Boulevard



Concrete core taken from Testhole TH5 on Barnes Street.