

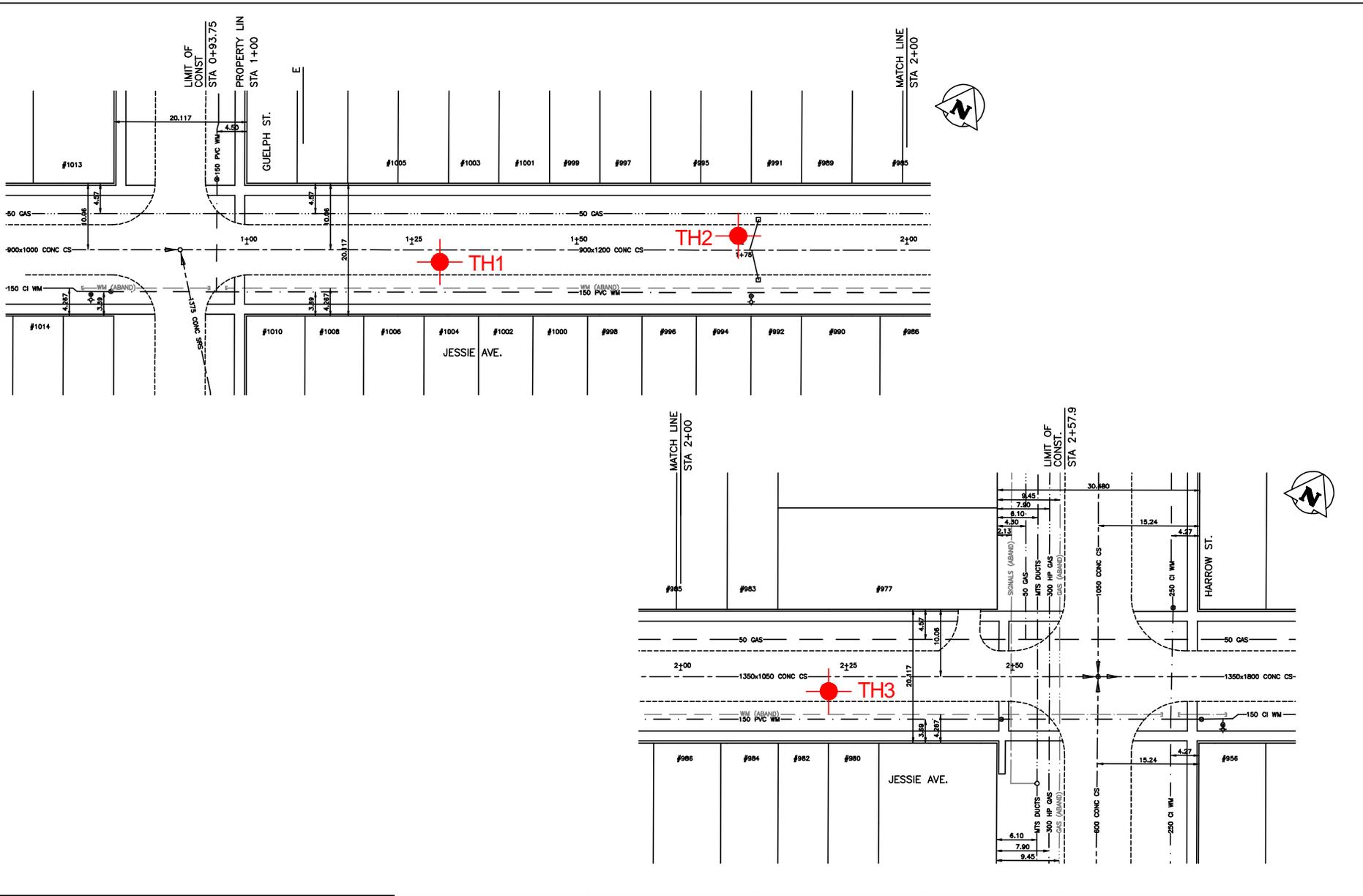


**JESSIE AVENUE
GUELPH STREET TO HARROW STREET
2008 CITY OF WINNIPEG
LOCAL STREETS RENEWALS PROGRAM**

Prepared for
KGS Group
3rd Floor, 865 Waverley Street
Winnipeg, Manitoba
R3T 5P4

Prepared by
The National Testing Laboratories Limited
199 Henlow Bay
Winnipeg, Manitoba
R3Y 1G4

January 7, 2008



THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project No.:KGS-759

Drawn by: KK

Figure: 1

Date: Jan. 4, 2007

Reviewed by: DF

Scale: NTS

Testhole Location Plan
2008 City of Winnipeg Local Street Renewals
Jessie Ave. between Guelph St. to Harrow St.

TESTHOLE TH1



Project Name: 2008 City of Winnipeg Local Street Renewals

Date Drilled: December 14, 2007

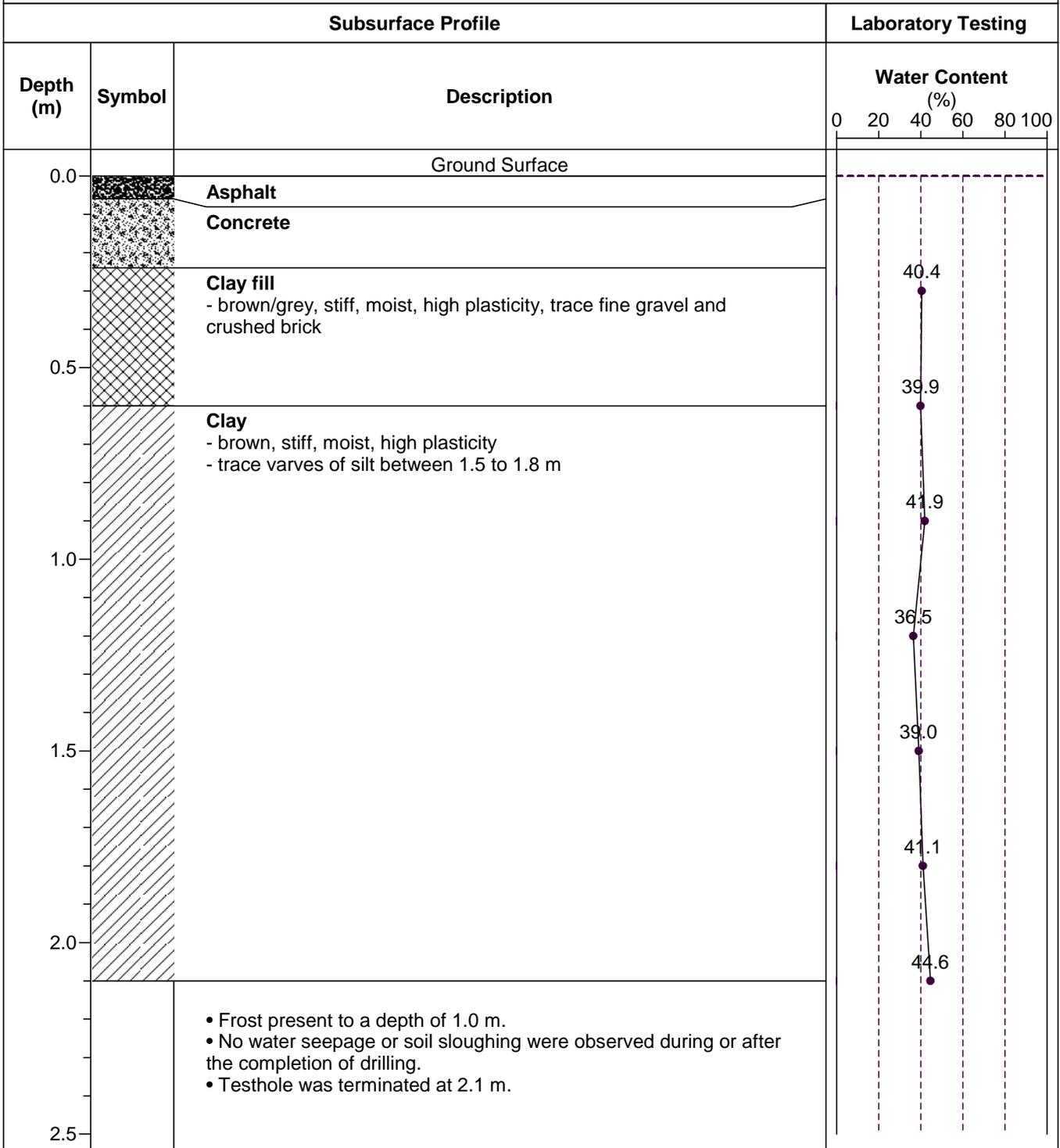
Client: KGS Group

Depth of Testhole: 2.1 m

Site: Jessie Avenue between Guelph Street to Harrow Street

Logged by: Kurtis Kulchyski

Testhole Location: E.B. Lane, 2 m E of property line between 1006 / 1004 Jessie St., 1.5 m away from curb



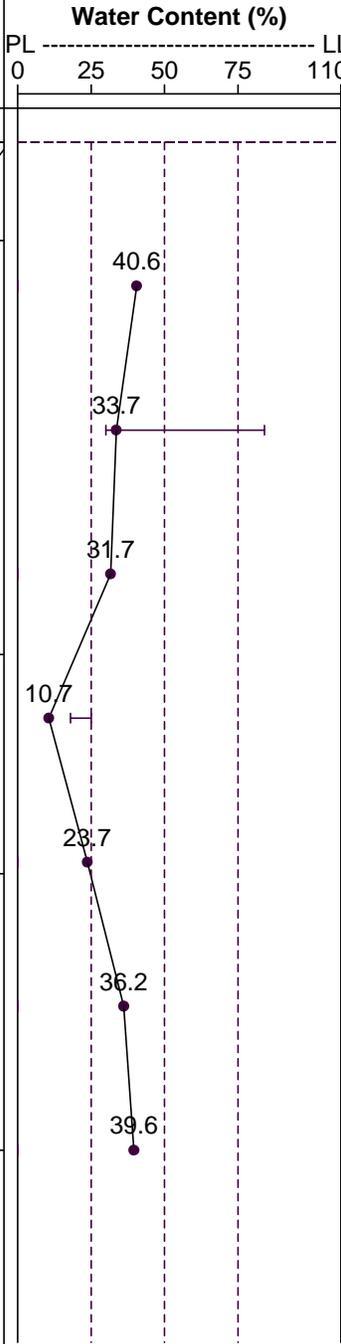
TESTHOLE TH2



Project Name: 2008 City of Winnipeg Local Street Renewals
 Client: KGS Group
 Site: Jessie Avenue between Guelph Street to Harrow Street
 Testhole Location: W.B. Lane, 2.4 m W of property line of 995 / 991 Jessie St., 1.5 m away from curb

Date Drilled: December 14, 2007
 Depth of Testhole: 2.1 m
 Logged by: Kurtis Kulchyski

Subsurface Profile			Laboratory Testing								
Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	
			PL	LL							
			0	25	50	75	110				
0.0		Ground Surface									
		Asphalt									
		Concrete									
		Clay - grey, stiff, moist, high plasticity - brown below 0.8 m									
0.5											
		Clayey Silt - tan, firm, moist, low plasticity									
1.0											
		Clay - brown, stiff, moist, high plasticity, trace silt and gypsum inclusions									
1.5											
2.0											
2.5		<ul style="list-style-type: none"> • Frost present to a depth of 1.1 m. • No water seepage or soil sloughing were observed during or after the completion of drilling. • Testhole was terminated at 2.1 m. 									



Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0	2.5	10.3	87.2
0.0	5.0	68.4	26.6

TESTHOLE TH3



Project Name: 2008 City of Winnipeg Local Street Renewals

Date Drilled: December 14, 2007

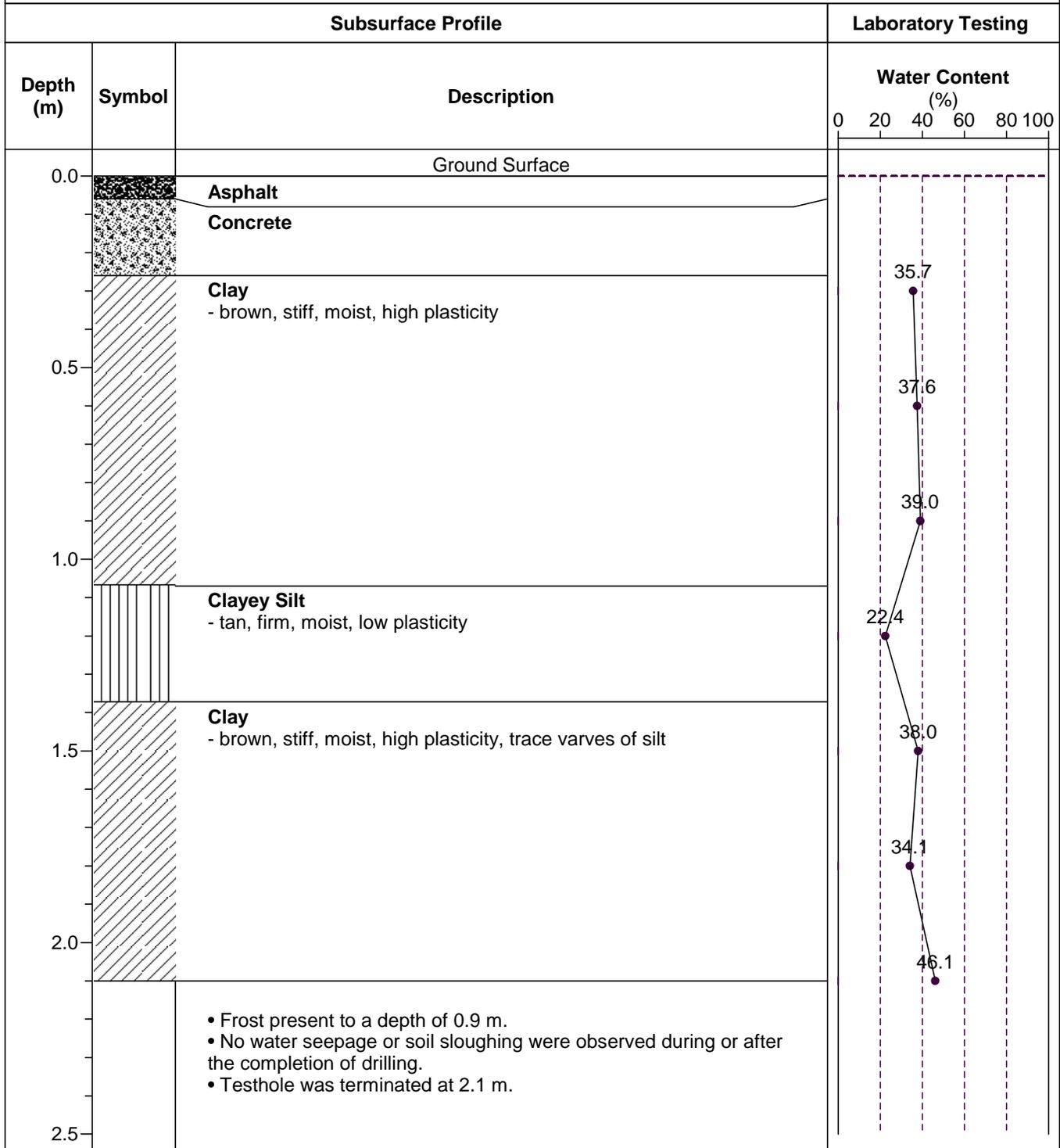
Client: KGS Group

Depth of Testhole: 2.1 m

Site: Jessie Avenue between Guelph Street to Harrow Street

Logged by: Kurtis Kulchyski

Testhole Location: E.B. Lane, In line with property line between 982 / 980 Jessie St., 1.5 m away from curb





**YALE AVENUE
WILTON STREET TO GUELPH STREET
2008 CITY OF WINNIPEG
LOCAL STREETS RENEWALS PROGRAM**

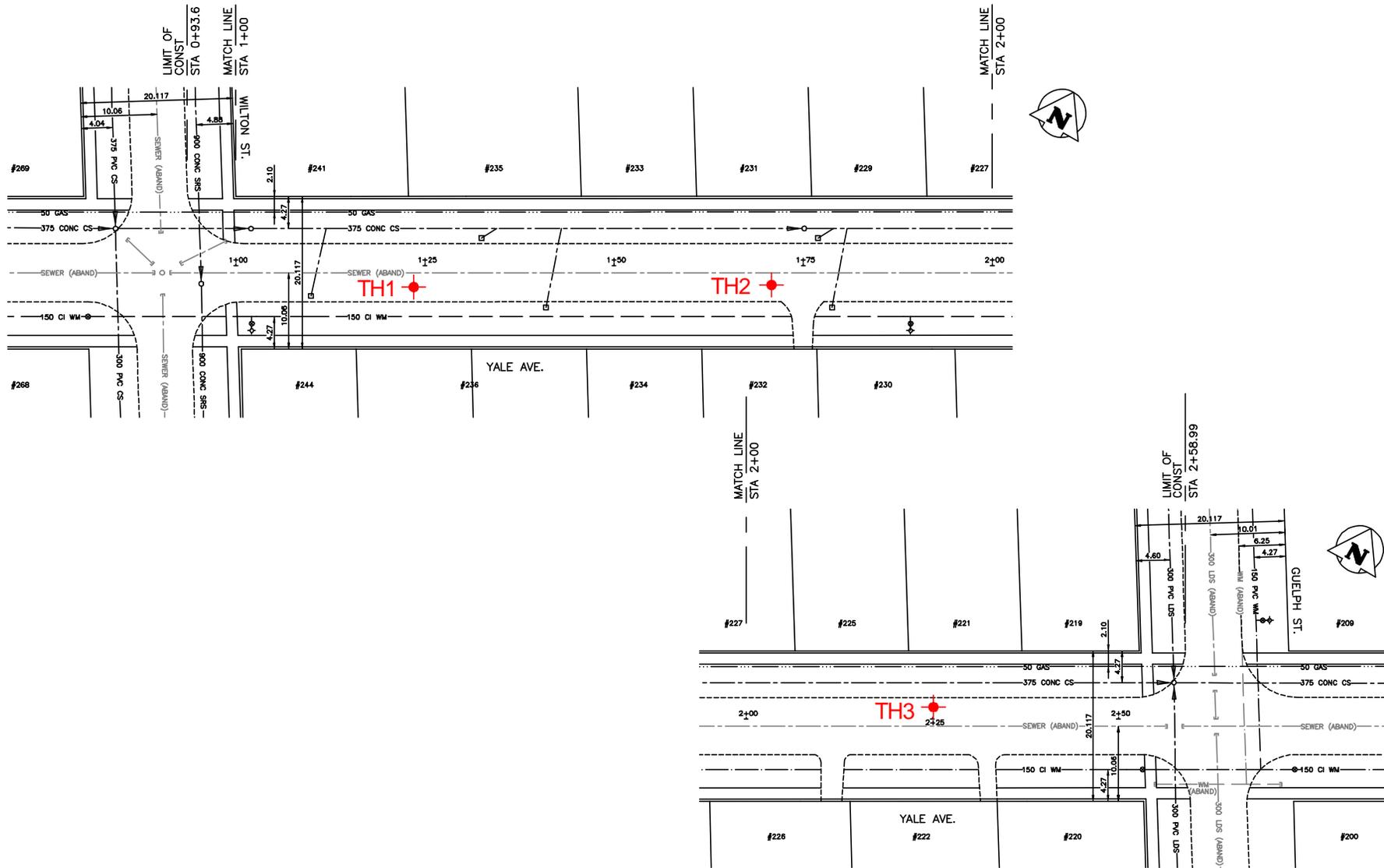
Prepared for
KGS Group
3rd Floor, 865 Waverley Street
Winnipeg, Manitoba
R3T 5P4

Prepared by
The National Testing Laboratories Limited
199 Henlow Bay
Winnipeg, Manitoba
R3Y 1G4

January 7, 2008

**Yale Avenue
Wilton Street to Guelph Street
2008 Local Street Renewals Program 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
TH1	EB lane, In line with the east property line of 241 Yale Ave., 1.8 m away from curb	Asphalt	80	Granular	220	N/A	N/A	-	-	-	-	-	-	-	-
TH2	EB lane, 7.5 m east of property line of 234 / 232 Yale Ave., 1.8 m away from curb	Asphalt	100	Granular	225	Clayey Silt	0.9	21.4	0.0	6.2	64.2	29.6	29	16	13
TH3	WB lane, 3.5 m east of property line of 225 / 221 Yale Ave., 1.8 m away from curb	Asphalt	95	Granular	205	Silty Clay	0.3	28.4	0.8	16	31.8	51.4	55	22	33



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Project No.:KGS-759

Drawn by: KK

Figure: 1

Date: Jan. 4, 2008

Reviewed by: DF

Scale: NTS

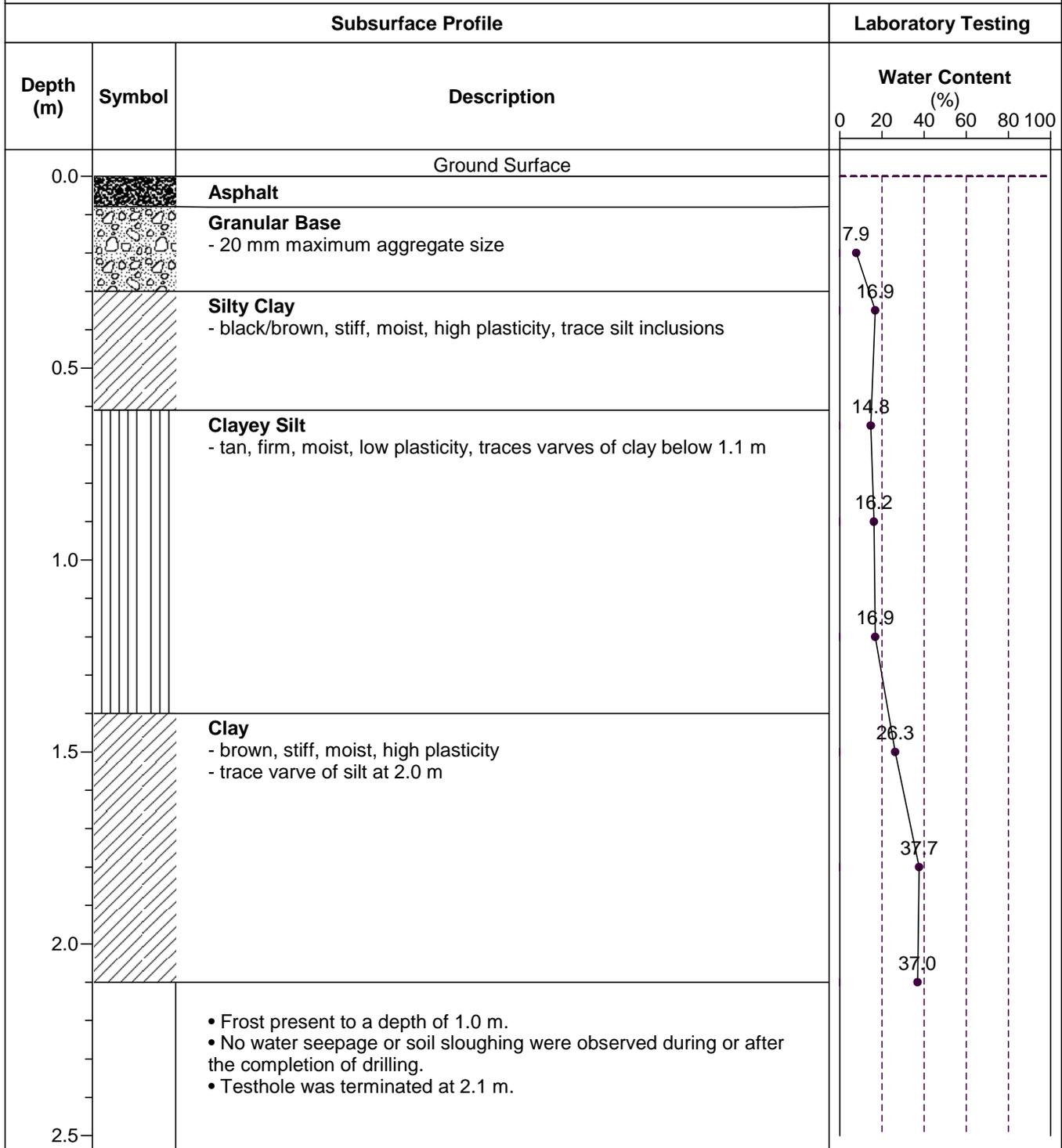
Testhole Location Plan
2008 City of Winnipeg Local Street Renewals
Yale Avenue between Wilton Street to Guelph Street

TESTHOLE TH1



Project Name: 2008 City of Winnipeg Local Street Renewals
Client: KGS Group
Site: Yale Avenue between Wilton Street to Guelph Street
Testhole Location: E.B. Lane, in line with E property line of 241 Yale Ave., 1.8 m away from curb

Date Drilled: December 14, 2007
Depth of Testhole: 2.1 m
Logged by: Kurtis Kulchyski



TESTHOLE TH2



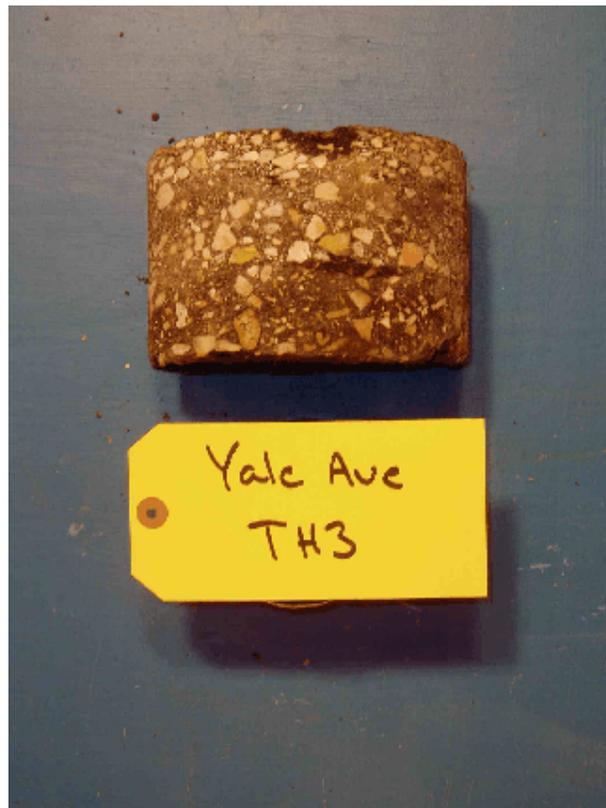
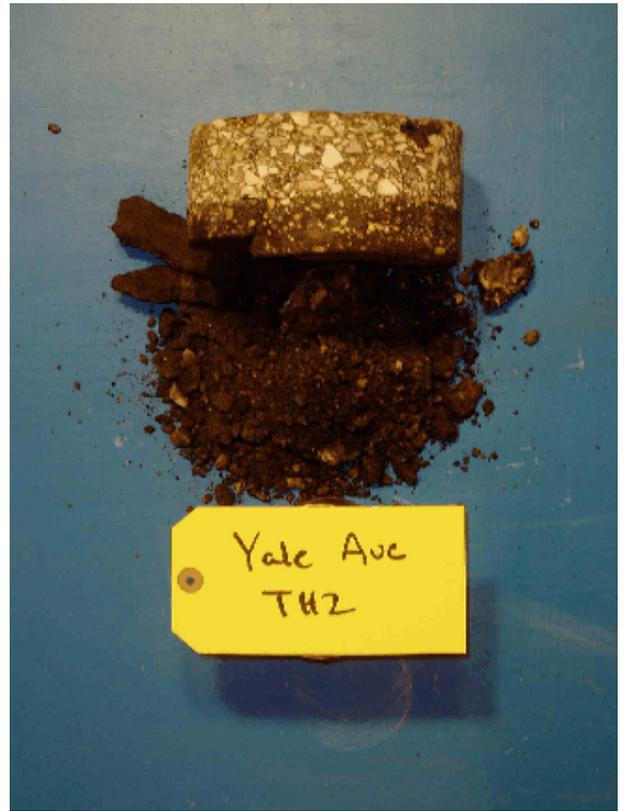
Project Name: 2008 City of Winnipeg Local Street Renewals
Client: KGS Group
Site: Yale Avenue between Wilton Street to Guelph Street
Testhole Location: E.B. Lane, 7.5 m E of property line of 234 / 232 Yale Ave., 1.8 m away from curb

Date Drilled: December 14, 2007
Depth of Testhole: 2.1 m
Logged by: Kurtis Kulchyski

Subsurface Profile			Laboratory Testing							
Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	0 25 50 75 110		LL				
0.0		Ground Surface								
		Asphalt								
		Granular Base - 20 mm maximum aggregate size								
		Silty Clay - black/brown, stiff, moist, high plasticity, trace silt inclusions								
0.5										
		Clayey Silt - tan, firm, moist, low plasticity								
1.0										
		Clay - brown, stiff, moist, high plasticity - trace varve of silt at 2.0 m								
1.5										
2.0										
2.1		<ul style="list-style-type: none"> • Frost present to a depth of 1.0 m. • No water seepage or soil sloughing were observed during or after the completion of drilling. • Testhole was terminated at 2.1 m. 								
2.5										

Depth (m)	Water Content (%)
0.1	10.9
0.2	16.5
0.4	22.0
0.9	21.4
1.1	24.6
1.4	31.9
1.7	36.3
2.0	44.2

Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0	6.2	64.2	29.6



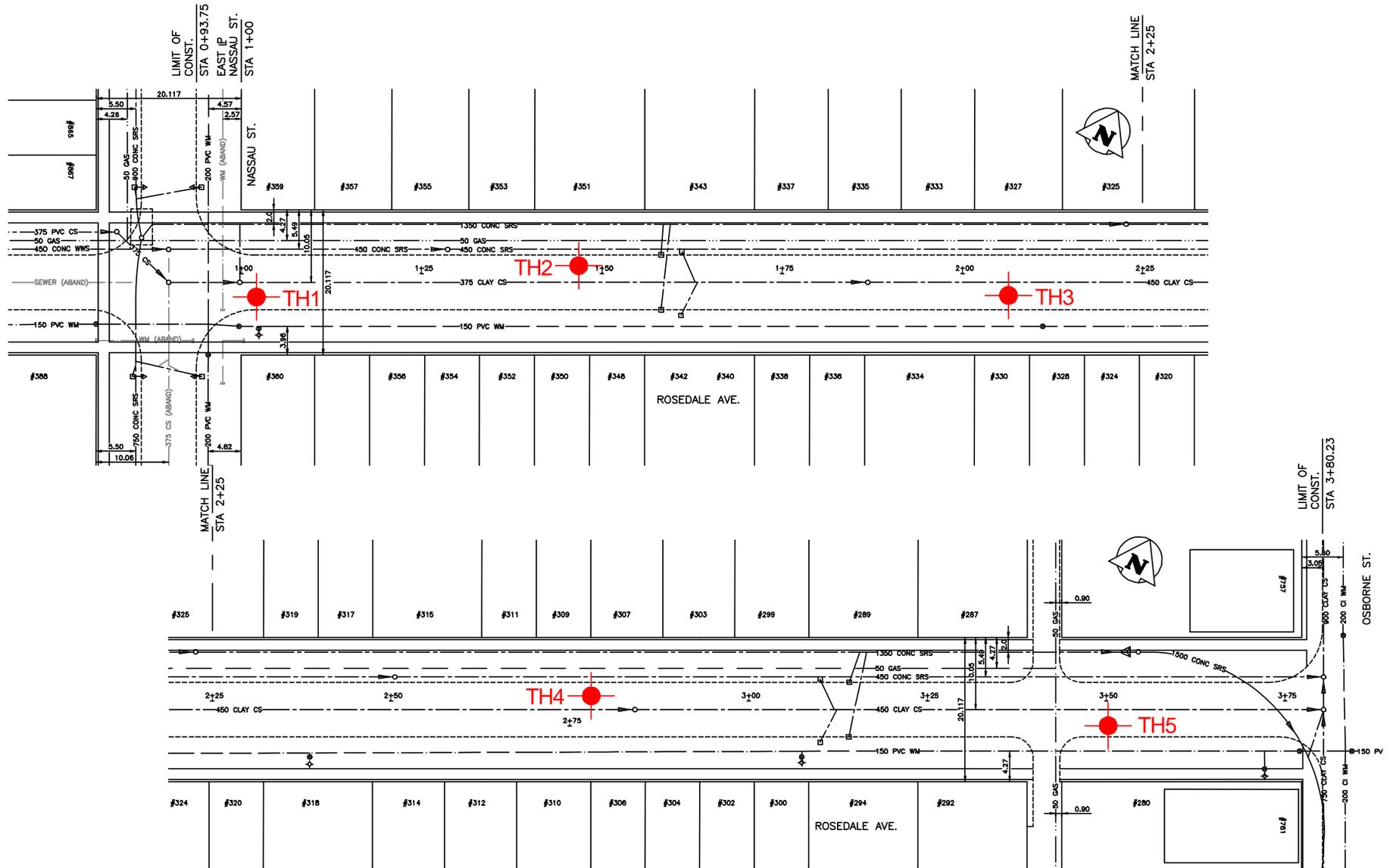


**ROSEDALE AVENUE
NASSAU STREET TO OSBORNE STREET
2008 CITY OF WINNIPEG
LOCAL STREETS RENEWALS PROGRAM**

Prepared for
KGS Group
3rd Floor, 865 Waverley Street
Winnipeg, Manitoba
R3T 5P4

Prepared by
The National Testing Laboratories Limited
199 Henlow Bay
Winnipeg, Manitoba
R3Y 1G4

January 7, 2008



**THE
NATIONAL
TESTING
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LIMITED**
Established in 1923

Project No.:KGS-759

Drawn by: KK

Figure: 1

Date: Jan. 4, 2008

Reviewed by: DF

Scale: NTS

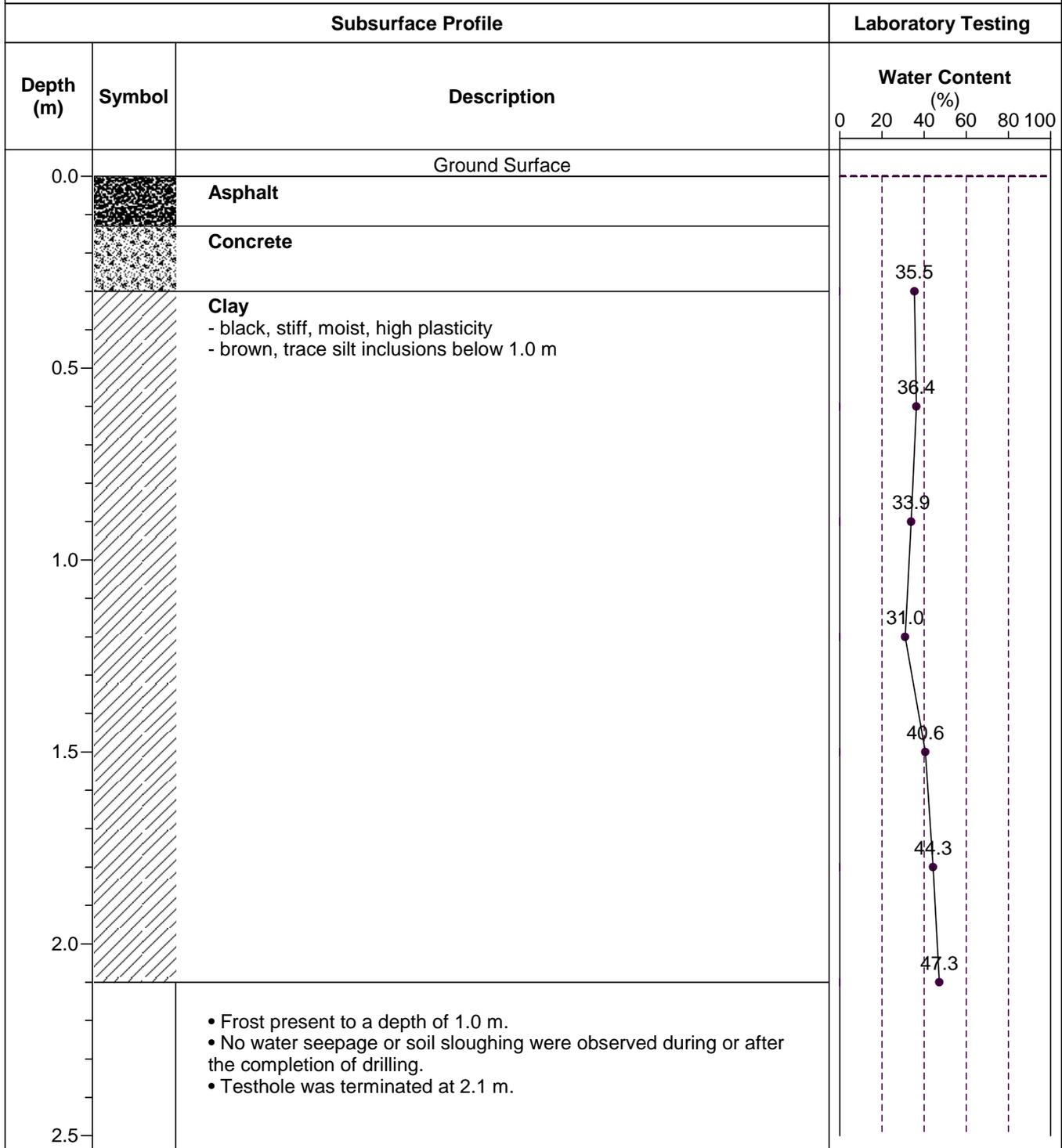
Testhole Location Plan,
2008 City of Winnipeg Local Street Renewal
Rosedale Avenue between Nassau St. to Osborne St.

TESTHOLE TH1



Project Name: 2008 City of Winnipeg Local Street Renewals
Client: KGS Group
Site: Rosedale Avenue between Nassau St. to Osborne St.
Testhole Location: E.B. Lane, 3.3 m E of W property line of 360 Rosedale Ave., 1.8 m away from curb

Date Drilled: December 18, 2007
Depth of Testhole: 2.1 m
Logged by: Kurtis Kulchyski

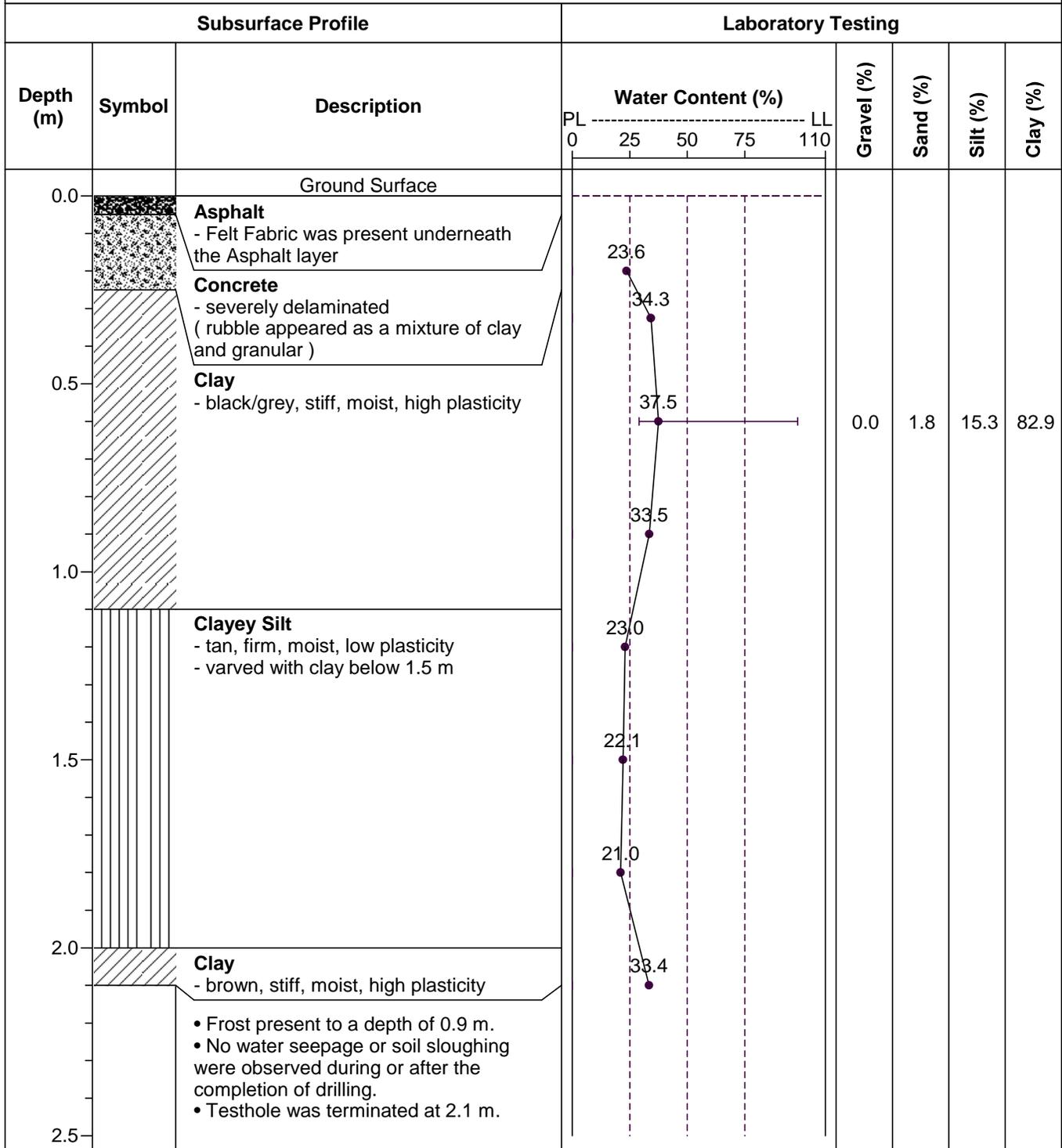


TESTHOLE TH2



Project Name: 2008 City of Winnipeg Local Street Renewals
 Client: KGS Group
 Site: Rosedale Avenue Between Nassau St. to Osborne St.
 Testhole Location: W.B. Lane, 5.9 m E of property line of 353 / 351 Rosedale Ave., 1.8 m away from curb

Date Drilled: December 14, 2007
 Depth of Testhole: 2.1 m
 Logged by: Kurtis Kulchyski



TESTHOLE TH3



Project Name: 2008 City of Winnipeg Local Street Renewals
 Client: KGS Group
 Site: Rosedale Avenue Between Nassau St. to Osborne St.
 Testhole Location: E.B. Lane, 2.7 m W of property line of 330 / 328 Rosedale Ave., 1.8 m away from curb

Date Drilled: December 14, 2007
 Depth of Testhole: 2.1 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						
		Asphalt						
		Concrete						
0.5		Clay - black, stiff, moist, high plasticity						
1.0		Clayey Silt - tan, firm, moist, low plasticity						
1.5		Clay - brown, stiff, moist, high plasticity, trace varves of silt						
2.0								
2.5		<ul style="list-style-type: none"> Frost present to a depth of 0.9 m. No water seepage or soil sloughing were observed during or after the completion of drilling. Testhole was terminated at 2.1 m. 						

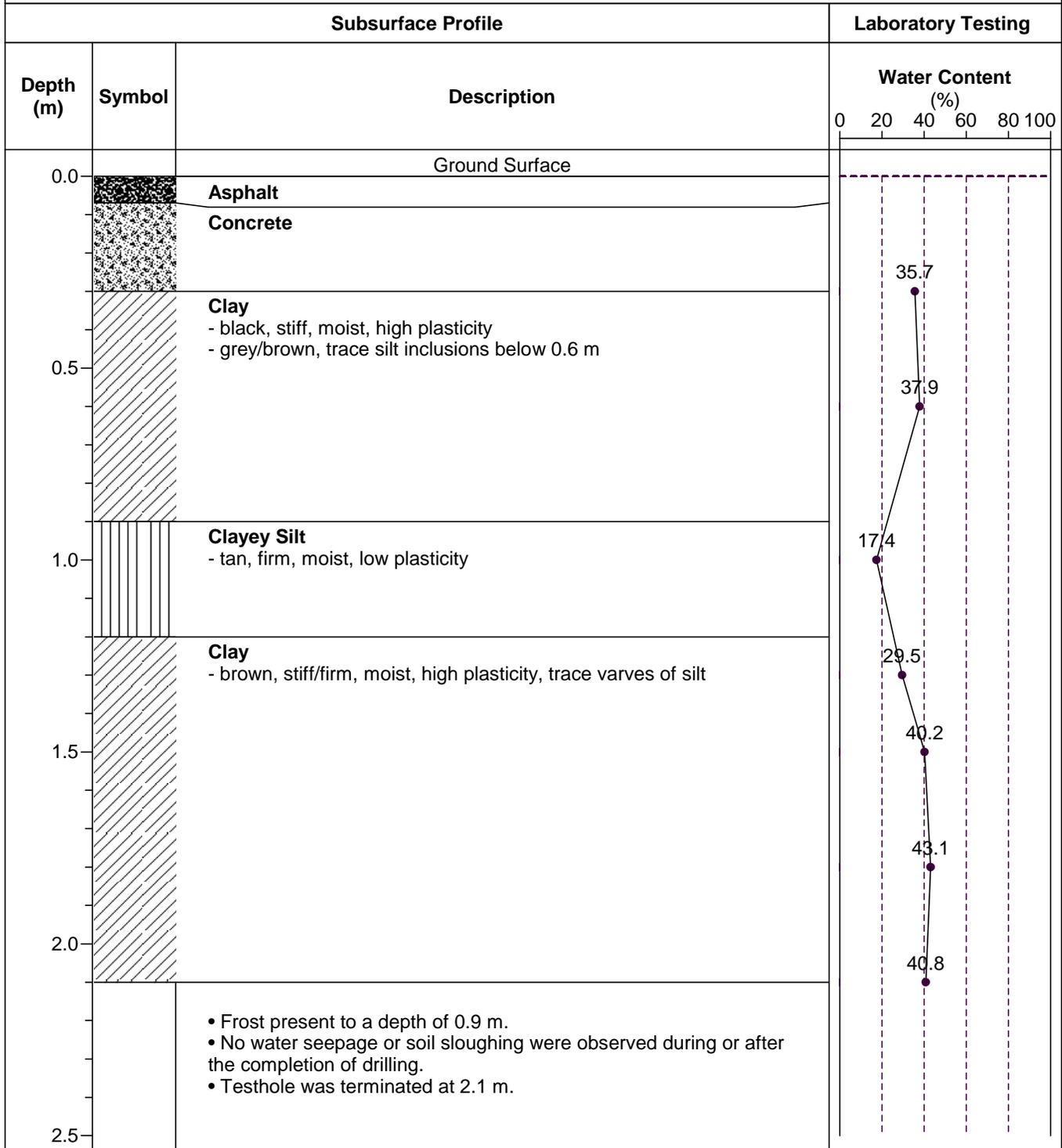
Depth (m)	Water Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.4	37.9				
0.8	35.5				
1.1	28.6	0.0	2.3	58.2	39.5
1.4	38.8				
1.7	40.0				
2.0	44.6				

TESTHOLE TH4



Project Name: 2008 City of Winnipeg Local Street Renewals
 Client: KGS Group
 Site: Rosedale Avenue between Nassau St. to Osborne St.
 Testhole Location: W.B. Lane, 0.1 m E of property line of 309 / 307 Rosedale Ave., 1.8 m away from curb

Date Drilled: December 14, 2007
 Depth of Testhole: 2.1 m
 Logged by: Kurtis Kulchyski

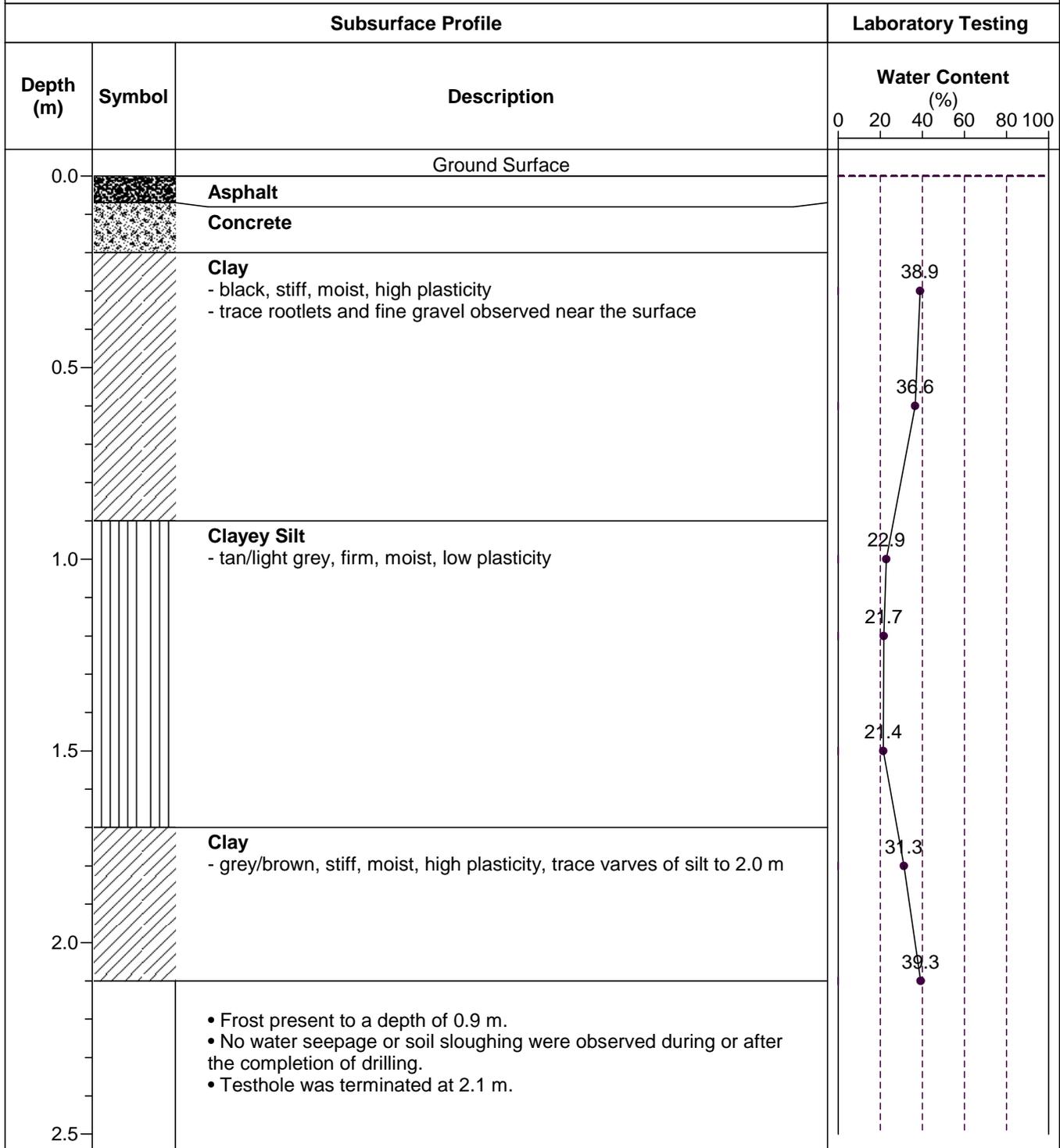


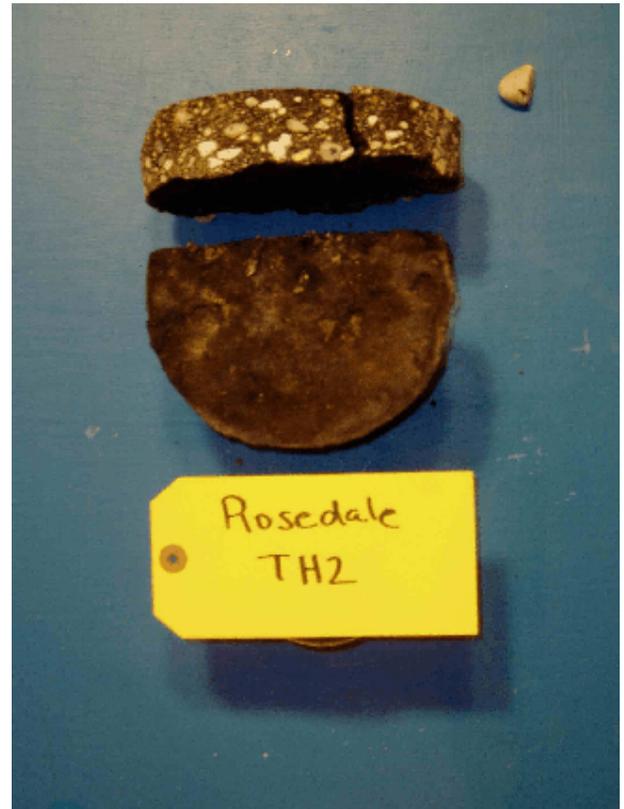
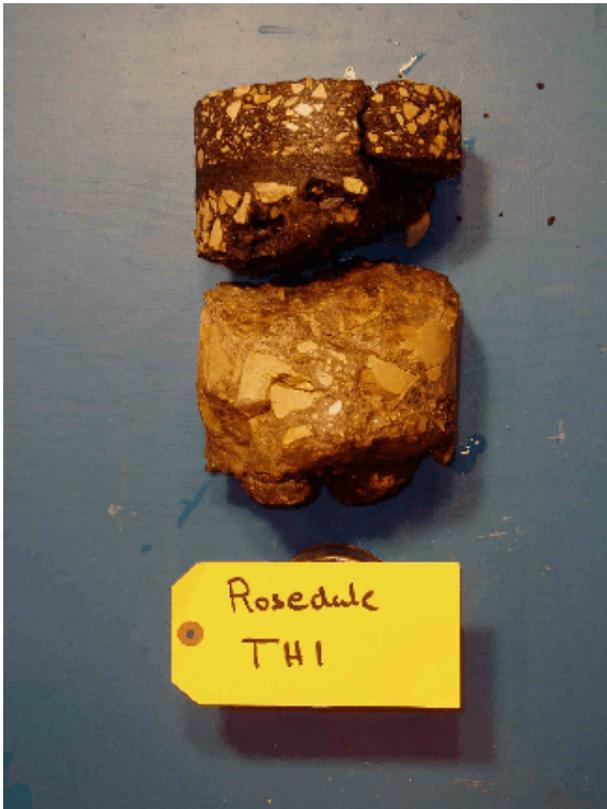
TESTHOLE TH5



Project Name: 2008 City of Winnipeg Local Street Renewals
 Client: KGS Group
 Site: Rosedale Avenue between Nassau St. to Osborne St.
 Testhole Location: E.B. Lane, 6.6 m E of W. property line of 280 Rosedale Ave., 1.8 m away from curb

Date Drilled: December 14, 2007
 Depth of Testhole: 2.1 m
 Logged by: Kurtis Kulchyski





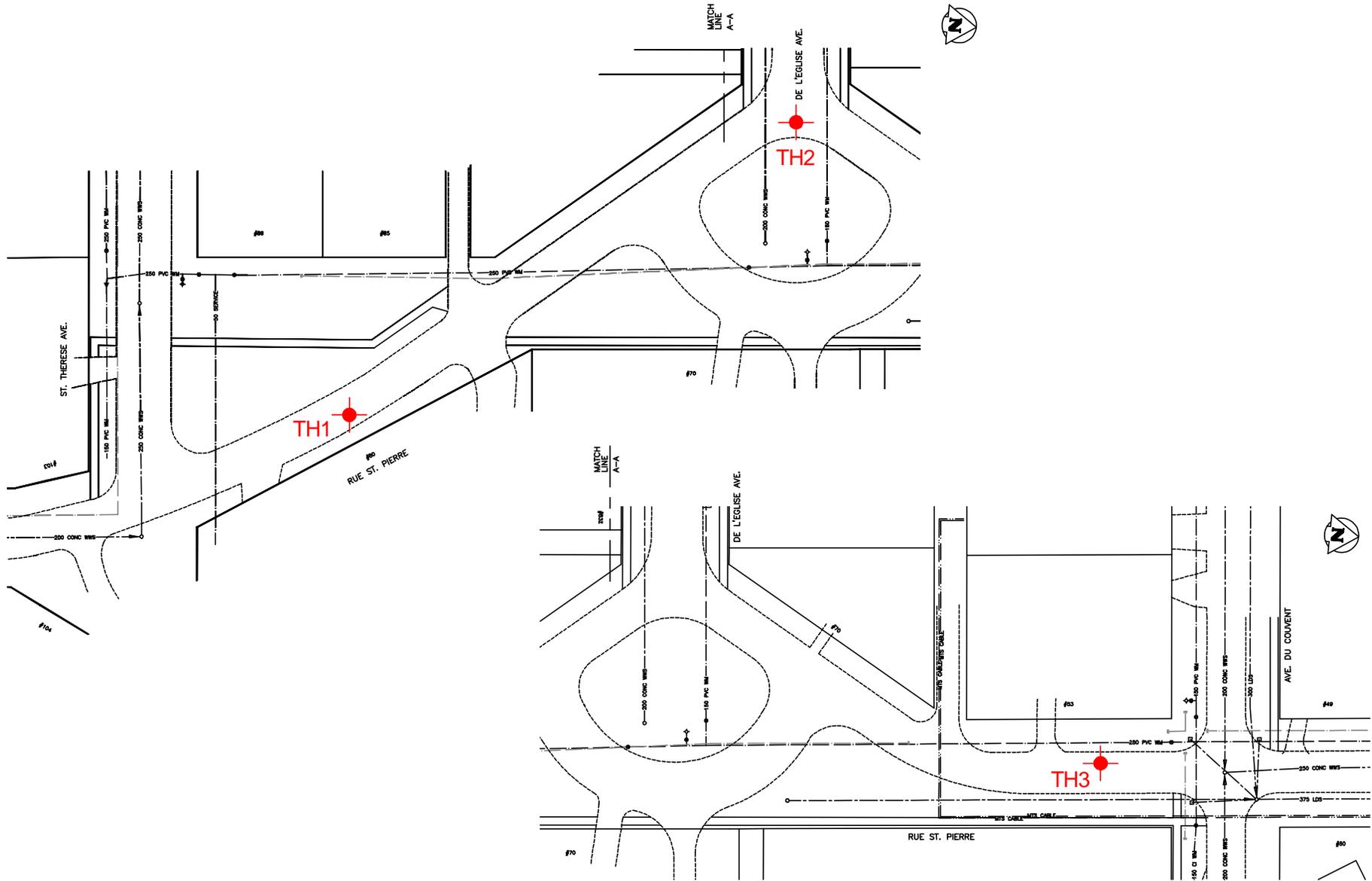
Note: Complete core samples of the pavement structure were not retrieved at every location. The condition of the concrete made retrieval of the sample impractical. The pavement structure was penetrated with a carbide bit during the investigation.

**RUE ST. PIERRE
ST. THERESE AVENUE TO AVENUE DU COUVENT
2008 CITY OF WINNIPEG
LOCAL STREETS RENEWALS PROGRAM**

Prepared for
KGS Group
3rd Floor, 865 Waverley Street
Winnipeg, Manitoba
R3T 5P4

Prepared by
The National Testing Laboratories Limited
199 Henlow Bay
Winnipeg, Manitoba
R3Y 1G4

January 7, 2008



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Project No.:KGS-759

Drawn by: KK

Figure: 1

Date: Jan. 4, 2008

Reviewed by: DF

Scale: NTS

Testhole Location Plan
2008 City of Winnipeg Local Street Renewals
Rue St. Pierre between St. Therese Ave and Ave. Du Couvent

TESTHOLE TH2



Project Name: 2008 City of Winnipeg Local Street Renewals

Date Drilled: December 14, 2007

Client: KGS Group

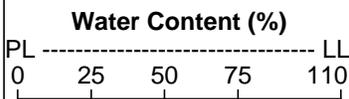
Depth of Testhole: 2.1 m

Site: Rue St. Pierre between St. Therese Ave. to Ave. Du Couvent

Logged by: Kurtis Kulchyski

Testhole Location: 2.5 m W of the westerly edge of the Traffic Circle

Subsurface Profile			Laboratory Testing							
Depth (m)	Symbol	Description	Water Content (%)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	0 25 50 75 110		LL				
0.0		Ground Surface								
		Asphalt								
		Granular Base - 20 mm maximum aggregate size								
		Clay - black/grey, stiff, moist, high plasticity								
0.5										
		Clayey Silt - tan, firm, moist, low plasticity								
1.0										
		Clay - brown, stiff, moist, high plasticity								
1.5										
							0.0	6.6	62.2	31.2
2.0										
2.5		<ul style="list-style-type: none"> • Frost present to a depth of 1.1 m. • No water seepage or soil sloughing were observed during or after the completion of drilling. • Testhole was terminated at 2.1 m. 								



TESTHOLE TH3



Project Name: 2008 City of Winnipeg Local Street Renewals

Date Drilled: December 14, 2007

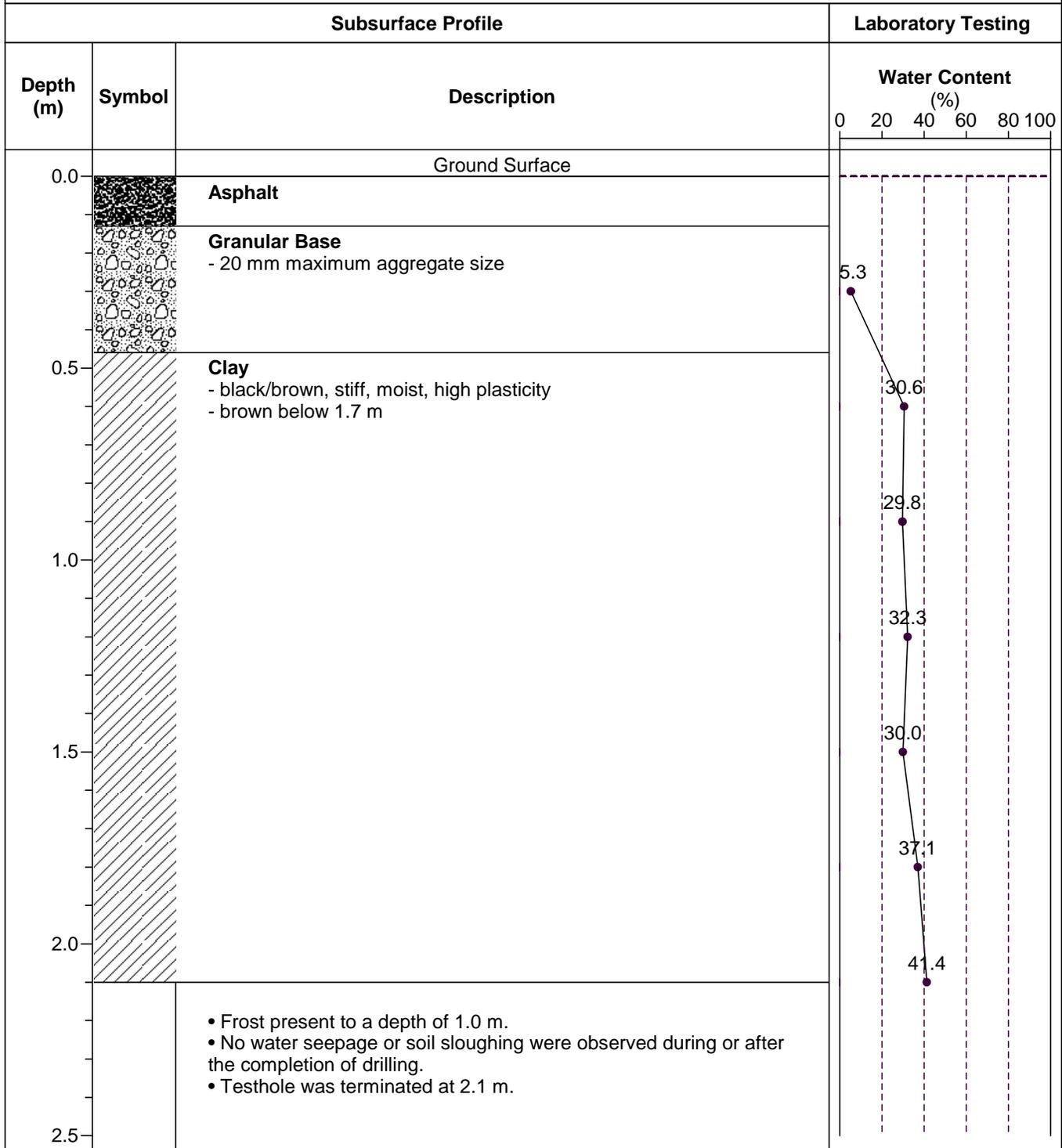
Client: KGS Group

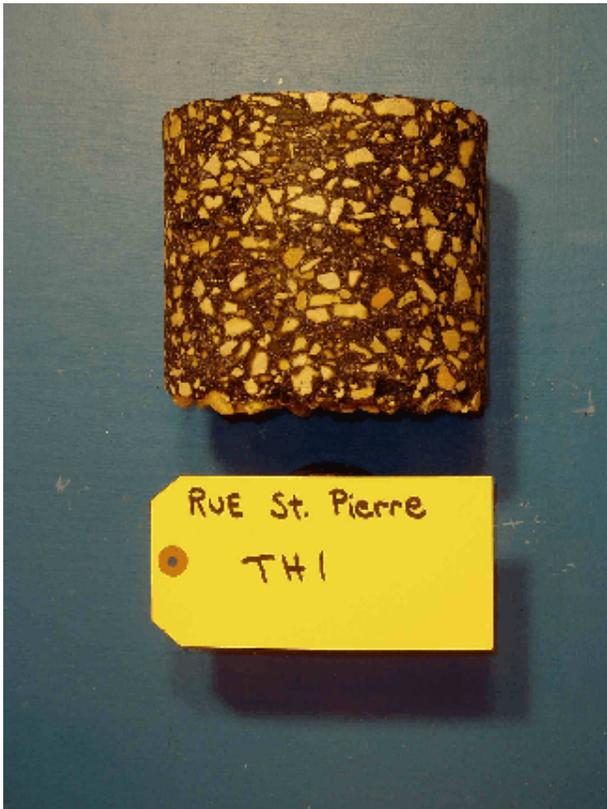
Depth of Testhole: 2.1 m

Site: Rue St. Pierre between St. Therese Ave. to Ave. Du Couvent

Logged by: Kurtis Kulchyski

Testhole Location: S.B. Lane, 6.5 m N of driveway of 53 Rue St. Pierre, 1.8 m away from curb



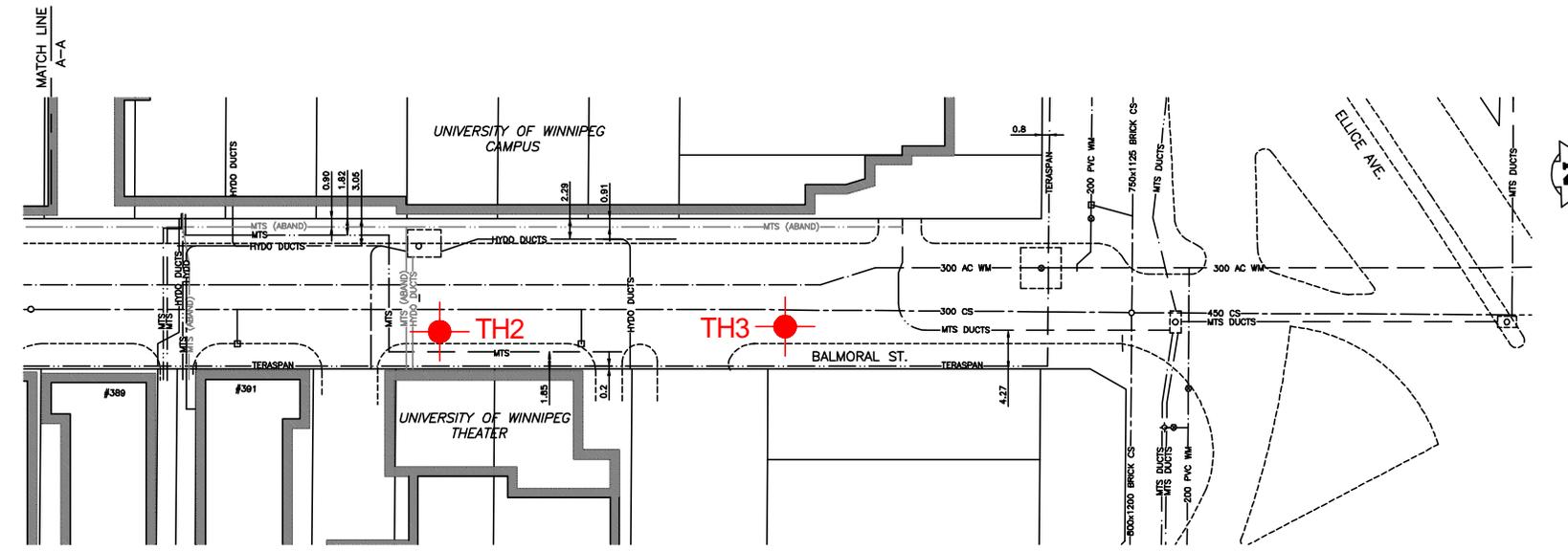
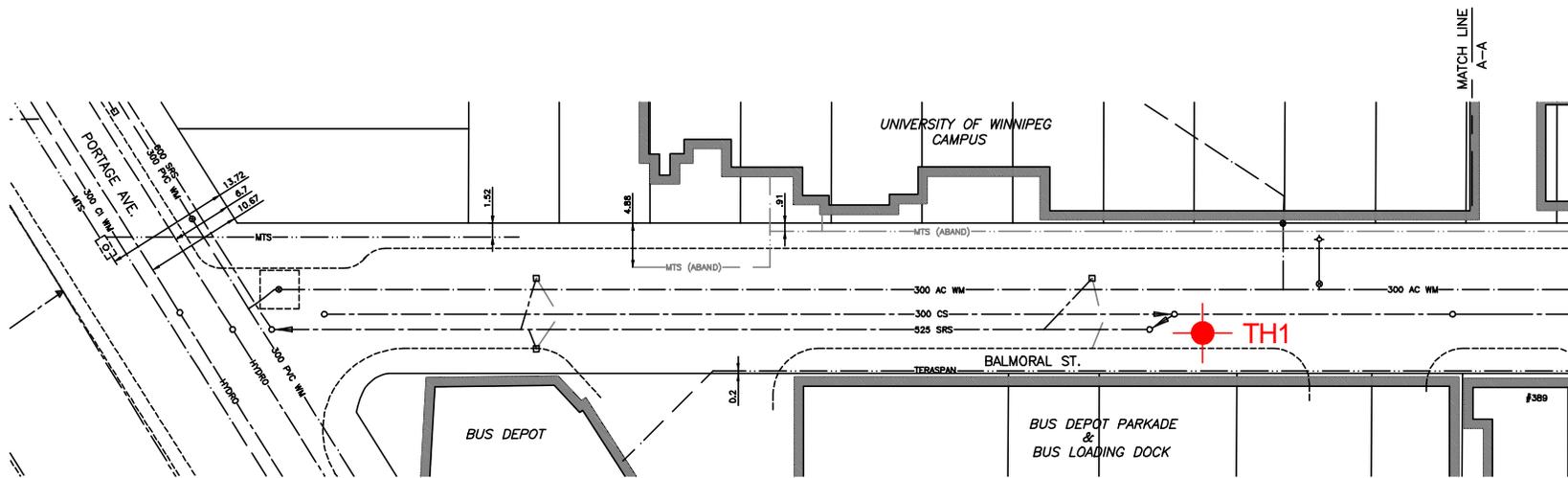


**BALMORAL STREET
PORTAGE AVENUE TO ELLICE AVENUE
2008 CITY OF WINNIPEG
LOCAL STREETS RENEWALS PROGRAM**

Prepared for
KGS Group
3rd Floor, 865 Waverley Street
Winnipeg, Manitoba
R3T 5P4

Prepared by
The National Testing Laboratories Limited
199 Henlow Bay
Winnipeg, Manitoba
R3Y 1G4

January 7, 2008



Project No.:KGS-759	Drawn by: KK	Figure: 1
Date: Jan. 4, 2008	Reviewed by: DF	Scale: NTS

Testhole Location Plan
 2008 City of Winnipeg Local Street Renewals
 Balmoral St. between Portage Ave. to Ellice Ave.

TESTHOLE TH1



Project Name: 2008 City of Winnipeg Local Street Renewals

Date Drilled: December 18, 2007

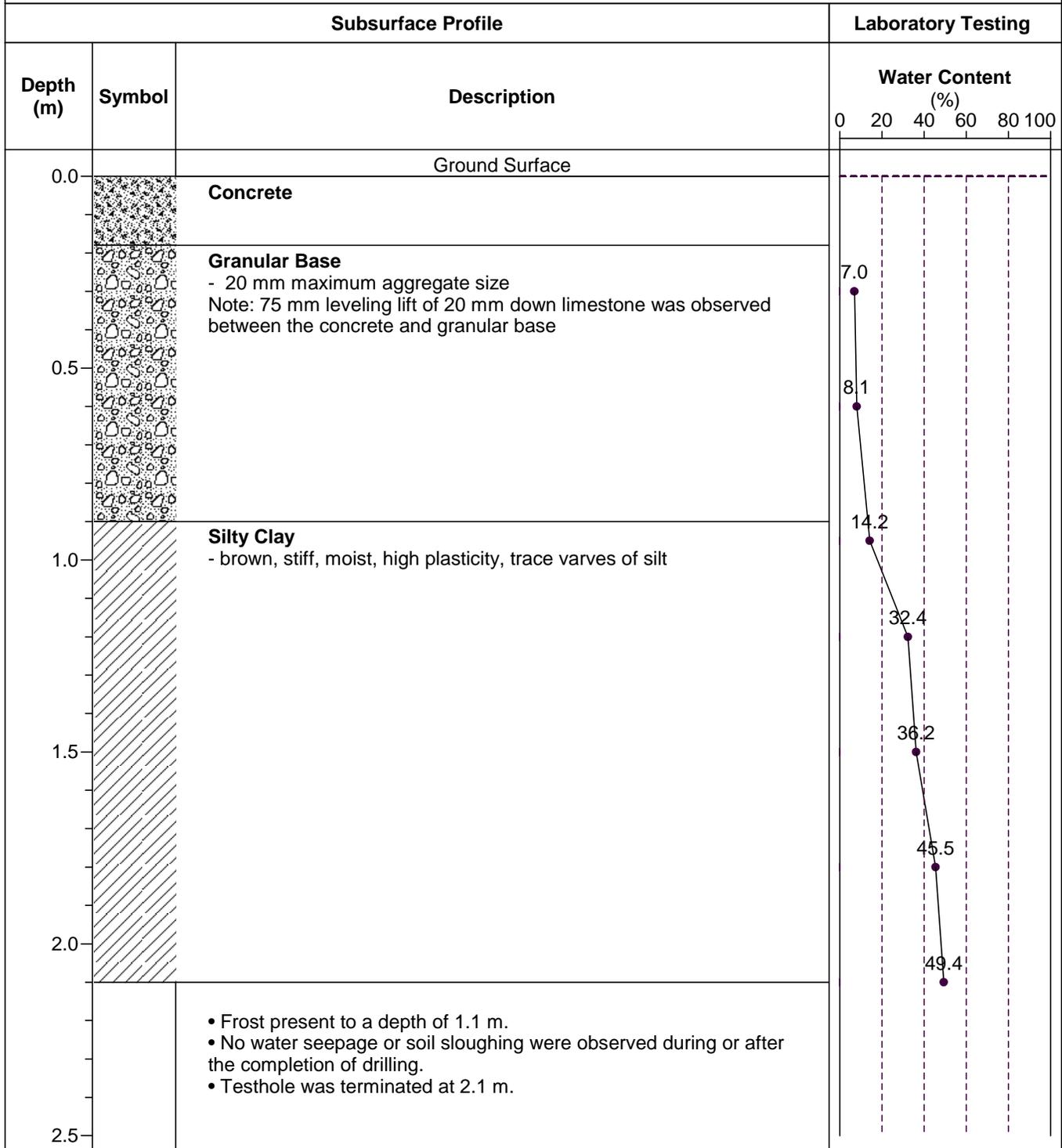
Client: KGS Group

Depth of Testhole: 2.1 m

Site: Balmoral Street between Portage Avenue to Ellice Avenue

Logged by: Kurtis Kulchyski

Testhole Location: E.Curb Lane, 28 m N of the NW corner of Bus Depot Parkade, 1.7 m away from curb



TESTHOLE TH3



Project Name: 2008 City of Winnipeg Local Street Renewals

Date Drilled: December 18, 2007

Client: KGS Group

Depth of Testhole: 2.1 m

Site: Balmoral Street Between Portage Avenue to Ellice Avenue

Logged by: Kurtis Kulchyski

Testhole Location: E.Curb Lane, 20 m N of the NW corner of U of W Theater., 2.0 m away from curb

