

# **APPENDIX 'A'**

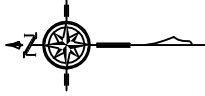
# **GEOTECHNICAL REPORT**

## APPENDIX 'A' - GEOTECHNICAL REPORT

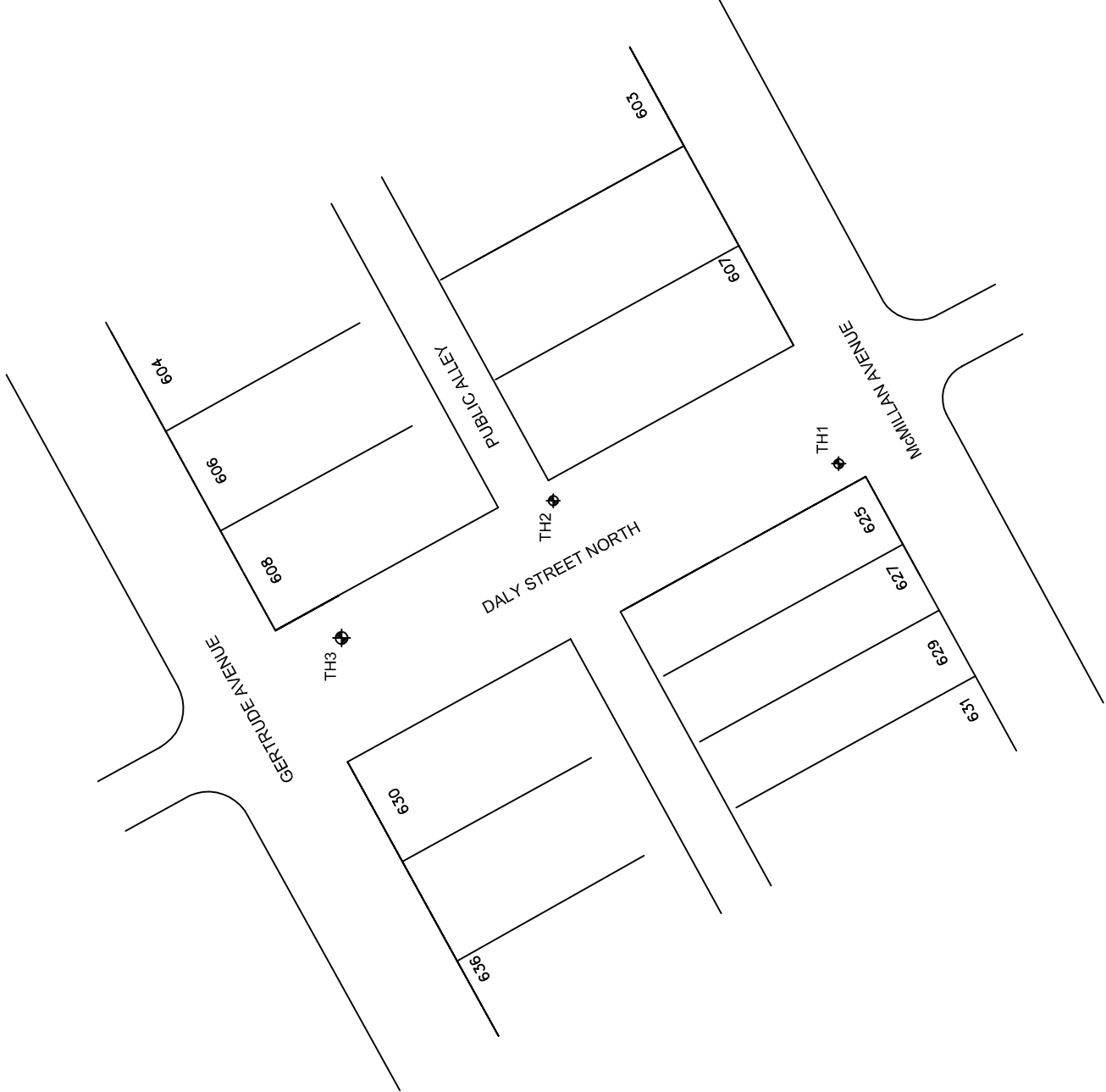
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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling.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



Test Hole  
Location



**ENG-TECH**  
CONSULTING LIMITED

#6 - 854 Marlon Street  
Winnipeg, MB R2J 0K4  
Phone: (204) 233-1694  
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ENG. STAMP:



CLIENT:	CITY OF WINNIPEG, PUBLIC WORKS DEPARTMENT
PROJECT:	CITY OF WINNIPEG 2007 RESIDENTIAL STREET RENEWAL PROGRAM
DWG DESCRIPTION:	TEST HOLE LOCATION PLAN DALY STREET NORTH
SCALE:	NTS
DRAWN BY:	OB
DATE:	DECEMBER 2006
FILE No.:	06-217-05
CLIENT DWG/FIG. No.:	
ENG-TECH DWG/FIG. No.:	2
REV.:	0

**Figure 2**  
**Test Hole Locations**

**City of Winnipeg**  
**2007 Residential Street Renewal Program**

Street Location	Test Hole #	Test Hole Location
<p align="center">DALY STREET from Gertrude Avenue to McMillan Avenue</p>	1	<ul style="list-style-type: none"> <li>- Adjacent to # 625 McMillan Avenue</li> <li>- 1.2 m east of west curb of Daly Street</li> <li>- 10.0 m north from north curb on McMillan Avenue</li> </ul>
	2	<ul style="list-style-type: none"> <li>- Adjacent to # 607 McMillan Avenue</li> <li>- 24.0 m south from south curb of Gertrude Avenue</li> <li>- 0.8 m west of east curb of Daly Street</li> </ul>
	3	<ul style="list-style-type: none"> <li>- Adjacent to # 608 Gertrude Avenue</li> <li>- 1.2 m west of east curb of Daly Street</li> <li>- 7.0 m from south curb of Gertrude Avenue</li> </ul>

# ENG-TECH CONSULTING LIMITED

GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING

**Client:** City of Winnipeg, Public Works Department

**Project:** City of Winnipeg 2007 Residential Street Program

**Site:** Daly Street North

**Location:** See Figure 2








**Test Hole #: TH 1**

**File No:** 06-217-05

**Date Drilled:** December 20, 2006

**Grade Elevation:** 100.0 m (local)

**Water Elevation:** - -

SUBSURFACE PROFILE				SAMPLE DATA				Water Content (%)	GRAIN SIZE DISTRIBUTION %			
Depth (m)	Soil Symbol	Description	Elevation (m)	Number	Sample Type	Recovery (%)	blows/300 mm		Gravel	Sand	Silt	Clay
0		Ground Surface <i>Asphalt (170 mm)</i>	100									
		<i>Clay Fill (CH)</i> - dark brown, moist, high plastic, some sand & gravel, with silt.		S1								
		<i>Silty Clay (CH)</i> - black, moist, high plastic, organics, some sand, and silt.		S2								
1		<i>Silt (ML)</i> - medium brown, moist, low plastic, some clay. - below 1.3 m, with clay.	99	S3								
		<i>Silt (ML)</i> - medium brown, moist, low plastic, some clay. - below 1.3 m, with clay.		S4								
		<i>Clay (CH)</i> - dark brown, moist, high plastic, some to with silt.		S5								
		<i>Clay (CH)</i> - dark brown, moist, high plastic, some to with silt.		S6								
2		<i>Clay (CH)</i> - dark brown, moist, high plastic, some to with silt.		S7								
		<i>End of Test Hole</i> - end of test hole at 2.0 m below grade. - no groundwater or sloughing encountered. - test hole backfilled with auger cuttings and capped with asphalt cold mix.	98									
3			97									

ENG-TECH Consulting Limited

Logged by: ERM

Reviewed by:

**Sample Type**



Split Barrel



Shelby Tube



Auger Cuttings



Split Spoon

Drilled By: Paddock Drilling Ltd.

Drill Rig: Acker MP5-T

Auger Size: 125 mm Solid Stem

Completion Depth: 2.0 m

Completion Elevation: 98.0 m

Sheet: 1 of 1

# ENG-TECH CONSULTING LIMITED

GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING

**Client:** City of Winnipeg, Public Works Department

**Project:** City of Winnipeg 2007 Residential Street Program

**Site:** Daly Street North

**Location:** See Figure 2

**Test Hole #: TH 2**

**File No:** 06-217-05

**Date Drilled:** December 20, 2006

**Grade Elevation:** 100.0 m (local)

**Water Elevation:** - -

SUBSURFACE PROFILE				SAMPLE DATA				Water Content (%)	GRAIN SIZE DISTRIBUTION %			
Depth (m)	Soil Symbol	Description	Elevation (m)	Number	Sample Type	Recovery (%)	blows/300 mm		Gravel	Sand	Silt	Clay
0		Ground Surface <i>Asphalt (165 mm)</i>	100									
		<i>Silty Clay (CH)</i> - black, moist, high plastic, organics, trace sand, and silt.		S1								
		<i>Clay (CH)</i> - greyish/black dark brown, moist, high plastic, some silt.		S2								
1		- below 1.2 m, dark brown.	99	S3								
		- between 1.5 m to 1.7 m, medium brown, some silt inclusions.		S4								
				S5								
2		<i>End of Test Hole</i> - end of test hole at 2.0 m below grade. - no groundwater or sloughing encountered. - test hole backfilled with auger cuttings and capped with asphalt cold mix.	98	S6								
3			97									

ENG-TECH Consulting Limited

Logged by: ERM

Reviewed by:

**Sample Type**



Split Barrel



Shelby Tube



Auger Cuttings



Split Spoon

Drilled By: Paddock Drilling Ltd.

Drill Rig: Acker MP5-T

Auger Size: 125 mm Solid Stem

Completion Depth: 2.0 m

Completion Elevation: 98.0 m

Sheet: 1 of 1

# ENG-TECH CONSULTING LIMITED

GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING

**Client:** City of Winnipeg, Public Works Department

**Project:** City of Winnipeg 2007 Residential Street Program

**Site:** Daly Street North

**Location:** See Figure 2

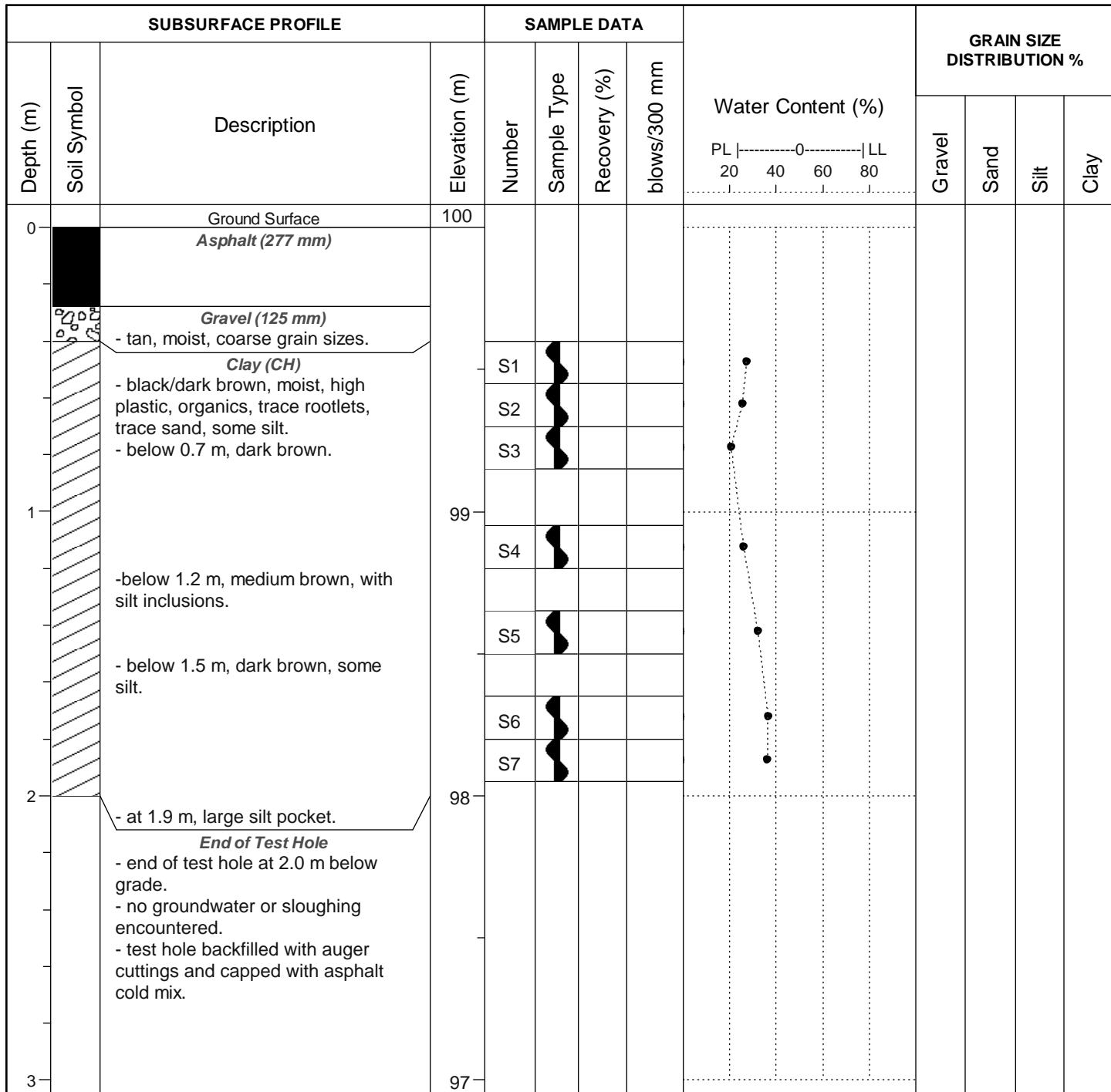
**Test Hole #: TH 3**

**File No:** 06-217-05

**Date Drilled:** December 20, 2006

**Grade Elevation:** 100.0 m (local)

**Water Elevation:** - -



ENG-TECH Consulting Limited

Logged by: ERM

Reviewed by:

**Sample Type**



Split Barrel



Shelby Tube



Auger Cuttings



Split Spoon

Drilled By: Paddock Drilling Ltd.

Drill Rig: Acker MP5-T

Auger Size: 125 mm Solid Stem

Completion Depth: 2.0 m

Completion Elevation: 98.0 m

Sheet: 1 of 1







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## PARTICLE SIZE ANALYSIS REPORT

City of Winnipeg, Public Works Department,  
 Transportation Engineering Division  
 106-1155 Pacific Avenue  
 Winnipeg, Manitoba  
 R3E 3P1

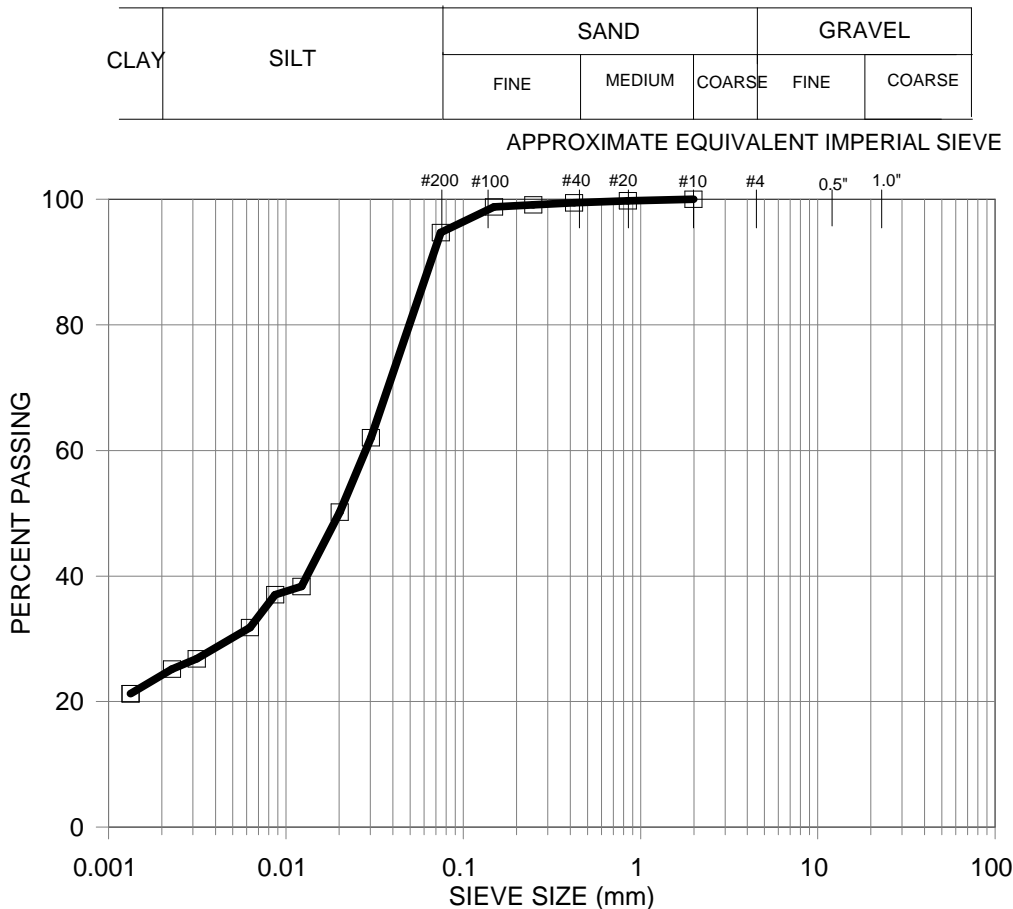
**File No.:** 06-217-05

**Reference No.:** 6-217-5-4

**ATTENTION:** Rolf K. Doerries, C.E.T.

**PROJECT:** CITY OF WINNIPEG 2007 RESIDENTIAL STREET RENEWAL PROGRAM

<b>Test Hole No.</b>	TH1	<b>Sample No.</b>	S5	<b>Depth:</b>	1.4 m
<b>Sampled By:</b>	ENG-TECH	<b>Type of Sample:</b>	Bag	<b>Source:</b>	Daly St. North
<b>Date Sampled:</b>	December 21/06	<b>Date Received:</b>	December 21/06	<b>Date Tested:</b>	December 27/06



SIEVE SIZE (mm)	PERCENT PASSING
2.0000	100.0
0.8500	99.8
0.4250	99.5
0.2500	99.2
0.1500	98.8
0.0750	94.7
0.0304	62.0
0.0202	50.2
0.0123	38.4
0.0087	37.1
0.0063	31.8
0.0031	26.8
0.0023	25.2
0.0013	21.3

**Percent of:** GRAVEL (0.0%), SAND (5.3%), SILT (70.4%) and CLAY (24.3%)  
**Sample Description:** Silt

**ENG-TECH Consulting Limited**

**COMMENTS:**

per \_\_\_\_\_  
 Clark Hryhoruk, President  
 Ph: (204) 233-1694 Fax: (204) 235-1579



**Daly Street North**