

Geotechnical Report

Appendix B
Test Hole Logs
IDE 1987



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 1

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO.

12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD. & WILKES AVE.

LOCATION REFER TO SITE PLAN

SHEET 1 OF 2

DATE DRILLED JUNE 27, 87

LOGGED BY GVN

ENGINEER KVL

CONTRACTOR PILE FOUNDATIONS LTD RIG WILLIAMS AUGER

HOLE SIZE 400 mm φ

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS	(SEE CODE)
						2	10 (K.S.F.)					
					SURFACE - GRASS							
2					ORGANIC CLAY FILL							
4	1		(CL)		ORGANIC CLAY - BLACK, LIGHTER IN COLOUR WITH DEPTH							
			(ML)		SILT - TAN - MOIST							
6	2				SILTY CLAY							
8					- BROWNISH-GREY - MEDIUM PLASTIC - BLOCK, FIRM TO STIFF TO 2.1m - FIRM BELOW 2.1m							R1
10	3											T2
12	4		(CI/CH)									R3
14					- VARIED WITH HIGHLY PLASTIC GREY CLAY BELOW 4.0m							T4
16	5											R5
18												T6
20	6											R7
22	7				SILTY CLAY							T8
24					- GREYISH-BROWN - FIRM - HIGHLY PLASTIC - WITH SILT POCKETS & SEAMS							R9
26	8		(CH)									T9
28					- WITH LARGE SANDY SILT POCKETS @ 8.4m							



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 1

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

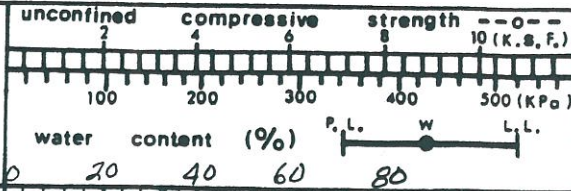
JOB NO.

PROJECT KENASTON AND WIKES GRADE SEPARATION STUDY

12-13-25

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (K.S.F.)		TYPE	SAMPLE NO.	BLOWS/FT (0.3m) OR RECOVERY	OTHER TESTS	(SEE CODE)
						100	200					
30	9			(CH)	<p><u>SILTY CLAY</u> AS ABOVE</p> <p>- WITH COBBLES UP TO 125mm</p>				R10			
32	10				<p><u>TILL</u></p> <p>- TAN</p> <p>- MOIST</p> <p>- STONY</p> <p>- WITH COBBLES</p> <p>- SLIGHTLY DENSER BELOW 10.8m</p>				R11			
34									R12			
36	11								R13			
38												
40	12				<p>- POWER AUGER REFUSAL ON BOULDER @ 11.6m</p>							





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 2

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 2-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD. & WILKES AVE.

LOCATION REFER TO SITE PLAN

SHEET 1 OF 2

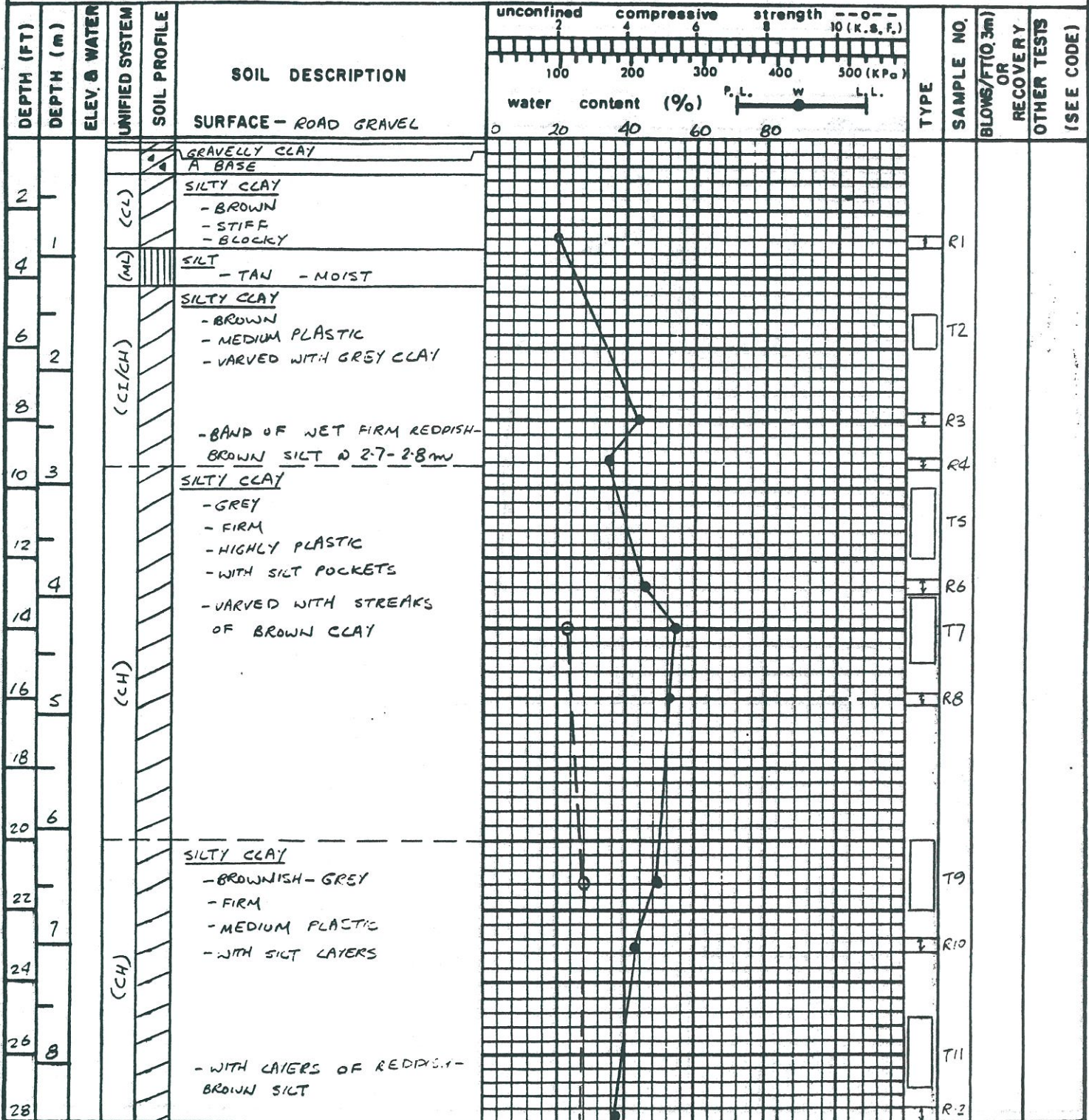
DATE DRILLED JUNE 23/87

LOGGED BY GVN

ENGINEER KVL

CONTRACTOR PILE FOUNDATIONS, LTD. RIG WILLIAMS AUGER

HOLE SIZE 400mm φ





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

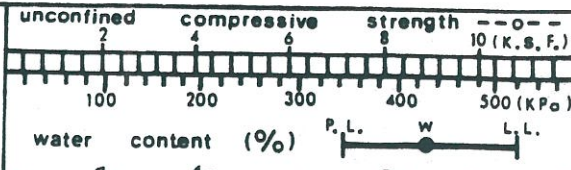
HOLE NO. 2

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.
PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

JOB NO.
12-16-25

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						10 (K.S.F.)	500 (KPa)				
30	9		(CH)	///	SILTY CLAY AS ABOVE						
32			(CH)	///	SILTY CLAY - GREY - FIRM - HIGHLY PLASTIC				T13		
34	10			Δ	TILL - GREYISH-BROWN - MOIST - SOFT - WITH BOULDERS BELOW 10.4m				R14		
36	11			Δ	- BECOMES HARD TO VERY HARD BELOW 11.4m				R15		
38				Δ					R16		
40	12			Δ					R17		
42	13			Δ							
44				Δ					R18		
46	14				- POWER AUGER REFUSAL ON DENSE TILL WITH BOULDERS @ 13.4m						





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 3

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD & WILKES AVE.

LOCATION REFER TO SITE PLAN

SHEET 1 OF 2

DATE DRILLED JUNE 26 / SEP. 18, 87

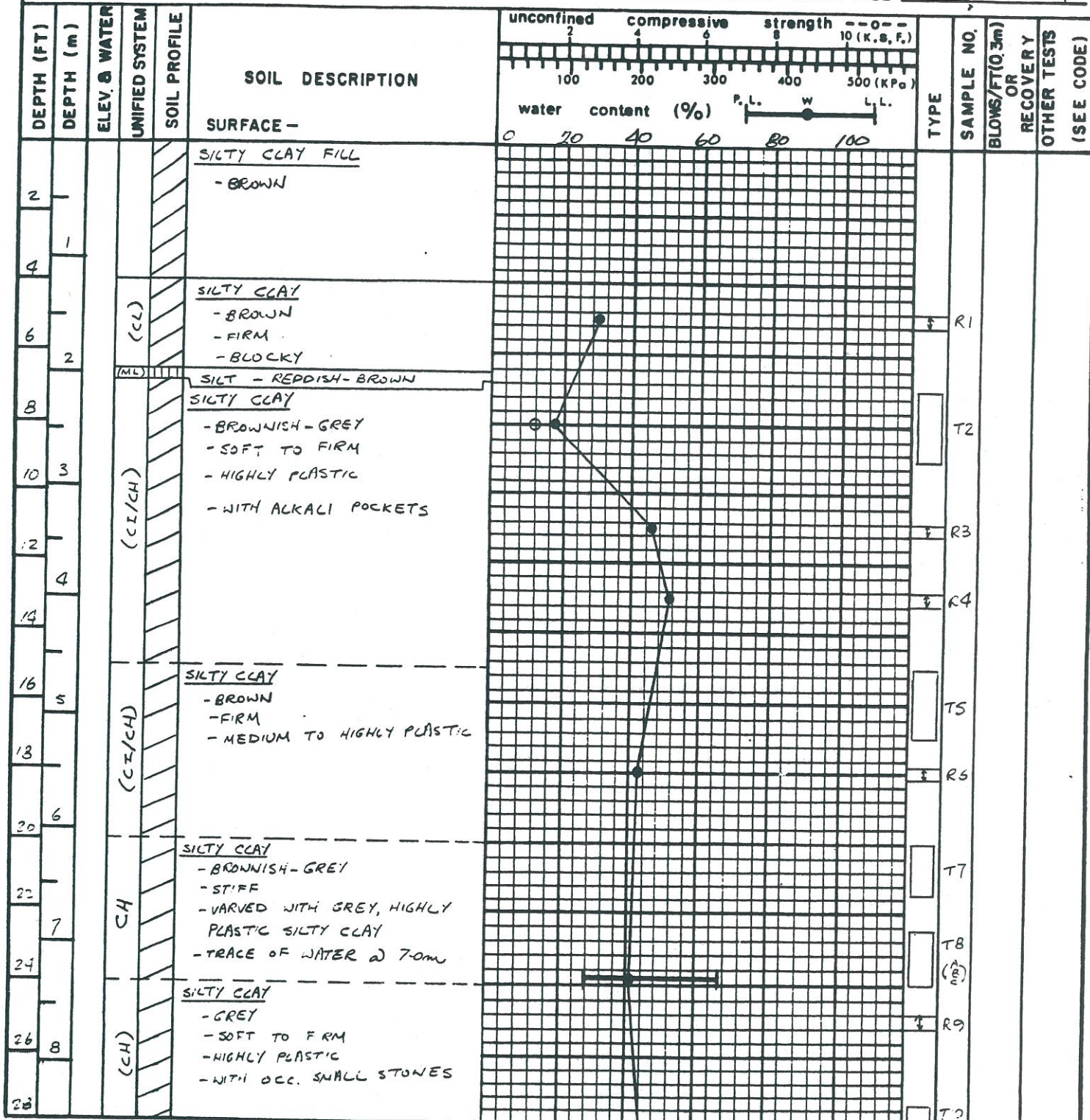
LOGGED BY GVN

CONTRACTOR PILE FOUNDATIONS LTD.
PADDOCK DRILLING LTD.

RIG WILLIAMS AUGER
SUS PECH BRAT 22

ENGINEER KVL

HOLE SIZE 400mm / 200mm ϕ





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 3

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.
PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

JOB NO.
12-16-25

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (KPa)		TYPE	SAMPLE NO.	BLOWS/FT (0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						100	200				
30	9			(CH)	SILTY CLAY AS ABOVE	100	200		T10 (σ)		
32									R11		
34	10				- WITH NUMEROUS TAN SILT POCKETS & LAYERS BELOW 10.0m				T12		
36	11										
38									R13		
40	12				TILL - GREY - WET - SOFT				S1	131	
42					TILL - BROWNISH-GREY - DENSE - WITH BOULDERS - POWER AUGER REFUSAL @ 12.5m				R14		
44	13				- WITH GRANITE ROCKS IN STONY TILL				R15	112	S2
46	14				- HOLE DISCONTINUED @ 13.7m DUE TO LOST OF DRILL BIT IN BOULDERY TILL				S3	79	



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 4

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO.

12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD. & WILKES AVE.

SHEET 1 OF 2

DATE DRILLED JUNE 26/SEP. 18. 87

LOCATION REFER TO SITE PLAN

LOGGED BY GVN

ENGINEER KVL

CONTRACTOR PILE FOUNDATIONS LTD. PADDOCK DRILLING LTD. RIG WILLIAMS AUGER GUS PEH BRAT 22

HOLE SIZE 400mm / 200mm ϕ

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (K.S.F.)		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS	(SEE CODE)
						10	20					
					SURFACE -							
2					SILTY CLAY FILL - VERY SILTY							
4	1				ORGANIC CLAY - BLACK - STIFF				R1			
6	2		(CL)		SILTY CLAY - GREYISH - BROWN - FIRM TO STIFF - BLOCKY, NUGGETY TO 23M				R2			
8												
10	3		(ML)		SILT - REDDISH-BROWN - VERY MOIST				R3			
12					SILTY CLAY - GREYISH - BROWN - FIRM - MEDIUM TO HIGHLY PLASTIC - WITH BROWN CLAY STREAKS - OCC. SILT POCKETS				T4			
14	4								R5			
16			(CI/CH)									
18					- WITH REDDISH-BROWN SILT STREAKS				T6			
20	5								R7			
22					SILTY CLAY - BROWN/GREY - FIRM TO STIFF - MEDIUM TO HIGHLY PLASTIC - WITH TAN SILT POCKETS				T8			
24	7		CH						T9			
26	8				SILTY CLAY - GREY - FIRM - HIGHLY PLASTIC - WITH BROWN SILT POCKETS				(A) F.0			
28			(CH)						T11			



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 4

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.
PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

JOB NO.
12-16-25

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (KPa)		water content (%)	TYPE	SAMPLE NO.	BLOWS/FT (0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						0-100	100-500					
30	9			(CH)	SILTY CLAY AS ABOVE	2	4			T11 (2)		
32	10									R12		
34	10				TILL					T13		
36	11				- GREY - MOIST TO WET - STONY							
38	11									R14		
40	12				- DRIER, HARDER BELOW 12.2m							
42	12									S1	34	
44	13									R15		
46	13				- SPT REFUSED @ 13.9m ON BOULDER					S2	126	
48	14									R16		
48	14				- POWER AUGER REFUSAL @ 14.2m					S3	120 #02 0.23m	
	15									R17		



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 5

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

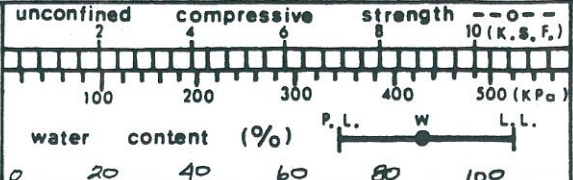
JOB NO.

12-16-15

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						100	200				
30	9			(CH)	SILTY CLAY AS ABOVE						
32											
34	10				- WITH STREAKS OF GREY TILL PUTT, BELOW 9.8m						
36	11				TILL						
38					- WET						
40	12				- WITH LAYERS OF FINE GRAVEL						
42					- SOFT						
44	13				- STONY						
46	14				- BOULDERY, A BIT DENSER BELOW 12.5m						
48					- POWER AUGER REFUSAL @ 12.6m						
50	15				- SPT REFUSED @ 12.2 m & @ 12.5m						
52	16				- SLIGHTLY SOFTER TILL @ 14.5m						
					- SPT REFUSED ON BOULDER @ 15.2m						



TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
	T10		
	R11		
	R12		
	R13		
	R14		
	S2	93	
	S3	95	
	S4	26	
	S5	140	



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 6

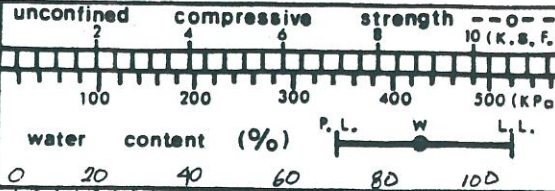
CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 12-15-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (K.P.a)		TYPE	SAMPLE NO.	BLOWS/FT (0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						100	200				
30	9			(CH)	SILTY CLAY AS ABOVE						
32	10								T12		
34									R13		
36	11				- TRACE OF TILL PUTTY BELOW 10.7m				T14		
38									R15		
40	12				TILL - GREY - SOFT, WET						
42	13				- HARD BELOW 12.8m				R16		
44									S1	54	
46	14				- BOULDERS WITH FREE WATER BELOW 13.9m - POWER AUGER REFUSAL @ 14.2m				R17		
48	15				- SPT REFUSED ON A BOULDER @ 14.3m				S3	140	





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 7

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD. & WILKES AVE.

LOCATION REFER TO SITE PLAN

SHEET 1 OF 2

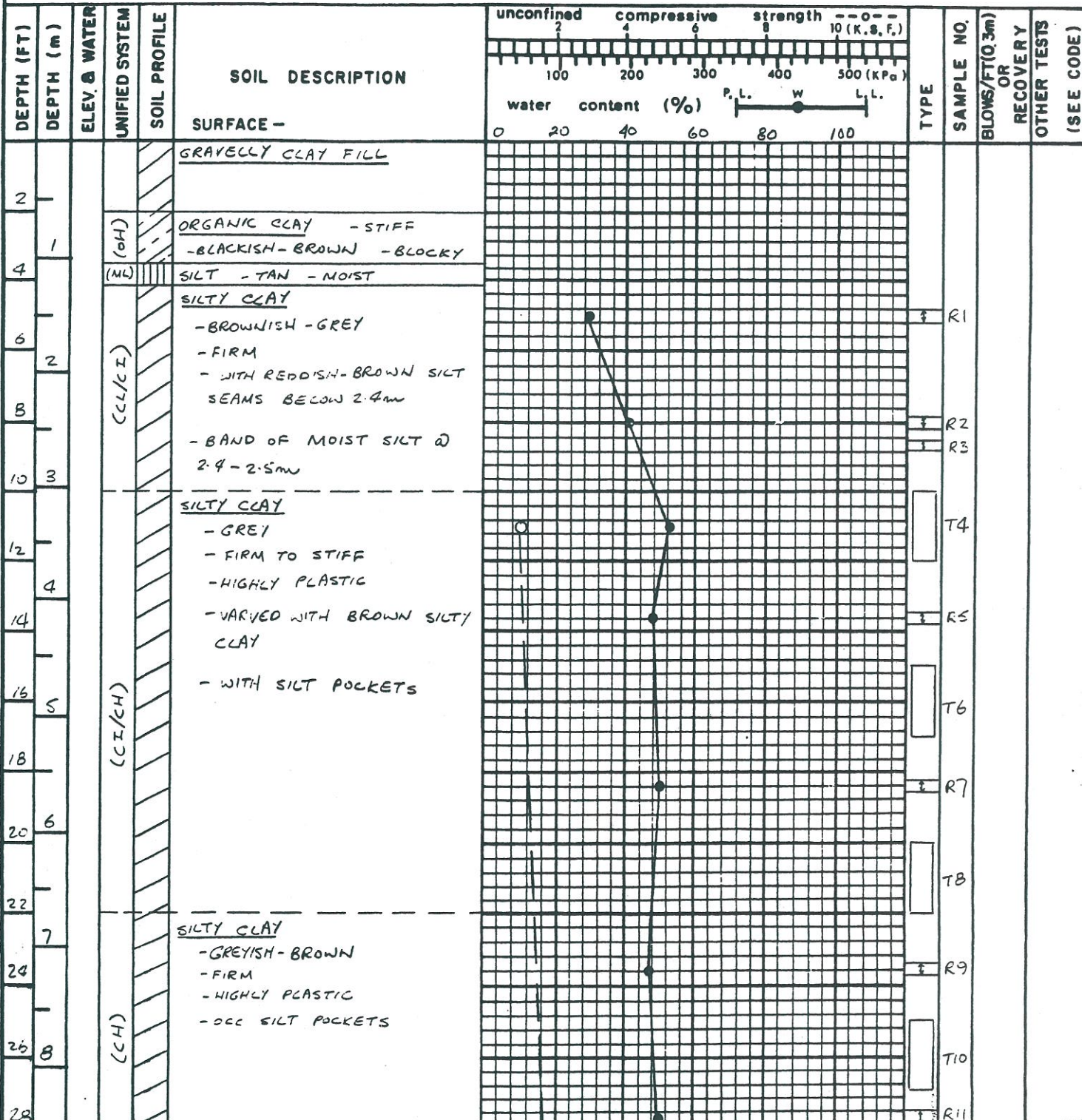
DATE DRILLED JUNE 25/87

LOGGED BY GVN

ENGINEER KVL

CONTRACTOR PILE FOUNDATIONS LTD. RIG WILLIAMS AUGER

HOLE SIZE 400mm φ





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 7

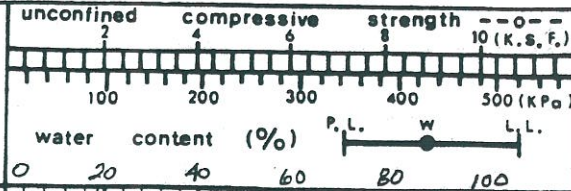
CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength		TYPE	SAMPLE NO.	BLOWS/FT (0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						10 (K.S.F.)	500 (KPa)				
30	→				SILTY CLAY AS ABOVE						
32	10			(CH)	- MORE SILT POCKETS BELOW 9.8m				T12		
34									R13		
36	11				TILL - GREY - MOIST - WITH SMALL STONES				T14		
38									R15		
40	12				- DRIER, FIRMER BELOW 11.9m				R16		
42					- HARD, WITH BOULDERS BELOW 12.5m				R17		
44	13				- BOULDERY, WITH FREE WATER @ 13.7m				R18		
46	14				- POWER AUGER REFUSAL ON BOULDERS @ 13.7m						





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 8

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

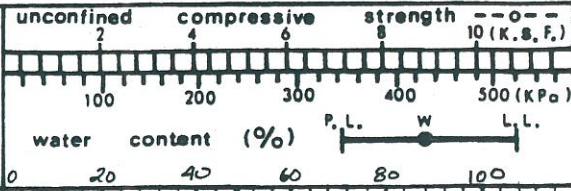
JOB NO.

12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						(K.S.F.)	(KPa)				
30	9			(SCH)	SILTY CLAY AS ABOVE				T10		
32									T11		
34	10								R12		
36	11				TILL - BROWNISH-GREY - WET - SOFT - SILTY, STONY, WITH BOULDERS				R13		
38									R14		
40	12				- DRIER, DENSER BELOW 12.6m				S1	3	
42									S2	13	
44	13				- POWER AUGER REFUSAL @ 12.8m				S3		
46	14				- HARD, DENSE TILL				R5	25	
					- REFUSAL OF SPT ON DENSE TILL @ 13.9m				R16		
									S4	131	





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 9

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD. & WILKES AVE.

LOCATION REFER TO SITE PLAN

SHEET 1 OF 2

DATE DRILLED SEPT. 17/87

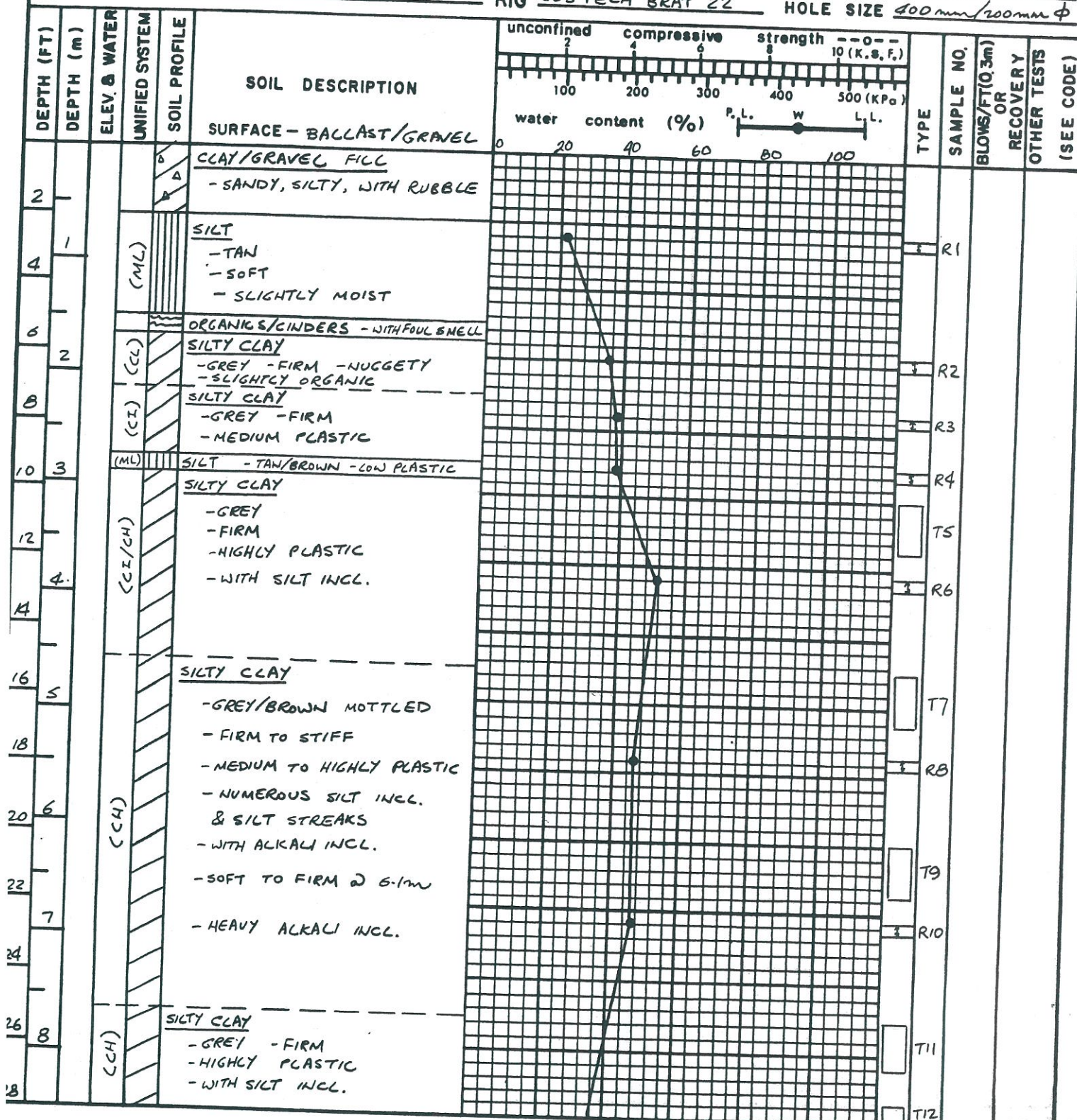
LOGGED BY CKK/GVN

CONTRACTOR PILE FOUNDATION LTD. PADDOCK DRILLING LTD.

RIG WILLIAMS AUGER GUS PECH BRAT 22

ENGINEER KVL

HOLE SIZE 400mm/200mm ϕ





INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 10

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.
PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

JOB NO.
12-16-25

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						10 (K.S.F.)	500 (KPa)				
30	9				SILTY CLAY AS ABOVE				T12		
32									T13		
34	10			(CH)					R14		
36	11				- WITH TRACE OF TILL BELOW 10.7m				T15		
38									R16		
40	12				TILL				R17		
42					- TAN/BROWN - SOFT, WET - PUTTY				R18		
44									R19		
46	14				- DRIER, DENSER WITH DEPTH				S1	119	
48									S2	121	
50	15								R20		
52									S3	108	
54	16				- POWER AUGER REFUSAL ON BOULDERS @ 15.5m				R21		
									S4	76	
									R22		
56	17				- SPT REFUSED ON DENSE TILL @ 16.5m				S5	102	
									S6	156	



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 9

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.
PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

JOB NO.
12-16-15

SHEET 2 OF 2

DEPTH (FT)	DEPTH (m)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (K.S.F.)		TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS (SEE CODE)
						100	200				
30	9				SILTY CLAY AS ABOVE				T12		
32	10			(CH)					T13		
34											
36	11				- TRACE OF TILL & PEBBLES BELOW 10.7m				T14		
38									R15		
40	12				TILL - LIGHT GREY - SOFT, PUTTY - SANDY, GRAVELLY				R16		
42					- BROWN, SLIGHTLY DRIER BELOW 12.2m				R17		
44	13				- DENSE BELOW 12.8m - POWER AUGER REFUSAL @ 13.1m				R18 S15	79	
46	14								S2	125 FOR 0.23m	
48					- SPT REFUSED ON BOULDER @ 14.0m				S3	BS	



INDEPENDENT TEST-LAB LIMITED

Geotechnical Engineering and Materials Testing

SOIL LOG SHEET

HOLE NO. 9

CLIENT CITY OF WINNIPEG STREETS AND TRANSPORTATION DEPT.

JOB NO. 12-16-25

PROJECT KENASTON AND WILKES GRADE SEPARATION STUDY

SITE OR SECTION KENASTON BLVD. & WILKES AVE.

LOCATION REFER TO SITE PLAN

SHEET 1 OF 2

DATE DRILLED SEPT. 17/87

LOGGED BY CKK/GVN

ENGINEER KVL

CONTRACTOR PILE FOUNDATION LTD. Paddock Drilling Ltd.

RIG WILLIAMS AUGER GUS PECH BRAT 22

HOLE SIZE 400mm/200mm

DEPTH (FT)	DEPTH (M)	ELEV. & WATER	UNIFIED SYSTEM	SOIL PROFILE	SOIL DESCRIPTION	unconfined compressive strength (KPa)	water content (%)	P.L.	W	L.L.	TYPE	SAMPLE NO.	BLOWS/FT(0.3m) OR RECOVERY	OTHER TESTS
2					SURFACE - BALLAST/GRAVEL									
4	1		(ML)		CLAY/GRAVEL FILL - SANDY, SILTY, WITH RUBBLE							R1		
6	2		(CL)		ORGANIC/CINDERS - WITH FOUL SMELL SILTY CLAY - GREY - FIRM - NUGGETY - SLIGHTLY ORGANIC							R2		
8			(CI)		SILTY CLAY - GREY - FIRM - MEDIUM PLASTIC							R3		
10	3		(ML)		SILT - TAN/BROWN - LOW PLASTIC							R4		
12	4		(CI/CH)		SILTY CLAY - GREY - FIRM - HIGHLY PLASTIC - WITH SILT INCL.							R6		
16	5		(CH)		SILTY CLAY - GREY/BROWN MOTTLED - FIRM TO STIFF - MEDIUM TO HIGHLY PLASTIC - NUMEROUS SILT INCL. & SILT STREAKS - WITH ALKALI INCL. - SOFT TO FIRM @ 6-1m							T7		
18												R8		
20	6		(CH)									T9		
22	7											R10		
24														
26	8		(CH)		SILTY CLAY - GREY - FIRM - HIGHLY PLASTIC - WITH SILT INCL.							T11		
28												T12		