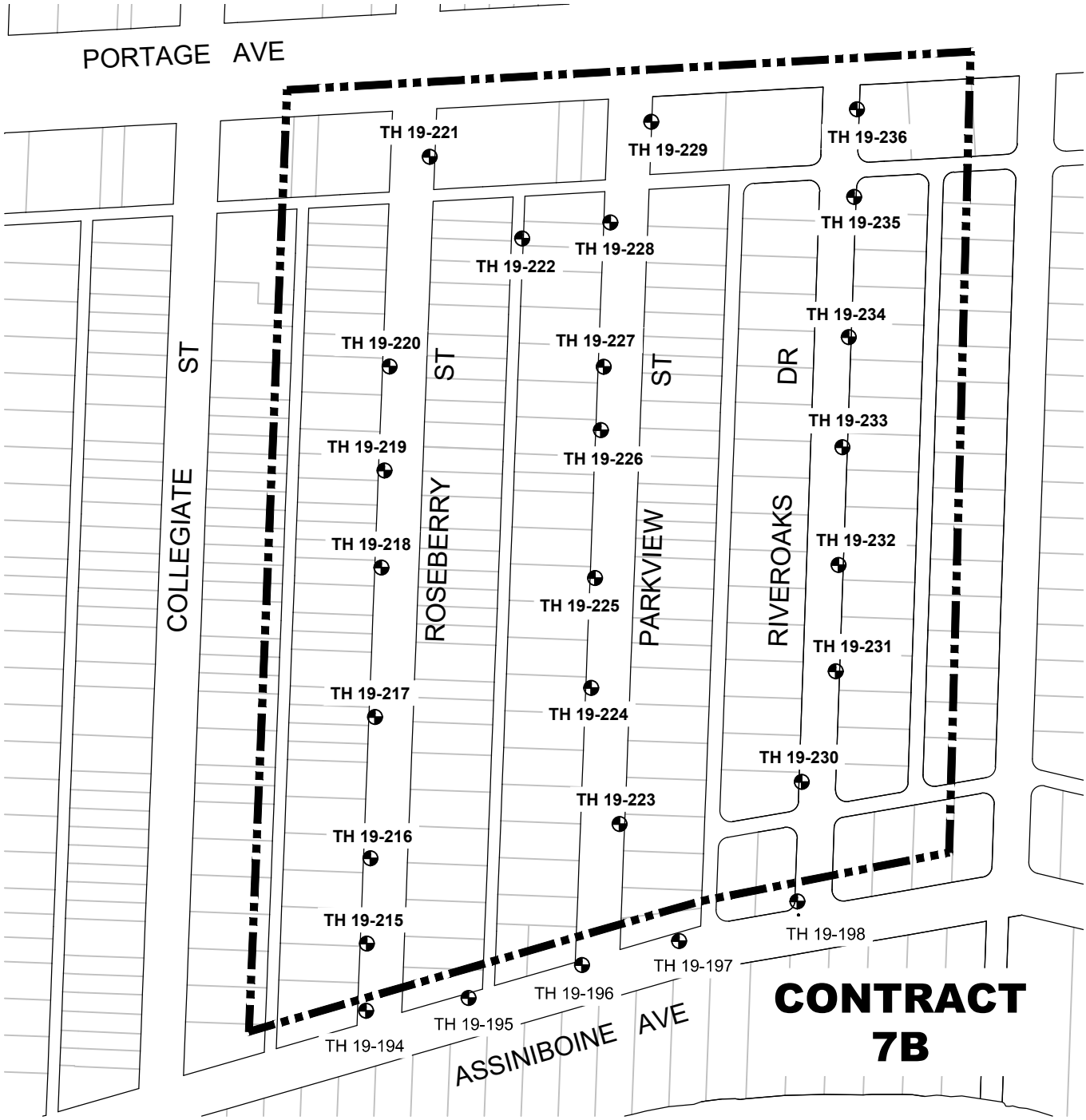
Appendix A
Test Hole Logs

APPENDIX A - TEST HOLE LOGS



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TETRA TECH
Complex World
Clear Solutions

AUTHORIZED BY:	MAL	CLIENT DRAWING NO.
DATE:	20.05.28	

DRAWING DESCRIPTION

TEST HOLE LOCATION FOR FERRY ROAD
CSR WORKS CONTRACT 7B

DESIGNED BY:	DRAWN BY: NL	DRAWING NO.	REV.
REVIEWED BY:	SCALE: NTS	FIGURE_1	0

X:\A-G\CITY OF WINNIPEG - WATER & WASTE DEPARTMENT - 0012\10001203.00 - FERRY ROAD\CONTRACT 7\GEOTECH\7B PARKVIEW, ROSEBERRY RIVER OAKS\TEST HOLES.DWG 20.05.28 1:17 PM

EXPLANATION OF TERMS & SYMBOLS

Description				TH Log Symbols	USCS Classification	Laboratory Classification Criteria			
						Fines (%)	Grading	Plasticity	Notes
COARSE GRAINED SOILS	GRAVELS (More than 50% of coarse fraction of gravel size)	CLEAN GRAVELS (Little or no fines)	Well graded gravels, sandy gravels, with little or no fines		GW	0-5	$C_U > 4$ $1 < C_C < 3$		Dual symbols if 5-12% fines. Dual symbols if above "A" line and $4<W_P<7$ $C_U = \frac{D_{60}}{D_{10}}$ $C_C = \frac{(D_{30})^2}{D_{10} x D_{60}}$
			Poorly graded gravels, sandy gravels, with little or no fines		GP	0-5	Not satisfying GW requirements		
		DIRTY GRAVELS (With some fines)	Silty gravels, silty sandy gravels		GM	> 12		Atterberg limits below "A" line or $W_P<4$	
			Clayey gravels, clayey sandy gravels		GC	> 12		Atterberg limits above "A" line or $W_P<7$	
	SANDS (More than 50% of coarse fraction of sand size)	CLEAN SANDS (Little or no fines)	Well graded sands, gravelly sands, with little or no fines		SW	0-5	$C_U > 6$ $1 < C_C < 3$		
			Poorly graded sands, gravelly sands, with little or no fines		SP	0-5	Not satisfying SW requirements		
		DIRTY SANDS (With some fines)	Silty sands, sand-silt mixtures		SM	> 12		Atterberg limits below "A" line or $W_P<4$	
			Clayey sands, sand-clay mixtures		SC	> 12		Atterberg limits above "A" line or $W_P<7$	
FINE GRAINED SOILS	SILTS (Below 'A' line negligible organic content)	$W_L<50$	Inorganic silts, silty or clayey fine sands, with slight plasticity		ML			Classification is Based upon Plasticity Chart	
		$W_L>50$	Inorganic silts of high plasticity		MH				
	CLAYS (Above 'A' line negligible organic content)	$W_L<30$	Inorganic clays, silty clays, sandy clays of low plasticity, lean clays		CL				
		$30<W_L<50$	Inorganic clays and silty clays of medium plasticity		CI				
		$W_L>50$	Inorganic clays of high plasticity, fat clays		CH				
	ORGANIC SILTS & CLAYS (Below 'A' line)	$W_L<50$	Organic silts and organic silty clays of low plasticity		OL				
		$W_L>50$	Organic clays of high plasticity		OH				
HIGHLY ORGANIC SOILS			Peat and other highly organic soils		Pt	Von Post Classification Limit		Strong colour or odour, and often fibrous texture	

	Asphalt		Glacial Till		Bedrock (Igneous)
	Concrete		Clay Shale		Bedrock (Limestone)
	Fill				Bedrock (Undifferentiated)

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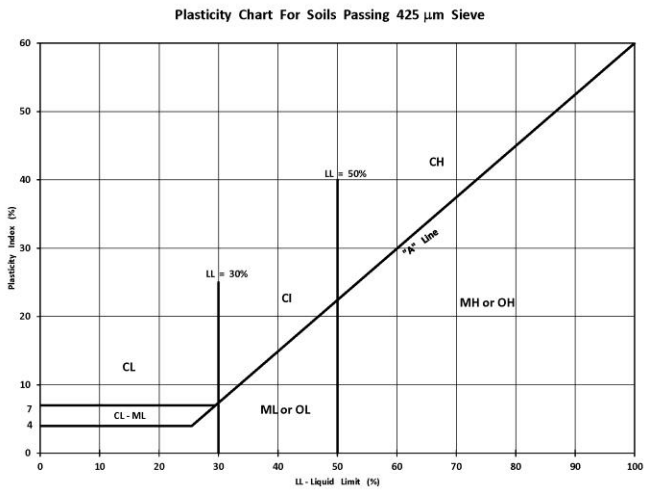


FRACTION		PARTICLE SIZE (mm) Min.	Max.	RELATIVE PROPORTIONS (by weight) Percent	Descriptor
Boulders		>300			
Cobbles		75	300	>35%	main fraction
Gravel	Coarse	19	75	35 - 50	"and"
	Fine	4.75	19		
Sand	Coarse	2.0	4.75	20 – 35	Adjective e.g. silty, clayey
	Medium	0.425	2.0		
	Fine	0.075	0.425	10 – 20	"some"
Silt (non-plastic) or Clay (plastic)		< 0.075 mm		1 - 10	"trace"

Soil Classification Example

Clay 50% (main fraction), Silt 25%, Sand 17%, Gravel 8%

Clay – silty, some sand, trace gravel

TERMS and SYMBOLS

Laboratory and field tests are identified as follows:

Unconfined Comp.: undrained shear strength (kPa or psf) derived from unconfined compression testing.

Torvane: undrained shear strength (kPa or psf) measured using a Torvane

Pocket Pen.: undrained shear strength (kPa or psf) measured using a pocket penetrometer.

Unit Weight bulk unit weight of soil or rock (kN/m^3 or pcf).

SPT – N Standard Penetration Test: The number of blows (N) required to drive a 51 mm O.D. split barrel sampler 300 mm into the soil using a 63.5 kg hammer with a free fall drop height of 760 mm.

DCPT Dynamic Cone Penetration Test. The number of blows (N) required to drive a 50 mm diameter cone 300 mm into the soil using a 63.5 kg hammer with a free fall drop height of 760 mm.

M/C insitu soil moisture content in percent

PL Plastic limit, moisture content in percent

LL Liquid limit, moisture content in percent

The undrained shear strength (Su) of cohesive soil is related to its consistency as follows:

Su (kPa)	Su (psf)	CONSISTENCY
<12	250	very soft
12 – 25	250 – 525	soft
25 – 50	525 – 1050	firm
50 – 100	1050 – 2100	stiff
100 – 200	2100 – 4200	very stiff
200	4200	hard

The SPT - N of non-cohesive soil is related to compactness condition as follows:

N – Blows / 300 mm	COMPACTNESS
0 - 4	very loose
4 - 10	loose
10 - 30	compact
30 - 50	dense
50 +	very dense

References:

ASTM D2487 – Classification of Soils For Engineering Purposes (Unified Soil Classification System)

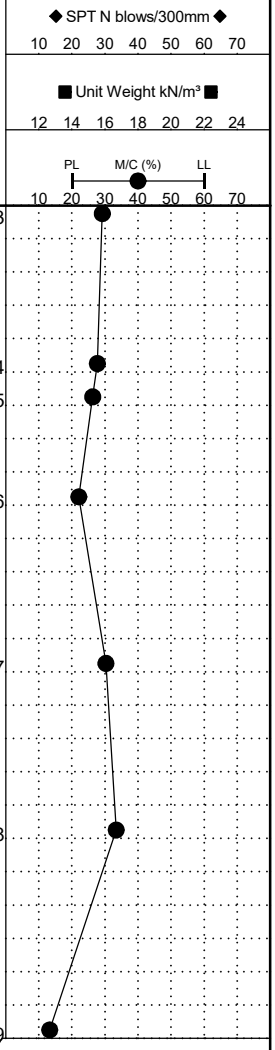
Canadian Foundation Engineering Manual, 4th Edition, Canadian Geotechnical Society, 2006

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-194**
LOCATION: UTM 14U: 5526273 m N, 628119 m E - Assiniboine Ave.		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 231.109

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
231	0		CLAY (FILL) - trace sand, trace gravel - black, moist, stiff, high plasticity		G23
230	1		CLAY (ALLUVIAL) - silty - brown - moist, stiff, high plasticity		G24 G25
229	2		SAND and SILT (ALLUVIAL) - brown, moist, loose		G26
228	3		CLAY (ALLUVIAL) - silty - brown - moist, stiff, high plasticity - trace silt inclusions		
227	4				G27
226	5		- grey below 5 m		G28
225	6				
224	7		SILT - some gravel, trace to some sand, trace to some clay - grey, wet, soft, low plasticity		G29



END OF TEST HOLE AT 7.6 m IN SILT

NOTES:
1. Some seepage observed below 5 m.
2. No sloughing observed during drilling.
3. Upon completion of drilling, test hole open to 6.4 m b/l grade and water level 3.5 m b/l grade.
4. Test hole backfilled with auger cuttings and bentonite chips.

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PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-195**
LOCATION: UTM 14U: 5526279 m N, 628162 m E - Assiniboine Ave.		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 231.26

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
231	0		TOPSOIL (100 mm thick) - silty, black, moist		G30
			CLAY (ALLUVIAL) - silty - brown - dry to moist, firm - intermediate plasticity		
230	1				G31
229	2				
	3		SAND (ALLUVIAL) - silty, brown, moist to wet		G32
228			CLAY (ALLUVIAL) - silty, trace sand - brown - moist, firm, intermediate plasticity		
227	4				G33
226	5		- grey below 5 m		
	6				G34

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 6.1 m IN CLAY (ALLUVIAL)

NOTES:
1. Trace to some seepage observed below 3 m.
2. Trace to some seepage and sloughing observed at 4.6 m.
3. Upon completion of drilling, test hole open to 4.6 m b/l grade and water level 4 m b/l grade.
4. Test hole backfilled with auger cuttings and bentonite chips.

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PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-196**
LOCATION: UTM 14U: 5526292 m N, 628209 m E - Assiniboine Ave.		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 231.116

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
231	0		TOPSOIL - 50 mm thick		
			CLAY (FILL) - traces of: sand, gravel & organics. black, moist		G35
230	1		CLAY AND SILT (ALLUVIAL) - trace sand - variable silt content - brown - moist, stiff, intermediate plasticity		G36
229	2				
					G37
228	3		SILT (ALLUVIAL) - trace clay, trace sand - brown - moist becoming wet with depth - loose		
227	4				G38
226	5		CLAY (ALLUVIAL) - silty - grey - moist, firm to stiff, intermediate plasticity - below 5.2 m; trace till inclusions, trace sand, trace gravel		G39
	6				

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 6.1 m IN CLAY (ALLUVIAL)
NOTES:
1. Some seepage and sloughing observed at 4.6 m.
2. Upon completion of drilling, test hole open to 4.2 m b/l grade & water level 4.2 m b/l grade.
3. Test hole backfilled with auger cuttings and bentonite chips.

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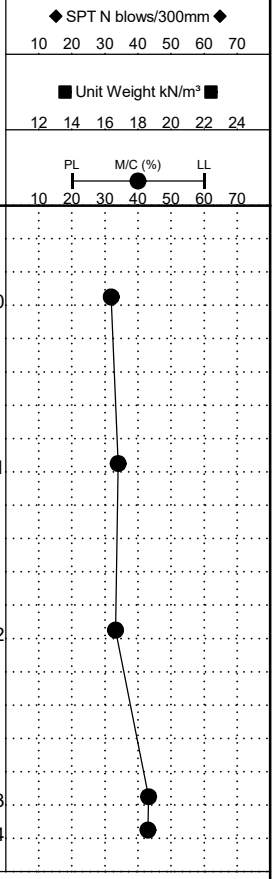
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-197**
LOCATION: UTM 14U: 5526302 m N, 628249 m E - Assiniboine Ave.		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 231.555

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
231	0		TOPSOIL - 50 mm thick, black, moist		
			CLAY (LACUSTRINE) - silty - black with trace organics, trace rootlets to 0.9 m - mottled brown and grey below 0.9 m - moist, stiff, high plasticity		
230	1			G	G40
229	2			G	G41
228	3				
227	4			G	G42
226	5		- grey below 4.5 m	G	G43
	6		- trace till inclusions below 5.8 m	G	G44



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

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REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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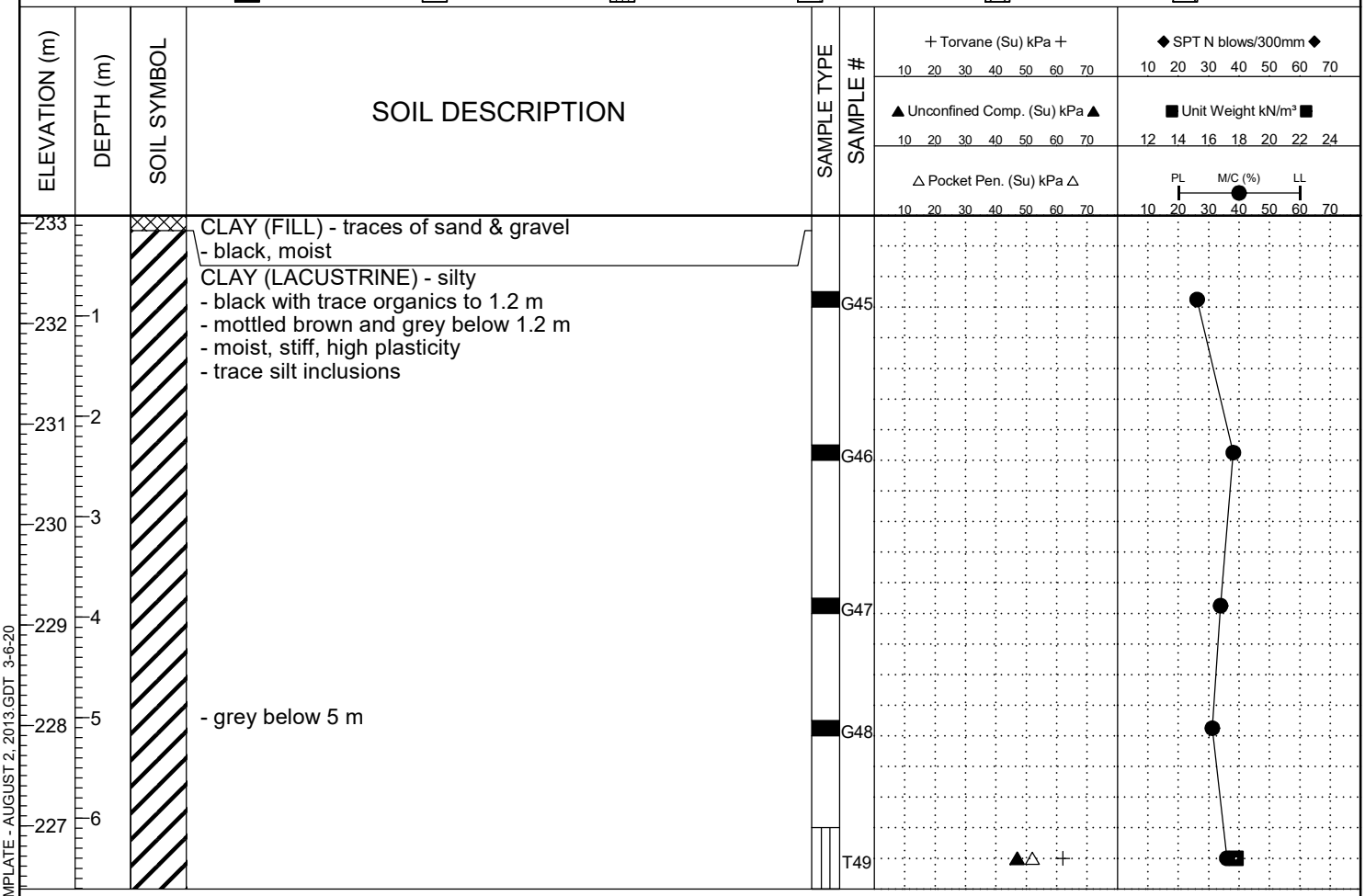
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-198**
LOCATION: UTM 14U: 5526319 m N, 628298 m E - Assiniboine Ave.		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 233.089

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND



END OF TEST HOLE AT 6.7 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

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REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-215**
LOCATION: UTM 14U: 5526301 m N, 628120 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 230.977

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
230	1		TOPSOIL - black, moist, 50mm thick CLAY (ALLUVIAL) - silty, trace sand - brown - moist, stiff, intermediate plasticity - trace silt inclusions		G159
229	2				G160
228	3				G161
227	4				G162
226	5		- grey below 4.6 m - possible lacustrine clay soil below 5 m		G163
225	6		- increased silt content below 6 m		G164
224	7		SILT (TILL) - trace sand, trace gravel - grey, moist to wet, loose to compact		G165

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 7.6 m IN SILT (TILL)
NOTES:
1. Trace seepage below 4.6 m.
2. Upon completion of drilling, test hole open to 6.7 m b/l grade & water level at 6.7 m b/l grade.
3. Test hole backfilled with auger cuttings and bentonite chips.

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REVIEWED BY: GR	COMPLETION DATE: 18-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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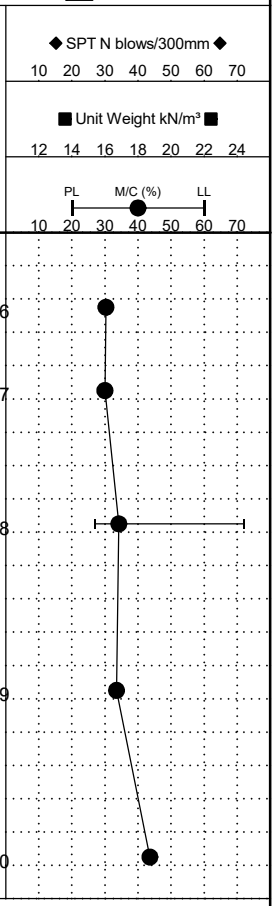
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-216**
LOCATION: UTM 14U: 5526337 m N, 628121 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 231.008

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
230	1		TOPSOIL - black, moist CLAY (ALLUVIAL) - silty, trace organics - black - moist, stiff, intermediate plasticity		G166
					G167
229	2		CLAY (LACUSTRINE) - some silt to silty, trace fine sand - mottled brown and grey - moist, stiff, high plasticity		
228	3		G168) Hydrometer Test: 77% clay, 19% silt, 4% fine sand		G168
227	4				G169
226	5				
225	6		- grey, trace till inclusions below 5.8 m		G170



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

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LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 18-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

BH GEOTECH PLOTS-AUGUST 2013 143691_TETRA TECH_FERRY ROAD_CONTRACT 7.GPJ DATA TEMPLATE - AUGUST 2, 2013.GDT 3-6-20

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-217**
LOCATION: UTM 14U: 5526395 m N, 628123 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 232.868

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
232	0	TOPSOIL - black, moist, 50mm thick		
		CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions		G241
231	1			G242
230	2			G243
229	3			
228	4			G244
227	5	- grey below 5 m		G245
	6			

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

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LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 24-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

BH GEOTECH PLOTS-AUGUST 2013 143691_TETRA TECH_FERRY ROAD_CONTRACT 7.GPJ DATA TEMPLATE - AUGUST 2, 2013.GDT 3-6-20

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-218**
LOCATION: UTM 14U: 5526457 m N, 628126 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 234.053

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	0	CLAY - silty, trace rootlets, trace organics - black, moist		G174
	1	SILT - brown, moist, loose		G175
232	2	CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions		G176
231	3			G177
230	4			G178
229	5			
228	6	- grey below 6 m		T179

Torvane (Su) kPa: 10 20 30 40 50 60 70
Unconfined Comp. (Su) kPa: 10 20 30 40 50 60 70
Pocket Pen. (Su) kPa: 10 20 30 40 50 60 70
SPT N blows/300mm: 10 20 30 40 50 60 70
Unit Weight kN/m³: 12 14 16 18 20 22 24
PL M/C (%) LL: 10 20 30 40 50 60 70

END OF TEST HOLE AT 6.7 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

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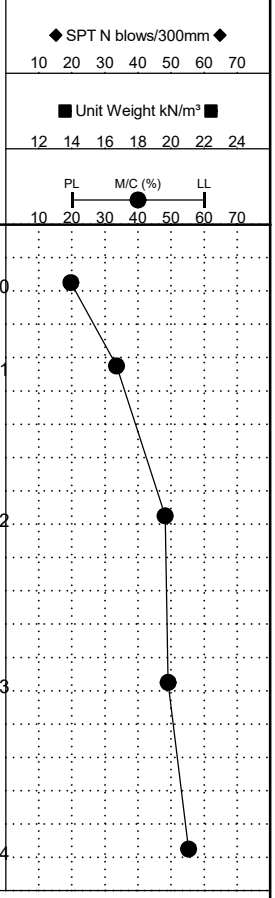
LOGGED BY: CR	COMPLETION DEPTH: 6.71 m
REVIEWED BY: GR	COMPLETION DATE: 18-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-219**
LOCATION: UTM 14U: 5526497 m N, 628127 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 233.669

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
			TOPSOIL - black, moist, 50mm thick		
			CLAY - silty, black with trace organics, moist		
233	1		SILT - brown, dry to moist, loose	G	180
			CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions	G	181
232	2				
231	3			G	182
230	4			G	183
229	5				
228	6			G	184



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 18-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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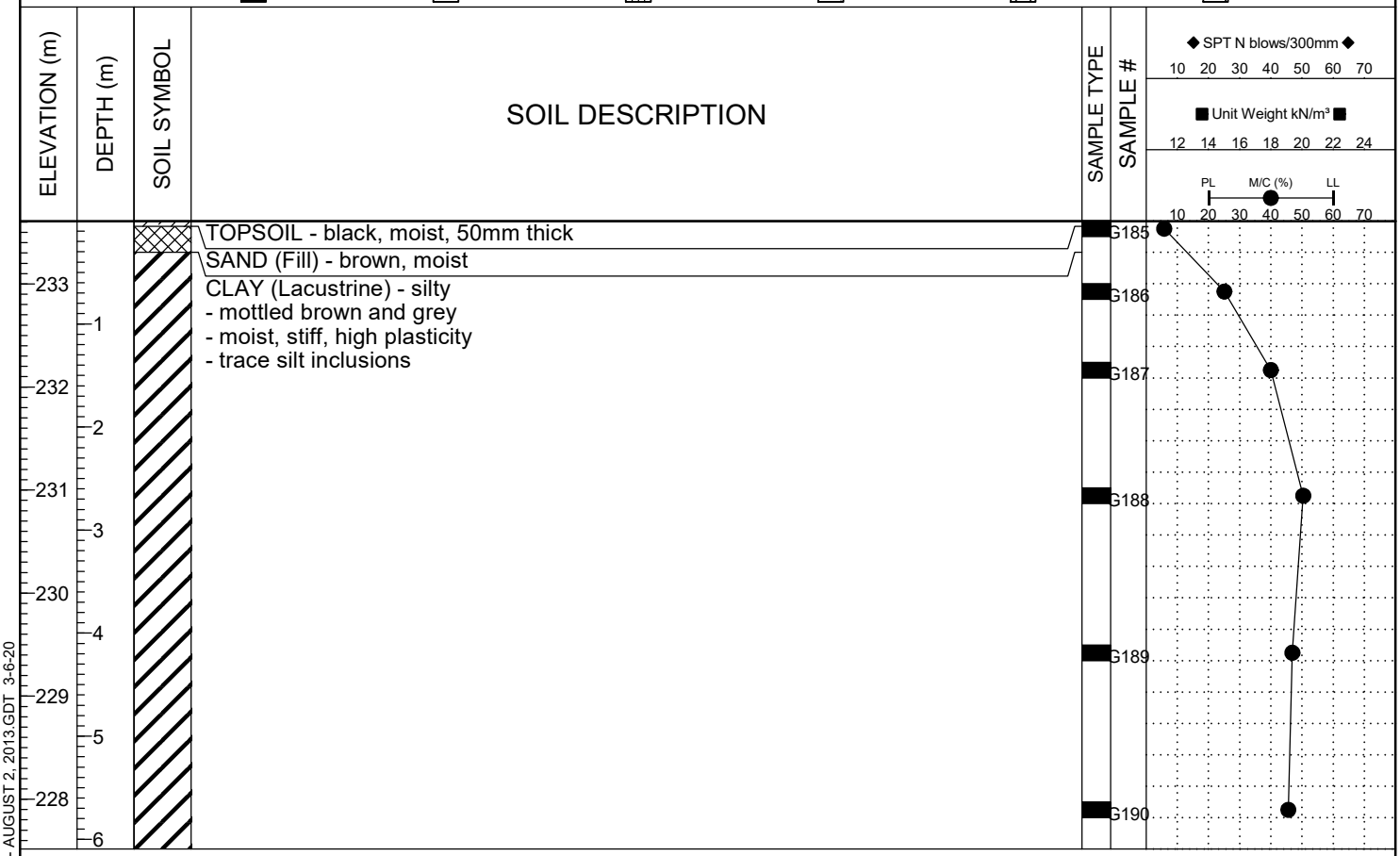
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-220**
LOCATION: UTM 14U: 5526540 m N, 628129 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 233.623

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:

1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC. *Consulting Geotechnical Engineers*	LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
	REVIEWED BY: GR	COMPLETION DATE: 17-7-19
	PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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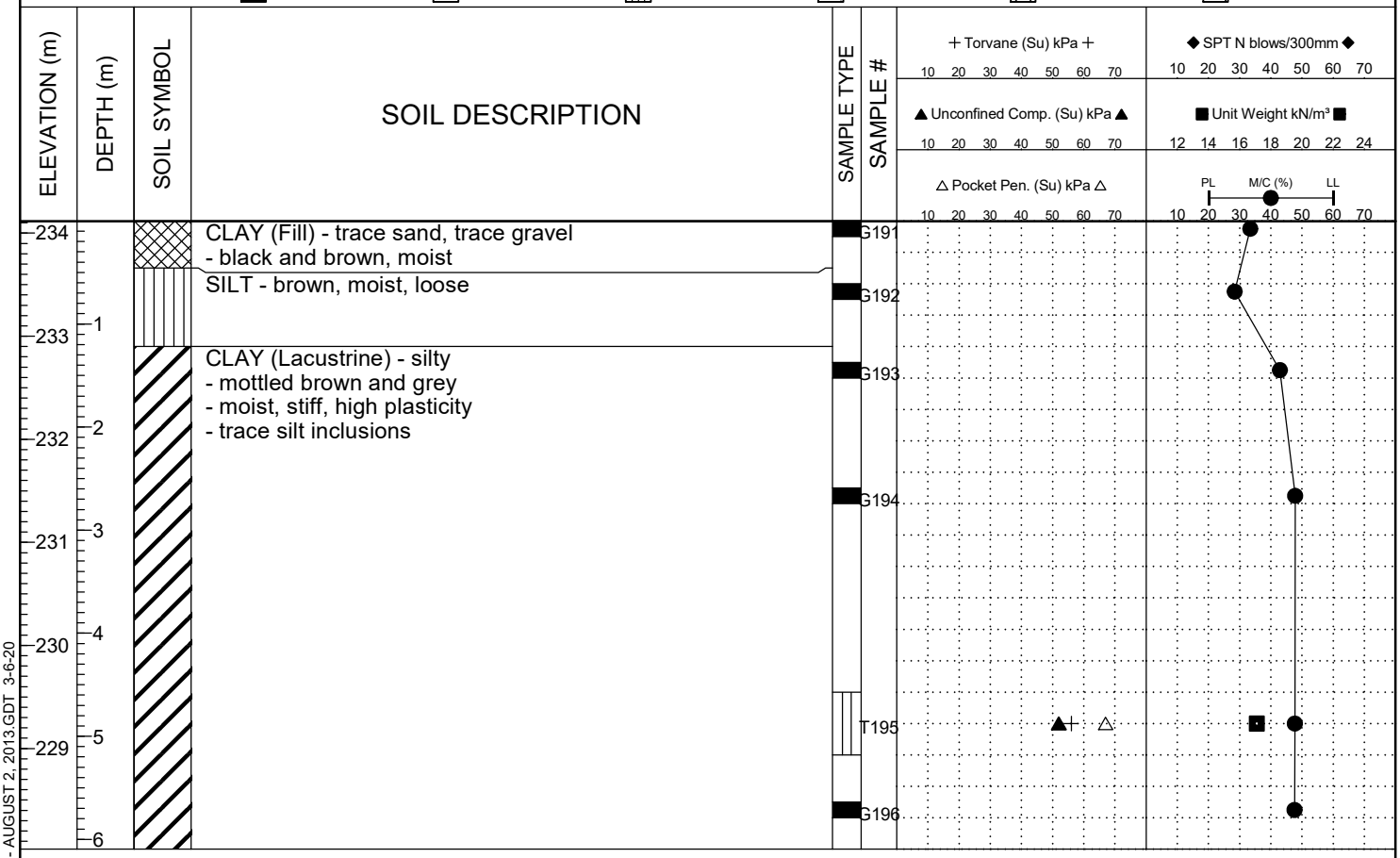
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-221**
LOCATION: UTM 14U: 5526627 m N, 628146 m E - Roseberry Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 234.13

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 18-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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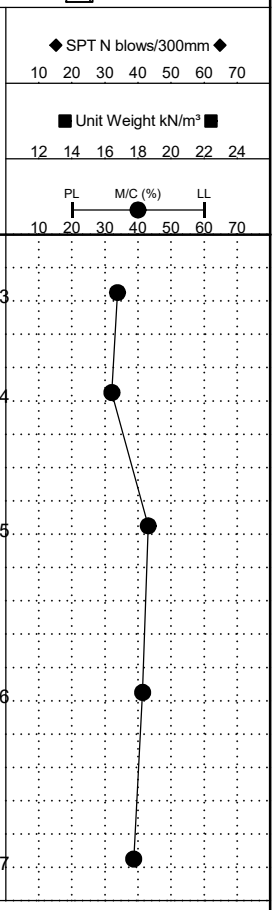
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-223**
LOCATION: UTM 14U: 5526351 m N, 628224 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 232.989

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
232	0		CLAY FILL - trace gravel, brown, moist		
	1		CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions		G113
231	2				G114
230	3				G115
229	4				G116
228	5		- grey below 4.6 m		
227	6				G117



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
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PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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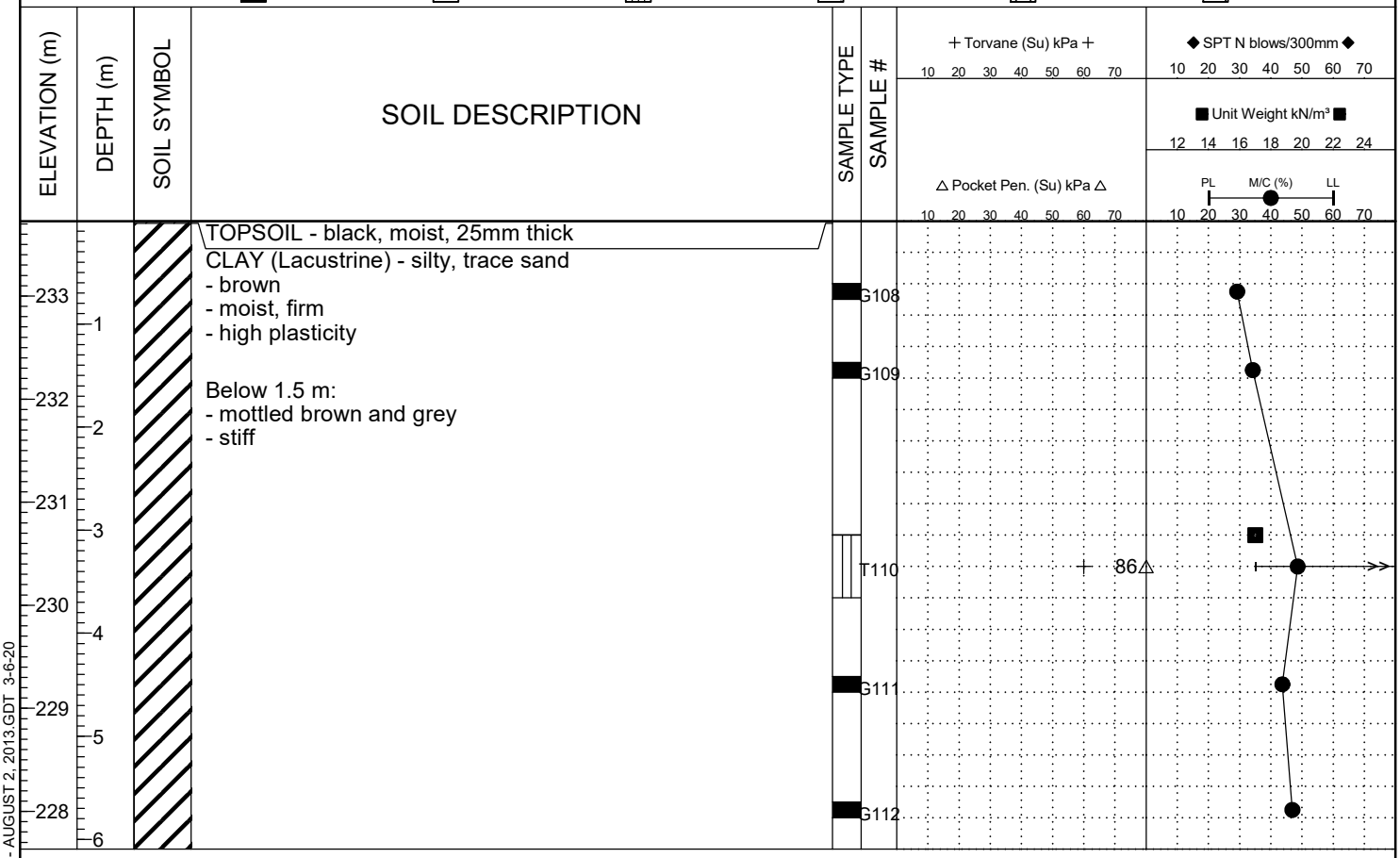
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-224**
LOCATION: UTM 14U: 5526407 m N, 628212 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 233.74

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:

1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

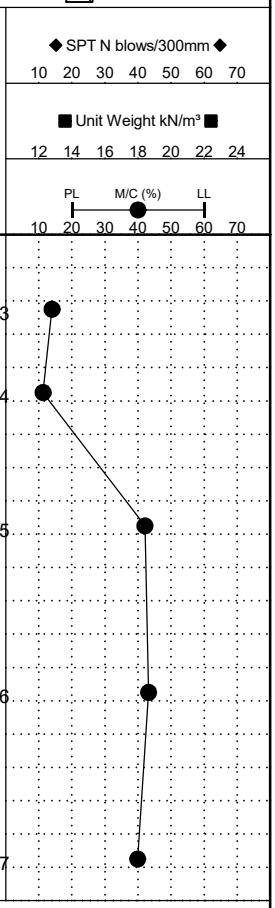
DYREGROV ROBINSON INC. *Consulting Geotechnical Engineers*	LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
	REVIEWED BY: GR	COMPLETION DATE: 17-7-19
	PROJECT ENGINEER: Gil Robinson	Page 1 of 1

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-225**
LOCATION: UTM 14U: 5526453 m N, 628214 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 233.546

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	0	TOPSOIL - black, moist, 50 mm thick		
		SILT - brown - dry, loose	GRAB	G103
232	1		GRAB	G104
	2	CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions		
231	3		GRAB	G105
230	4		GRAB	G106
229	5	- grey below 5 m		
228	6		GRAB	G107



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 17-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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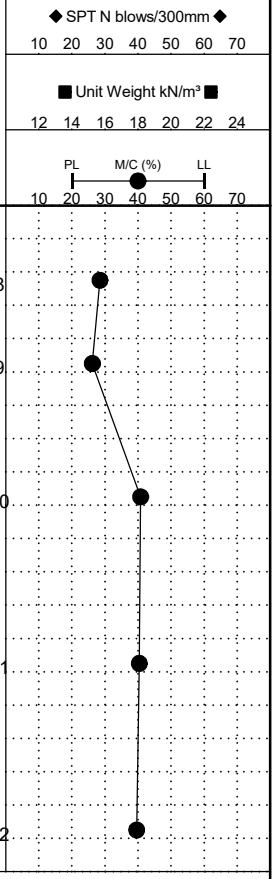
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-226**
LOCATION: UTM 14U : 5526514 m N, 628216 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 233.795

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	0		TOPSOIL - black, moist, 25mm thick		
			CLAY - silty - black with trace organics to 1.5 m - mottled brown and grey below 1.5 m - moist, stiff, high plasticity - trace silt inclusions		
232	1				G98
231	2				G99
230	3				G100
229	4				G101
228	5				G102
	6				



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 17-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-227**
LOCATION: UTM 14U: 5526540 m N, 628218 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 233.896

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	0	TOPSOIL - black, moist, 50mm thick		
		CLAY (Lacustrine) - silty		
		- black with trace organics to 0.9 m		
		- mottled brown and grey below 0.9 m		G93
	1	- moist, stiff, high plasticity		
232		- trace silt inclusions		G94
	2			
231				G95
	3			
230				
	4			
229				T96
	5			
228				G97
	6	- grey below 5.8 m		

+ Torvane (Su) kPa +
10 20 30 40 50 60 70

▲ Unconfined Comp. (Su) kPa ▲
10 20 30 40 50 60 70

△ Pocket Pen. (Su) kPa △
10 20 30 40 50 60 70

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 17-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-228**
LOCATION: UTM 14U: 5526600 m N, 628220 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 234.073

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	1	TOPSOIL - black, moist, 50 mm thick CLAY (Lacustrine) - silty - black with trace organics to 1.5 m - mottled brown and grey below 1.5 m - moist, stiff, high plasticity - trace silt inclusions		G88
232	2			G89
231	3			G90
230	4			G91
229	5	- grey below 5.5 m		G92
228	6			

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 17-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

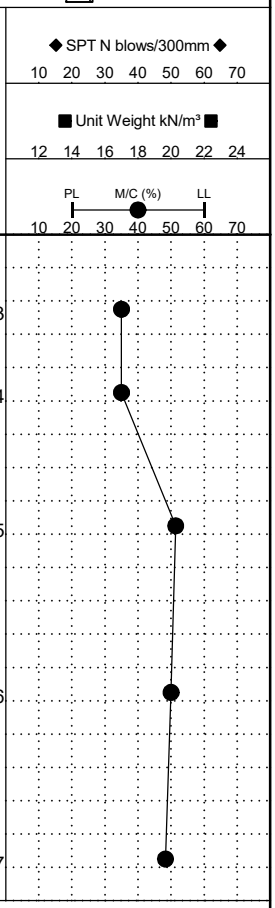
BH GEOTECH PLOTS-AUGUST 2013 143691_TETRA TECH_FERRY ROAD_CONTRACT 7.GPJ DATA TEMPLATE - AUGUST 2, 2013.GDT 3-6-20

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-229**
LOCATION: UTM 14U: 5526642 m N, 628237 m E - Parkview Street		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Acker SS drill rig w/ 125mm SS augers	ELEVATION (m): 234.396

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
234	0	CLAY (Fill) - trace sand, trace gravel - black, moist, stiff		
	1	CLAY (Lacustrine) - silty - black with trace ogranics to 0.9 m - mottled brown and grey below 0.9 m - moist, stiff, high plasticity - trace silt inclusions		G83
233				G84
	2			
232				G85
	3			
231				
	4			G86
230				
	5			
229				G87
	6			



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 17-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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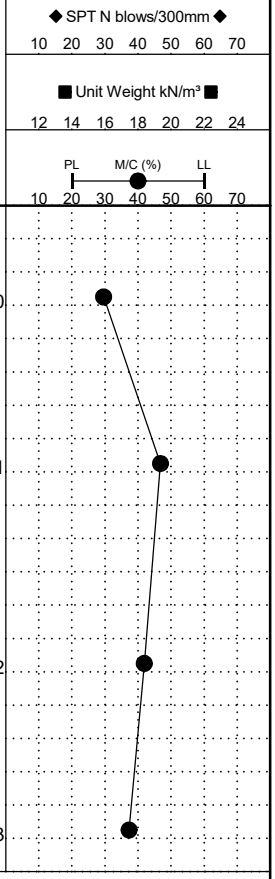
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-230**
LOCATION: UTM 14U: 5526368 m N, 628300 m E- Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 233.927

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	0	TOPSOIL - black, moist, 50 mm thick		
		CLAY (Lacustrine) - silty - motteld brown / grey - moist, stiff, high plasticity - trace silt inclusions	GRAB	G50
232	2		GRAB	G51
231	3			
230	4		GRAB	G52
229	5	- grey below 5 m		
228	6		GRAB	G53



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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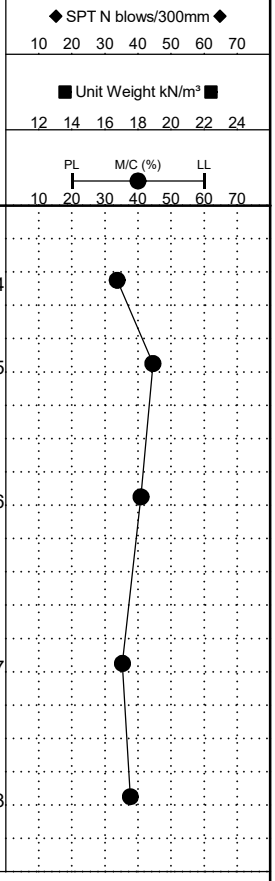
PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-231**
LOCATION: UTM 14U: 5526414 m N, 628314 m E - Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 234.204

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
234	0	TOPSOIL - black, moist		
		CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions		G54
233	1			G55
232	2			G56
231	3			
230	4			G57
229	5	- grey below 5 m		G58
	6			



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. Trace seepage observed at 4.6 m.
2. Upon completion of drilling, test hole open to 6.1 m b/l grade & water level 6 m b/l grade.
3. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

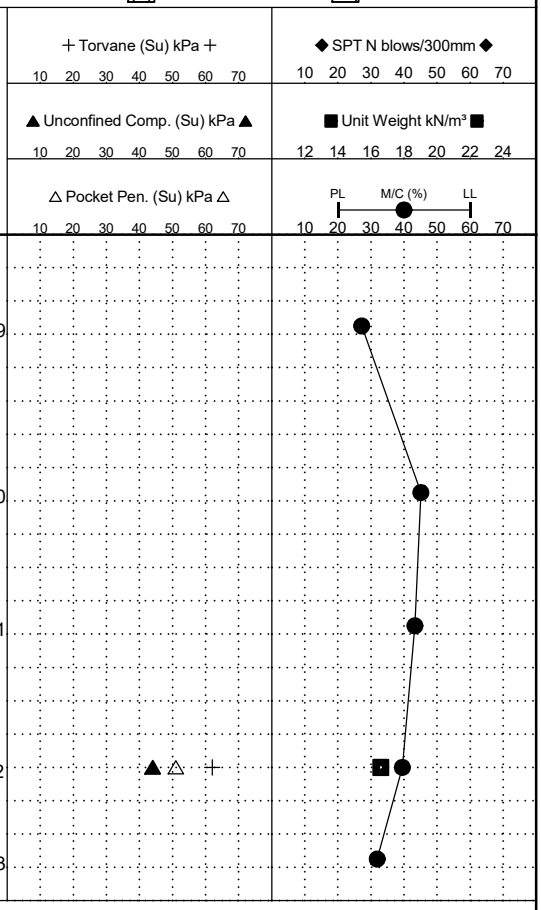
LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-232**
LOCATION: UTM 14U: 5526458 m N, 628315 m E - Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 234.071

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
233	1		TOPSOIL - black, moist, 50 mm thick CLAY (Lacustrine) - silty - mottled brown and grey - moist, stiff, high plasticity - trace silt inclusions		G59
232	2				G60
231	3				G61
230	4				
229	5		- grey below 5 m		T62
228	6				G63



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

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PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-233**
LOCATION: UTM 14U: 5526506 m N, 628317 m E - Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 234.381

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
234	0	TOPSOIL - black, moist, 50 mm thick		
		CLAY (FILL) - trace gravel, black, dry to moist		G64
		SILT - brown, dry, loose		
	1	CLAY (Lacustrine) - silty		
233		- mottled brown and grey		G65
		- moist, stiff, high plasticity		
	2	- trace silt inclusions		
232				G66
	3			
231				
	4			G67
230				
	5			
229		- grey below 5.5 m		G68
	6			

◆ SPT N blows/300mm ◆
10 20 30 40 50 60 70

■ Unit Weight kN/m³ ■
12 14 16 18 20 22 24

PL M/C (%) LL
10 20 30 40 50 60 70

END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

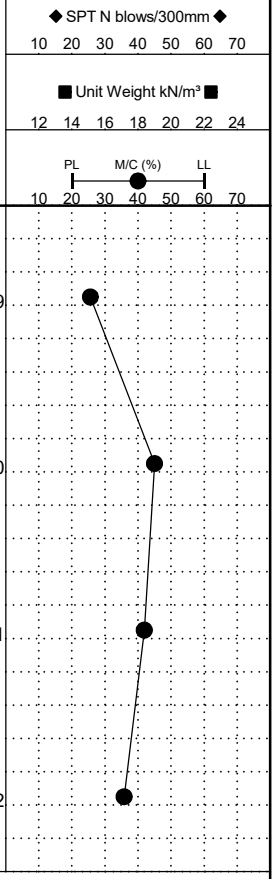
BH GEOTECH PLOTS-AUGUST 2013 143691_TETRA TECH_FERRY ROAD_CONTRACT 7.GPJ DATA TEMPLATE - AUGUST 2, 2013.GDT 3-6-20

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-234**
LOCATION: UTM 14U: 5526553 m N, 628319 m E - Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 234.443

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
234	0	TOPSOIL - black, moist, 50mm thick		
		CLAY (Lacustrine) - silty - black with trace organcis to 0.9 m - mottled brown and grey below 0.9 m - moist, stiff, high plasticity - trace silt inclusions		
233	1			
				G69
232	2			
				G70
231	3			
				G71
230	4			
229	5	- grey below 5 m		
				G72
	6			



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. No sloughing or seepage observed during drilling.
2. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

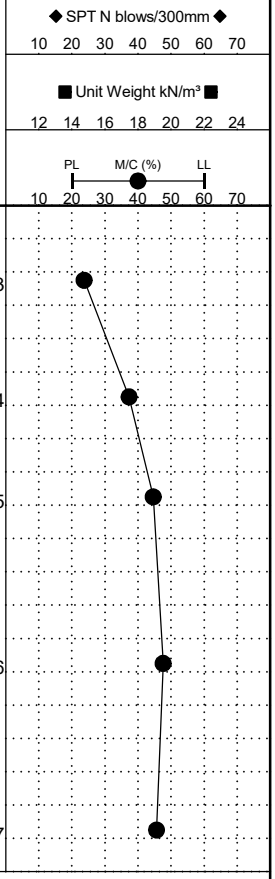
BH GEOTECH PLOTS-AUGUST 2013 143691_TETRA TECH_FERRY ROAD_CONTRACT 7.GPJ DATA TEMPLATE - AUGUST 2, 2013.GDT 3-6-20

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-235**
LOCATION: UTM 14U: 5526611 m N, 628321 m E - Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 234.679

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
234	0	TOPSOIL - black, moist, 50 mm thick		
		CLAY (Lacustrine) - silty		
		- black with trace organics to 0.9 m		
	1	- mottled brown and grey below 0.9 m		
233		- moist, stiff, high plasticity		
	2	- trace silt inclusions		
232				G73
	3			
231				G74
	4			
230				G75
	5	- grey below 5 m		
229				G76
	6			G77



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:

1. Trace seepage below 4.6 m.
2. Upon completion of drilling, test hole open to 6.1 m b/l grade & water level at 6 m b/l grade.
3. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1

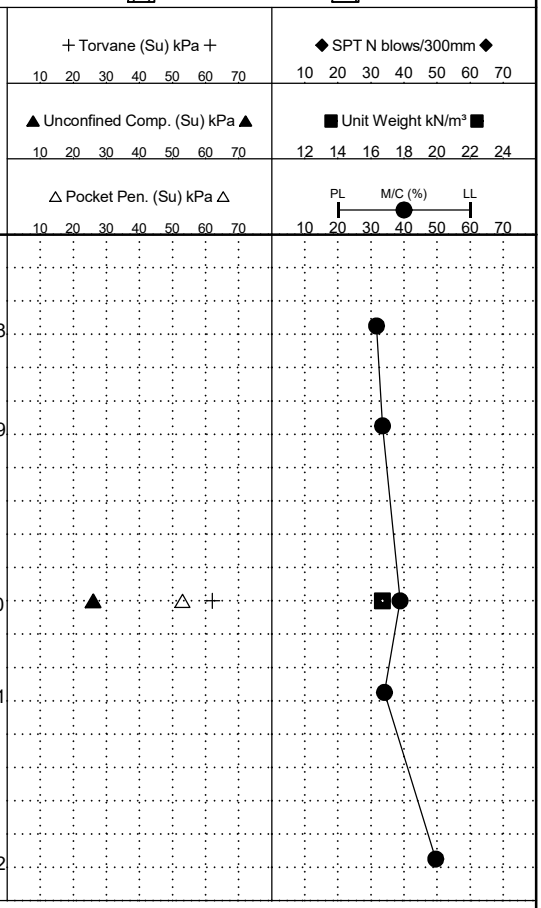
BH GEOTECH PLOTS-AUGUST 2013 143691_TETRA TECH_FERRY ROAD_CONTRACT 7.GPJ DATA TEMPLATE - AUGUST 2, 2013.GDT 3-6-20

PROJECT: Ferry Road Riverbend CSR - Contract 7	CLIENT: Tetra Tech Canada Inc.	TEST HOLE NO: **19-236**
LOCATION: UTM 14U: 5526647 m N, 628323 m E, Riveroaks Drive		PROJECT NO.: 143691
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Ranger 24 Drill Rig w/125mm SS augers	ELEVATION (m): 234.885

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

ELEVATION (m)	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #
234	0		TOPSOIL - black, moist, 50 mm thick		
			CLAY (Lacustrine) - silty - black with trace organics to 1.2 m - mottled brown and grey below 1.2 m - moist, stiff, high plasticity - trace silt inclusions		G78
233	2				G79
232	3				T80
231	4				G81
230	5		- grey below 5 m		
229	6				G82



END OF TEST HOLE AT 6.1 m IN CLAY

NOTES:
1. Trace seepage observed below 4.6 m.
2. Upon completion of drilling, test hole open to 6.1 m b/l grade & water level 6 m b/l grade.
3. Test hole backfilled with auger cuttings and bentonite chips.

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

LOGGED BY: CR	COMPLETION DEPTH: 6.10 m
REVIEWED BY: GR	COMPLETION DATE: 11-7-19
PROJECT ENGINEER: Gil Robinson	Page 1 of 1