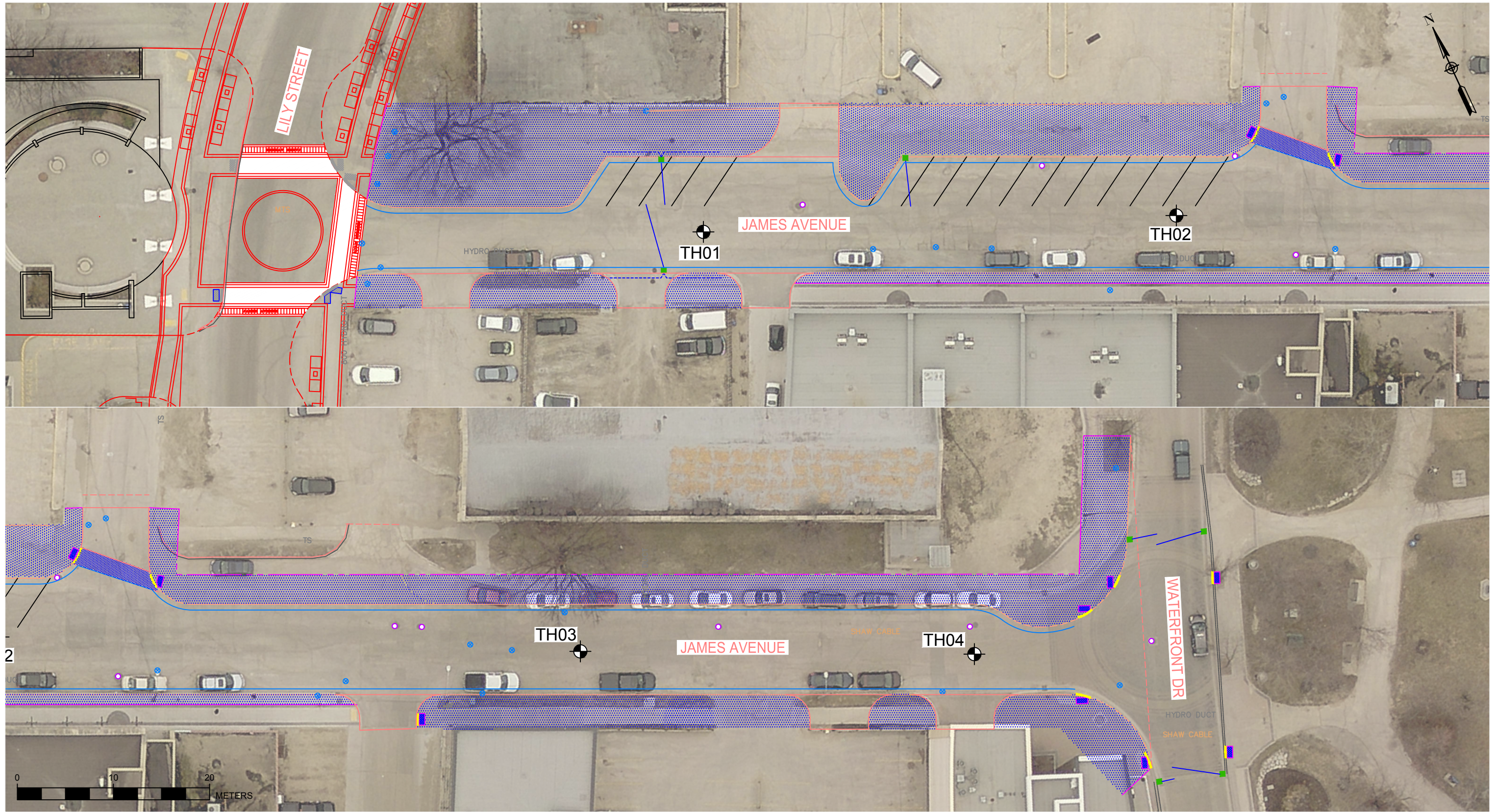


APPENDIX 'A'

GEOTECHNICAL REPORT

P:\JOBS\18300\S\18390\18398 WSP - WATERFRONT DRIVE\DRAWINGS\WX18398.DWG



LEGEND:
TEST HOLE

REVISION	BY	DATE
----	----	----

CLIENT:

WSP GROUP

Amec Foster Wheeler
Environment & Infrastructure
440 DOVERCOURT DRIVE
WINNIPEG, MANITOBA R3Y 1N4
PHONE: 204.488.2997 FAX:204.489.8261

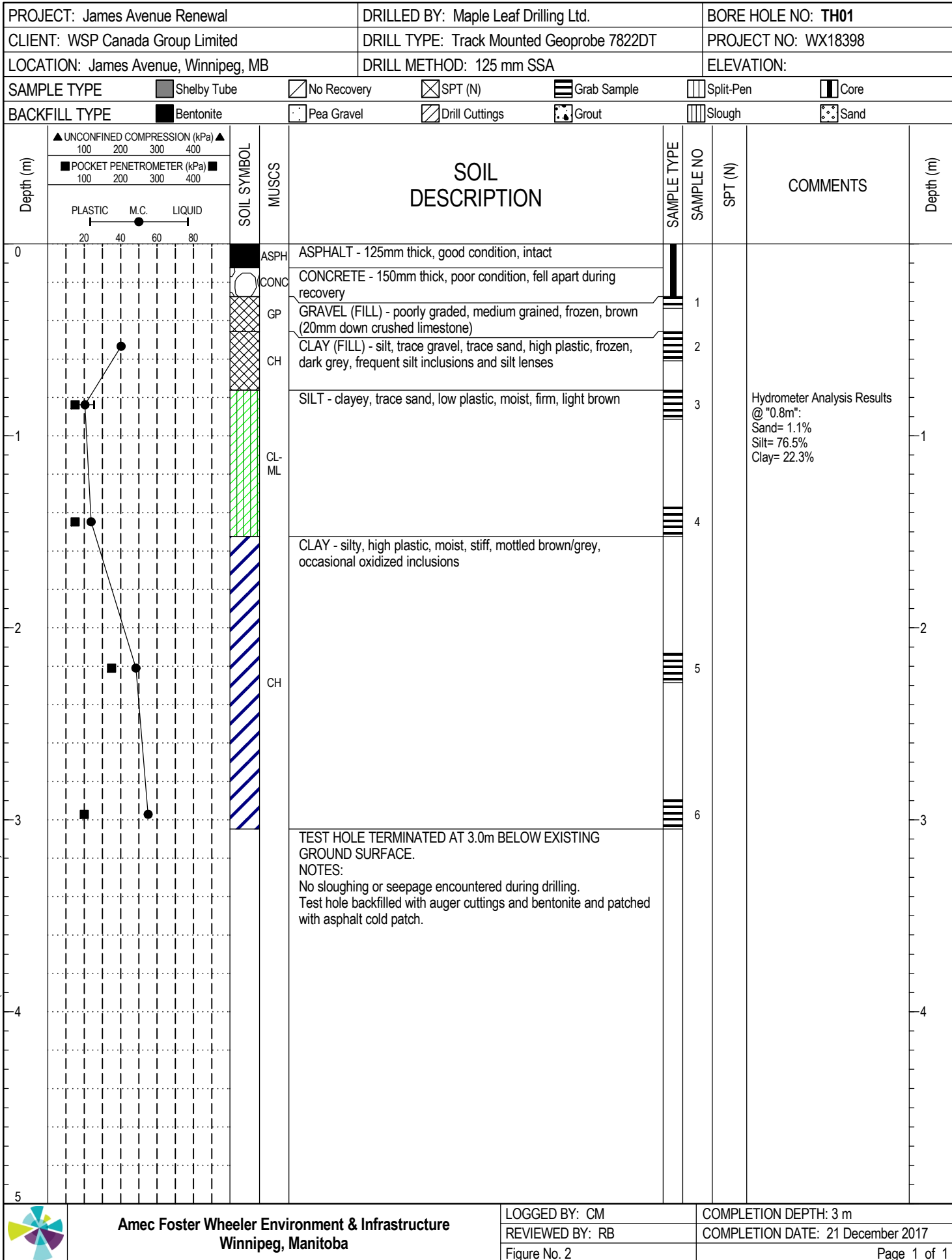


DWN BY: MD
CHK'D BY: RB
DATUM: NAD83
PROJECTION: UTM Zone 14 U
SCALE: AS SHOWN

GEOTECHNICAL INVESTIGATION
JAMES AVENUE RENEWAL
LILY STREET TO WATERFRONT DRIVE
WINNIPEG, MANITOBA

TEST HOLE LOCATION PLAN

DATE: JANUARY 2018
PROJECT NO: WX18398
REV. NO.: A
FIGURE NO: FIGURE 1



WX18398 - WSP JAMES AVE GPJ - 18-01-16 03:51 PM (GEOTECHNICAL - REVISED)



Amec Foster Wheeler Environment & Infrastructure
Winnipeg, Manitoba

LOGGED BY: CM
REVIEWED BY: RB
Figure No. 2

COMPLETION DEPTH: 3 m
COMPLETION DATE: 21 December 2017

PROJECT: James Avenue Renewal		DRILLED BY: Maple Leaf Drilling Ltd.		BORE HOLE NO: TH02	
CLIENT: WSP Canada Group Limited		DRILL TYPE: Track Mounted Geoprobe 7822DT		PROJECT NO: WX18398	
LOCATION: James Avenue, Winnipeg, MB		DRILL METHOD: 125 mm SSA		ELEVATION:	

SAMPLE TYPE	<input checked="" type="checkbox"/> Shelby Tube	<input type="checkbox"/> No Recovery	<input checked="" type="checkbox"/> SPT (N)	<input type="checkbox"/> Grab Sample	<input type="checkbox"/> Split-Pen	<input type="checkbox"/> Core
BACKFILL TYPE	<input checked="" type="checkbox"/> Bentonite	<input type="checkbox"/> Pea Gravel	<input checked="" type="checkbox"/> Drill Cuttings	<input type="checkbox"/> Grout	<input type="checkbox"/> Slough	<input type="checkbox"/> Sand

▲ UNCONFINED COMPRESSION (kPa) ▲

100 200 300 400

■ POCKET PENETROMETER (kPa) ■

100 200 300 400

PLASTIC M.C. LIQUID

20 40 60 80

SOIL DESCRIPTION

SOIL SYMBOL

MUSCS

ASPH

CONC

CH

CI

CL-ML

CH

Depth (m)	SAMPLE TYPE	SAMPLE NO	SPT (N)	COMMENTS	Depth (m)
0	ASPH			ASPHALT - 115mm thick, good condition, intact	
	CONC			CONCRETE - 130mm thick, poor condtion, broke apart easily	
	CH	1		CLAY (FILL) - silty, trace gravel, trace sand, high plastic, frozen, grey	
	CI	2		CLAY - and silt, trace sand, medium plastic, frozen, brown, occasional silt and sulphate inclusions	
1		3		SILT - clayey, trace sand, low plastic, moist, light brown - frozen to 1.5m	1
	CL-ML	4		- soft below 1.5m	
2		5		CLAY - silty, high plastic, moist, stiff, mottled brown/grey, frequent silt and sulphate inclusions	2
3	CH	6		TEST HOLE TERMINATED AT 3.0m BELOW EXISTING GROUND SURFACE.	3
				NOTES: No sloughing or seepage encountered during drilling. Test hole backfilled with auger cuttings and bentonite and patched with asphalt cold patch.	
4					4
5					5

WX18398 - WSP JAMES AVE.GPJ 18-01-16 03:52 PM (GEOTECHNICAL - REVISED)

Amec Foster Wheeler Environment & Infrastructure
Winnipeg, Manitoba

LOGGED BY: CM

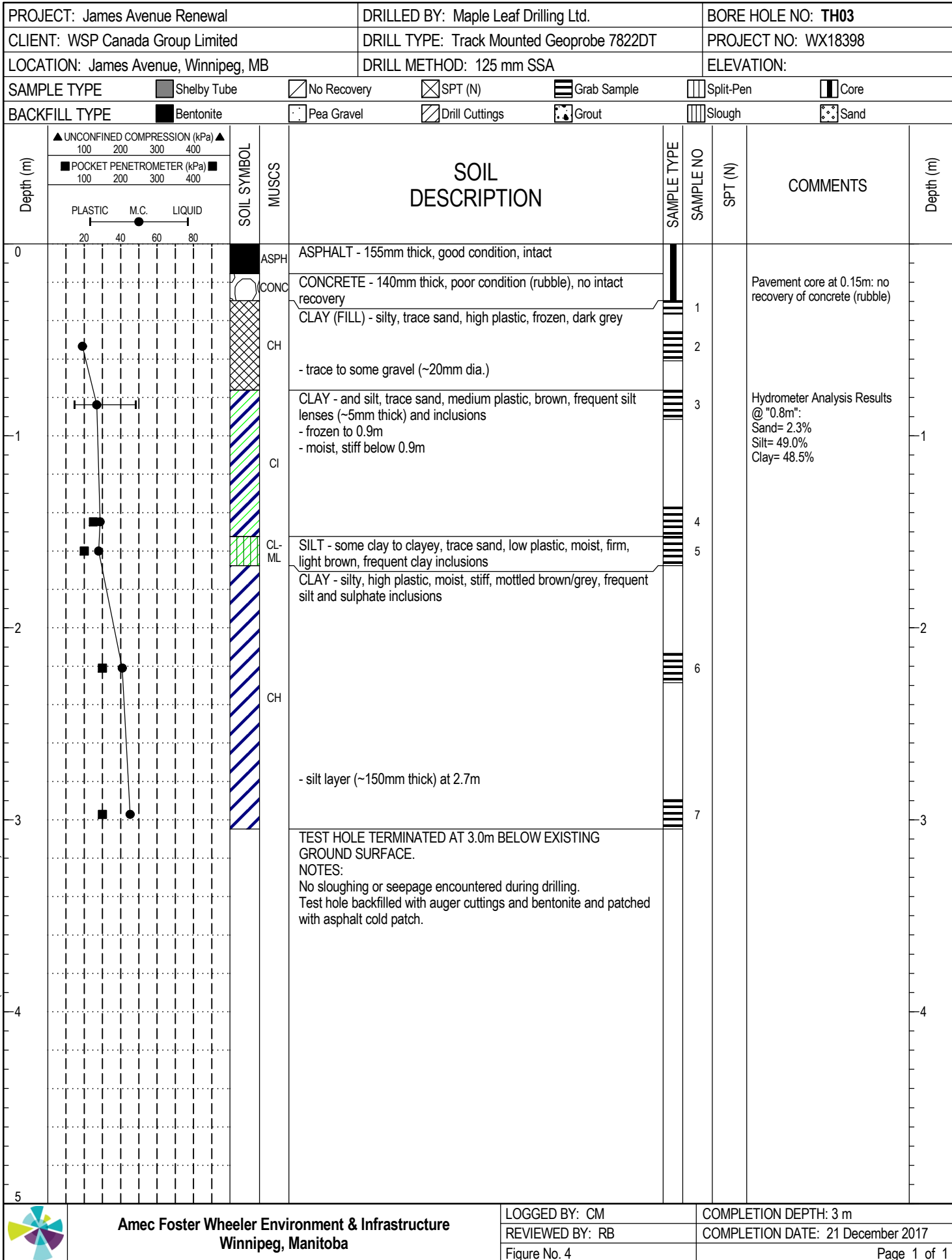
REVIEWED BY: RB

Figure No. 3

COMPLETION DEPTH: 3 m

COMPLETION DATE: 21 December 2017

Page 1 of 1



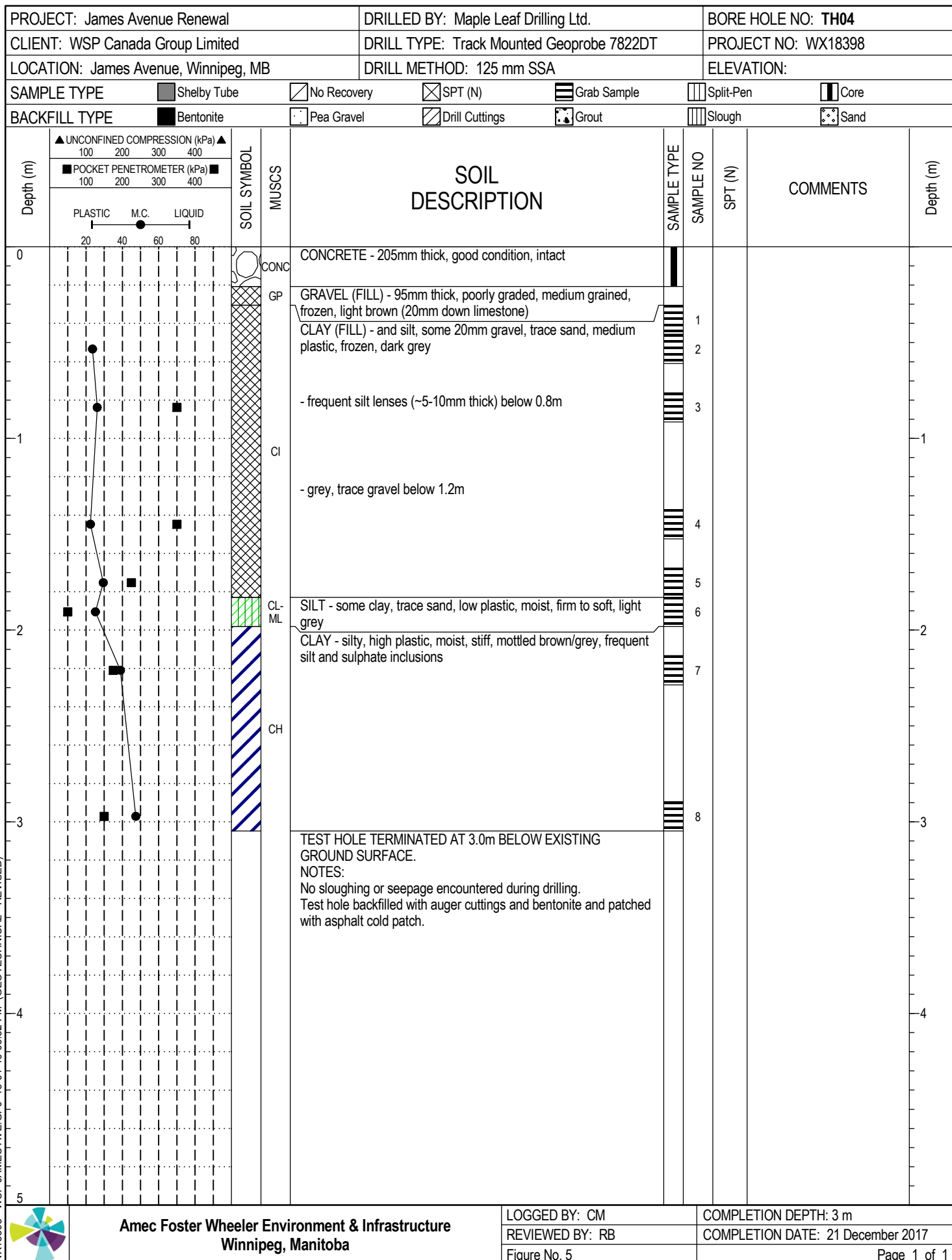
WX18398 - WSP JAMES AVE.GPJ 18-01-16 03:52 PM (GEOTECHNICAL - REVISED)



Amec Foster Wheeler Environment & Infrastructure
Winnipeg, Manitoba

LOGGED BY: CM
REVIEWED BY: RB
Figure No. 4

COMPLETION DEPTH: 3 m
COMPLETION DATE: 21 December 2017





**Amec Foster Wheeler
Environment & Infrastructure**

WSP CANADA GROUP LIMITED

**Core Photographs, TH01 and TH02
Geotechnical Investigation
James Avenue Renewal
Winnipeg, Manitoba**

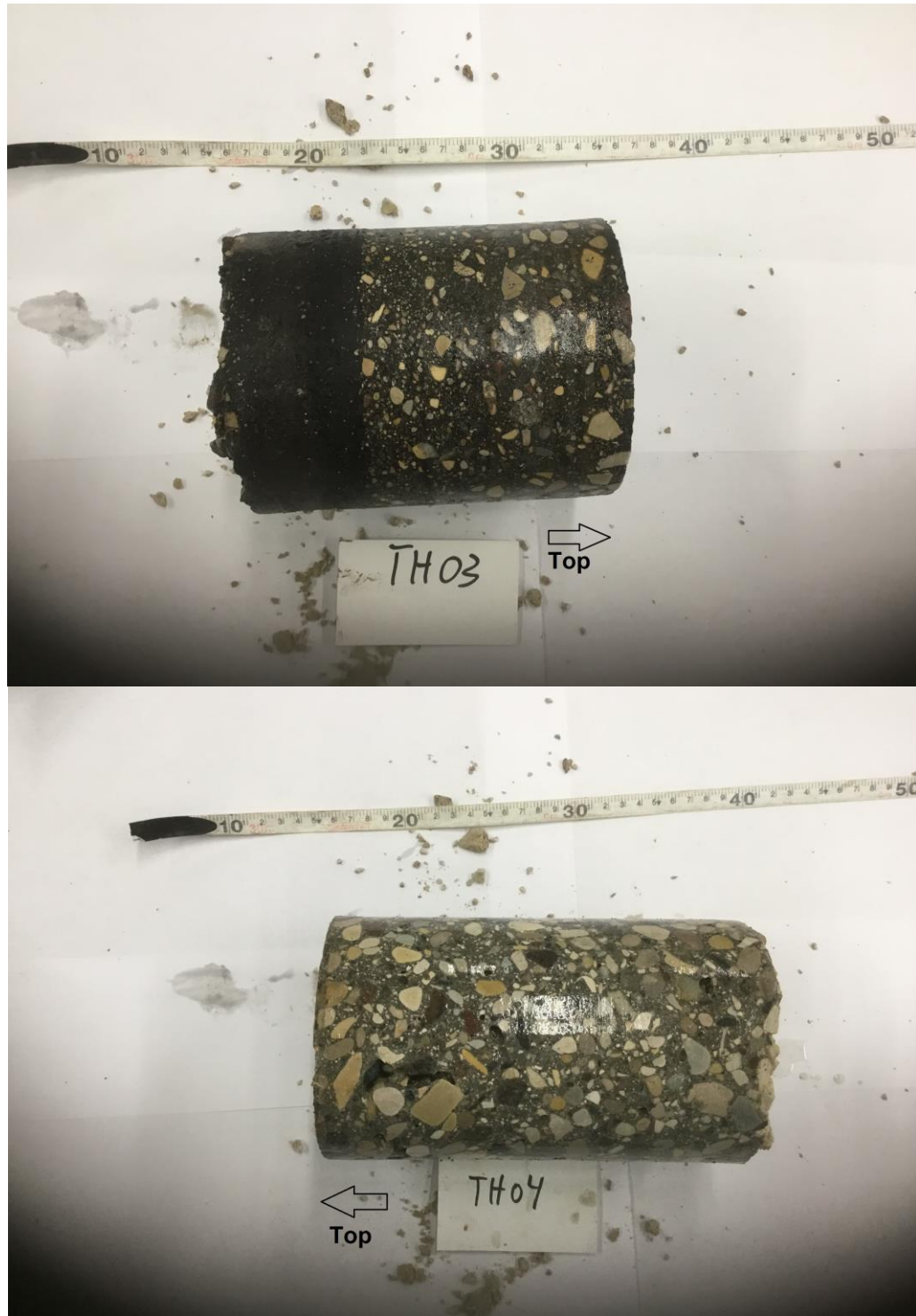
Drawn: RB


Scale: NTS

Date: Jan. 2018

Project No.: WX18398

Figure: 6



 Amec Foster Wheeler Environment & Infrastructure	WSP CANADA GROUP LIMITED		Core Photographs, TH03 and TH04 Geotechnical Investigation James Avenue Renewal Winnipeg, Manitoba		
Drawn: RB	Scale: NTS	Date: Jan. 2018	Project No.: WX18398	Figure: 7	