BOREHOLE RECORD — BH25-01

Stantec

CLIENT: City of Winnipeg	BH COORDINATES	PROJECT NO.: 113733942	
PROJECT: GWWD Mile 41.3 Railway Bridge	[UTM Zone 14U]	BH ELEVATION: 273.8m	
LOCATION: RM of Reynolds, Manitoba	5516017 N 690271 E	DATUM: NAD83	
DATE BORED: July 14 2025 to July 15 2025	WATER LEVEL: 3.8 m on July 15, 2025		

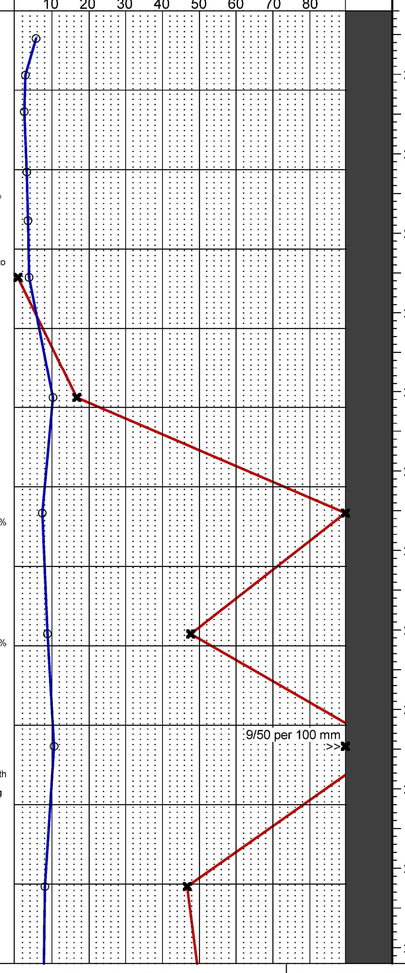
DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION (USCS)	TYPE	NUMBER	RECOVERY (mm) or TCR %	N-VALUE or RQD %	OTHER TESTS / REMARKS
0	273.8	**FILL:** brown sand containing gravel, trace silt, trace rootlets	GS				
1			GS				
			GS				
2			GS				Sieve/Hydro at 2.0 m G 43% S 52% M 4% C 2%
			GS				
3			SS			1	- Switched to HSA due to soil sloughing
4	269.2	Compact grey **SAND (SP)** - silty, some gravel	SS			17	
5							
6	267.7	Very dense brown silt **TILL** - sandy, gravelly, some clay	SS			90	Sieve/Hydro at 6.1 m G 22% S 34% M 30% C 15%
7							
		- dense, grey, trace gravel below 7.6 m	SS			48	Sieve/Hydro at 7.6 m G 4% S 30% M 50% C 17%
8							
9			SS				
	264.3	**GRANITE BOULDER** Core HQ1 - 9.5 to 10.8 m					- Auger refusal at a depth of 9.5 m on boulder - Switched to HQ Coring
10	263.6	Dense grey silt **TILL** - sandy, some gravel, some clay					
11		Core HQ2 - 10.8 to 12.6 m	SS			47	- no sample retrieved in HQ2
12							

UNDRAINED SHEAR STRENGTH, Cu (kPa): ▲ LABORATORY TEST ◆ FIELD VANE TEST ★ POCKET PENETROMETER □ POCKET SHEAR VANE — 50 kPa, 100 kPa, 150 kPa, 200 kPa

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

✖ SPT (N-value) BLOWS/0.3m

Water Content (%) and Blow Count: 10 20 30 40 50 60 70 80



BACKFILL — ELEVATION (m): 273, 272, 271, 270, 269, 268, 267, 266, 265, 264, 263, 262

▼ Water Level Measured On Date Indicated

BACKFILL SYMBOL: ASPHALT, GROUT, CONCRETE, BENTONITE, DRILL CUTTINGS, SAND, SLOUGH

Drilling Contractor: Maple Leaf Drilling	Logged By: SB
Drilling Method: SSA/HSA/HQ	Reviewed By: RB
Completion Depth: 20.6 m	Page 1 of 2

BOREHOLE RECORD — BH25-01

Stantec

CLIENT: City of Winnipeg	BH COORDINATES	PROJECT NO.: 113733942	
PROJECT: GWWD Mile 41.3 Railway Bridge	[UTM Zone 14U]	BH ELEVATION: 273.8m	
LOCATION: RM of Reynolds, Manitoba	5516017 N 690271 E	DATUM: NAD83	
DATE BORED: July 14 2025 to July 15 2025	WATER LEVEL: 3.8 m on July 15, 2025		

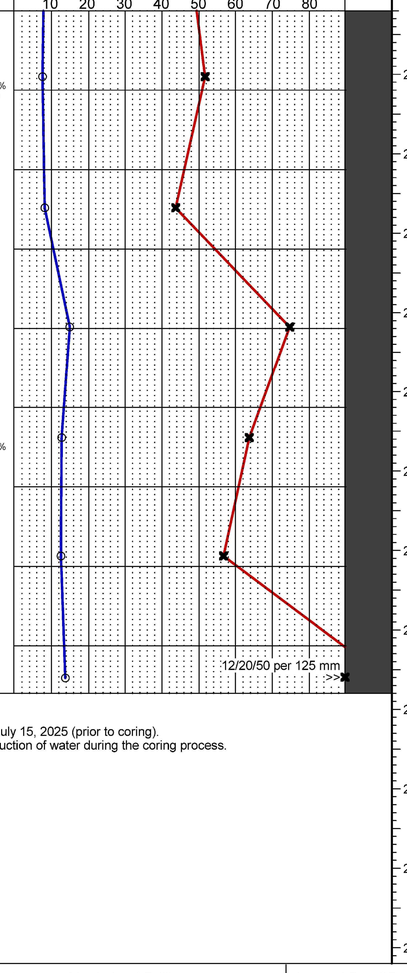
DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION (USCS)	TYPE	NUMBER	RECOVERY (mm) or TCR %	N-VALUE or RQD %	OTHER TESTS / REMARKS
12							
13		Core HQ3 - 12.6 to 14.3 m - very dense, trace gravel at 12.6 m	SS			52	Sieve/Hydro at 12.6 m G 6% S 38% M 42% C 13% - no sample retrieved in HQ3
14		Core HQ4 - 14.3 to 15.8 m - with cobbles below 14.3 m	SS			44	
15							
16		Core HQ5 - 15.8 to 17.2 m - very dense, some sand below 15.8 m	SS			75	
17		Core HQ6 - 17.2 to 18.6 m	SS			64	Sieve/Hydro at 17.2 m G 0% S 12% M 63% C 25%
18							
19		Core HQ7 - 18.6 to 20.2	SS			57	
20							
	253.2		SS				
21		**End of Borehole** • Borehole terminated at a depth of 20.6 m within very dense till. • Groundwater level was observed at a depth of 3.8 m within the hollow stem augers on July 15, 2025 (prior to coring). • Final groundwater depth could not be observed upon completion of drilling due to introduction of water during the coring process. • Borehole backfilled with bentonite and auger cuttings.					
22							
23							
24							

UNDRAINED SHEAR STRENGTH, Cu (kPa): ▲ LABORATORY TEST ◆ FIELD VANE TEST ★ POCKET PENETROMETER □ POCKET SHEAR VANE — 50 kPa, 100 kPa, 150 kPa, 200 kPa

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

✖ SPT (N-value) BLOWS/0.3m

Water Content (%) and Blow Count: 10 20 30 40 50 60 70 80



BACKFILL — ELEVATION (m): 261, 260, 259, 258, 257, 256, 255, 254, 253, 252, 251, 250

▼ Water Level Measured On Date Indicated

BACKFILL SYMBOL: ASPHALT, GROUT, CONCRETE, BENTONITE, DRILL CUTTINGS, SAND, SLOUGH

Drilling Contractor: Maple Leaf Drilling	Logged By: SB
Drilling Method: SSA/HSA/HQ	Reviewed By: RB
Completion Depth: 20.6 m	Page 2 of 2

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	26.02.13	J.M.B.

B.M. ELEV.

Stantec
500-311 Portage Ave, Winnipeg MB Canada
www.stantec.com

DESIGNED BY	S.N.B.	CHECKED BY	R.A.B.
DRAWN BY	J.M.B.	APPROVED BY	E.R.T.
HOR. SCALE: VERTICAL:		RELEASED FOR CONSTRUCTION:	
DATE	2026-02-11	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO. G-003

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

GREATER WINNIPEG WATER DISTRICT
RAILWAY BRIDGE REPLACEMENT AT MILE 41.3
BOREHOLE RECORD

SHEET 3 OF 17

CAD FILE DRAWING NUMBER 33942g-003-m41.3.dwg

CITY DRAWING NUMBER 1-0754R-C0001-001