APPENDIX A

GEOTECHNICAL REPORT

Geotechnical Testing Services for the Regional Street Renewal Program

Wilkes Avenue

Prepared for:

KGS Group
865 Waverley St
Winnipeg, MB R3T 5P4

February 13, 2026

H. MANALO CONSULTING LTD.

1402 Notre Dame Avenue, Winnipeg, MB, R3E 3G5
Phone: (204) 697-3854; Cell (204) 997-1355
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Introduction

On December 3, 2025, H. Manalo Consulting Ltd. (HMCL) was authorized by Ryan Paulus of KGS Group to proceed with the requested geotechnical investigation. The objective of the investigation was to assess existing road conditions through pavement coring and subsurface soil sampling on Regional Streets Wilkes Avenue (Segment 1 and Segment 2) under the City of Winnipeg Package. The list of streets included in this project is provided in Table 1 below.

Table 1. Location of Wilkes Segment 1 and Segment 2

Location	Classification	Treatment
Wilkes Av – Hartstone Rd to PTH 100	Regional	Asphalt Rehabilitation

Field Work Program

The investigation adhered to the City of Winnipeg's guidelines provided in the tender, section E3 Site Investigation Requirements. The core locations were designated by KGS Group. Pavement coring was conducted from January 14 to January 19, 2025, using a 160 mm diameter coring bit. For local streets scheduled for pavement rehabilitation, pavement cores were extracted at joints and mid-slab to assess pavement condition. Subgrade drilling was carried out to depths of 2.5 m for reconstruction project. Initial soil classification was performed on site, and samples were collected. At all core and test hole locations, the sections were refilled with aggregates and cold-mix asphalt. All collected samples were sent to the HMCL laboratory for additional review and analysis.

Laboratory Analysis and Reporting

Core samples were brought back to the laboratory for documentation of pavement type and thickness and core sample images were documented for reference. Asphalt pavement thickness ranged from 78 mm to 195 mm, while crushed limestone fill material thickness varied between 0.50 m to 1.5 m. It is worth noted that the fill material is frozen and can not determine true maximum size due to auger grinding material to a finer size.

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Subsurface soil samples were tested for moisture content and visually classified. Selected samples underwent plasticity index, particle size distribution, and CBR testing. A soil log for each test hole was completed for reference. The required quantity of testing was determined by the client in accordance with City of Winnipeg requirements.

We appreciated the opportunity to assist you in this project. Please call the undersigned if you require further information.

Prepared by:

Mayumi Kawano, EIT
Geotechnical Engineer Intern
Field and Laboratory Supervisor

Reviewed by:

Paul Bevel
Manager, Field and Laboratory Services

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APPENDIX A

SUMMARY OF TEST RESULTS

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A.2 Summary of Laboratory Testing

Rehabilitation Sites

TH	Sample ID	PSA				PI			PR		CBR	
		Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	MDD (kg/m^3)	OMC (%)	at 2.5mm penetration	at 5.1mm penetration
Wilkes Ave - Segment 1 (Perimeter Hwy to Charleswood Rd)												
BH1	**HM 856 GS5**	-	2.6	30.6	66.8	73	22	51	1648	21	1.9	1.5
BH2	**HM 857 GS8**	-	2.1	38.7	59.3	71	22	49	1501	23	2.7	2
BH3	**HM 858 GS5**	-	2.1	25.3	72.5	81	23	58	1502	26.3	1.6	1.3
Wilkes Ave - Segment 2 (Charleston St to Harstone Rd)												
BH7	**HM846 GS6**	-	3.7	33.1	63.2	68	24	44	1451	25.3	2.6	2.1
BH8	**HM847 GS5**	-	3.6	54.8	41.7	72	23	49	1498	28.2	2.6	1.8
BH9	**HM848 GS4**	-	1.8	47.6	50.6	72	22	50	1420	28.8	2.8	1.9

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A.2 Summary of Laboratory Testing

Rehabilitation Sites

TH	Sample ID	PSA				PI			PR		CBR	
		Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	MDD (kg/m^3)	OMC (%)	at 2.5mm penetration	at 5.1mm penetration
Wilkes Ave - Segment 2 (Charleston St to Harstone Rd)												
BH10	**HM849 GS5**	-	4.5	32.3	63.2	74	20	54	1423	28.6	2.4	1.8
BH11	**HM850 GS4**	-	1.8	47.6	50.6	76	21	55	1420	27.8	2.3	1.7

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A.1 Summary of Pavement Measurements

Rehabilitation Sites	BOREHOLE NO.	LANE	BOREHOLE LOCATION	PAVEMENT STRUCTURE	
				ASPHALT THICKNESS (mm)	CONCRETE THICKNESS (mm)
Wilkes Avenue – Segment 1 (Perimeter Hwy to Charleswood Rd)	1	Eastbound Lane	14 U, 620667 E, 5522053 N	194	-
	2	Westbound Lane	14 U, 620792 E, 5522043 N	175	-
	3	Eastbound Lane	14 U, 620867 E, 5522046 N	135	-
	4	Westbound Lane	14 U, 620972 E, 5522060 N	195	-
	5	Eastbound Lane	14 U, 621086 E, 5522066 N	127	-
	6	Westbound Lane	14 U, 621188 E, 5522080 N	148	-
Wilkes Avenue – Segment 2 (Charleston St to Harstone Rd)	7	Eastbound Lane	14 U, 621992 E, 5522148 N	167	-
	8	Westbound Lane	14 U, 622097 E, 5522161 N	78	-
	9	Eastbound Lane	14 U, 622183 E, 5522164 N	160	-
	10	Westbound Lane	14 U, 622300 E, 5522178 N	176	-
	11	Eastbound Lane	14 U, 622394 E, 5522183 N	120	-
	12	Westbound Lane	14 U, 622489 E, 5522196 N	127	-
	13	Eastbound Lane	14 U, 622584 E, 5522199 N	152	-
	14	Westbound Lane	14 U, 622692 E, 5522213 N	154	-
	15	Eastbound Lane	14 U, 622785 E, 5522216 N	115	-
	16	Westbound Lane	14 U, 622878 E, 5522229 N	117	-
	17	Eastbound Lane	14 U, 622972 E, 5522232 N	130	-
	18	Westbound Lane	14 U, 623083 E, 5522246 N	142	-

Note: [A] - The exact concrete thickness cannot be determined due to the deterioration of the concrete.

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APPENDIX B.1.

WILKES AVENUE – SEGMENT 1

(PERIMETER HWY TO CHARLESWOOD RD)

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Rehabilitation Sites

Pavement Coring and Subsurface Drilling Locations

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Rehabilitation Sites

Pavement Structure Measurement

Test Hole No.	Test Hole Location	Asphalt Thickness (mm)	Concrete Thickness (mm)
Wilkes Avenue – Segment 1 (Perimeter Hwy to Charleswood Rd)			
BH1	Eastbound Lane 1m away from shoulder line 14 U, 620667 E, 5522053 N	194	-
BH2	Westbound Lane 2.5m away from shoulder line 14 U, 620792 E, 5522043 N	175	-
BH3	Eastbound Lane 2m away from shoulder line 14 U, 620867 E, 5522046 N	135	-
BH4	Westbound Lane 1.5m away from shoulder line 14 U, 620972 E, 5522060 N	195	-
BH5	Eastbound Lane 1m away from shoulder line 14 U, 621086 E, 5522066 N	127	-
BH6	Westbound Lane 1m away from shoulder line 14 U, 621188 E, 5522080 N	148	-

Note: [A] – The exact concrete thickness cannot be determined due to the deterioration of the concrete.

H. MANALO CONSULTING LTD.

Project No: 286-2504

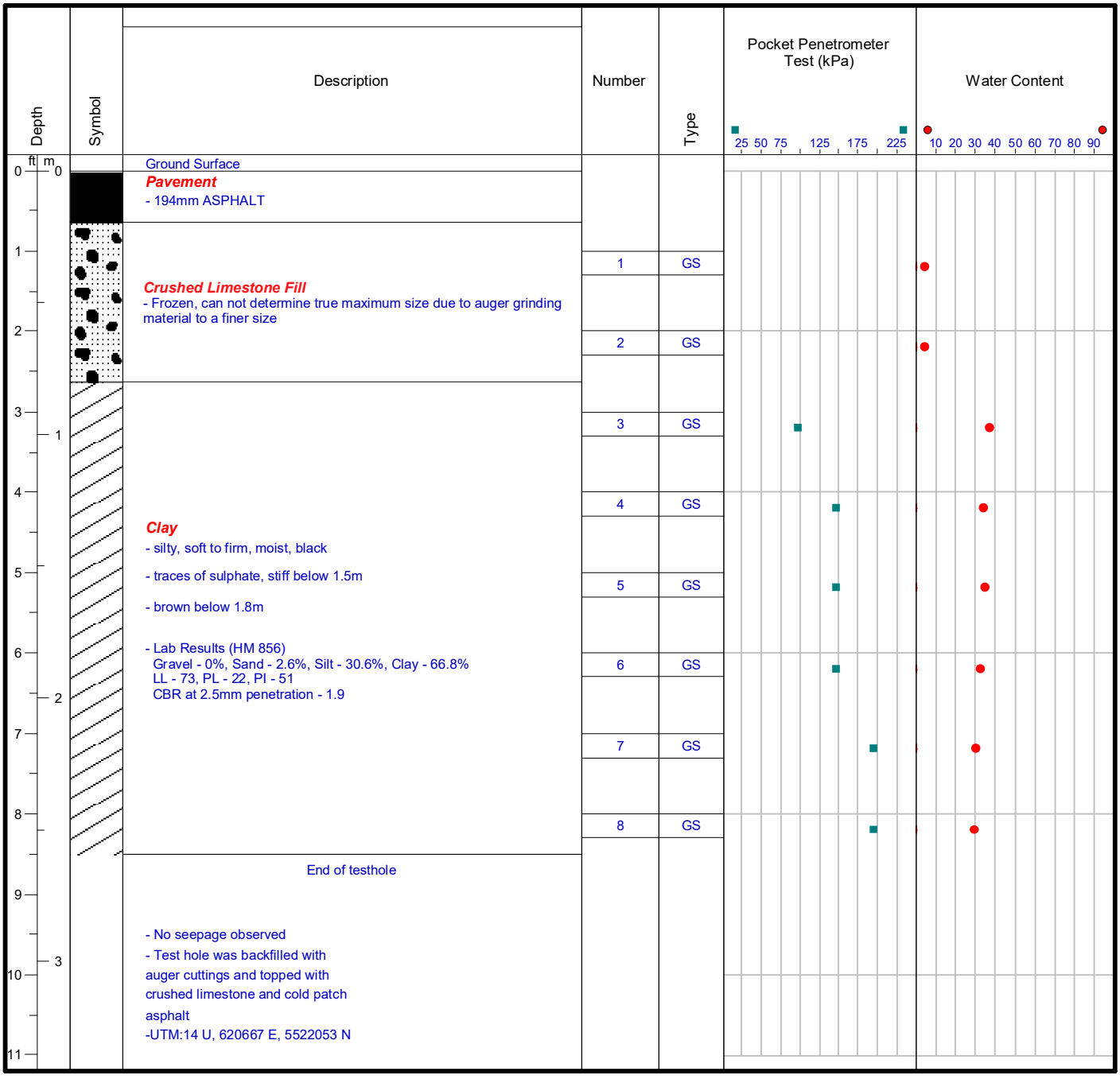
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 1 (Wilkes Ave) - Eastbound Lane

TH1

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 16, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

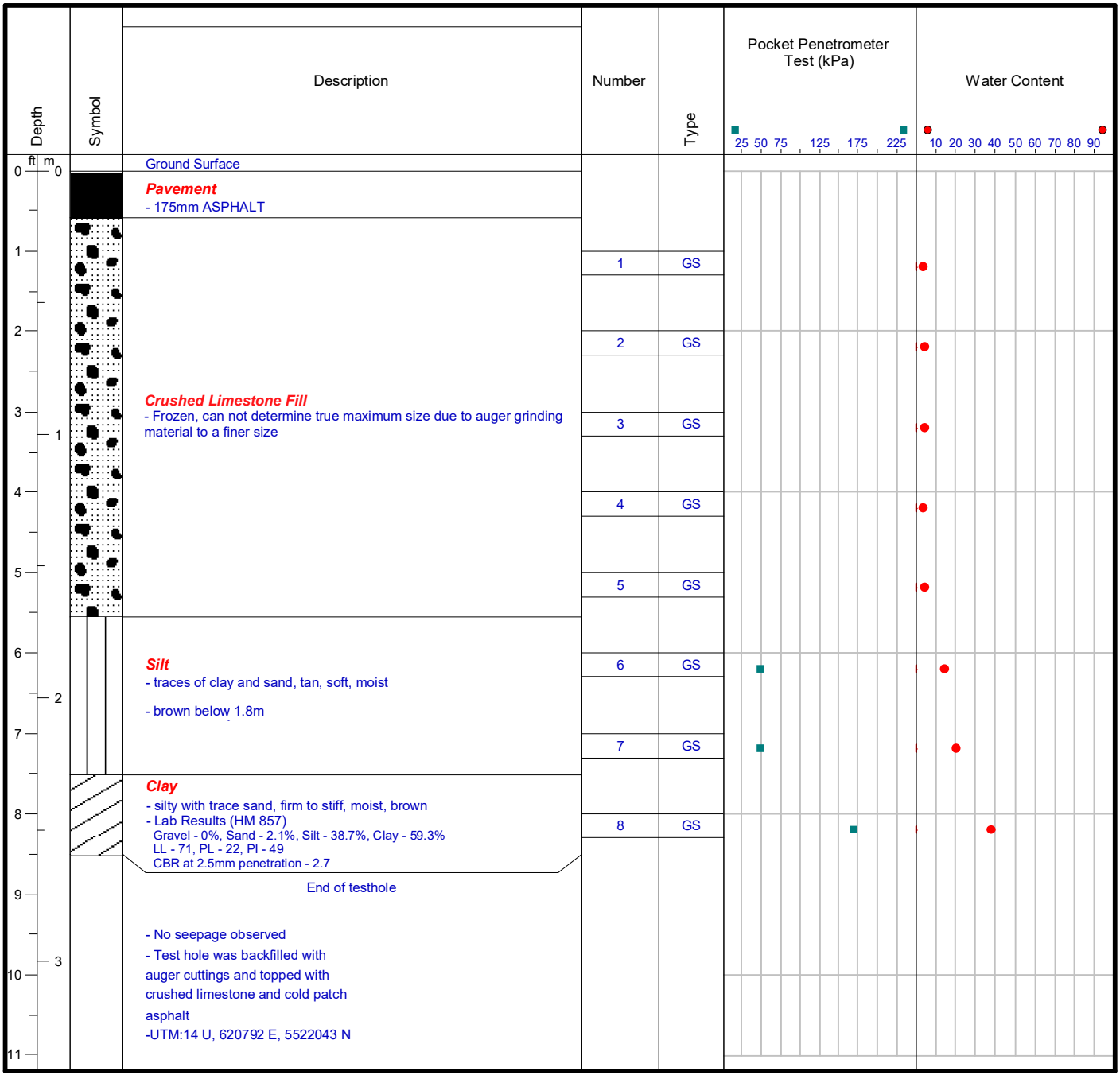
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 1 (Wilkes Ave) - Westbound Lane

BH2

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 16, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

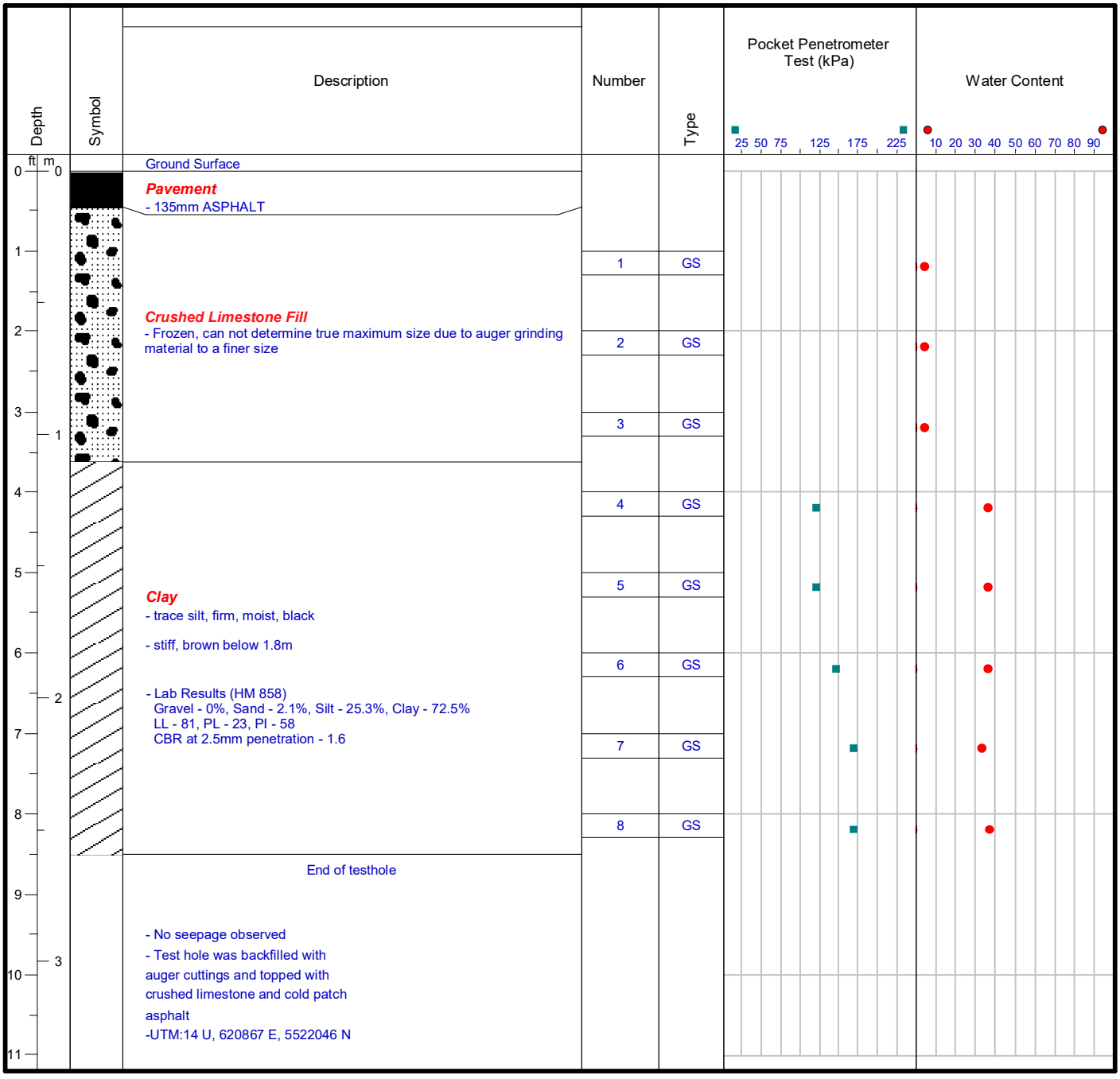
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 1 (Wilkes Ave) - Eastbound Lane

BH3

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 16, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

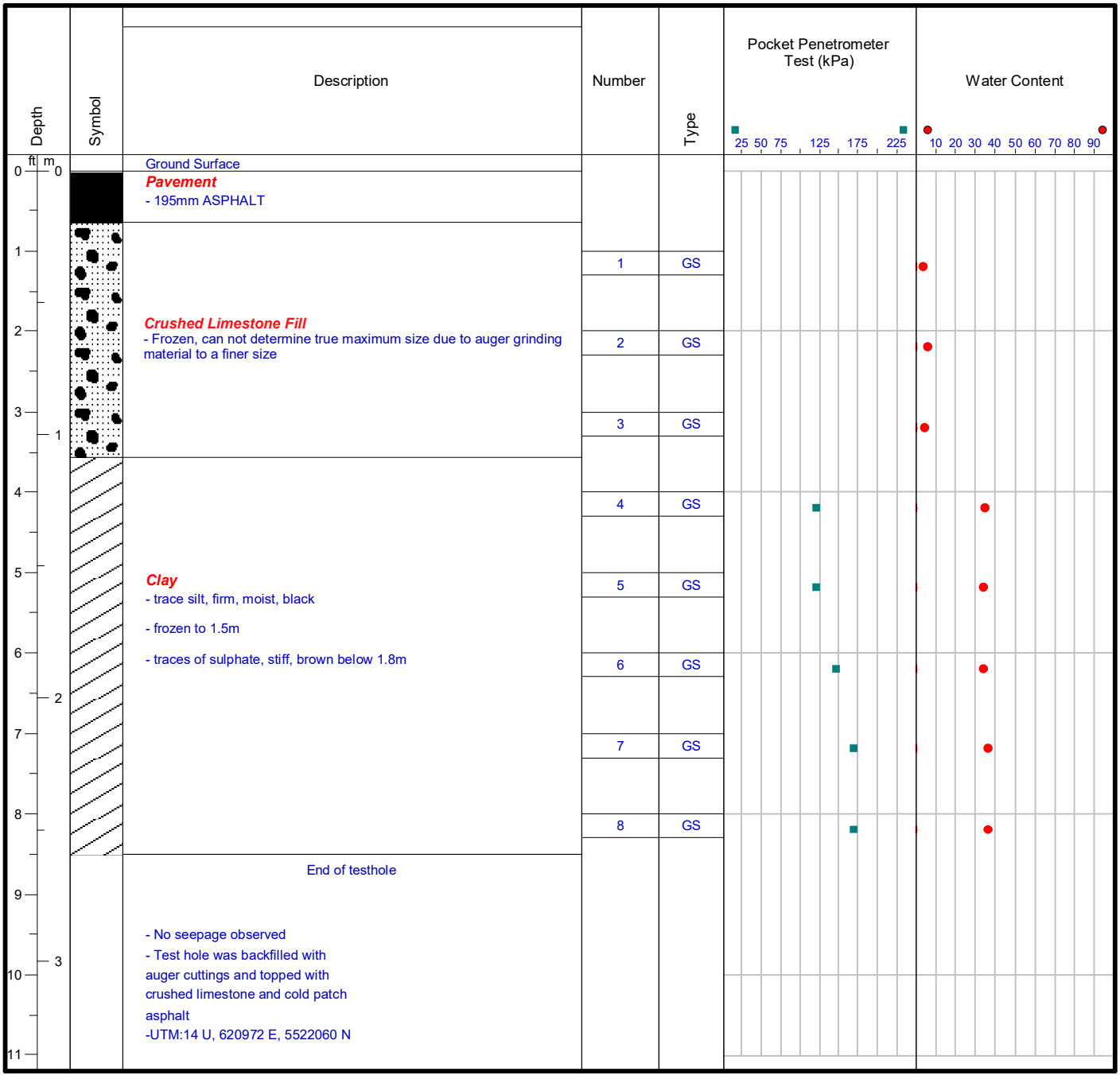
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 1 (Wilkes Ave) - Westbound Lane

BH4

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 16, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

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Project No: 286-2504

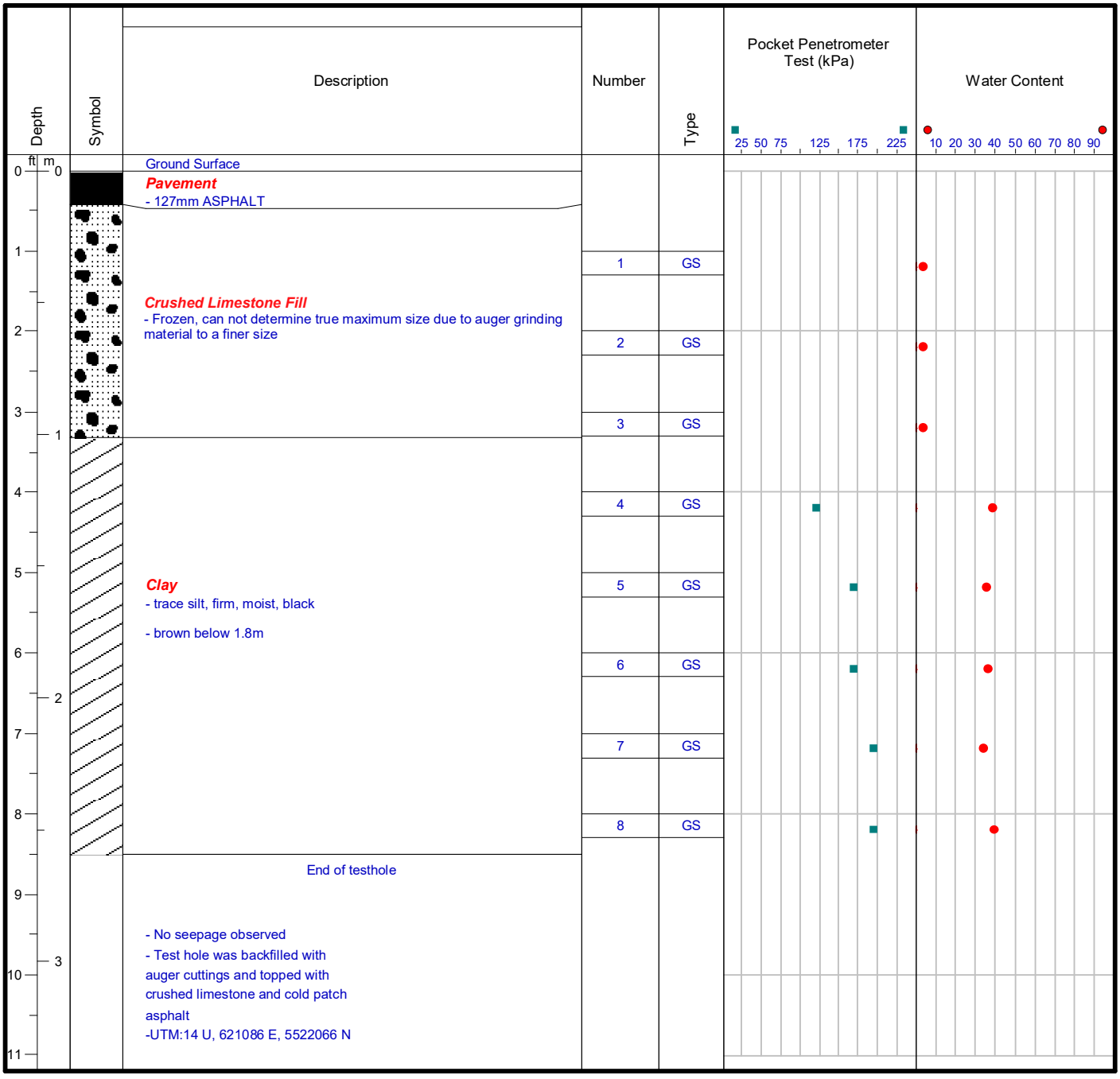
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 1 (Wilkes Ave) - Eastbound Lane

BH5

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 16, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

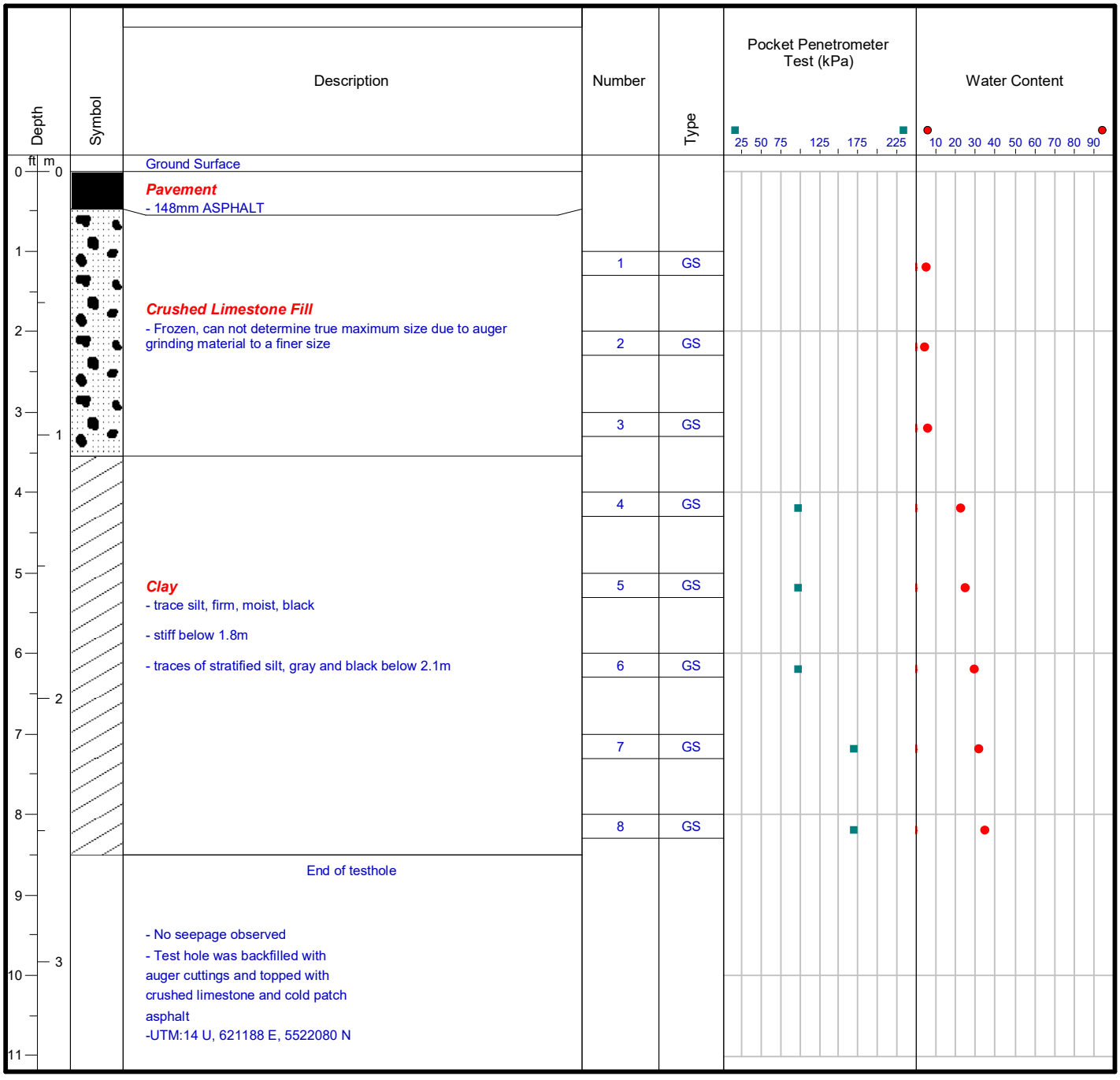
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 1 (Wilkes Ave) - Westbound Lane

TH6

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 16, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

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Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 856	
	Winnipeg, MB R3T 5P4	Date sampled/By:	16-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	16-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	27-Jan-26	JJ
Location:	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1			

SAMPLE DATA

Sample Type:	CLAY - silty, trace sand		
Source:	Wilkes Ave - BH 1 - GS 5		
Sampled by:	CB		
Optimum Moisture Content:	21.0	%	
Maximum Dry Density:	1648	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	23-Jan-26

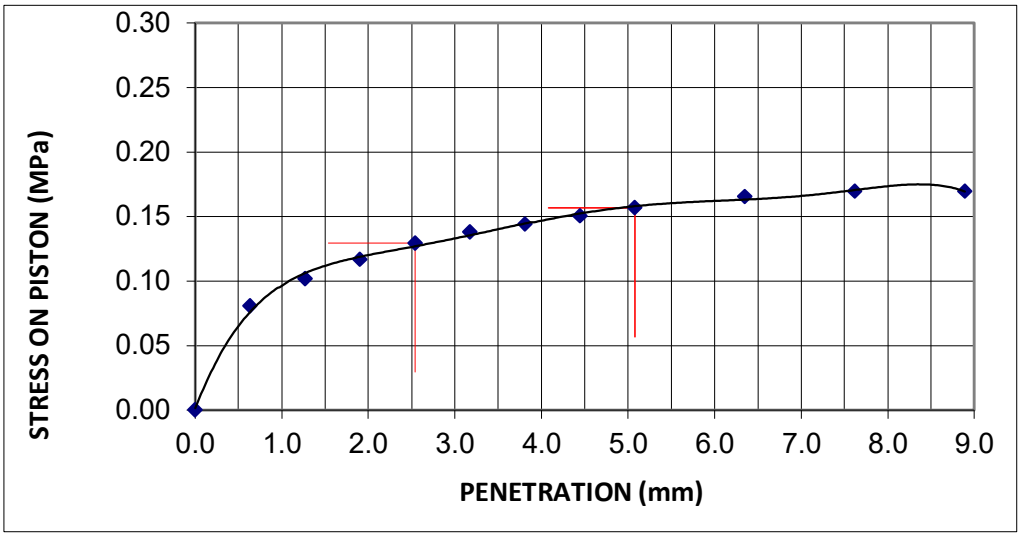
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	21.2	33.5
MC of top 25mm layer, %		
Dry Density, kg/m^3	1566	1536
Compaction,%	95%	
CBR at 2.5mm penetration, %		1.9
Swell, %		7.0

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.08
1.27	0.10
1.91	0.12
2.54	0.13
3.18	0.14
3.81	0.14
4.45	0.15
5.08	0.16
6.35	0.17
7.62	0.17
8.89	0.17

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.13	0.13	1.9	-
5.08	10.3	0.16	0.16	-	1.5

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 857	
	Winnipeg, MB R3T 5P4	Date sampled/By:	16-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	16-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	27-Jan-26	JJ
Location:	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1			

SAMPLE DATA

Sample Type:	CLAY - silty,trace sand		
Source:	Wilkes Ave - BH 2 - GS 8		
Sampled by:	CB		
Optimum Moisture Content:	23.0	%	
Maximum Dry Density:	1501	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	22-Jan-26

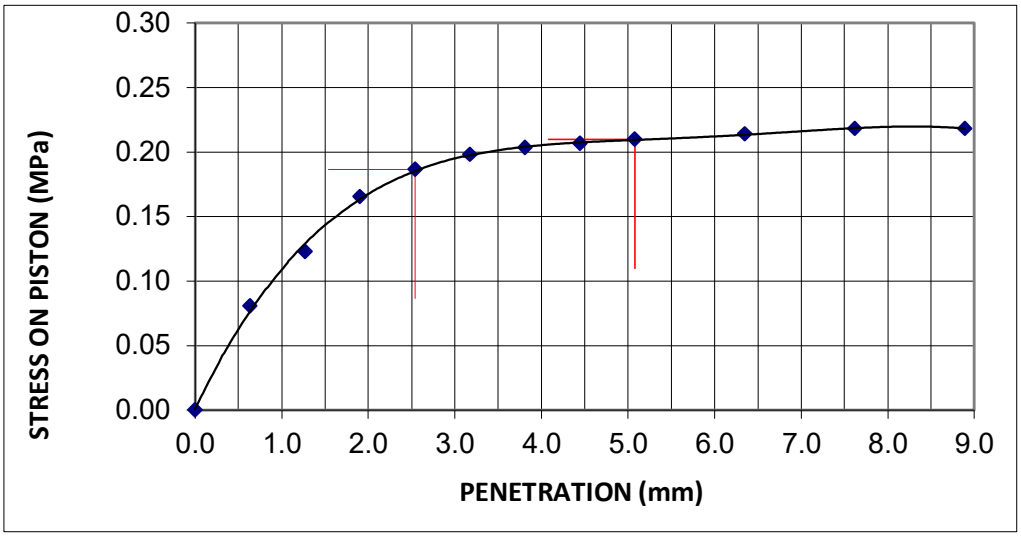
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	23.1	31.5
MC of top 25mm layer, %		
Dry Density, kg/m^3	1426	1393
Compaction,%	95%	
CBR at 2.5mm penetration, %		2.7
Swell, %		4.0

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.08
1.27	0.12
1.91	0.17
2.54	0.19
3.18	0.20
3.81	0.20
4.45	0.21
5.08	0.21
6.35	0.21
7.62	0.22
8.89	0.22

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.19	0.19	2.7	-
5.08	10.3	0.21	0.21	-	2.0

Remarks:

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Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 858	
	Winnipeg, MB R3T 5P4	Date sampled/By:	16-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	16-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	27-Jan-26	JJ
Location:	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1			

SAMPLE DATA

Sample Type:	CLAY - silty trace sand		
Source:	Wilkes Ave - BH 3 - GS 5		
Sampled by:	CB		
Optimum Moisture Content:	26.3	%	
Maximum Dry Density:	1502	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	DA	Date Tested:	23-Jan-26

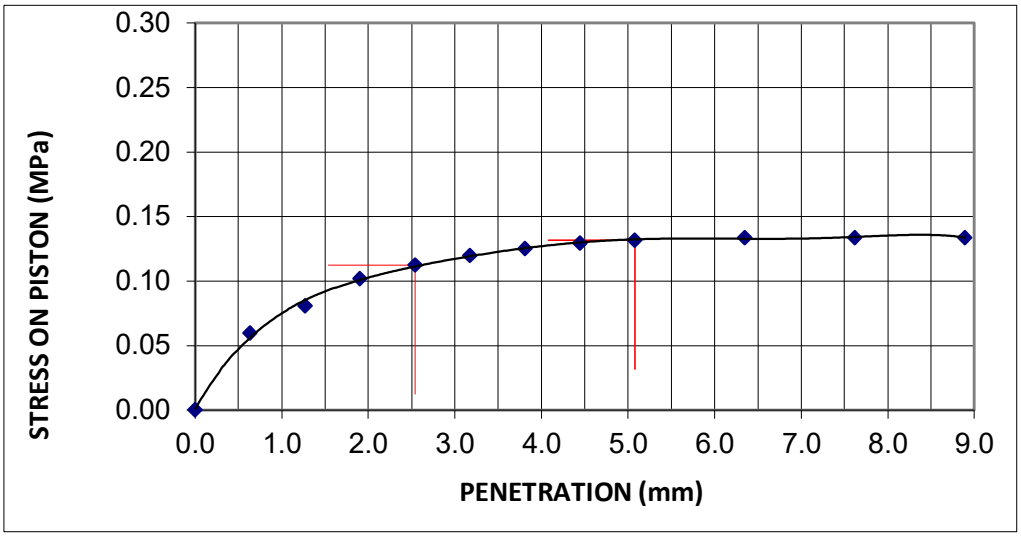
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	26.3	36.0
MC of top 25mm layer, %		
Dry Density, kg/m^3	1427	1382
Compaction,%	95%	
CBR at 2.5mm penetration, %		1.6
Swell, %		9.0

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.06
1.27	0.08
1.91	0.10
2.54	0.11
3.18	0.12
3.81	0.13
4.45	0.13
5.08	0.13
6.35	0.13
7.62	0.13
8.89	0.13

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.11	0.11	1.6	-
5.08	10.3	0.13	0.13	-	1.3

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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CCIL Canadian Council of Independent Laboratories

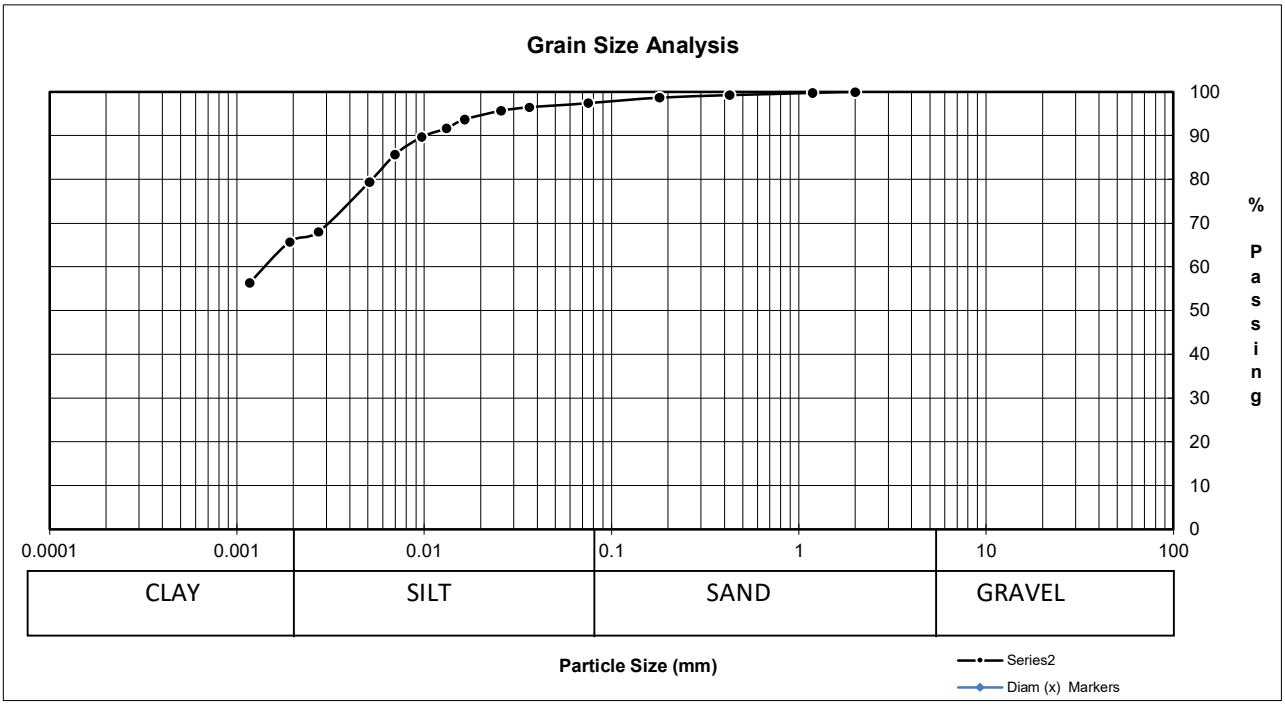
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	6
	Winnipeg, MB R3T 5P4	Lab No.:	HM 856
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

Date Sampled:	Jan. 16, 2026	Date Received:	Jan. 16, 2026
Sampled By:	CB	Date Tested:	Jan. 23, 2026

Material Identification	
B.H./T.H. No.	**BH 1**
Depth	**5-ft**
Sample Source	**GS5**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0362	96.5
9.50	100.0	0.0257	95.7
4.75	100.0	0.0164	93.7
2.00	100.0	0.0131	91.7
1.18	99.8	0.0097	89.7
0.425	99.3	0.0070	85.7
0.180	98.7	0.0051	79.4
0.075	97.4	0.0012	56.4



% Composition		
0.00	Gravel	D10
2.56	Sand	D30
30.64	Silt	D60
66.80	Clay	Cu
		Cc

Remarks:

Technician: Benjamin Yung

Reviewed by: Paul Bevel

H. MANALO CONSULTING LTD.
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Phone: 204 697 3854 Cell: 204 997-1355 hermie@hmanalo.ca

CCIL Canadian Council of Independent Laboratories

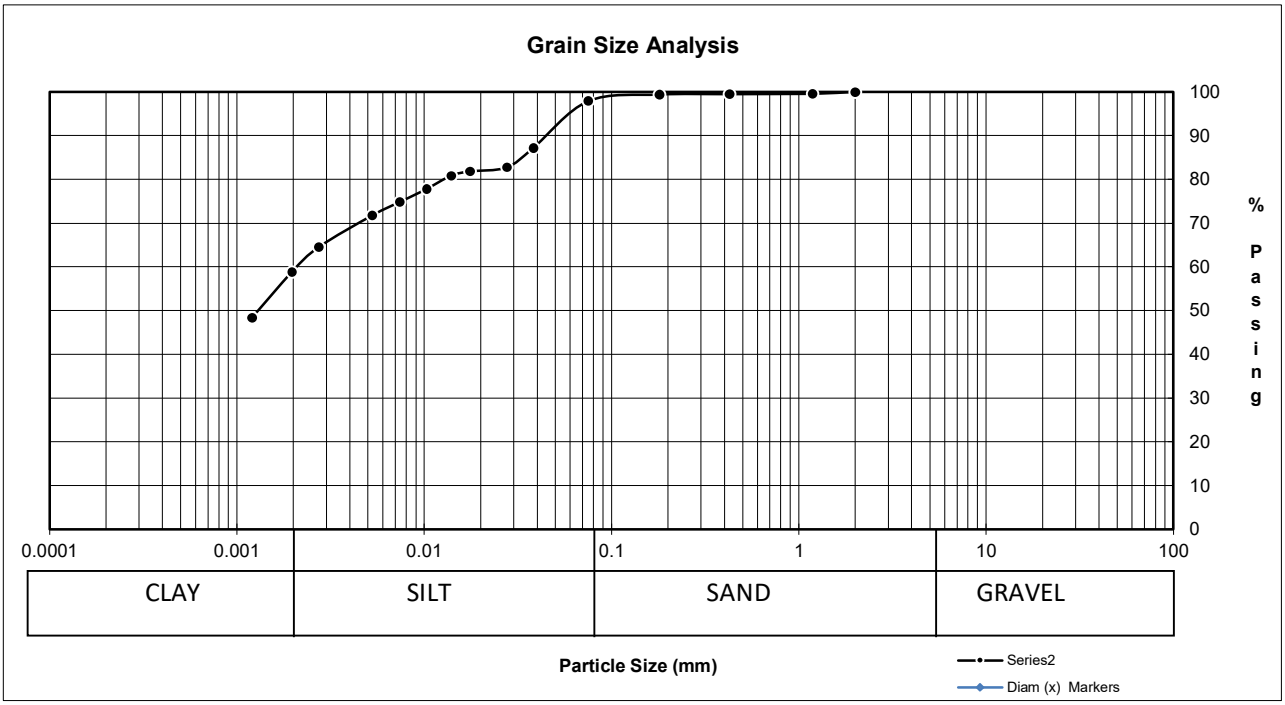
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	7
	Winnipeg, MB R3T 5P4	Lab No.:	HM 857
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

Date Sampled:	Jan. 16, 2026	Date Received:	Jan. 16, 2026
Sampled By:	CB	Date Tested:	Jan. 23, 2026

Material Identification	
B.H./T.H. No.	**BH 2**
Depth	**8-ft**
Sample Source	**GS 8**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0382	87.2
9.50	100.0	0.0276	82.8
4.75	100.0	0.0175	81.8
2.00	100.0	0.0139	80.8
1.18	99.6	0.0103	77.8
0.425	99.5	0.0074	74.8
0.180	99.4	0.0053	71.8
0.075	97.9	0.0012	48.4



% Composition		
	Gravel	D10
		D30
2.06	Sand	D60
38.65	Silt	Cu
59.29	Clay	Cc

Remarks:

P. Bevel

Technician: Benjamin Yung

Reviewed by: Paul Bevel

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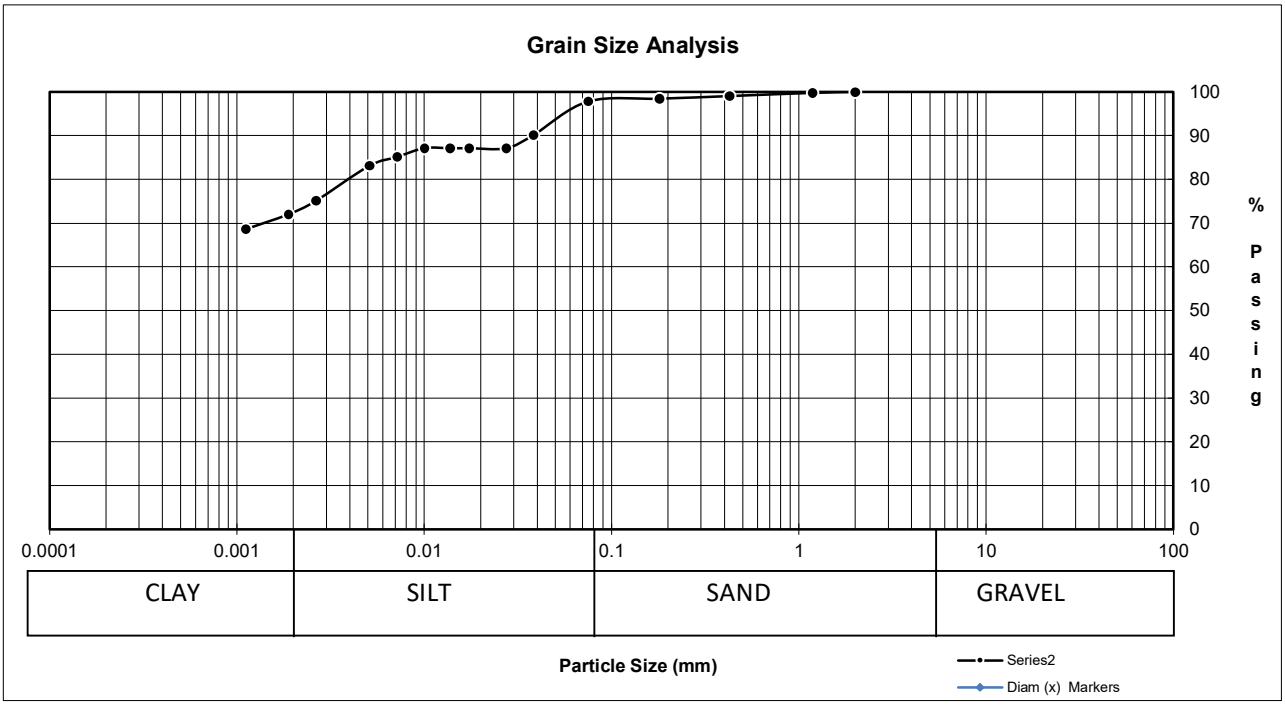
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	8
	Winnipeg, MB R3T 5P4	Lab No.:	HM 858
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

Date Sampled:	Jan 16, 2026	Date Received:	Jan 16, 2026
Sampled By:	CB	Date Tested:	Jan 23, 2026

Material Identification	
B.H./T.H. No.	**BH 3**
Depth	**5-ft**
Sample Source	**GS5**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0382	90.1
9.50	100.0	0.0274	87.1
4.75	100.0	0.0174	87.1
2.00	100.0	0.0137	87.1
1.18	99.8	0.0100	87.1
0.425	99.1	0.0072	85.1
0.180	98.5	0.0051	83.1
0.075	97.9	0.0011	68.7



% Composition		D10
	Gravel	D30
2.14	Sand	D60
25.32	Silt	Cu
72.54	Clay	Cc

Remarks:

Technician: Benjamin Yung

Reviewed by: Paul Bevel

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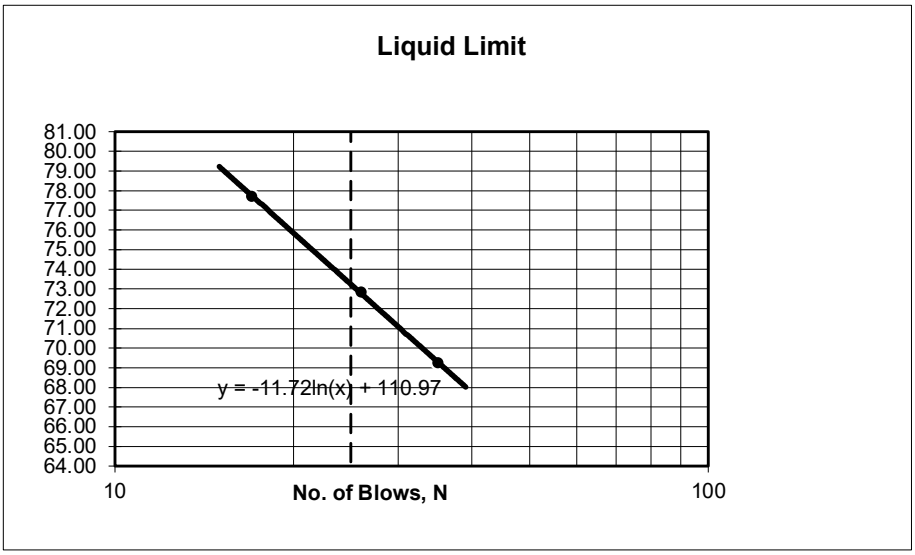
Atterberg Limits (ASTM D4318)

Client:	KGS Group	Project No.:	286-2504	
	865 Waverley St	PI Test No.:	6	
	Winnipeg, MB R3T 5P4	Lab No.:	HM 856	
Attention.:	Ryan Paulus	Date Sampled/By:	January 16, 2026	CB
Project:	Regional Streets - Wilkes Avenue	Date Received:	January 16, 2026	
	Geotechnical Investigation	Date Tested / By:	January 23, 2026	BY
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1			

Liquid Limit Determination					Liquid Limit 25 Blows
Dish No.:	1	2	3		
Wet Soil + Dish:	13.34	11.27	12.25		
Dry Soil + Dish:	10.16	8.84	9.06		
Moisture:	3.18	2.43	3.19		
Dish:	4.42	4.67	3.93		
Dry Soil:	5.74	4.17	5.13		
% Moisture:	69.25	72.84	77.73		
No. of Blows:	35	26	17		
Liquid Limit:					73



Material Identification:

Test Hole:	**BH 1**
Grab Sample No:	**GS5**
Depth:	**5-ft**
Liquid Limit, %:	**73**
Plastic Limit, %:	**22**
Plasticity Index:	**51**
(LL-PL)	

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.75	8.36	8.61		
Dry Soil + Dish:	8.08	7.79	7.99		
Moisture:	0.67	0.57	0.62		
Dish:	3.97	4.54	4.44		
Dry Soil:	4.11	3.25	3.55		
% Moisture:	21.20	22.30	22.10		
				Average:	**22**

Test Method : ASTM: D4318, D2216

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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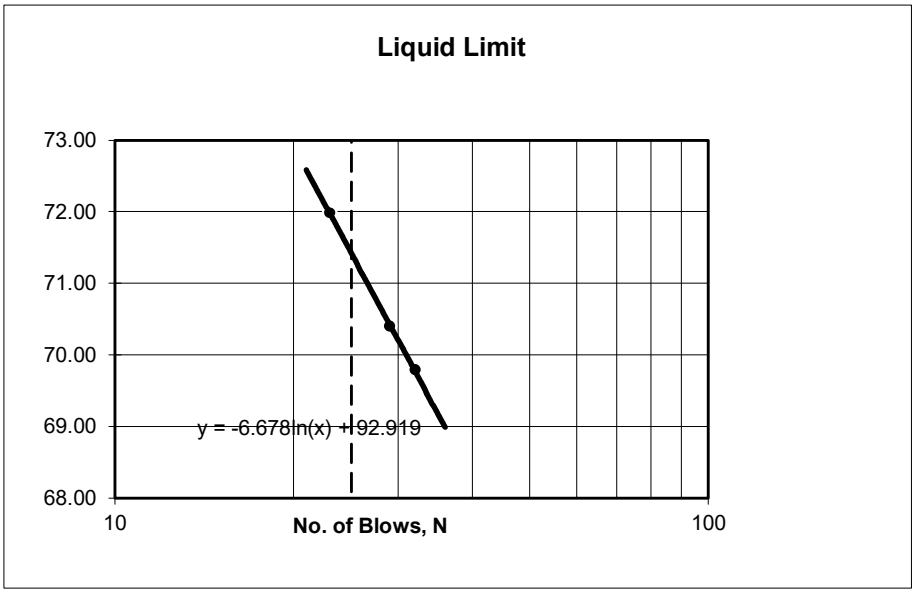
Atterberg Limits (ASTM D4318)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No.:	286-2504	
		PI Test No.:	7	
		Lab No.:	HM 857	
Attention.:	Ryan Paulus	Date Sampled/By:	January 16, 2026	C.Bautista
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Received:	January 16, 2026	
		Date Tested / By:	January 23, 2026	C.Barela
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1			

Liquid Limit Determination					Liquid Limit 25 Blows
Dish No.:	1	2	3		
Wet Soil + Dish:	10.44	10.63	11.05		
Dry Soil + Dish:	8.06	7.87	8.30		
Moisture:	2.38	2.76	2.75		
Dish:	4.65	3.95	4.48		
Dry Soil:	3.41	3.92	3.82		
% Moisture:	69.79	70.41	71.99		
No. of Blows:	32	29	23		
Liquid Limit:					71



Material Identification:

Test Hole:	**BH 2**
Grab Sample No:	**GS 8**
Depth:	**8-ft**
Liquid Limit, %:	**71**
Plastic Limit, %:	**22**
Plasticity Index:	**49**
(LL-PL)	

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.65	8.11	10.18		
Dry Soil + Dish:	7.94	7.36	9.14		
Moisture:	0.71	0.75	1.04		
Dish:	4.75	4	4.2		
Dry Soil:	3.19	3.36	4.94		
% Moisture:	22.26	22.32	21.05		
				Average:	**22**

Test Method : ASTM: D4318, D2216
Remarks:

P. Bevel

Reviewed by: Paul Bevel

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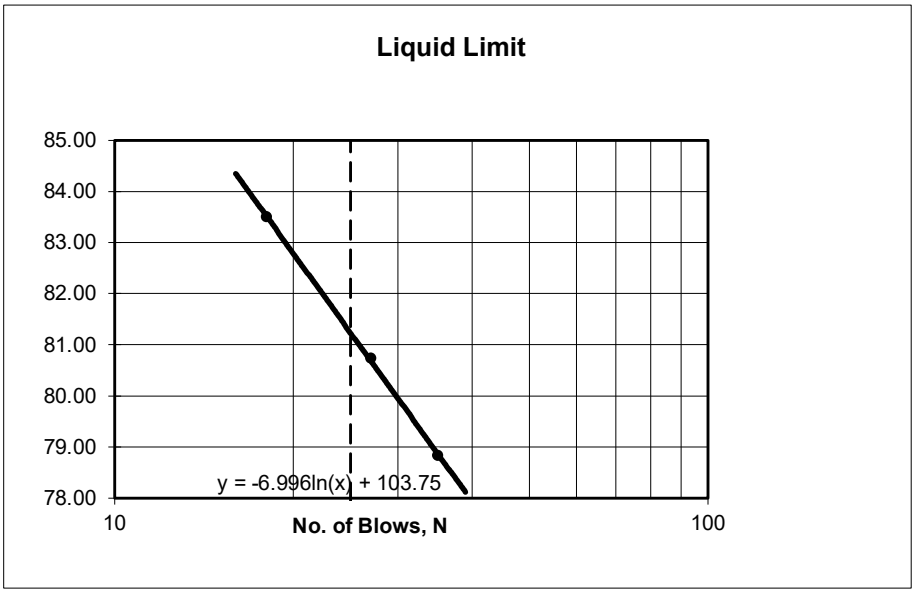
Atterberg Limits (ASTM D4318)

Client:	KGS Group	Project No.:	286-2504
	865 Waverley St	PI Test No.:	8
	Winnipeg, MB R3T 5P4	Lab No.:	HM 858
Attention.:	Ryan Paulus	Date Sampled/By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue	Date Received:	January 16, 2026
	Geotechnical Investigation	Date Tested / By:	January 26, 2026 BY
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

Liquid Limit Determination					Liquid Limit
Dish No.:	1	2	3		25 Blows
Wet Soil + Dish:	11.57	12.52	13.53		
Dry Soil + Dish:	8.44	8.71	9.48		
Moisture:	3.13	3.815	4.05		
Dish:	4.47	3.98	4.63		
Dry Soil:	3.97	4.725	4.85		
% Moisture:	78.84	80.74	83.51		
No. of Blows:	35	27	18		
Liquid Limit:					81



Material Identification:

Test Hole:	**BH 3**
Grab Sample No:	**GS 5**
Depth:	**5-ft**
Liquid Limit, %:	**81**
Plastic Limit, %:	**23**
Plasticity Index: (LL-PL)	**58**

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.53	9.84	10.21		
Dry Soil + Dish:	7.7	8.91	9.11		
Moisture:	0.83	0.93	1.1		
Dish:	3.97	4.8	4.38		
Dry Soil:	3.73	4.11	4.73		
% Moisture:	22.25	22.63	23.26		
				Average:	**23**

Test Method : ASTM: D4318, D2216
Remarks:

P. Bevel

Reviewed by: Paul Bevel

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 856
	Winnipeg, MB R3T 5P4	Proctor Test No.:	6
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

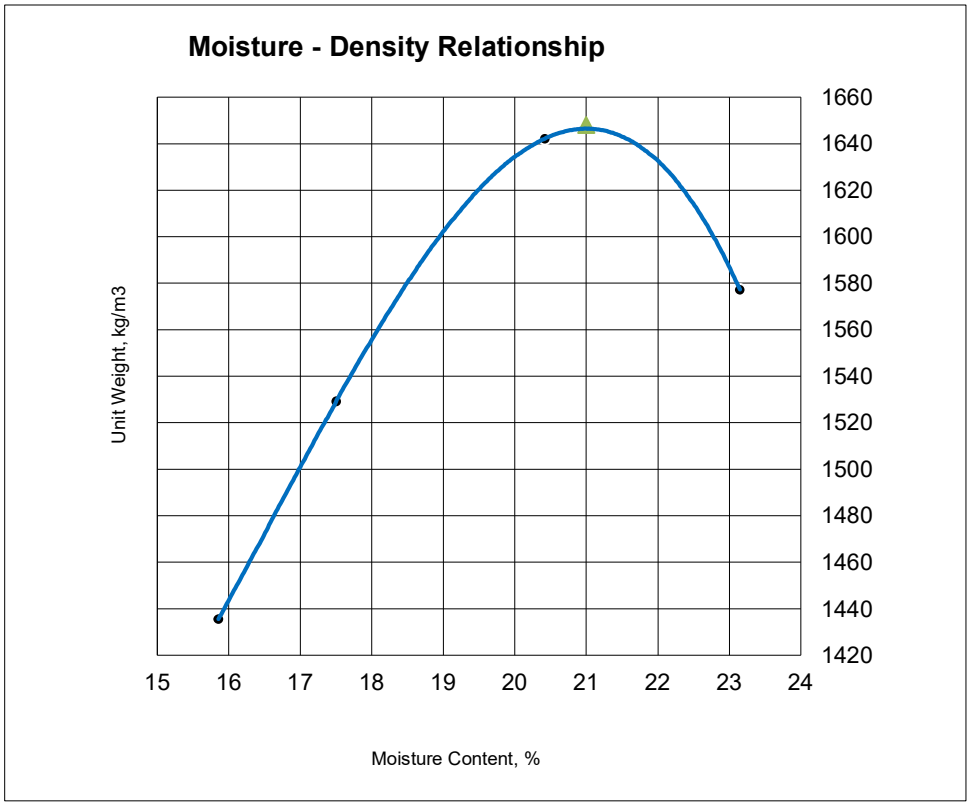
Date Sampled:	January 16, 2026	Date Received:	January 16, 2026
Sampled By:	CB	Date Tested:	January 23, 2026

MATERIAL INFORMATION

Material Type:	CLAY - silty, trace sand		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 1 - GS 5

PROCEDURE	C
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	56
NO. OF LAYERS	3
MOLD SIZE	152.4 mm
MOLD VOLUME	2116
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1663	1797	1978	1942
Moisture Content	15.9	17.5	20.4	23.1
Dry Density	1436	1529	1642	1577



Maximum Dry Density (MDD): 1648 kg/m³

Optimum Moisture Content 21.0 %

STONE CORRECTION (ASTM D 4718)

Retained on 19mm sieve ____ %

Corrected Moisture: 21.0 %

Corrected Maximum Dry Density: 1648 kg/m³

Remarks:

Tested by: Christopher Bautista

Reviewed by: Paul Bevel

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 857
	Winnipeg, MB R3T 5P4	Proctor Test No.:	7
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

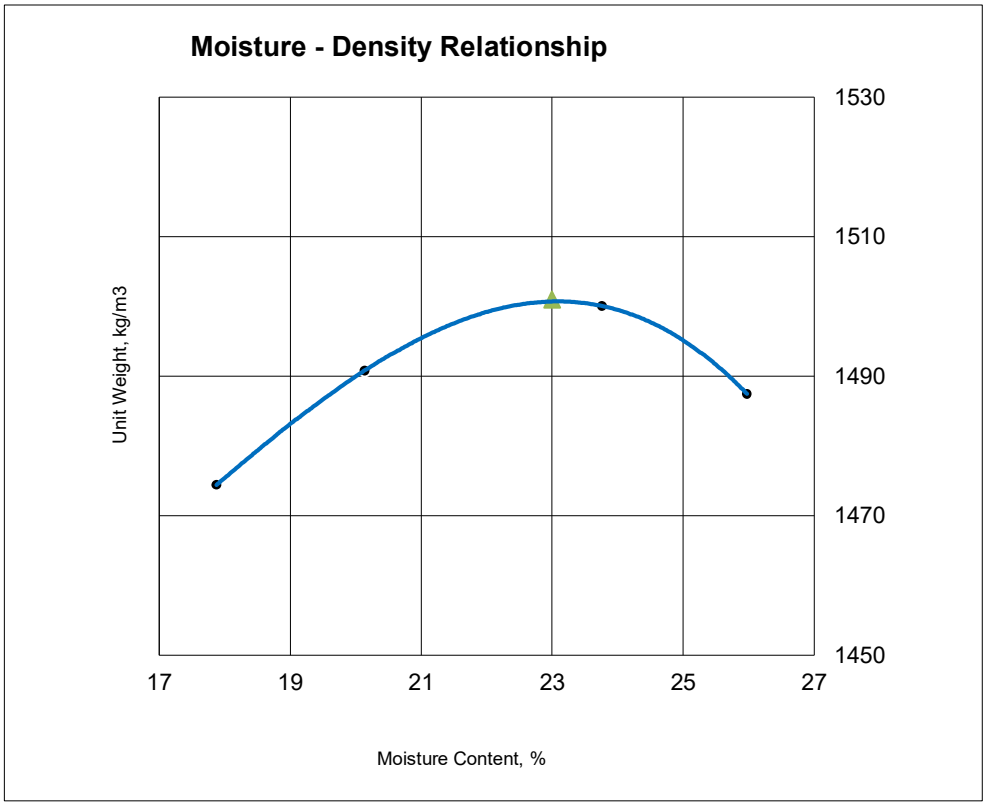
Date Sampled:	January 16, 2026	Date Received:	January 16, 2026
Sampled By:	CB	Date Tested:	January 22, 2026

MATERIAL INFORMATION

Material Type:	CLAY - silty trace sand		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 2 - GS 8

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	2116
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1738	1791	1856	1874
Moisture Content	17.9	20.1	23.8	26.0
Dry Density	1474	1491	1500	1487



Maximum Dry Density (MDD): 1501 kg/m³

Optimum Moisture Content 23.0 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: ____ %

Corrected Moisture: 23.0 %

Corrected Maximum Dry Density: 1501 kg/m³

Remarks:

Tested by: Mehdi Abbasi

Reviewed by: Paul Bevel

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 858
	Winnipeg, MB R3T 5P4	Proctor Test No.:	8
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Perimeter Hwy to Charleswood Rd) - Segment 1		

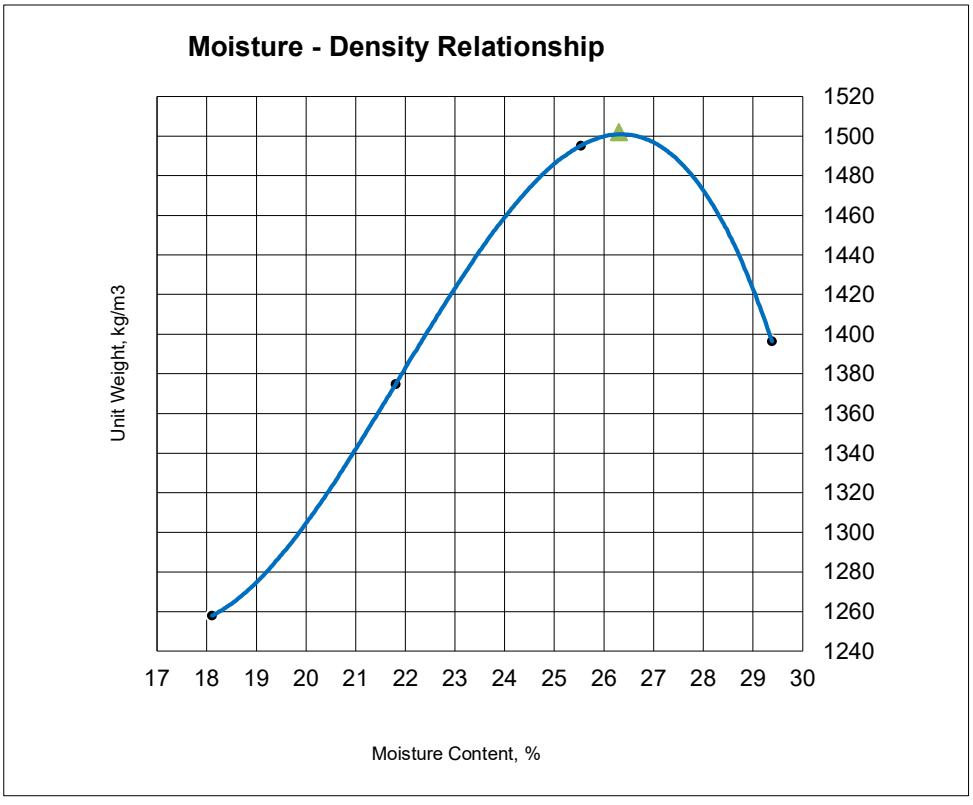
Date Sampled:	January 16, 2026	Date Received:	January 16, 2026
Sampled By:	CB	Date Tested:	January 23, 2026

MATERIAL INFORMATION

Material Type:	CLAY - silty, trace sand		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 3 GS 5

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	2116
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1486	1675	1877	1807
Moisture Content	18.1	21.8	25.5	29.4
Dry Density	1258	1375	1495	1397



Maximum Dry Density (MDD): 1502 kg/m³

Optimum Moisture Content 26.3 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: ____ %

Corrected Moisture: 26.3 %

Corrected Maximum Dry Density: 1502 kg/m³

Remarks:

Tested by: Dayo Aiyeru

Reviewed by: Paul Bevel

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 1 HM 856
Attention:	Ryan Paulus	Date Sampled / By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 1	Date Received: Date Tested / By:	January 16, 2026 January 17, 2026 Mehdi A.

Test Hole No.	BH1-1	BH1-2	BH1-3	BH1-4	BH1-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	CA21	CA-19	GM9	G2	GM5
Wt Wet Sample + Tare	163.9	164.4	170.4	174.9	197.3
Wt Dry Sample + Tare	156.9	157.1	124.8	131.2	147.2
Wt Water	7.0	7.3	45.6	43.7	50.1
Wt Tare	4.6	4.5	3.9	4.6	3.9
Wt Dry Sample	152.3	152.6	120.9	126.6	143.3
Moisture Content (%)	**4.6**	**4.8**	**37.7**	**34.5**	**35.0**
Test Hole No.	BH1-6	BH1-7	BH1-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	102	P4	M28		
Wt Wet Sample + Tare	202.7	184.6	186.4		
Wt Dry Sample + Tare	153.8	142.5	144.6		
Wt Water	48.9	42.1	41.8		
Wt Tare	4.7	4.1	4.4		
Wt Dry Sample	149.1	138.4	140.2		
Moisture Content (%)	**32.8**	**30.4**	**29.8**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 2 HM 857
Attention:	Ryan Paulus	Date Sampled / By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 2	Date Received: Date Tested / By:	January 16, 2026 January 23, 2026 CB

Test Hole No.	BH2-1	BH2-2	BH2-3	BH2-4	BH2-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	B2	A3	Z-5	M56	H10
Wt Wet Sample + Tare	221	200.9	166.9	176.2	198.5
Wt Dry Sample + Tare	212	192.2	159.6	168.8	189.8
Wt Water	9.0	8.7	7.3	7.4	8.7
Wt Tare	3.9	3.9	4.6	4.6	4.5
Wt Dry Sample	208.1	188.3	155.0	164.2	185.3
Moisture Content (%)	**4.3**	**4.6**	**4.7**	**4.5**	**4.7**
Test Hole No.	BH2-6	BH2-7	BH2-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	M13	H-4	A-13		
Wt Wet Sample + Tare	188.9	173	175.2		
Wt Dry Sample + Tare	165.6	143.9	128		
Wt Water	23.3	29.1	47.2		
Wt Tare	5.0	4.5	3.9		
Wt Dry Sample	160.6	139.4	124.1		
Moisture Content (%)	**14.5**	**20.9**	**38.0**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 3 HM 857
Attention:	Ryan Paulus	Date Sampled / By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 3	Date Received: Date Tested / By:	January 16, 2026 January 23, 2026 CB

Test Hole No.	BH3-1	BH3-2	BH3-3	BH3-4	BH3-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	S4	CO-3	M9	T125	M10
Wt Wet Sample + Tare	193.1	185.6	171.1	166.4	169.5
Wt Dry Sample + Tare	183.9	177.1	163.2	122.9	125.4
Wt Water	9.2	8.5	7.9	43.5	44.1
Wt Tare	4.5	4.1	4.7	4.1	4.5
Wt Dry Sample	179.4	173.0	158.5	118.8	120.9
Moisture Content (%)	**5.1**	**4.9**	**5.0**	**36.6**	**36.5**
Test Hole No.	BH3-6	BH3-7	BH3-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	GM7	G15	GM10		
Wt Wet Sample + Tare	158.1	160.5	178.6		
Wt Dry Sample + Tare	117	121.3	131.1		
Wt Water	41.1	39.2	47.5		
Wt Tare	4.0	4.7	4.1		
Wt Dry Sample	113.0	116.6	127.0		
Moisture Content (%)	**36.4**	**33.6**	**37.4**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 4 HM 859
Attention:	Ryan Paulus	Date Sampled / By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 4	Date Received: Date Tested / By:	January 16, 2026 January 23, 2026 CB

Test Hole No.	BH4-1	BH4-2	BH4-3	BH4-4	BH4-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	Z-8	A14	H-13	M38	G3
Wt Wet Sample + Tare	192.3	180.3	158.8	187.7	169
Wt Dry Sample + Tare	184.4	169.7	151.2	140.1	126.6
Wt Water	7.9	10.6	7.6	47.6	42.4
Wt Tare	4.6	4.0	4.6	4.5	4.9
Wt Dry Sample	179.8	165.7	146.6	135.6	121.7
Moisture Content (%)	**4.4**	**6.4**	**5.2**	**35.1**	**34.8**

Test Hole No.	BH4-6	BH4-7	BH4-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	B1	G20	G11		
Wt Wet Sample + Tare	168.6	179.2	183.9		
Wt Dry Sample + Tare	126.8	132.3	135.9		
Wt Water	41.8	46.9	48.0		
Wt Tare	4.1	4.6	4.3		
Wt Dry Sample	122.7	127.7	131.6		
Moisture Content (%)	**34.1**	**36.7**	**36.5**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 5 HM 860
Attention:	Ryan Paulus	Date Sampled / By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 5	Date Received: Date Tested / By:	January 16, 2026 January 23, 2026 CB

Test Hole No.	BH5-1	BH5-2	BH5-3	BH5-4	BH5-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	SE-6	PS-3	Z-1	B4	H16
Wt Wet Sample + Tare	183.4	192.7	190.9	165.4	164.2
Wt Dry Sample + Tare	176.5	185.5	183.6	120.1	122.1
Wt Water	6.9	7.2	7.3	45.3	42.1
Wt Tare	4.6	4.7	4.5	4.0	4.5
Wt Dry Sample	171.9	180.8	179.1	116.1	117.6
Moisture Content (%)	**4.0**	**4.0**	**4.1**	**39.0**	**35.8**
Test Hole No.	BH5-6	BH5-7	BH5-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	C7	G18	PM1		
Wt Wet Sample + Tare	158.7	191.5	192.1		
Wt Dry Sample + Tare	117.52	143.6	139		
Wt Water	41.2	47.9	53.1		
Wt Tare	4.6	4.5	4.1		
Wt Dry Sample	112.9	139.1	134.9		
Moisture Content (%)	**36.5**	**34.4**	**39.4**		

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Phone: 204 697 3854 Cell: 204 997-1355 hermie@hmanalo.ca

Canadian Council of Independent Laboratories

MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 HM 861
Attention:	Ryan Paulus	Date Sampled / By:	January 16, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 6	Date Received: Date Tested / By:	January 16, 2026 January 23, 2026 CB

Test Hole No.	BH6-1	BH6-2	BH6-3	BH6-4	BH6-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	C-01	M50	H26	M49	M22
Wt Wet Sample + Tare	155.8	168.6	212.2	166.9	171.5
Wt Dry Sample + Tare	147.2	160.8	199.2	136.6	137.8
Wt Water	8.6	7.8	13.0	30.3	33.7
Wt Tare	3.9	4.7	4.5	4.7	4.7
Wt Dry Sample	143.3	156.1	194.7	131.9	133.1
Moisture Content (%)	**6.0**	**5.0**	**6.7**	**23.0**	**25.3**
Test Hole No.	BH6-6	BH6-7	BH6-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	C2	P1 13	H15		
Wt Wet Sample + Tare	162.5	178.2	157.5		
Wt Dry Sample + Tare	126.1	136	117.4		
Wt Water	36.4	42.2	40.1		
Wt Tare	4.8	4.5	4.7		
Wt Dry Sample	121.3	131.5	112.7		
Moisture Content (%)	**30.0**	**32.1**	**35.6**		

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Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 1
(Perimeter Hwy to Charleswood Rd)

BH1 - Eastbound Lane

BH1 - Site Photo

BH2 - Westbound Lane

BH2 - Site Photo

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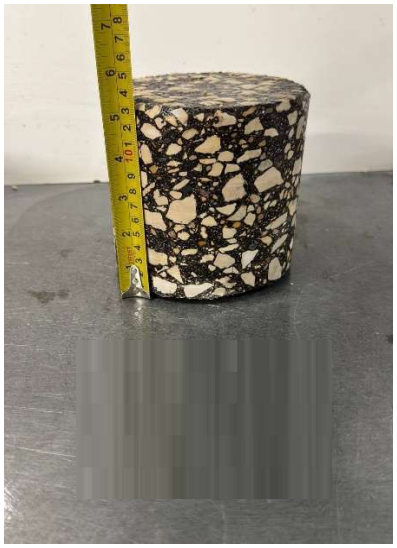
Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 1
(Perimeter Hwy to Charleswood Rd)



BH3 - Eastbound Lane

BH3 - Site Photo

BH4 - Eastbound Lane

BH4 - Site Photo

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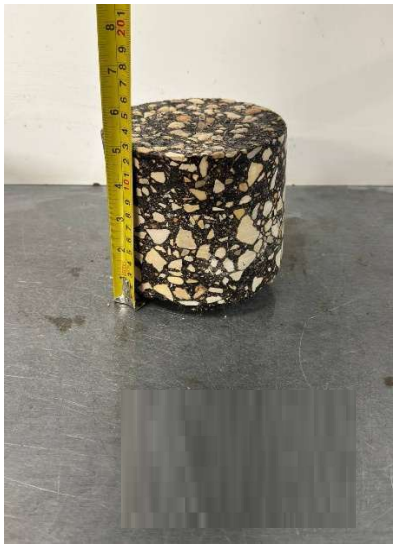
Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 1
(Perimeter Hwy to Charleswood Rd)



BH5 - Eastbound Lane

BH5 - Site Photo

BH6 - Westbound Lane

BH6 - Site Photo

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APPENDIX B.2.

WILKES AVENUE – SEGMENT 2

(CHARLESTON ST TO HARSTONE RD)

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Rehabilitation Sites

Pavement Coring and Subsurface Drilling Locations

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Phone: (204) 697-3854; Cell (204) 997-1355
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Rehabilitation Sites

Pavement Structure Measurement

Test Hole No.	Test Hole Location	Asphalt Thickness (mm)	Concrete Thickness (mm)
Wilkes Avenue – Segment 2 (Charleston St to Harstone Rd)			
BH7	Eastbound Lane 2.5m away from shoulder line 14 U, 621992 E, 5522148 N	167	-
BH8	Westbound Lane 2.5m away from shoulder line 14 U, 622097 E, 5522161 N	78	-
BH9	Eastbound Lane 1.5m away from shoulder line 14 U, 622183 E, 5522164 N	160	-
BH10	Westbound Lane 3m away from shoulder line 14 U, 622300 E, 5522178 N	176	-
BH11	Eastbound Lane 1m away from shoulder line 14 U, 622394 E, 5522183 N	120	-
BH12	Westbound Lane 2m away from shoulder line 14 U, 622489 E, 5522196 N	127	-
BH13	Eastbound Lane 1.5m away from shoulder line 14 U, 622584 E, 5522199 N	152	-
BH14	Westbound Lane 1.5m away from shoulder line 14 U, 622692 E, 5522213 N	154	-

Note: [A] - The exact concrete thickness cannot be determined due to the deterioration of the concrete.

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Rehabilitation Sites

Pavement Structure Measurement

Test Hole No.	Test Hole Location	Asphalt Thickness (mm)	Concrete Thickness (mm)
Wilkes Avenue – Segment 2 (Charleston St to Harstone Rd)			
BH15	Eastbound Lane 1m away from shoulder line 14 U, 622785 E, 5522216 N	115	-
BH16	Westbound Lane 2.6m away from shoulder line 14 U, 622878 E, 5522229 N	117	-
BH17	Eastbound Lane 1m away from shoulder line 14 U, 622972 E, 5522232 N	130	-
BH18	Westbound Lane 2m away from shoulder line 14 U, 623083 E, 5522246 N	142	-

Note: [A] - The exact concrete thickness cannot be determined due to the deterioration of the concrete.

H. MANALO CONSULTING LTD.

Project No: 286-2504

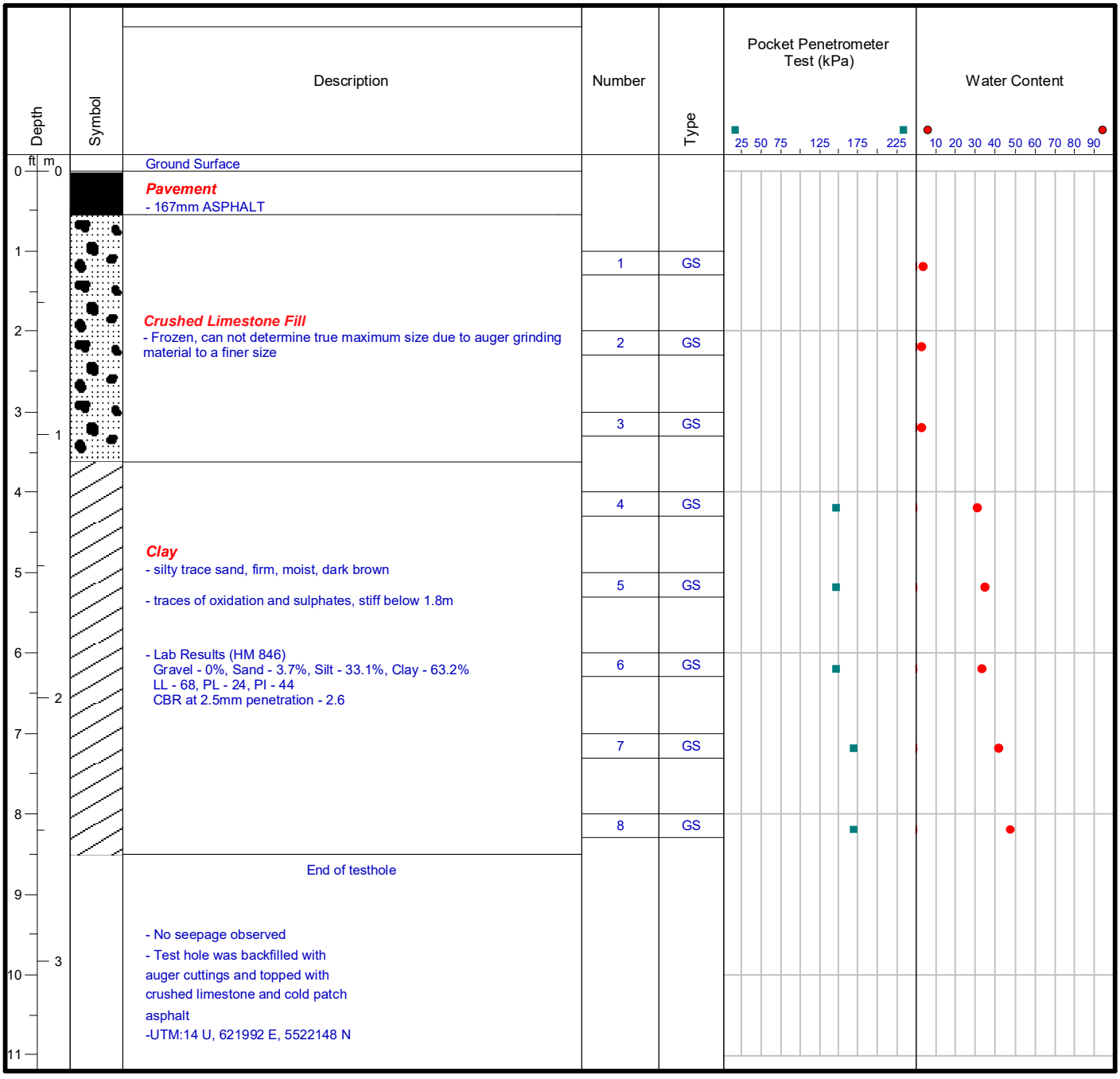
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Eastbound Lane

BH7

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

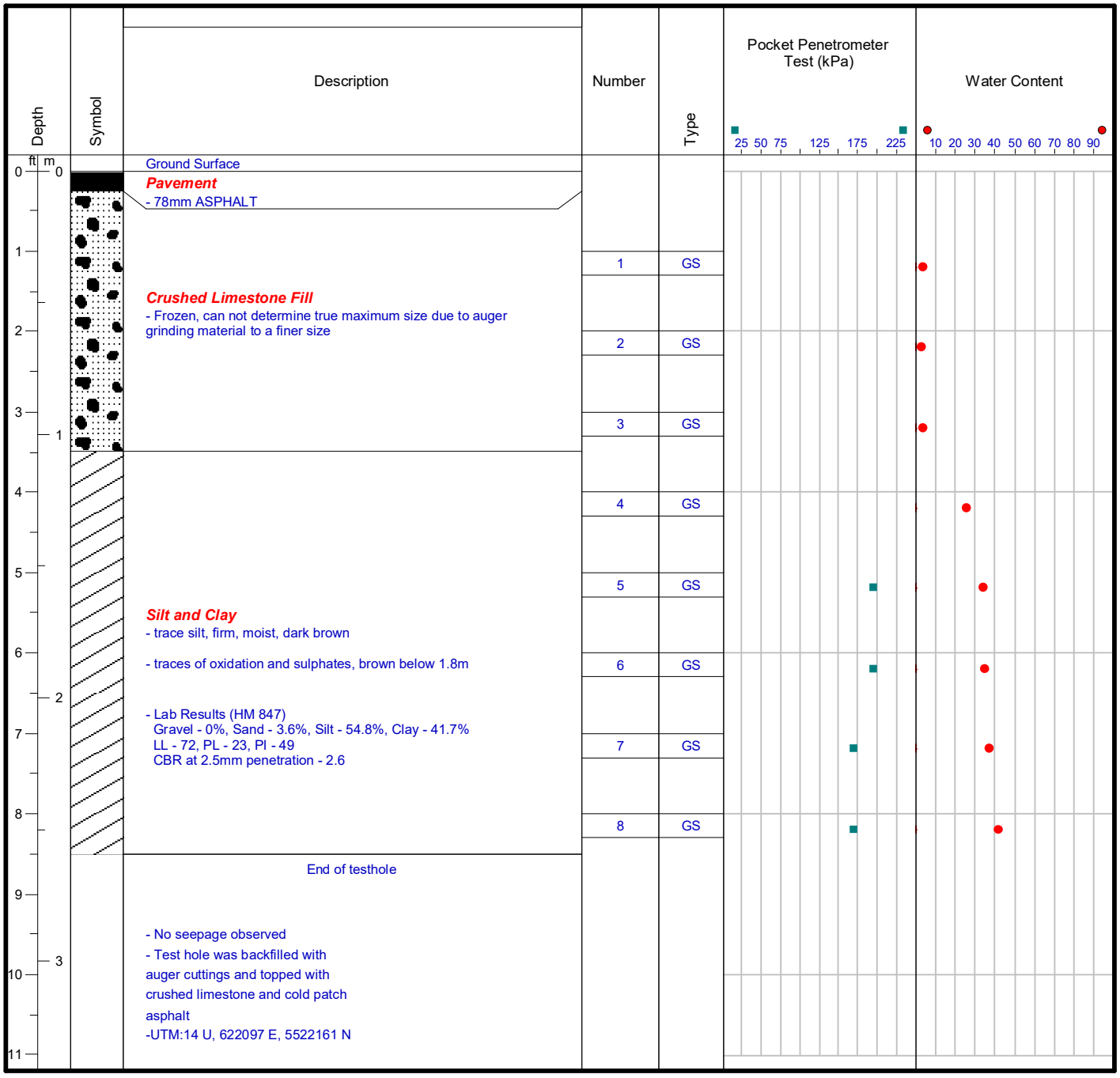
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Westbound Lane

TH8

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

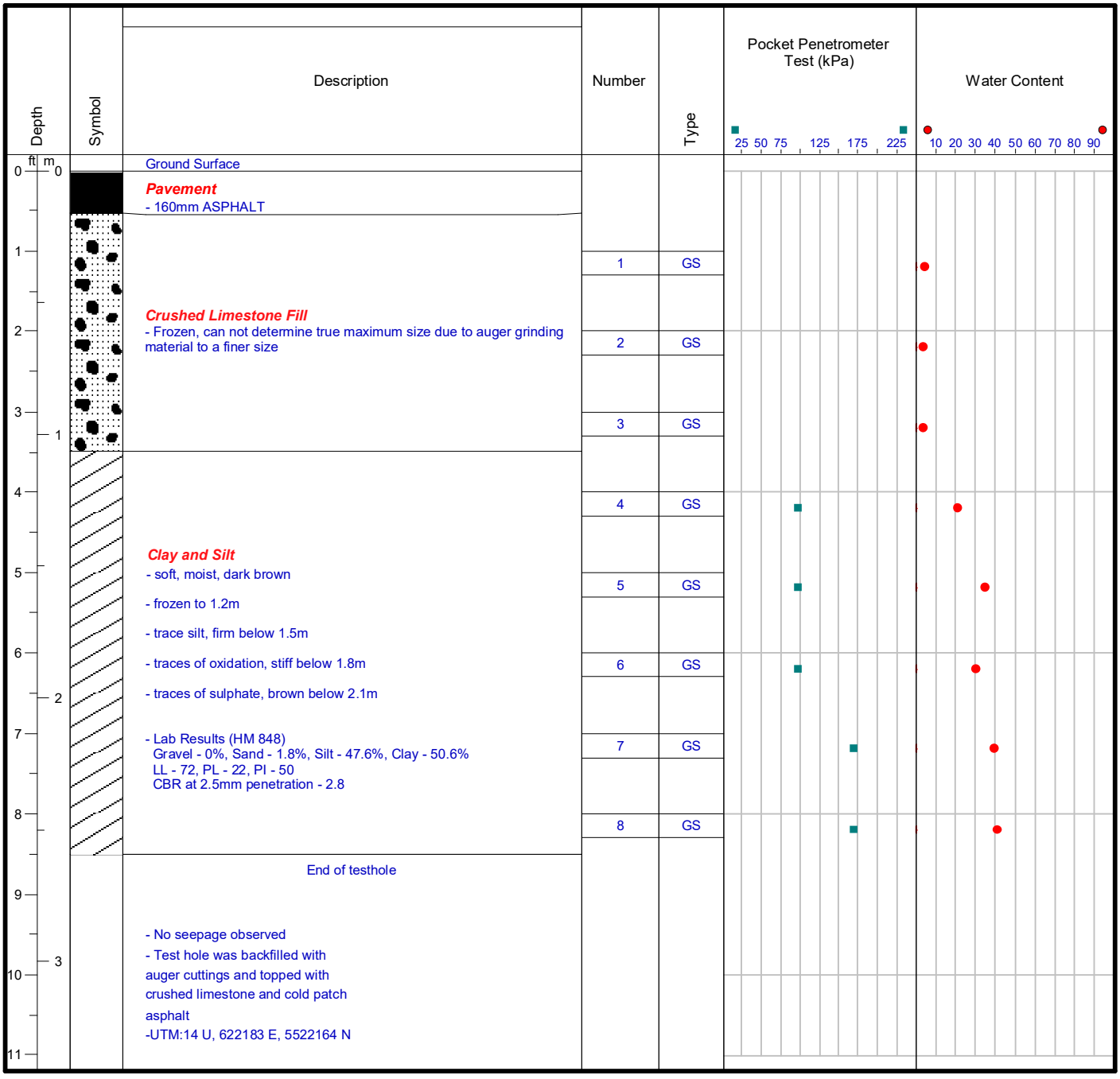
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Eastbound Lane

BH9

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

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Project No: 286-2504

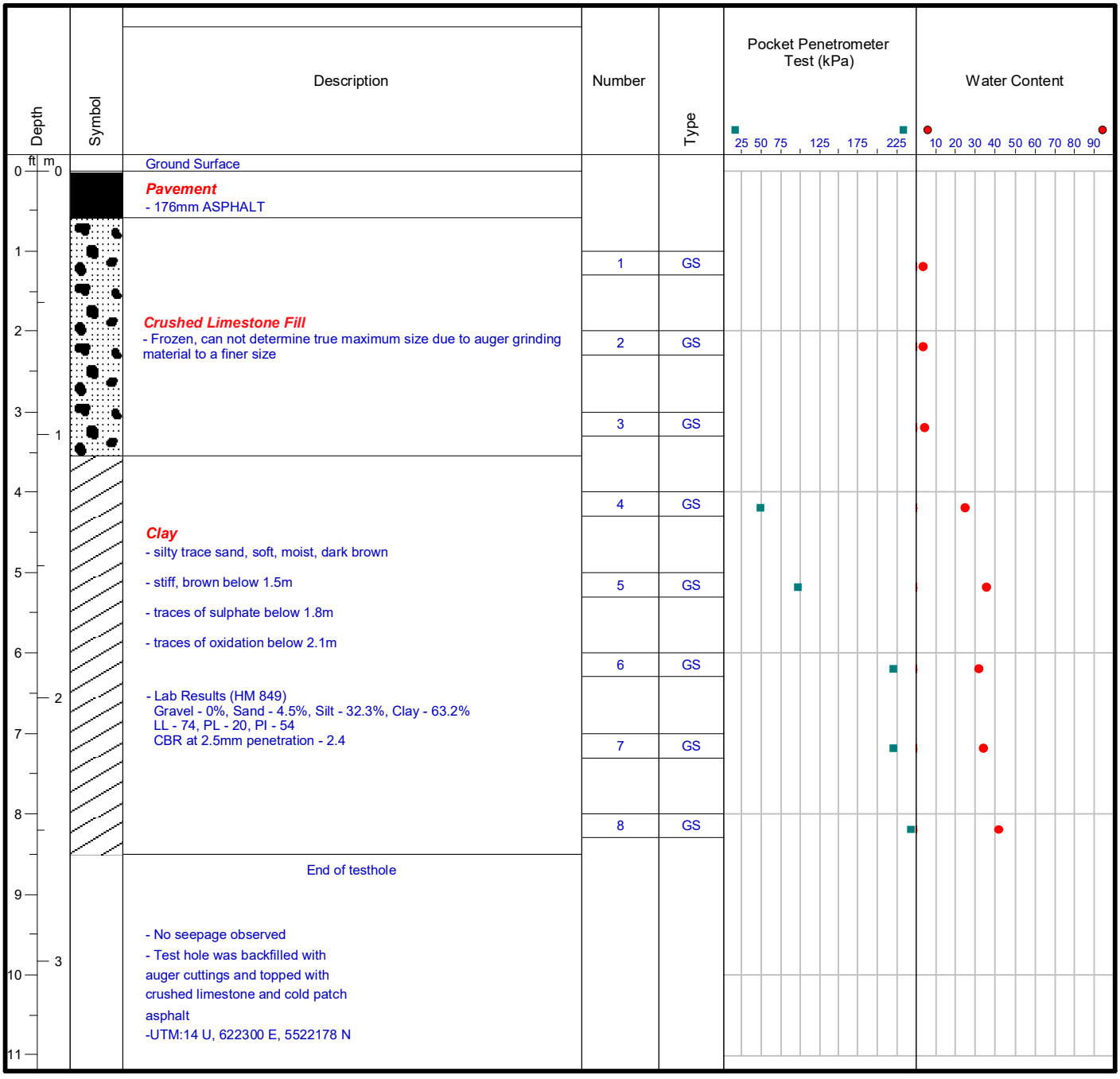
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Westbound Lane

BH10

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

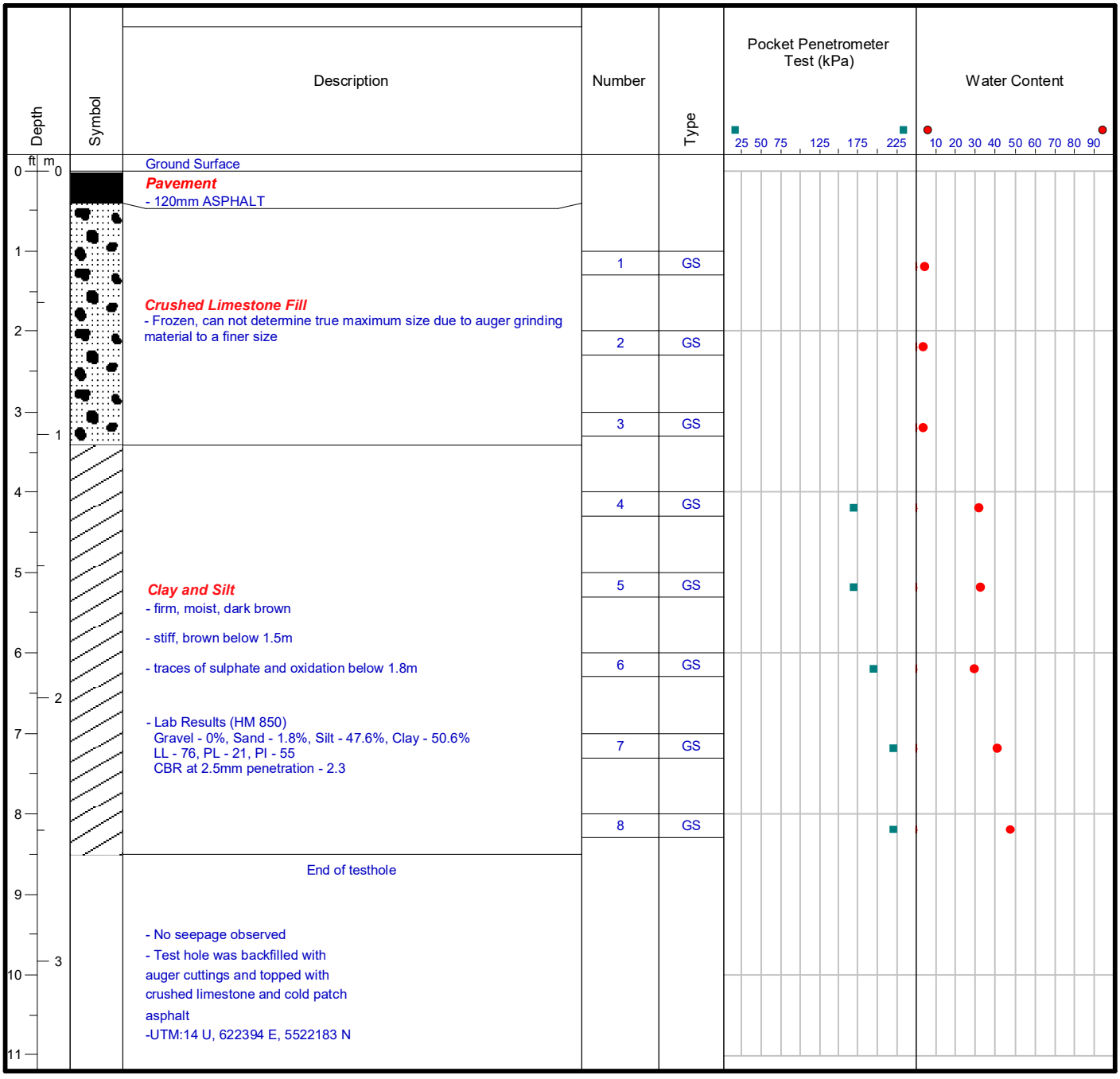
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Eastbound Lane

BH11

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

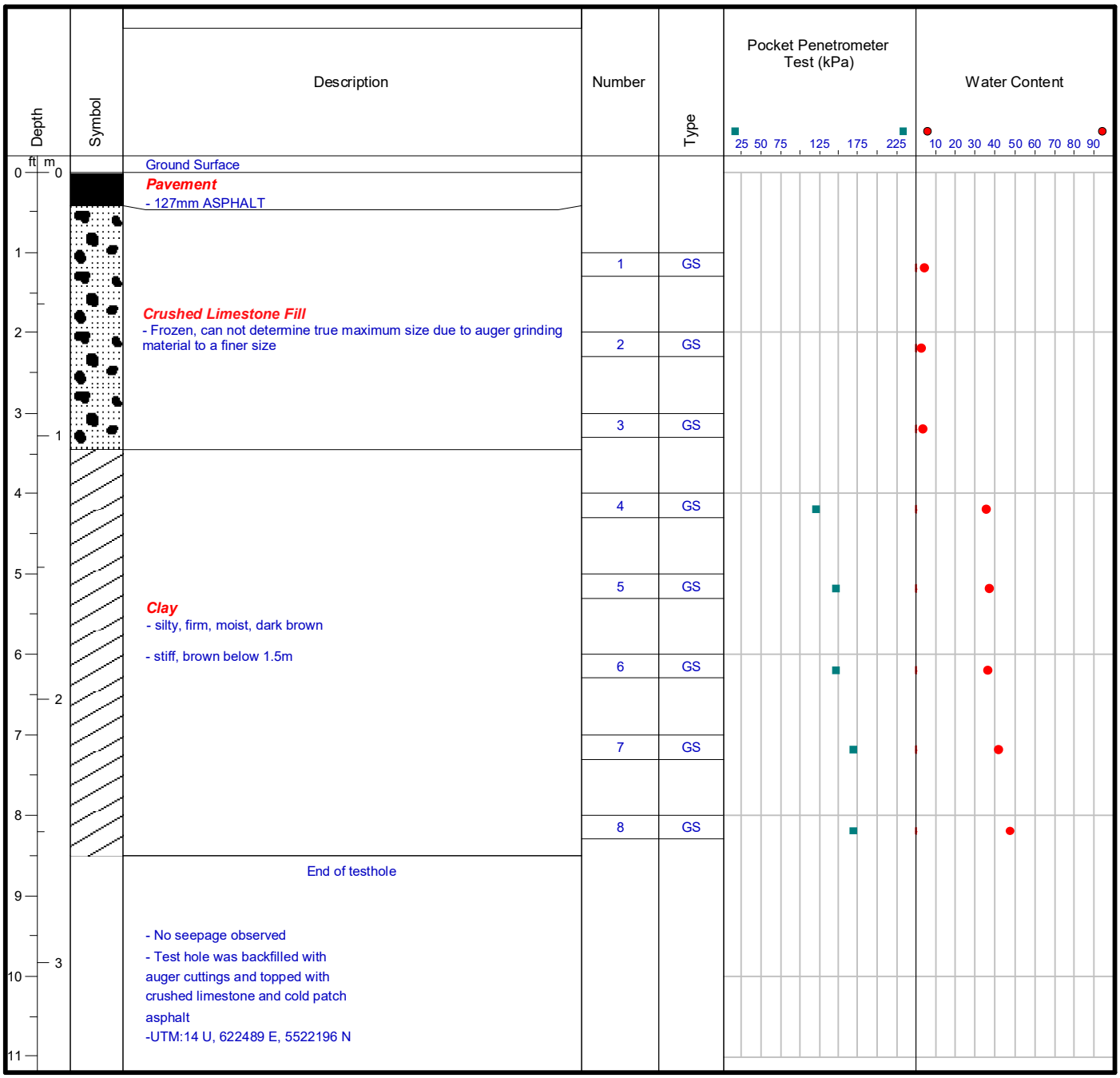
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Westbound Lane

BH12

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 19, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

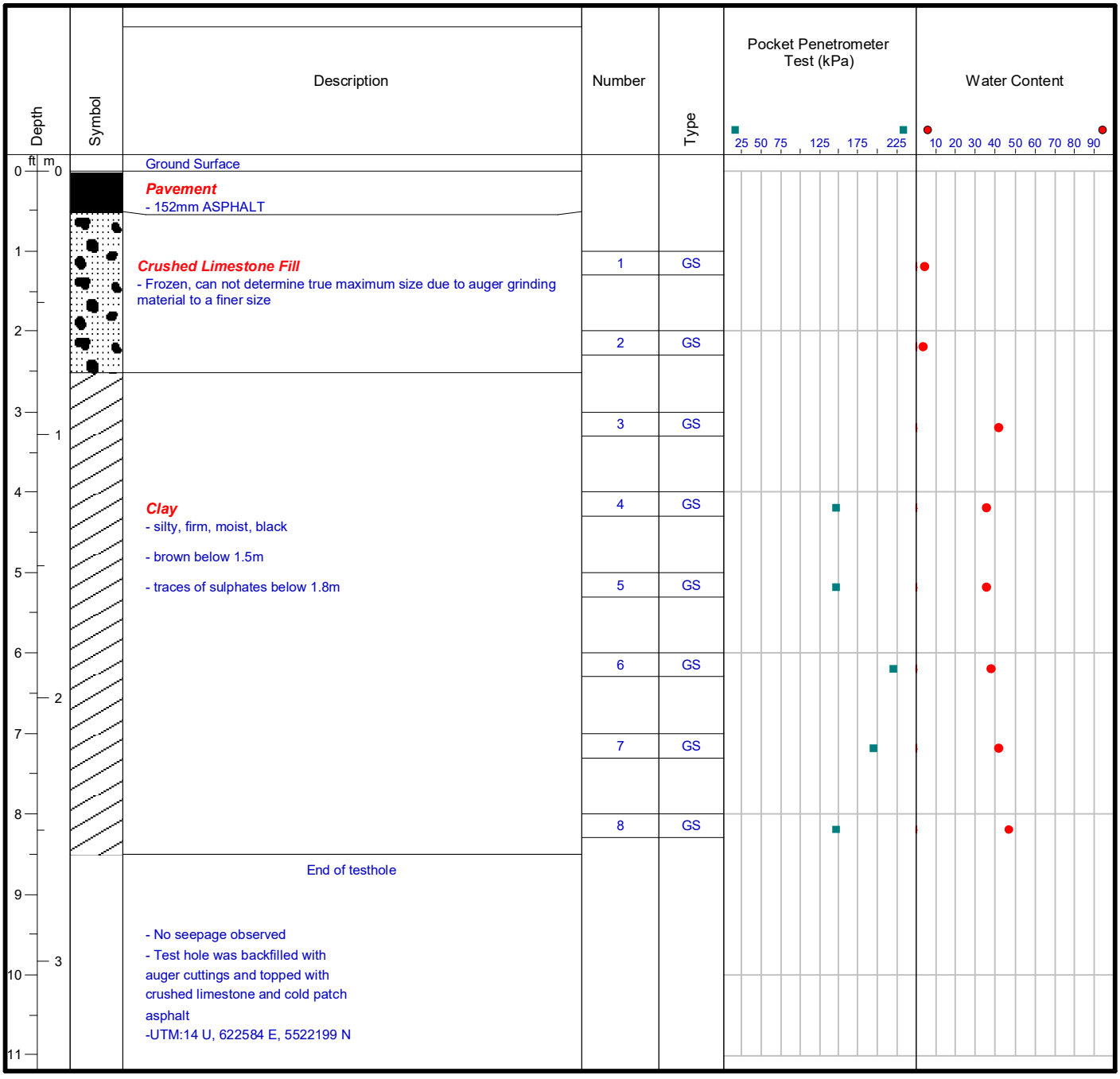
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Eastbound Lane

BH13

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

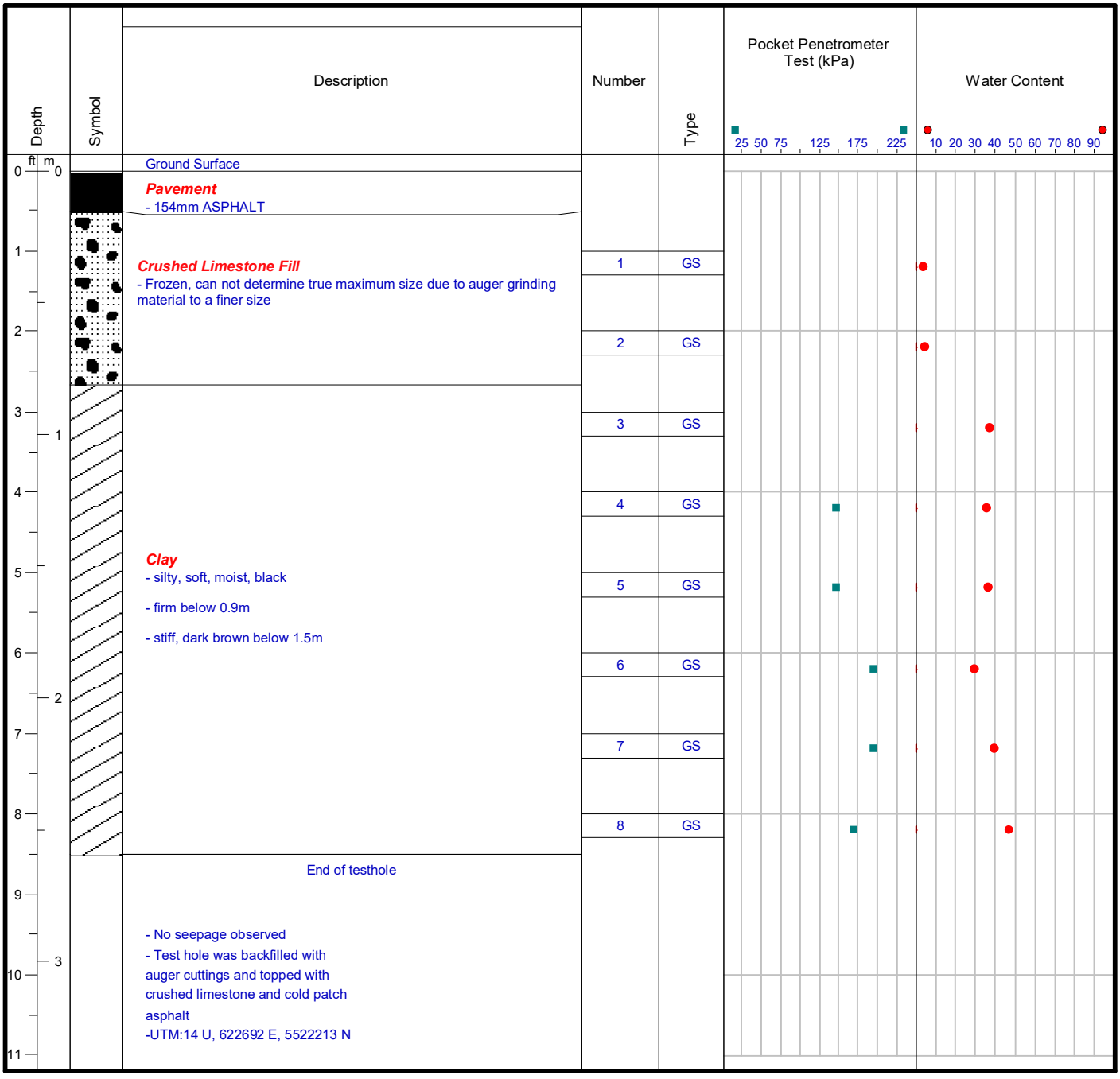
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Westbound Lane

BH14

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 19, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

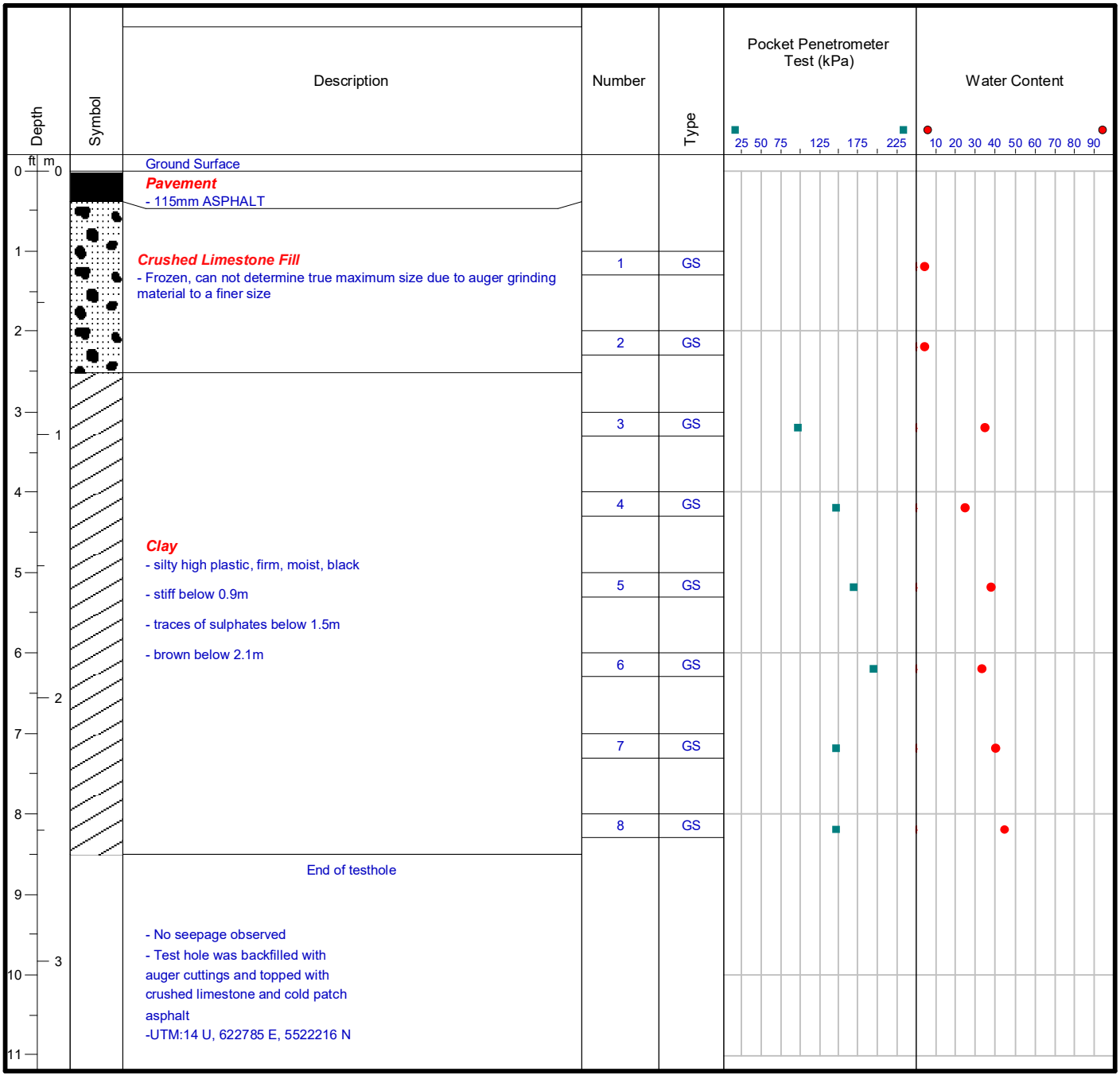
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Eastbound Lane

BH15

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

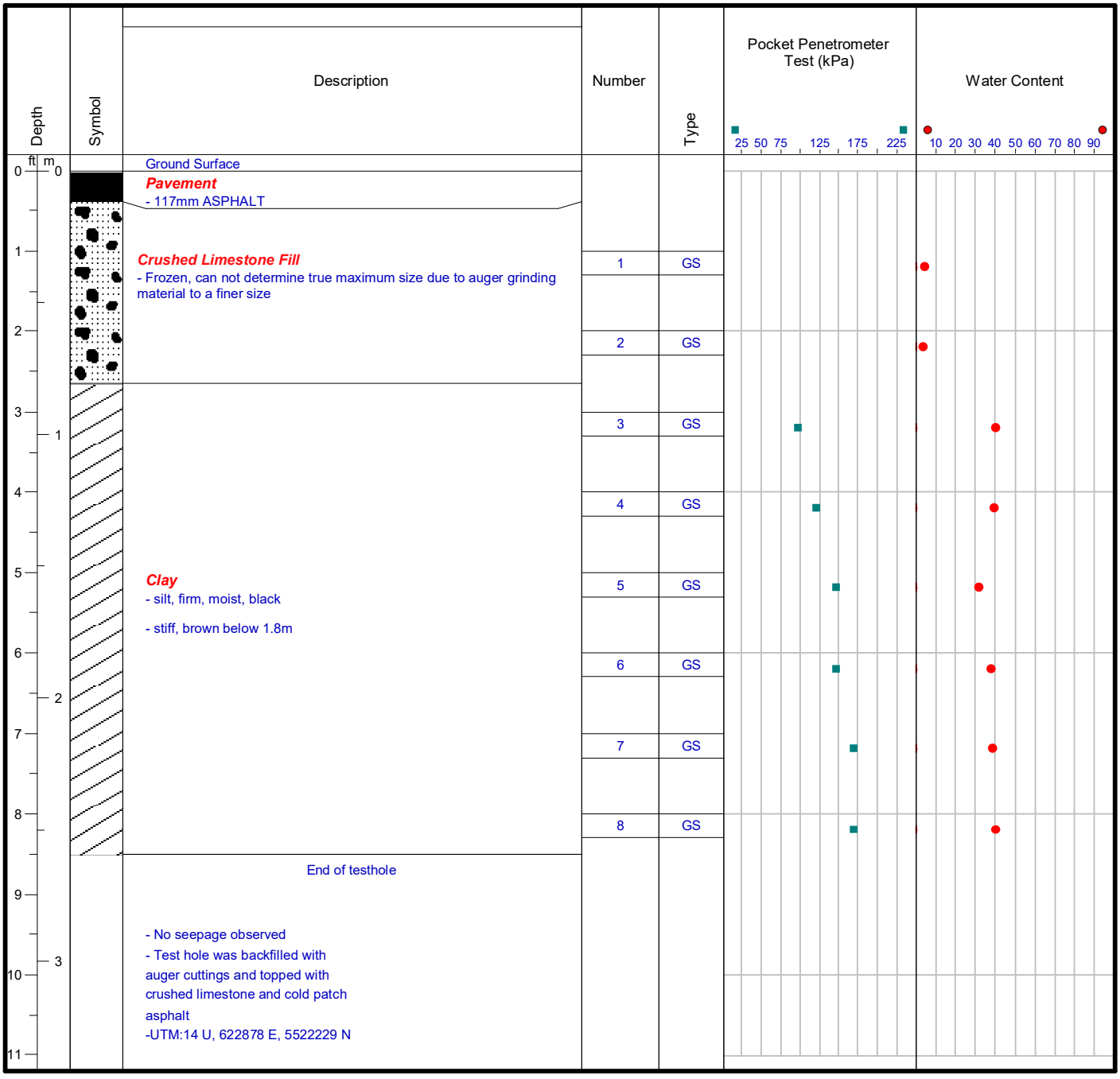
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Westbound Lane

BH16

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 19, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

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Project No: 286-2504

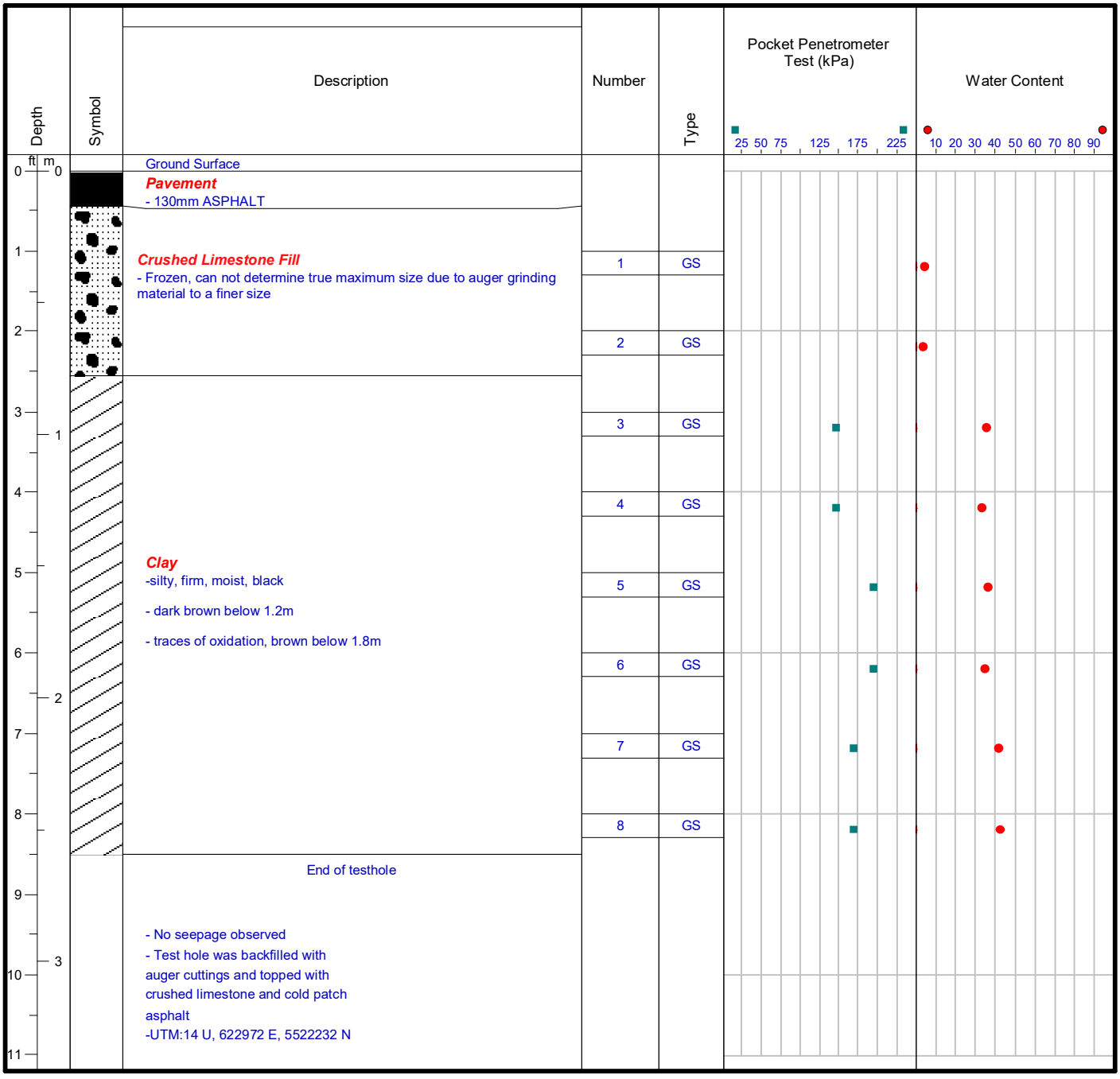
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Eastbound Lane

BH17

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

H. MANALO CONSULTING LTD.

Project No: 286-2504

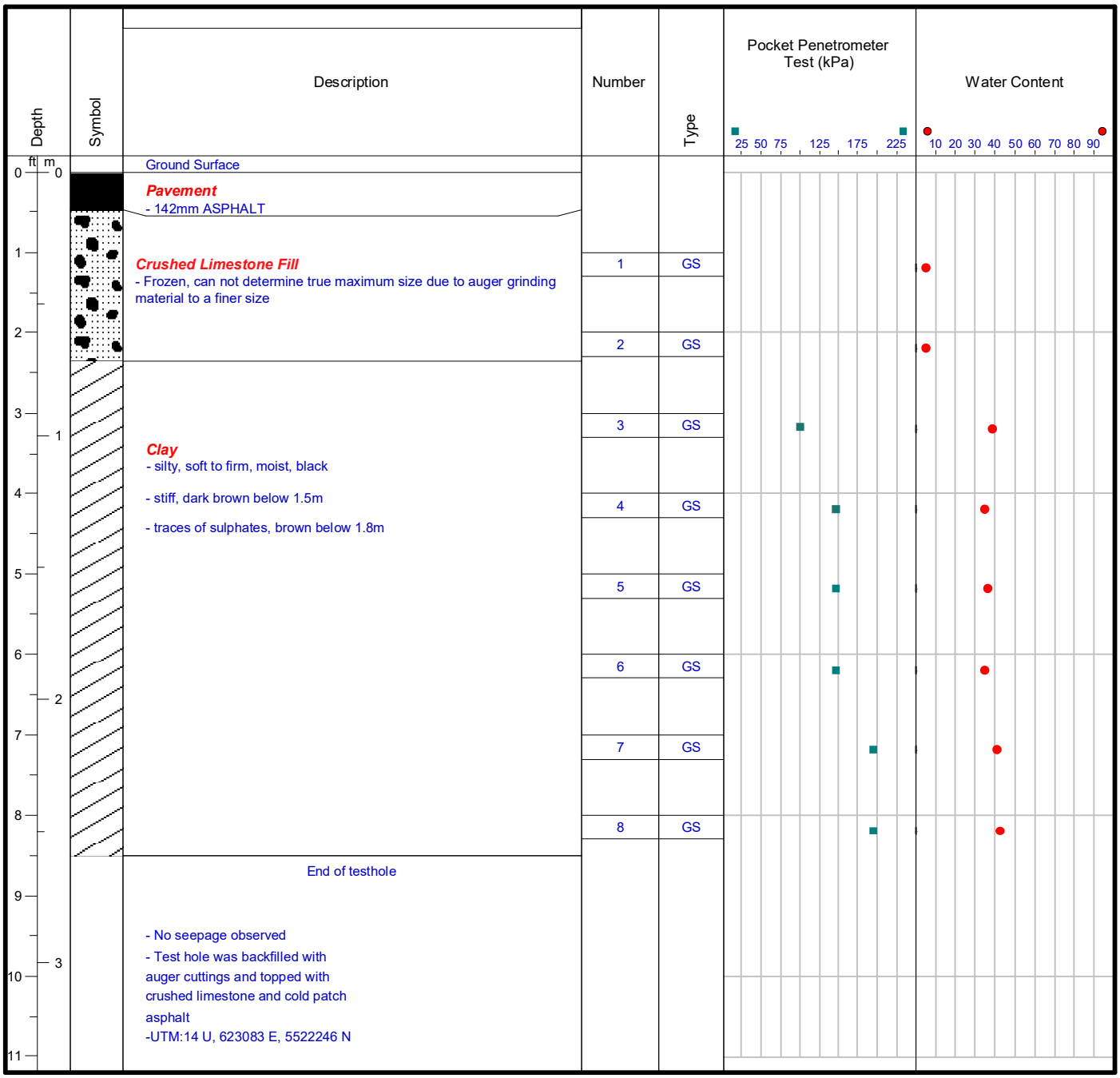
Project: Regional Streets - Wilkes Avenue

Client: KGS Group

Location: Segment 2 (Wilkes Ave) - Westbound Lane

BH18

Logged By: MK



Drill Method: Auger Drilling

Drill Date: Janaury 15, 2026

Hole Size: 5 Inches

Datum: Existing surface

Checked by: Paul Bevel

Sheet: 1 of 1

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CCIL Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 846	
	Winnipeg, MB R3T 5P4	Date sampled/By:	15-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	15-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	23-Jan-26	JJ
Location:	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

SAMPLE DATA

Sample Type:	CLAY - silty, trace sand		
Source:	Wilkes Ave - BH 7 - GS 6		
Sampled by:	CB		
Optimum Moisture Content:	25.3	%	
Maximum Dry Density:	1451	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	21-Jan-26

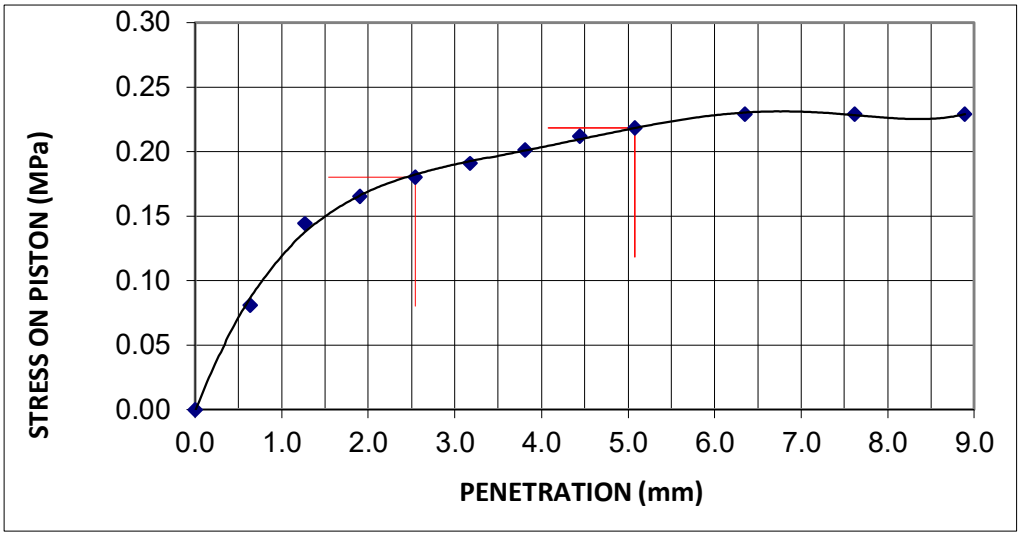
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	27.0	36.2
MC of top 25mm layer, %		
Dry Density, kg/m^3	1418	1426
Compaction,%	98%	
CBR at 2.5mm penetration, %		2.6
Swell, %		5.4

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.08
1.27	0.14
1.91	0.17
2.54	0.18
3.18	0.19
3.81	0.20
4.45	0.21
5.08	0.22
6.35	0.23
7.62	0.23
8.89	0.23

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.18	0.18	2.6	-
5.08	10.3	0.22	0.22	-	2.1

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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CCIL Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 847	
	Winnipeg, MB R3T 5P4	Date sampled/By:	15-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	15-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	23-Jan-26	JJ
Location:	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

SAMPLE DATA

Sample Type:	SILT and clay		
Source:	Wilkes Ave - BH 8 - GS 5		
Sampled by:	CB		
Optimum Moisture Content:	28.2	%	
Maximum Dry Density:	1498	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	20-Jan-26

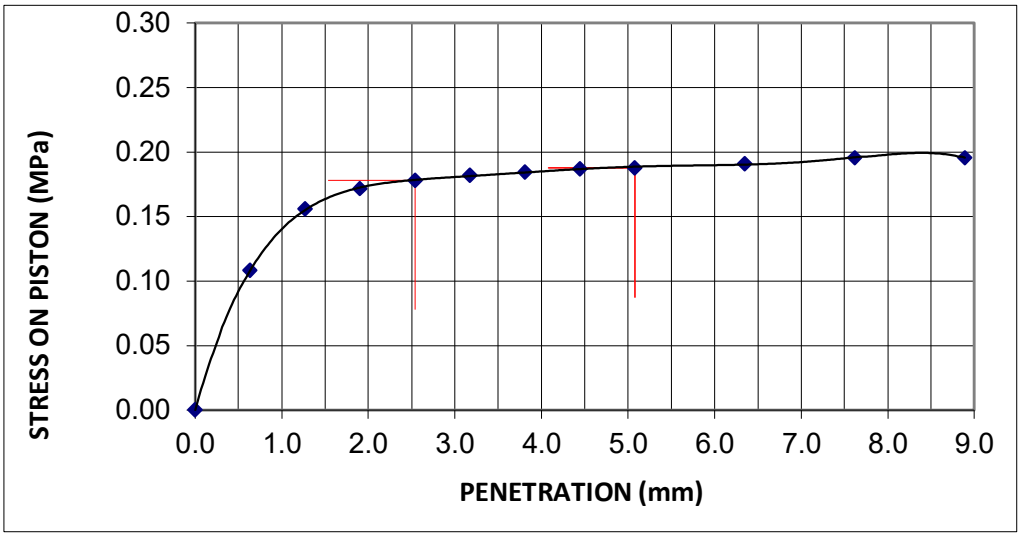
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	32.9	36.2
MC of top 25mm layer, %		
Dry Density, kg/m^3	1379	1388
Compaction,%	92%	
CBR at 2.5mm penetration, %		2.6
Swell, %		2.6

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.11
1.27	0.16
1.91	0.17
2.54	0.18
3.18	0.18
3.81	0.18
4.45	0.19
5.08	0.19
6.35	0.19
7.62	0.20
8.89	0.20

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.18	0.18	2.6	-
5.08	10.3	0.19	0.19	-	1.8

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 848	
	Winnipeg, MB R3T 5P4	Date sampled/By:	15-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	15-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	23-Jan-26	JJ
Location:	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

SAMPLE DATA

Sample Type:	CLAY and silt		
Source:	Wilkes Ave - BH 9 - GS 4		
Sampled by:	CB		
Optimum Moisture Content:	28.8	%	
Maximum Dry Density:	1420	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	20-Jan-26

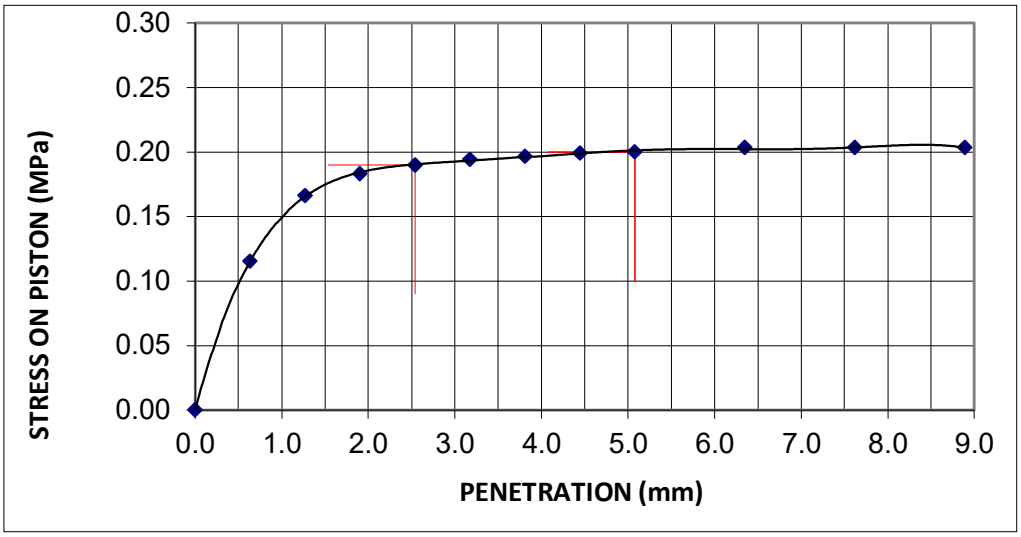
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	32.9	36.2
MC of top 25mm layer, %		
Dry Density, kg/m^3	1350	1322
Compaction,%	95%	
CBR at 2.5mm penetration, %		2.8
Swell, %		2.6

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.12
1.27	0.17
1.91	0.18
2.54	0.19
3.18	0.19
3.81	0.20
4.45	0.20
5.08	0.20
6.35	0.20
7.62	0.20
8.89	0.20

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.19	0.19	2.8	-
5.08	10.3	0.20	0.20	-	1.9

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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Phone: 204-697-3854 Cell: 204-997-1355

Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 849	
	Winnipeg, MB R3T 5P4	Date sampled/By:	15-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	15-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	23-Jan-26	JJ
Location:	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

SAMPLE DATA

Sample Type:	CLAY - silty and trace sand		
Source:	Wilkes Ave - BH 10 - GS 5		
Sampled by:	CB		
Optimum Moisture Content:	28.6	%	
Maximum Dry Density:	1423	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	20-Jan-26

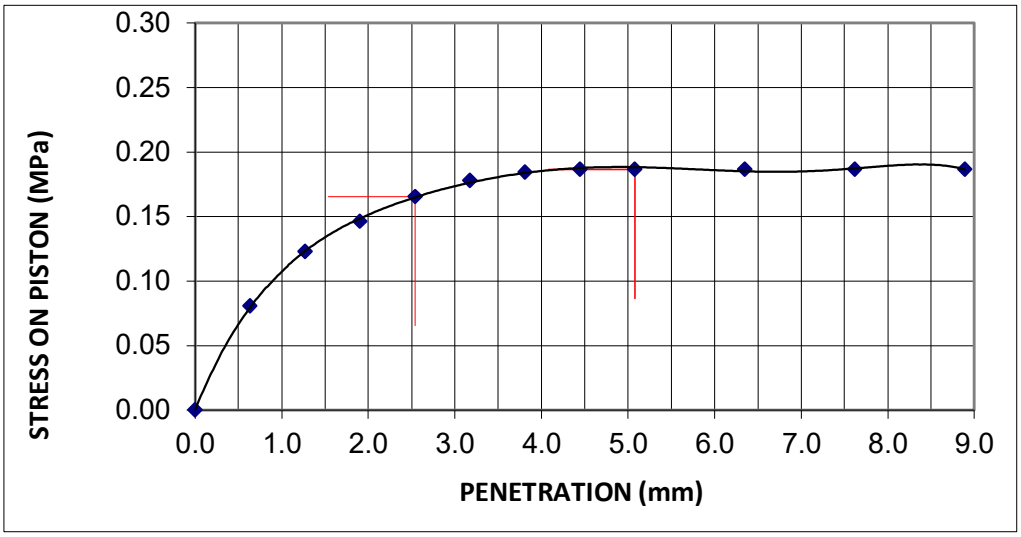
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	29.9	35.8
MC of top 25mm layer, %		
Dry Density, kg/m^3	1357	1381
Compaction,%	95%	
CBR at 2.5mm penetration, %		2.4
Swell, %		4.9

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.08
1.27	0.12
1.91	0.15
2.54	0.17
3.18	0.18
3.81	0.18
4.45	0.19
5.08	0.19
6.35	0.19
7.62	0.19
8.89	0.19

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.17	0.17	2.4	-
5.08	10.3	0.19	0.19	-	1.8

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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Phone: 204-697-3854 Cell: 204-997-1355

Canadian Council of Independent Laboratories

CALIFORNIA BEARING RATIO (CBR) TEST - ASTM D 1883

Client:	KGS Group	Project No:	286-2504	
	865 Waverley St	Lab No:	HM 850	
	Winnipeg, MB R3T 5P4	Date sampled/By:	15-Jan-26	CB
Attention:	Ryan Paulus	Date Received:	15-Jan-26	CB
Project	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Tested /By:	23-Jan-26	JJ
Location:	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

SAMPLE DATA

Sample Type:	CLAY and silt		
Source:	Wilkes Ave - BH 11 - GS 5		
Sampled by:	CB		
Optimum Moisture Content:	27.8	%	
Maximum Dry Density:	1420	kg/cm^3	
Method of Compaction:	Standard Proctor		
Tested by:	MA	Date Tested:	21-Jan-26

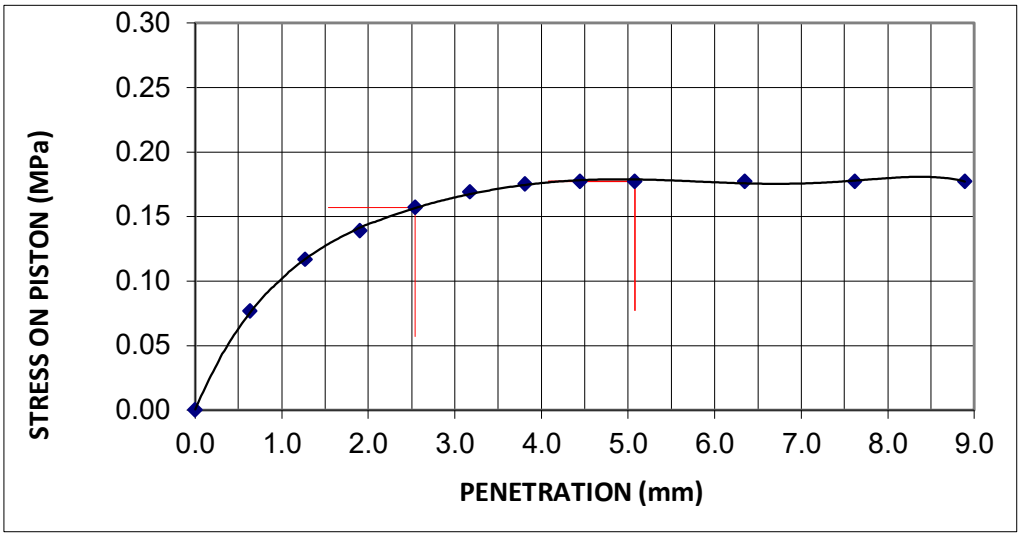
SPECIMEN DATA

DESCRIPTION	Before Soaking	After Testing
Moisture Content (MC), %	28.1	33.4
MC of top 25mm layer, %		
Dry Density, kg/m^3	1355	130782
Compaction,%	95%	
CBR at 2.5mm penetration, %		2.3
Swell, %		4.9

LOAD DATA

PENETRATION mm	STRESS MPa
0	0.00
0.64	0.08
1.27	0.12
1.91	0.14
2.54	0.16
3.18	0.17
3.81	0.18
4.45	0.18
5.08	0.18
6.35	0.18
7.62	0.18
8.89	0.18

LOAD PENETRATION CURVE



PENETRATION mm	STANDARD LOAD MPa	TEST LOAD ACTUAL MPa	TEST LOAD CORRECTED MPa	BEARING RATIO (soaked) at 2.5 mm penetration	BEARING RATIO (soaked) at 5.1 mm penetration
2.54	6.9	0.16	0.16	2.3	-
5.08	10.3	0.18	0.18	-	1.7

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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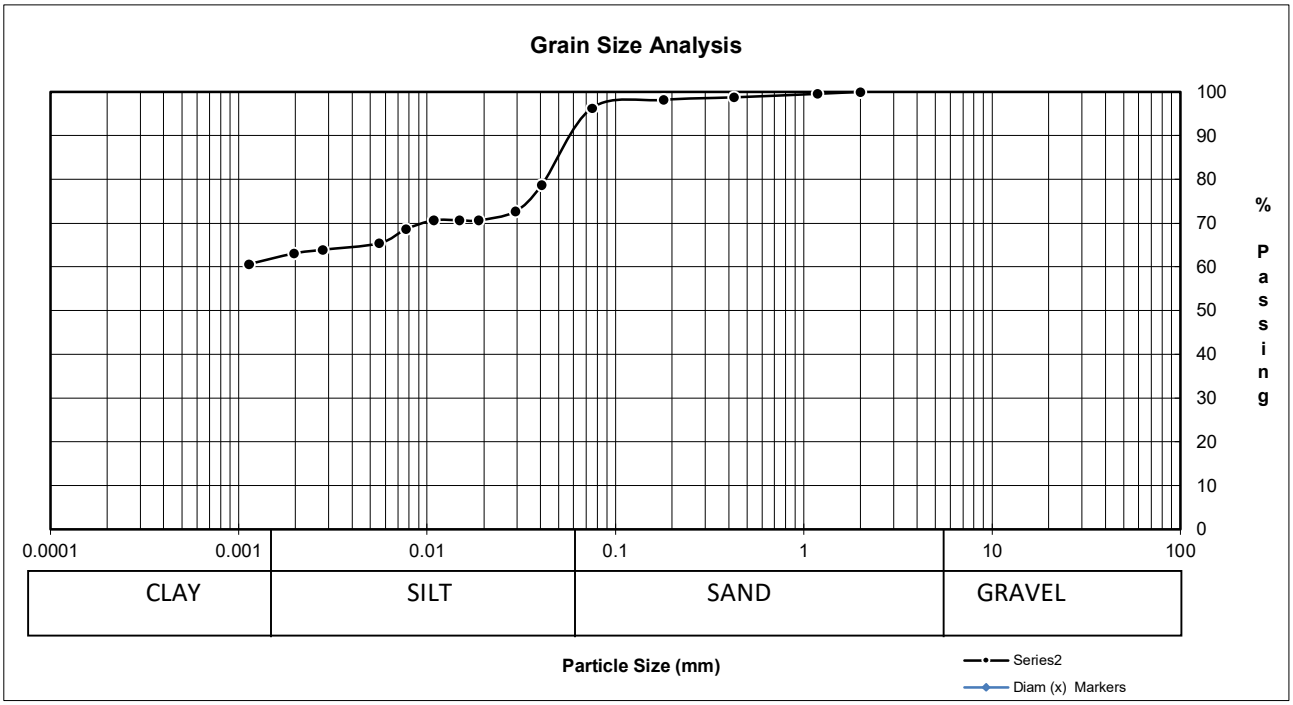
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	1
	Winnipeg, MB R3T 5P4	Lab No.:	HM 846
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 19, 2026

Material Identification	
B.H./T.H. No.	**BH7**
Depth	**6-ft**
Sample Source	**GS6**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0405	78.7
9.50	100.0	0.0294	72.7
4.75	100.0	0.0188	70.7
2.00	100.0	0.0148	70.7
1.18	99.6	0.0108	70.7
0.425	98.8	0.0077	68.7
0.180	98.2	0.0056	65.4
0.075	96.3	0.0011	60.6



% Composition		D10
	Gravel	D30
3.72	Sand	D60
33.13	Silt	Cu
63.15	Clay	Cc

Remarks:

Technician: Edel Santiago

Reviewed by: Paul Bevel

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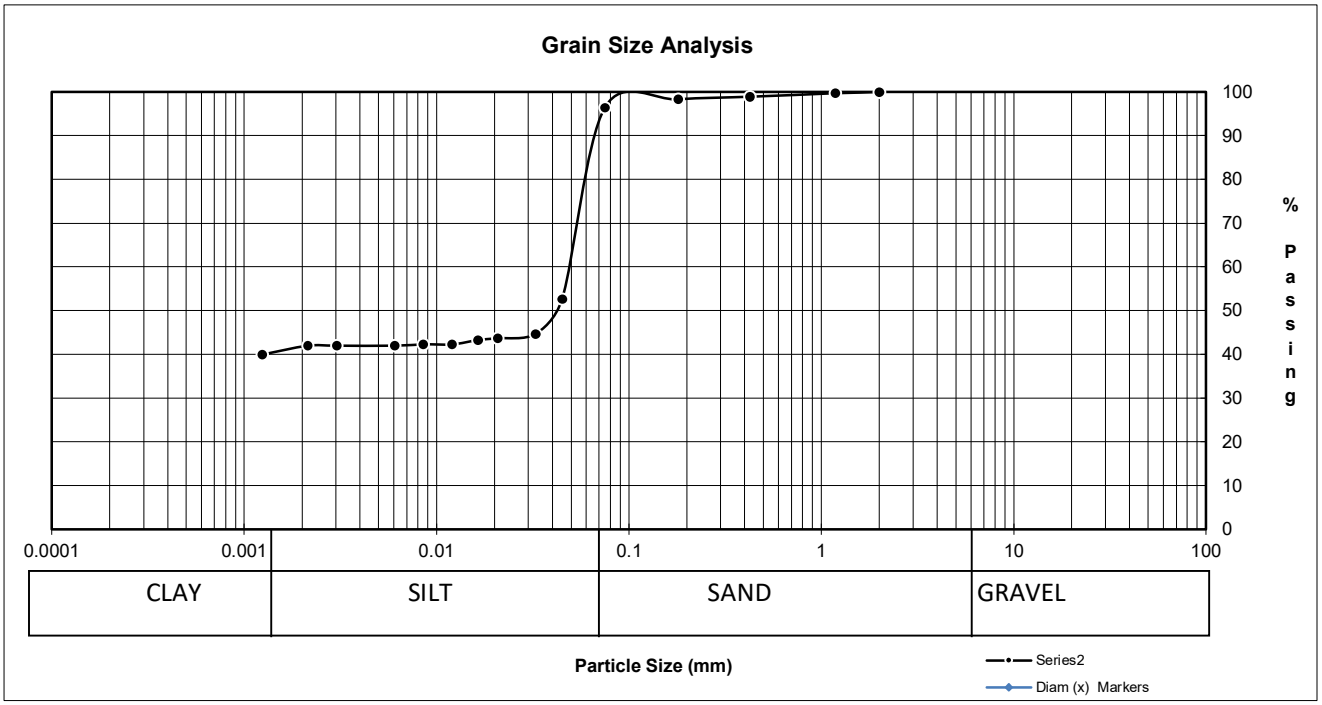
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	2
	Winnipeg, MB R3T 5P4	Lab No.:	HM 847
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 19, 2026

Material Identification	
B.H./T.H. No.	**BH 8**
Depth	**5-ft**
Sample Source	**GS 5**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0450	52.7
9.50	100.0	0.0327	44.7
4.75	100.0	0.0208	43.7
2.00	100.0	0.0164	43.3
1.18	99.7	0.0120	42.3
0.425	98.9	0.0085	42.3
0.180	98.3	0.0060	42.0
0.075	96.4	0.0012	40.0



% Composition		D10
	Gravel	D30
3.58	Sand	D60
54.76	Silt	Cu
41.66	Clay	Cc

Remarks:

Technician: Edel Santiago

Reviewed by: Paul Bevel

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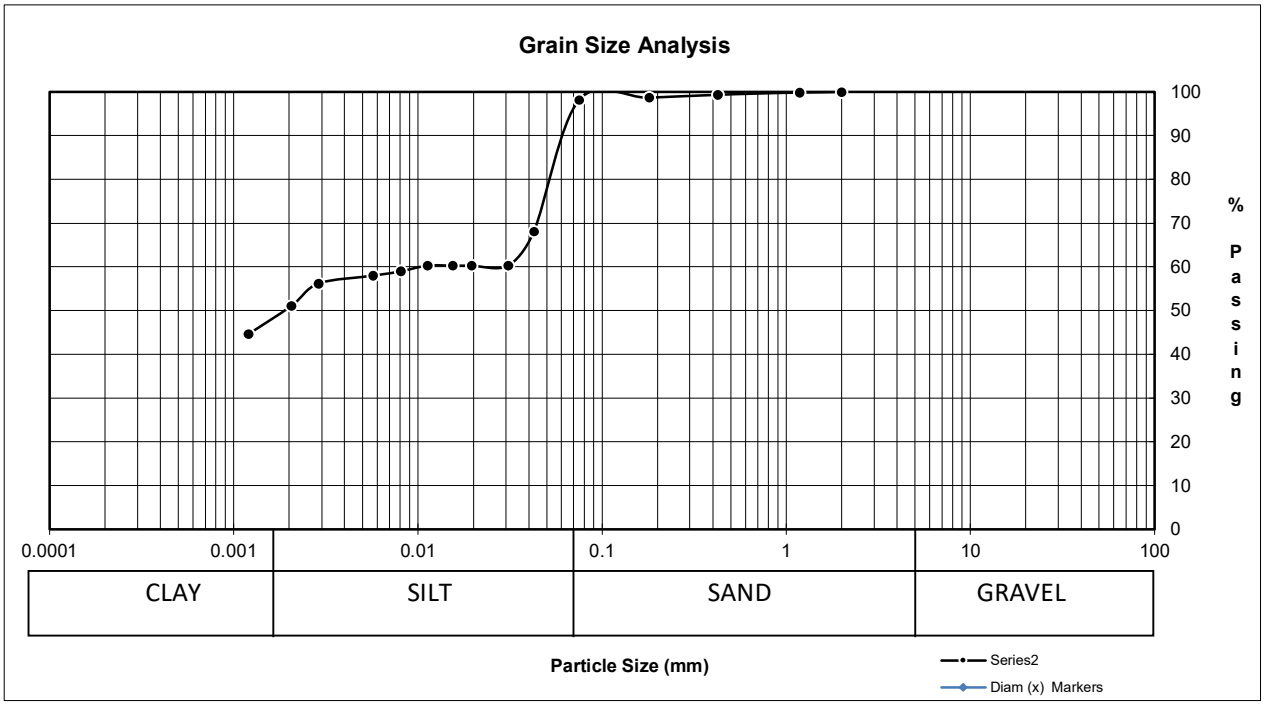
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	3
	Winnipeg, MB R3T 5P4	Lab No.:	HM 848
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Date Sampled:	Jan 15, 2026	Date Received:	Jan 15, 2026
Sampled By:	CB	Date Tested:	Jan 19, 2026

Material Identification	
B.H./T.H. No.	**BH 9**
Depth	**4-ft**
Sample Source	**GS4**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0425	68.1
9.50	100.0	0.0309	60.3
4.75	100.0	0.0195	60.3
2.00	100.0	0.0154	60.3
1.18	99.9	0.0113	60.3
0.425	99.4	0.0080	59.0
0.180	98.7	0.0057	58.0
0.075	98.2	0.0012	44.6



% Composition		D10
	Gravel	D30
1.82	Sand	D60
47.55	Silt	Cu
50.63	Clay	Cc

Remarks:

Technician: Edel Santiago

Reviewed by: Paul Bevel

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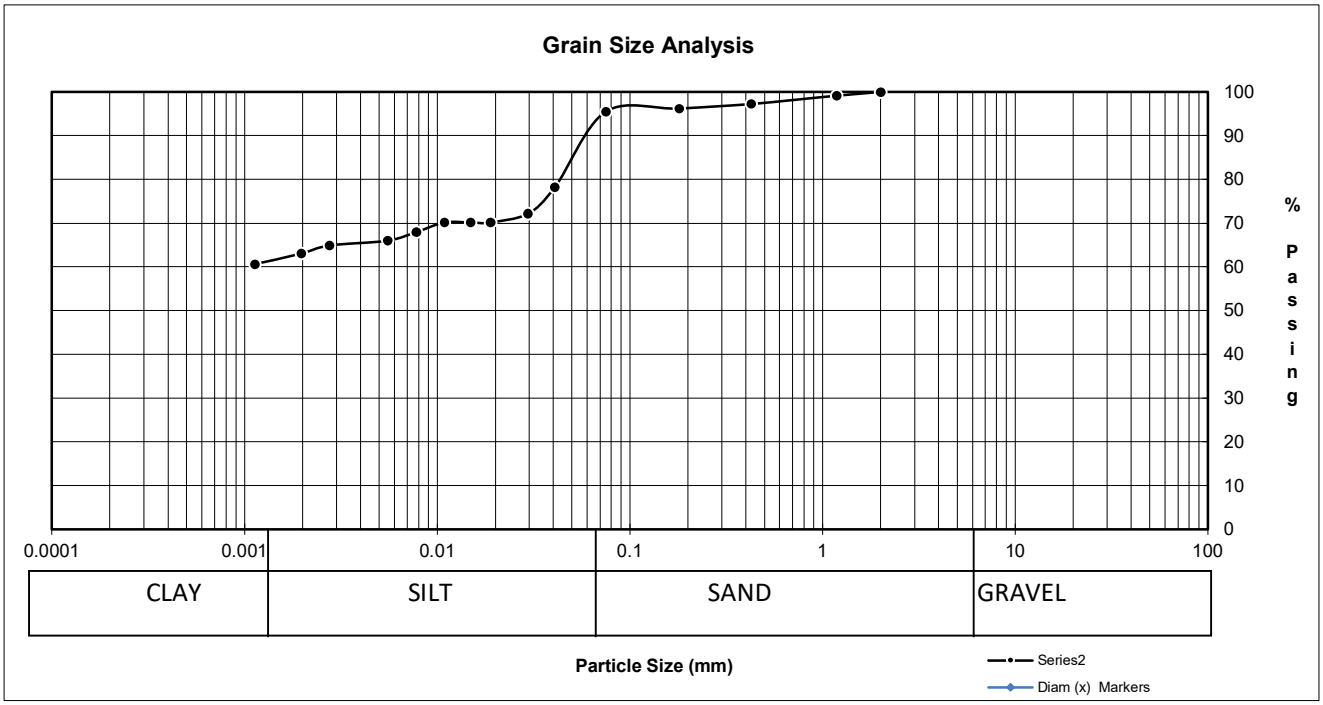
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	4
	Winnipeg, MB R3T 5P4	Lab No.:	HM 849
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 19, 2026

Material Identification	
B.H./T.H. No.	**TH 10**
Depth	**5-ft**
Sample Source	**GS5**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0408	78.2
9.50	100.0	0.0296	72.2
4.75	100.0	0.0189	70.2
2.00	100.0	0.0149	70.2
1.18	99.1	0.0109	70.2
0.425	97.3	0.0078	68.0
0.180	96.2	0.0055	66.0
0.075	95.5	0.0011	60.6



% Composition		D10
	Gravel	D30
4.54	Sand	D60
32.31	Silt	Cu
63.15	Clay	Cc

Remarks:

Technician: Edel Santiago

Reviewed by: Paul Bevel

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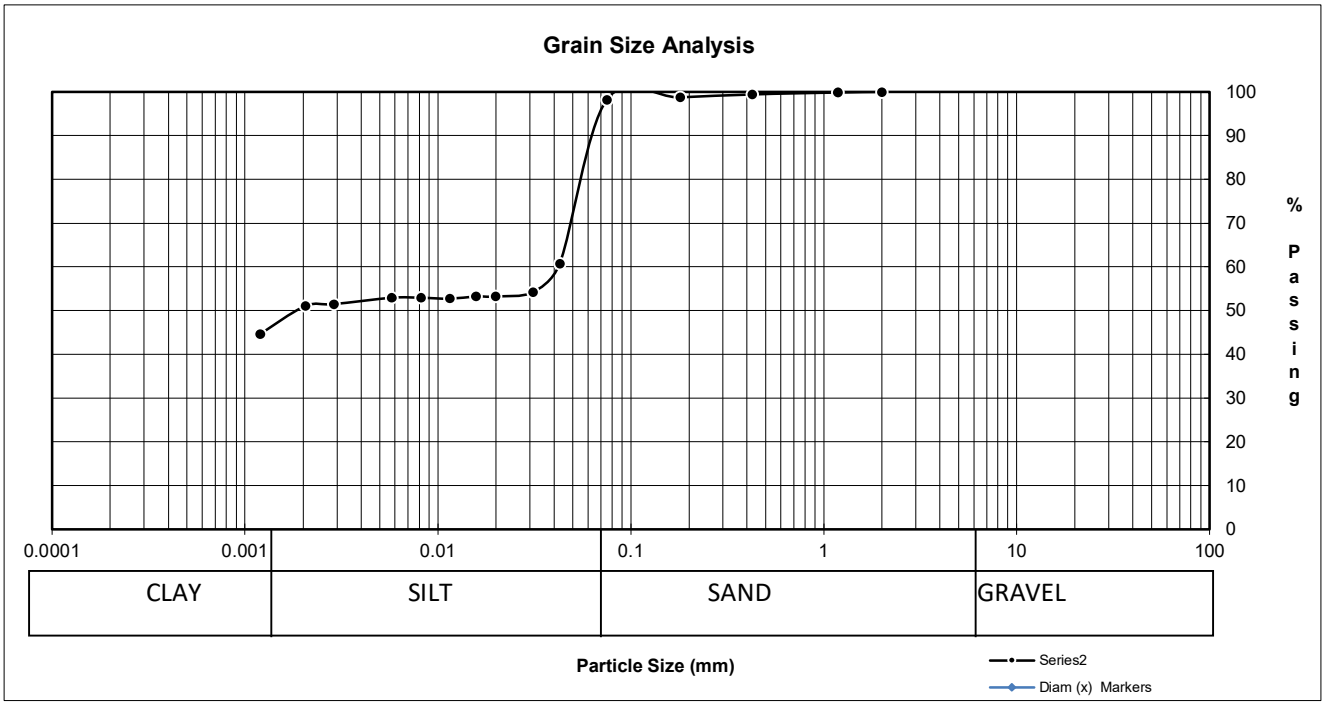
PARTICLE SIZE ANALYSIS OF SOILS TEST REPORT

CLIENT:	KGS Group	Project No.:	286-2504
	865 Waverley St	PSA Test No.:	5
	Winnipeg, MB R3T 5P4	Lab No.:	HM 850
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 19, 2026

Material Identification	
B.H./T.H. No.	**BH 11**
Depth	**4-ft**
Sample Source	**GS 4**
Specific Gravity of Material:	**2.65**

Sieve Analysis		Hydrometer Analysis	
Sieve (mm)	% Passing	Diameter	% Finer
50.00	100.0		
37.50	100.0		
25.00	100.0		
19.00	100.0		
16.00	100.0		
12.50	100.0	0.0427	60.7
9.50	100.0	0.0311	54.2
4.75	100.0	0.0199	53.2
2.00	100.0	0.0157	53.2
1.18	99.9	0.0115	52.8
0.425	99.5	0.0082	52.9
0.180	98.8	0.0058	52.9
0.075	98.2	0.0012	44.6



% Composition		D10
	Gravel	D30
1.78	Sand	D60
47.59	Silt	Cu
50.63	Clay	Cc

Remarks:

Technician: Edel Santiago

Reviewed by: Paul Bevel

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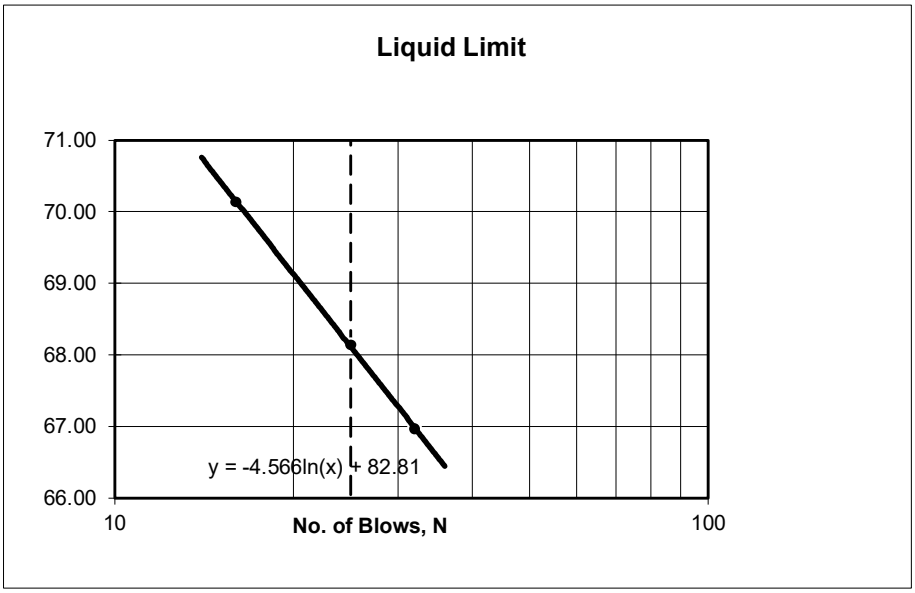
Atterberg Limits (ASTM D4318)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No.:	286-2504
		PI Test No.:	1
		Lab No.:	HM 846
Attention.:	Ryan Paulus	Date Sampled/By:	January 15, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Received:	January 15, 2026
		Date Tested / By:	January 23, 2026 BY
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Liquid Limit Determination					Liquid Limit
Dish No.:	1	2	3		25 Blows
Wet Soil + Dish:	12.22	12.67	12.91		
Dry Soil + Dish:	9.21	9.33	9.4		
Moisture:	3.01	3.34	3.51		
Dish:	4.71	4.43	4.4		
Dry Soil:	4.5	4.9	5		
% Moisture:	66.97	68.14	70.14		
No. of Blows:	32	25	16		
Liquid Limit:					68



Material Identification:

Test Hole:	**BH 7**
Grab Sample No:	**GS 6**
Depth:	**6-ft**
Liquid Limit, %:	**68**
Plastic Limit, %:	**24**
Plasticity Index: (LL-PL)	**44**

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.08	8.21	8.18		
Dry Soil + Dish:	7.38	7.52	7.51		
Moisture:	0.7	0.69	0.67		
Dish:	4.67	4.49	4.61		
Dry Soil:	2.71	3.03	2.9		
% Moisture:	25.83	22.77	23.10		
				Average:	**24**

Test Method : ASTM: D4318, D2216

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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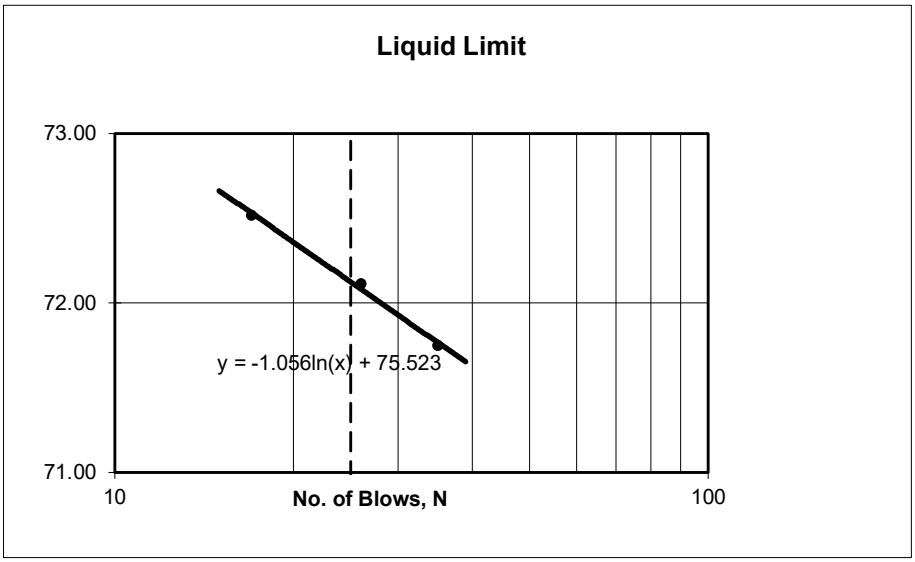
Atterberg Limits (ASTM D4318)

Client:	KGS Group	Project No.:	286-2504	
	865 Waverley St	PI Test No.:	2	
	Winnipeg, MB R3T 5P4	Lab No.:	HM 847	
Attention.:	Ryan Paulus	Date Sampled/By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue	Date Received:	January 15, 2026	
	Geotechnical Investigation	Date Tested / By:	January 22, 2026	BY
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

Liquid Limit Determination					Liquid Limit 25 Blows
Dish No.:	1	2	3		
Wet Soil + Dish:	12.06	10.87	11.95		
Dry Soil + Dish:	8.86	8.31	8.81		
Moisture:	3.2	2.56	3.14		
Dish:	4.4	4.76	4.48		
Dry Soil:	4.46	3.55	4.33		
% Moisture:	71.75	72.11	72.52		
No. of Blows:	35	26	17		
Liquid Limit:					72



Material Identification:

Test Hole:	**BH 8**
Grab Sample No:	**GS 5**
Depth:	**5-ft**
Liquid Limit, %:	**72**
Plastic Limit, %:	**23**
Plasticity Index: (LL-PL)	**49**

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.34	8.4	8.74		
Dry Soil + Dish:	7.61	7.63	7.90		
Moisture:	0.73	0.77	0.84		
Dish:	4.4	3.97	4.48		
Dry Soil:	3.21	3.66	3.42		
% Moisture:	22.74	21.04	24.56		
				Average:	**23**

Test Method : ASTM: D4318, D2216

Remarks:

Reviewed by: Paul Bevel

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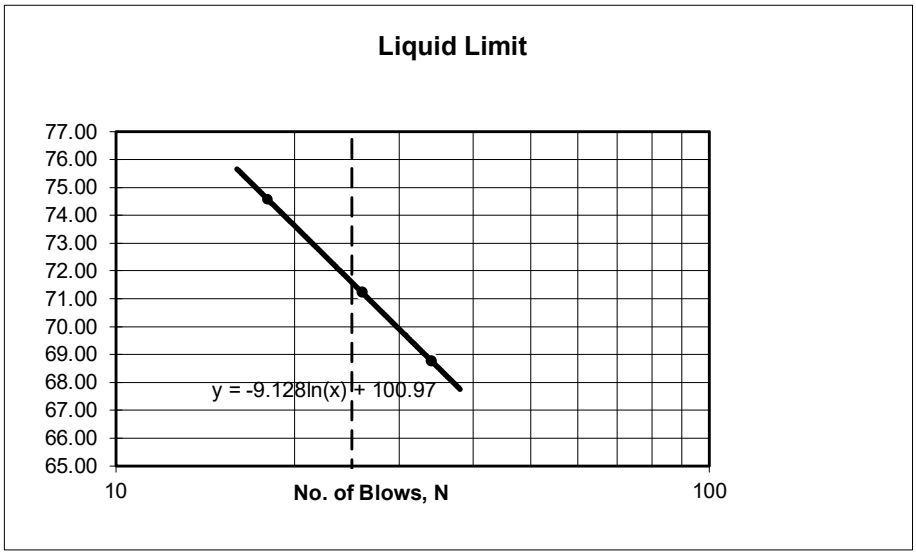
Atterberg Limits (ASTM D4318)

Client:	KGS Group	Project No.:	286-2504
	865 Waverley St	PI Test No.:	3
	Winnipeg, MB R3T 5P4	Lab No.:	HM 848
Attention.:	Ryan Paulus	Date Sampled/By:	January 15, 2026 CB
Project:	Regional Streets - Wilkes Avenue	Date Received:	January 15, 2026
	Geotechnical Investigation	Date Tested / By:	January 22, 2026 BY
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Liquid Limit Determination					Liquid Limit 25 Blows
Dish No.:	1	2	3		
Wet Soil + Dish:	13.79	10.37	10.55		
Dry Soil + Dish:	9.87	7.37	7.89		
Moisture:	3.92	3	2.66		
Dish:	4.74	3.58	4.68		
Dry Soil:	5.13	3.79	3.21		
% Moisture:	68.77	71.24	74.58		
No. of Blows:	34	26	18		
Liquid Limit:					72



Material Identification:

Test Hole:	**BH 9**
Grab Sample No:	**GS4**
Depth:	**4-ft**
Liquid Limit, %:	**72**
Plastic Limit, %:	**22**
Plasticity Index:	**50**
(LL-PL)	

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.52	9.65	8.52		
Dry Soil + Dish:	7.81	8.73	7.80		
Moisture:	0.71	0.92	0.72		
Dish:	4.48	4.5	4.52		
Dry Soil:	3.33	4.23	3.28		
% Moisture:	21.32	21.75	21.95		
				Average:	**22**

Test Method : ASTM: D4318, D2216

Remarks:

Reviewed by: Paul Bevel

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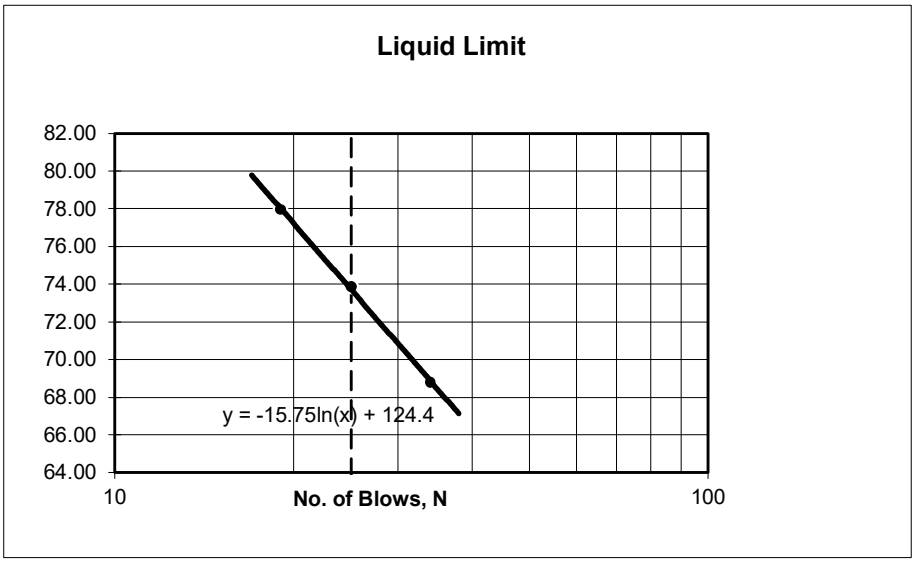
Atterberg Limits (ASTM D4318)

Client:	KGS Group	Project No.:	286-2504
	865 Waverley St	PI Test No.:	4
	Winnipeg, MB R3T 5P4	Lab No.:	HM 849
Attention.:	Ryan Paulus	Date Sampled/By:	January 15, 2026 CB
Project:	Regional Streets - Wilkes Avenue	Date Received:	January 15, 2026
	Geotechnical Investigation	Date Tested / By:	January 21, 2026 BY
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

Liquid Limit Determination					Liquid Limit 25 Blows
Dish No.:	1	2	3		
Wet Soil + Dish:	12.63	13.17	14.11		
Dry Soil + Dish:	8.88	9.08	9.52		
Moisture:	3.75	4.09	4.59		
Dish:	4.52	4.65	4.81		
Dry Soil:	4.36	4.43	4.71		
% Moisture:	68.81	73.86	77.96		
No. of Blows:	34	25	19		
Liquid Limit:					74



Material Identification:

Test Hole:	**BH 10**
Grab Sample No:	**GS5**
Depth:	**5-ft**
Liquid Limit, %:	**74**
Plastic Limit, %:	**20**
Plasticity Index:	**54**
(LL-PL)	

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.18	8.1	8.4		
Dry Soil + Dish:	7.57	7.41	7.77		
Moisture:	0.61	0.69	0.63		
Dish:	4.59	4.02	4.59		
Dry Soil:	2.98	3.39	3.18		
% Moisture:	20.47	20.35	19.81		
				Average:	**20**

Test Method : ASTM: D4318, D2216

Remarks:

P. Bevel

Reviewed by: Paul Bevel

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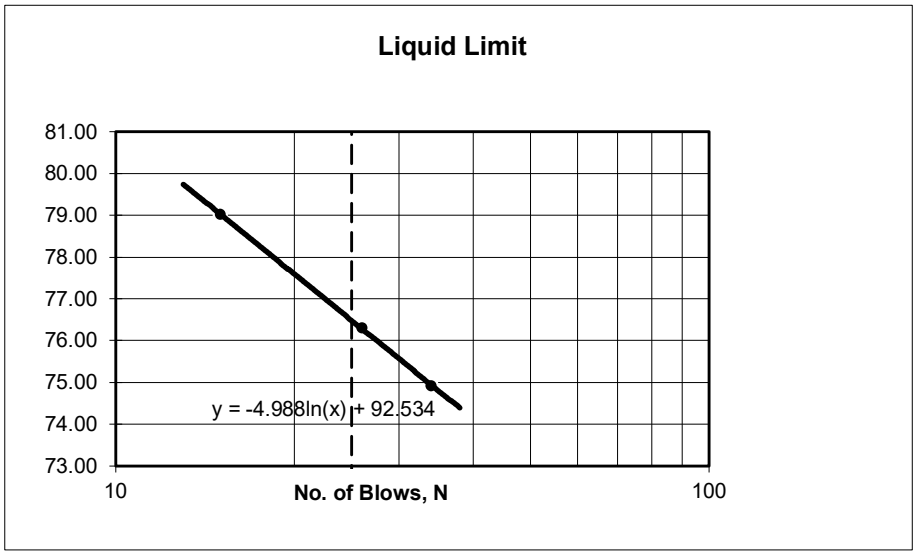
Atterberg Limits (ASTM D4318)

Client:	KGS Group	Project No.:	286-2504	
	865 Waverley St	PI Test No.:	5	
	Winnipeg, MB R3T 5P4	Lab No.:	HM 850	
Attention.:	Ryan Paulus	Date Sampled/By:	15-Jan-26	C.Bautista
Project:	Regional Streets - Wilkes Avenue	Date Received:	15-Jan-26	
	Geotechnical Investigation	Date Tested / By:	23-Jan-26	C.Barela
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2			

Liquid Limit Determination					Liquid Limit 25 Blows
Dish No.:	1	2	3		
Wet Soil + Dish:	10.57	10.67	11.18		
Dry Soil + Dish:	7.94	8.01	8.28		
Moisture:	2.63	2.6575	2.9		
Dish:	4.43	4.53	4.61		
Dry Soil:	3.51	3.4825	3.67		
% Moisture:	74.93	76.31	79.02		
No. of Blows:	34	26	15		
Liquid Limit:					76



Material Identification:

Test Hole:	**BH 11**
Grab Sample No:	**GS 4**
Depth:	**4-ft**
Liquid Limit, %:	**76**
Plastic Limit, %:	**21**
Plasticity Index:	**55**
(LL-PL)	

Plastic Limit Determination					
Dish No.:	1	2	3		
Wet Soil + Dish:	8.46	8.57	8.24		
Dry Soil + Dish:	7.78	7.86	7.51		
Moisture:	0.68	0.71	0.73		
Dish:	4.52	4.64	4.03		
Dry Soil:	3.26	3.22	3.48		
% Moisture:	20.86	22.05	20.98		
				Average:	**21**

Test Method : ASTM: D4318, D2216

Remarks:

Reviewed by: Paul Bevel

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hermie@hmanalo.ca

MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 846
	Winnipeg, MB R3T 5P4	Proctor Test No.:	1
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

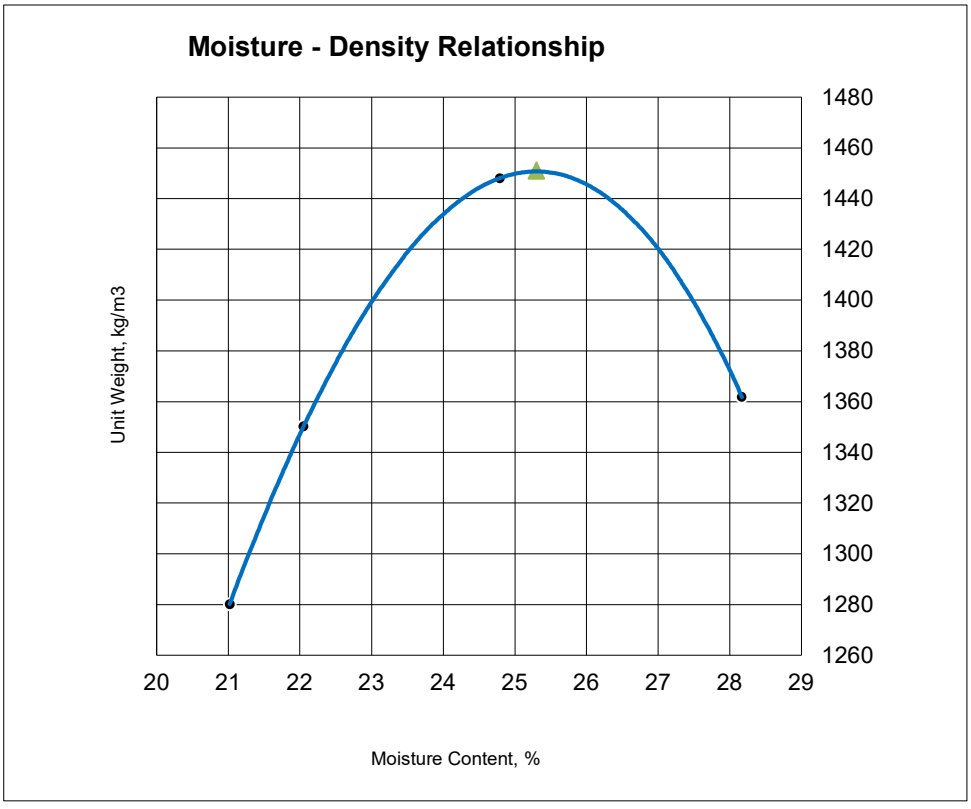
Date Sampled:	15-Jan-26	Date Received:	15-Jan-26
Sampled By:	CB	Date Tested:	21-Jan-26

MATERIAL INFORMATION

Material Type:	CLAY - silty, trace sand		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 7 - GS 6

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	943
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1549	1648	1807	1745
Moisture Content	21.0	22.1	24.8	28.2
Dry Density	1280	1350	1448	1362



Maximum Dry Density (MDD): 1451 kg/m³

Optimum Moisture Content 25.3 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: ____ %

Corrected Moisture: 25.3 %

Corrected Maximum Dry Density: 1451 kg/m³

Remarks:

Tested by: Mehdi Abbasi

Reviewed by:

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 847
	Winnipeg, MB R3T 5P4	Proctor Test No.:	2
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

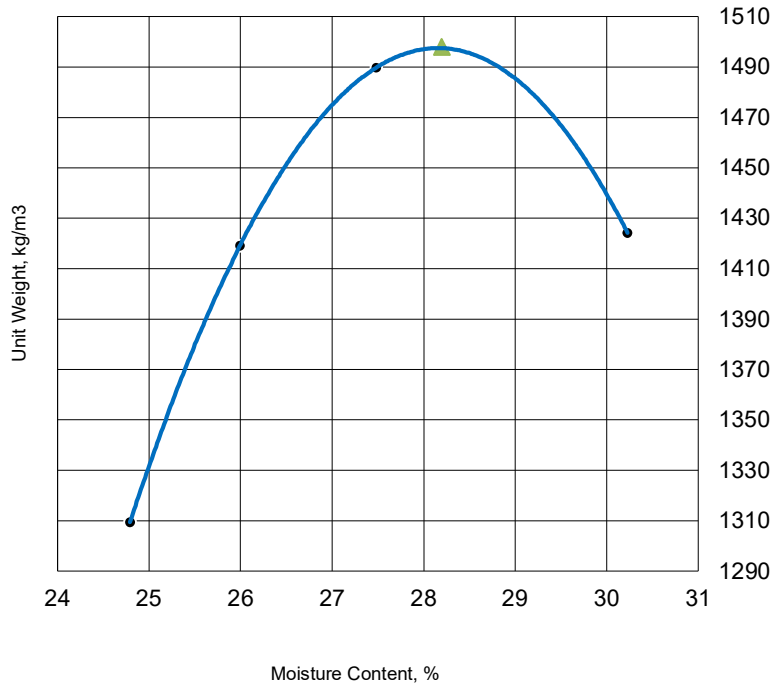
Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 20, 2026

MATERIAL INFORMATION

Material Type:	SILT and clay, trace sand		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 8 - GS 5

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	943
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1634	1788	1899	1855
Moisture Content	24.8	26.0	27.5	30.2
Dry Density	1309	1419	1490	1424



Maximum Dry Density (MDD): 1498 kg/m³

Optimum Moisture Content 28.2 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: ____ %

Corrected Moisture: 28.2 %

Corrected Maximum Dry Density: 1498 kg/m³

Remarks:

Tested by: Mehdi Abbasi

Reviewed by: Paul Bevel

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 848
	Winnipeg, MB R3T 5P4	Proctor Test No.:	3
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

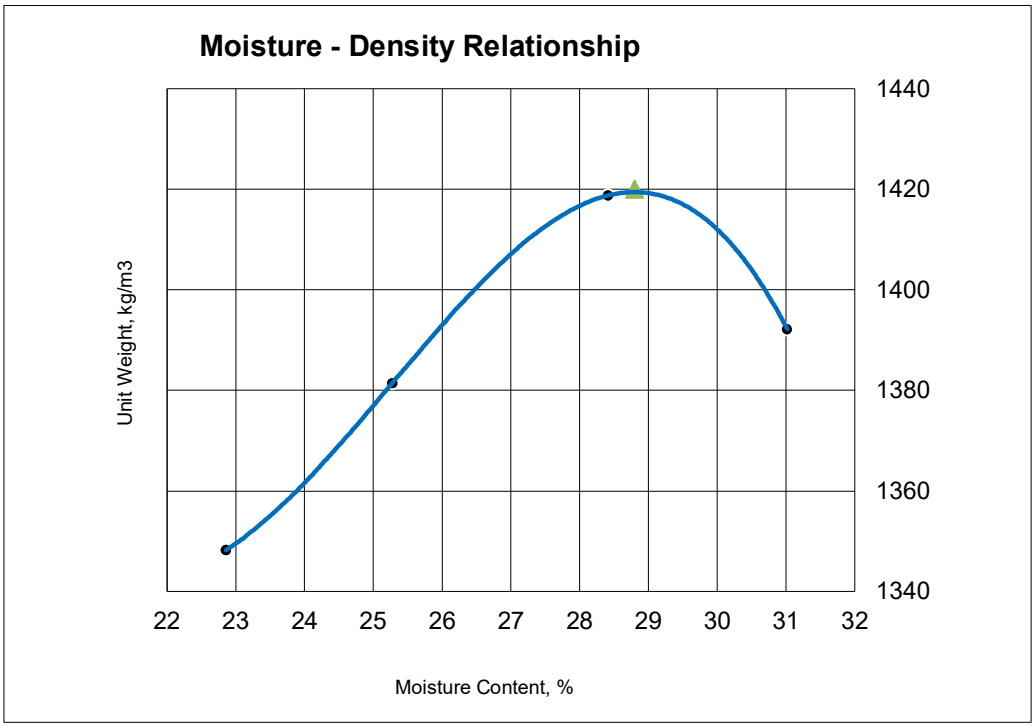
Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 20, 2026

MATERIAL INFORMATION

Material Type:	CLAY and silt		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 9 - GS 4

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	943
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1656	1731	1822	1824
Moisture Content	22.9	25.3	28.4	31.0
Dry Density	1348	1381	1419	1392



Maximum Dry Density (MDD): 1420 kg/m³

Optimum Moisture Content 28.8 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: ____ %

Corrected Moisture: 28.8 %

Corrected Maximum Dry Density: 1420 kg/m³

Remarks:

Tested by: Mehdi Abbasi

Reviewed by: Paul Bevel

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 849
	Winnipeg, MB R3T 5P4	Proctor Test No.:	4
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

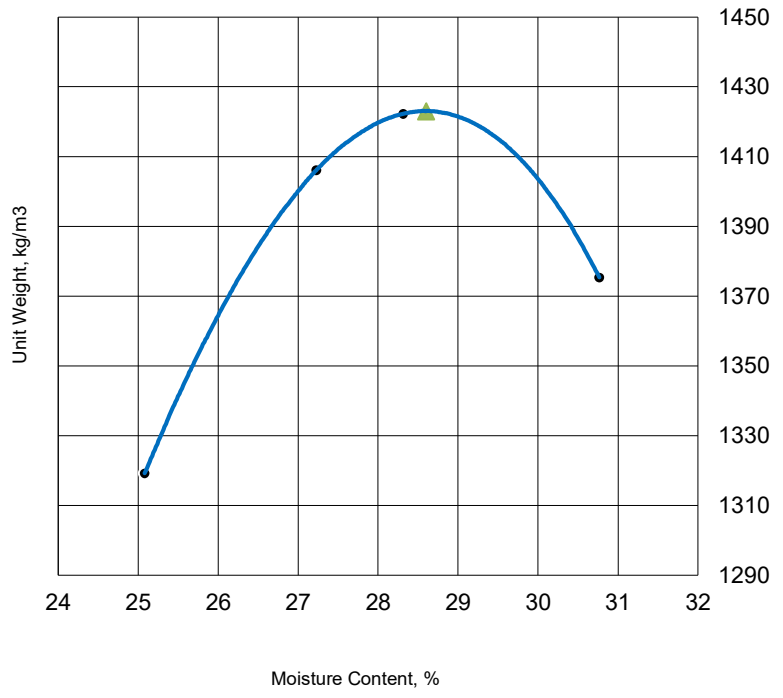
Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 20, 2026

MATERIAL INFORMATION

Material Type:	CLAY - silty and trace sand		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 10 - GS 5

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	943
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1650	1789	1825	1799
Moisture Content	25.1	27.2	28.3	30.8
Dry Density	1319	1406	1422	1375



Maximum Dry Density (MDD): 1423 kg/m³

Optimum Moisture Content 28.6 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: ____ %

Corrected Moisture: 28.6 %

Corrected Maximum Dry Density: 1423 kg/m³

Remarks:

Tested by: Mehdi Abbasi

Reviewed by:

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MAXIMUM DRY DENSITY AND MOISTURE CONTENT - Proctor Method (ASTM D698)

CLIENT	KGS Group	Project No.:	286-2504
	865 Waverley St	Lab No.:	HM 850
	Winnipeg, MB R3T 5P4	Proctor Test No.:	5
ATTENTION:	Ryan Paulus		
PROJECT:	Regional Streets - Wilkes Avenue Geotechnical Investigation		
	Wilkes Ave (Charleston St to Harstone Rd) - Segment 2		

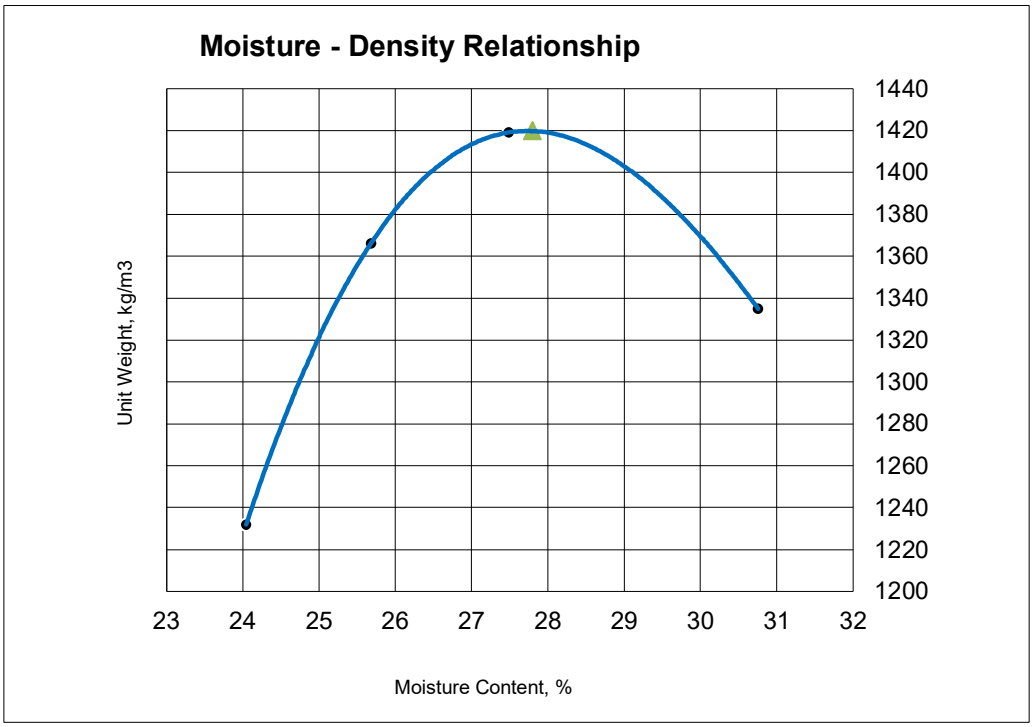
Date Sampled:	January 15, 2026	Date Received:	January 15, 2026
Sampled By:	CB	Date Tested:	January 21, 2026

MATERIAL INFORMATION

Material Type:	CLAY and silt		
Material Use:	Subgrade	Material Supplier:	Not applicable
Maximum Size:	4.75mm	Material Source:	BH 11 - GS 4

PROCEDURE	A
PREPARATION	Dry
COMPACTION METHOD	Manual
BLOWS PER LAYER	25
NO. OF LAYERS	3
MOLD SIZE	100
MOLD VOLUME	943
WEIGHT OF HAMMER	2.5 kg

Test No.	1	2	3	4
Wet Density	1528	1717	1809	1745
Moisture Content	24.0	25.7	27.5	30.8
Dry Density	1232	1366	1419	1335



Maximum Dry Density (MDD): 1420 kg/m³

Optimum Moisture Content 27.8 %

STONE CORRECTION (ASTM D 4718)

Retained on 4.75mm sieve: _____ %

Corrected Moisture: 27.8 %

Corrected Maximum Dry Density: 1420 kg/m³

Remarks:

Tested by: Mehdi Abbasi

Reviewed by:

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Canadian Council of Independent Laboratories

MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 1 HM 846
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 7	Date Received: Date Tested / By:	January 15, 2026 January 15, 2026 Hamid Ab.

Test Hole No.	BH 7-1	BH 7-2	BH 7-3	BH 7-4	BH 7-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	G4	T105	A21	M30	PI 24
Wt Wet Sample + Tare	178.1	231.2	203.5	167.9	194.7
Wt Dry Sample + Tare	170.6	223.1	196.6	128.6	145.4
Wt Water	7.5	8.1	6.9	39.3	49.3
Wt Tare	4.5	4.2	4.7	5.0	4.5
Wt Dry Sample	166.1	218.9	191.9	123.6	140.9
Moisture Content (%)	**4.5**	**3.7**	**3.6**	**31.8**	**35.0**
Test Hole No.	BH 7-6	BH 7-7	BH 7-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	J77	PI 31	C9		
Wt Wet Sample + Tare	169.3	185.9	189.7		
Wt Dry Sample + Tare	127.5	132.3	129.8		
Wt Water	41.8	53.6	59.9		
Wt Tare	4.0	4.6	4.6		
Wt Dry Sample	123.5	127.7	125.2		
Moisture Content (%)	**33.8**	**42.0**	**47.8**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 2 HM 847	
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 8	Date Received: Date Tested / By:	January 15, 2026 January 15, 2026	 Hamid A.

Test Hole No.	BH 8-1	BH 8-2	BH 8-3	BH 8-4	BH 8-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	GM2	PI 30	PI 9	PI25	G23
Wt Wet Sample + Tare	173.8	179.4	207.8	145.9	153.7
Wt Dry Sample + Tare	167	173.2	199.8	116.6	115.5
Wt Water	6.8	6.2	8.0	29.3	38.2
Wt Tare	4.5	4.4	4.5	4.5	4.8
Wt Dry Sample	162.5	168.8	195.3	112.1	110.7
Moisture Content (%)	**4.2**	**3.7**	**4.1**	**26.1**	**34.5**
Test Hole No.	BH 8-6	BH 8-7	BH 8-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	A4	V2	H2		
Wt Wet Sample + Tare	178.2	148.8	157.2		
Wt Dry Sample + Tare	132.8	109.5	112.2		
Wt Water	45.4	39.3	45.0		
Wt Tare	4.0	4.6	4.4		
Wt Dry Sample	128.8	104.9	107.8		
Moisture Content (%)	**35.2**	**37.5**	**41.7**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 3 HM 848	
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 9	Date Received: Date Tested / By:	January 15, 2026 January 15, 2026	 Hamid A.

Test Hole No.	BH 9-1	BH 9-2	BH 9-3	BH 9-4	BH 9-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	GM4	PI 12	G 11	56	C05
Wt Wet Sample + Tare	173	176.3	207.8	147.9	146.3
Wt Dry Sample + Tare	165.3	169.4	199.2	122.3	109.4
Wt Water	7.7	6.9	8.6	25.6	36.9
Wt Tare	4.0	4.5	4.1	4.6	4.0
Wt Dry Sample	161.3	164.9	195.1	117.7	105.4
Moisture Content (%)	**4.8**	**4.2**	**4.4**	**21.8**	**35.0**
Test Hole No.	BH 9-6	BH 9-7	BH 9-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	G19	M35	157.6		
Wt Wet Sample + Tare	163.4	156.6	A15		
Wt Dry Sample + Tare	126	113.6	157.6		
Wt Water	37.4	43.0	112.9		
Wt Tare	4.7	4.7	3.9		
Wt Dry Sample	121.3	108.9	153.7		
Moisture Content (%)	**30.8**	**39.5**	**73.5**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 4 HM 849	
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 10	Date Received: Date Tested / By:	January 15, 2026 January 15, 2026	 Hamid A.

Test Hole No.	BH 10-1	BH 10-2	BH 10-3	BH 10-4	BH 10-5
Depth	**1-ft**	**2-ft**	**3-ft**	**4-ft**	**5-ft**
Tare No.	C04	M28	A4	G12	M37
Wt Wet Sample + Tare	173.7	192.1	200.7	160.8	161.3
Wt Dry Sample + Tare	166.5	184.7	191.9	129	119.7
Wt Water	7.2	7.4	8.8	31.8	41.6
Wt Tare	4.3	4.7	4.9	4.5	4.9
Wt Dry Sample	162.2	180.0	187.0	124.5	114.8
Moisture Content (%)	**4.4**	**4.1**	**4.7**	**25.5**	**36.2**

Test Hole No.	BH 10-6	BH 10-7	BH 10-8		
Depth	**6-ft**	**7-ft**	**8-ft**		
Tare No.	P8	M54	Z7		
Wt Wet Sample + Tare	197.5	164	168.1		
Wt Dry Sample + Tare	150.2	123.4	119.9		
Wt Water	47.3	40.6	48.2		
Wt Tare	4.1	4.8	4.9		
Wt Dry Sample	146.1	118.6	115.0		
Moisture Content (%)	**32.4**	**34.2**	**41.9**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 5 HM 850	
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 11	Date Received: Date Tested / By:	January 15, 2026 January 15, 2026	 Hamid A.

Test Hole No.	BH 11-1	BH 11-2	BH 11-3	BH 11-4	BH 11-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	PI 22	PI 20	GM 04	PI 14	PI 2
Wt Wet Sample + Tare	180.5	195.4	190	152.4	146.7
Wt Dry Sample + Tare	172.1	187.3	182.5	116.6	111.3
Wt Water	8.4	8.1	7.5	35.8	35.4
Wt Tare	4.8	4.5	4.0	4.5	4.4
Wt Dry Sample	167.3	182.8	178.5	112.1	106.9
Moisture Content (%)	**5.0**	**4.4**	**4.2**	**31.9**	**33.1**
Test Hole No.	BH 11-6	BH 11-7	BH 11-8		
Depth	6-ft	7-ft	8-ft		
Tare No.	PI 1	PI 4	GM 01		
Wt Wet Sample + Tare	172	162.5	170.9		
Wt Dry Sample + Tare	133.2	116.2	116.9		
Wt Water	38.8	46.3	54.0		
Wt Tare	4.5	4.5	4.1		
Wt Dry Sample	128.7	111.7	112.8		
Moisture Content (%)	**30.1**	**41.5**	**47.9**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 HM 862	
Attention:	Ryan Paulus	Date Sampled / By:	January 19, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Received: Date Tested / By:	January 19, 2026 January 22, 2026	 Marlon Viñas

Test Hole No.	BH 12 - 1	BH 12 - 2	BH 12 - 3	BH 12 - 4	BH 12 - 5
Depth	**1-ft**	**2-ft**	**3-ft**	**4-ft**	**5-ft**
Tare No.	J 025	J 024	J 023	J 022	J 021
Wt Wet Sample + Tare	147	181	185.2	145.9	141.4
Wt Dry Sample + Tare	140.1	175	178.4	108.4	104.3
Wt Water	6.9	6.0	6.8	37.5	37.1
Wt Tare	4.7	4.5	4.3	4.5	4.6
Wt Dry Sample	135.4	170.5	174.1	103.9	99.7
Moisture Content (%)	**5.1**	**3.5**	**3.9**	**36.1**	**37.2**

Test Hole No.	BH 12 - 5	BH 12 - 6	BH 12 - 7		
Depth	**6-ft**	**7-ft**	**8-ft**		
Tare No.	J 025	60	C0-2		
Wt Wet Sample + Tare	157.6	139	168.5		
Wt Dry Sample + Tare	116.6	99.2	115.5		
Wt Water	41.0	39.8	53.0		
Wt Tare	4.6	4.6	4.7		
Wt Dry Sample	112.0	94.6	110.8		
Moisture Content (%)	**36.6**	**42.1**	**47.8**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 6 HM 851
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Avenue - BH 13	Date Received: Date Tested / By:	January 15, 2026 January 15, 2026 Hamid A.

Test Hole No.	BH 13-1	BH 13-2	BH 13-3	BH 13-4	BH 13-5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	H 22	H 25	H 24	H 23	H 21
Wt Wet Sample + Tare	197.5	170.8	200.9	140.4	126
Wt Dry Sample + Tare	188.6	163.6	142.9	104.3	93.7
Wt Water	8.9	7.2	58.0	36.1	32.3
Wt Tare	4.5	4.4	4.3	4.4	4.8
Wt Dry Sample	184.1	159.2	138.6	99.9	88.9
Moisture Content (%)	**4.8**	**4.5**	**41.8**	**36.1**	**36.3**

Test Hole No.	BH 13-6	BH 13-7	BH 13-8		
Depth	5-ft	6-ft	7-ft		
Tare No.	H6	PI15	PI 19		
Wt Wet Sample + Tare	145.7	144.6	134.6		
Wt Dry Sample + Tare	106.6	103	92.9		
Wt Water	39.1	41.6	41.7		
Wt Tare	4.9	4.6	4.5		
Wt Dry Sample	101.7	98.4	88.4		
Moisture Content (%)	**38.4**	**42.3**	**47.2**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 HM 863	
Attention:	Ryan Paulus	Date Sampled / By:	January 19, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Received: Date Tested / By:	January 19, 2026 January 23, 2026	 Marlon Viñas

Test Hole No.	BH 14 - 1	BH 14 - 2	BH 14 - 3	BH 14 - 4	BH 14 - 5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	J3	J4	J5	CB 02	PI 26
Wt Wet Sample + Tare	149.8	154.7	143.5	160.7	133.8
Wt Dry Sample + Tare	144.1	148	105.5	119.2	98.9
Wt Water	5.7	6.7	38.0	41.5	34.9
Wt Tare	4.6	4.4	4.5	4.6	4.7
Wt Dry Sample	139.5	143.6	101.0	114.6	94.2
Moisture Content (%)	**4.1**	**4.7**	**37.6**	**36.2**	**37.0**
Test Hole No.	BH 14 - 6	BH 14 - 7	BH 14 - 8		
Depth	6-ft	7-ft	8-ft		
Tare No.	PI 7	PI 6	Q 1		
Wt Wet Sample + Tare	130.1	145.3	167.3		
Wt Dry Sample + Tare	100.9	105.3	114.7		
Wt Water	29.2	40.0	52.6		
Wt Tare	4.6	4.5	4.0		
Wt Dry Sample	96.3	100.8	110.7		
Moisture Content (%)	**30.3**	**39.7**	**47.5**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 7 HM 852	
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Ave - PC 15	Date Received: Date Tested / By:	January 15, 2026 January 20, 2026	 Marlon Viñas

Test Hole No.	BH 15 - 1	BH 15 - 2	BH 15 - 3	BH 15 - 4	BH 15 - 5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	P4	P3	P2	P1	H17
Wt Wet Sample + Tare	206.9	189.3	158.4	171.5	148.8
Wt Dry Sample + Tare	197	180.8	118.3	137.3	109.1
Wt Water	9.9	8.5	40.1	34.2	39.7
Wt Tare	4.5	4.5	4.5	4.4	4.5
Wt Dry Sample	192.5	176.3	113.8	132.9	104.6
Moisture Content (%)	**5.1**	**4.8**	**35.2**	**25.7**	**38.0**

Test Hole No.	BH 15 - 6	BH 15 - 7	BH 15 - 8		
Depth	6-ft	7-ft	8-ft		
Tare No.	H16	H15	H14		
Wt Wet Sample + Tare	147.6	170.8	168		
Wt Dry Sample + Tare	111.8	122.9	117.3		
Wt Water	35.8	47.9	50.7		
Wt Tare	4.5	4.5	4.2		
Wt Dry Sample	107.3	118.4	113.1		
Moisture Content (%)	**33.4**	**40.5**	**44.8**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 HM 864	
Attention:	Ryan Paulus	Date Sampled / By:	January 19, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation	Date Received:	January 19, 2026	
		Date Tested / By:	January 23, 2026	Marlon Viñas

Test Hole No.	BH 16 - 1	BH 16 - 2	BH 16 - 3	BH 16 - 4	BH 16 - 5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	GM 21	PI 21	CB 13	CB 11	CB 12
Wt Wet Sample + Tare	160.8	181.3	137.2	143.2	152.4
Wt Dry Sample + Tare	153.6	174	98.9	104	116.2
Wt Water	7.2	7.3	38.3	39.2	36.2
Wt Tare	4.1	4.8	4.4	4.7	4.5
Wt Dry Sample	149.5	169.2	94.5	99.3	111.7
Moisture Content (%)	**4.8**	**4.3**	**40.5**	**39.5**	**32.4**
Test Hole No.	BH 16 - 6	BH 16 - 7	BH 16 - 8		
Depth	6-ft	7-ft	8-ft		
Tare No.	PS 4	CB 3	CB 1		
Wt Wet Sample + Tare	164	179.5	156.1		
Wt Dry Sample + Tare	120	130.3	112.2		
Wt Water	44.0	49.2	43.9		
Wt Tare	4.4	4.6	4.6		
Wt Dry Sample	115.6	125.7	107.6		
Moisture Content (%)	**38.1**	**39.1**	**40.8**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 8 HM 853
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026 CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Ave - BH 17	Date Received: Date Tested / By:	January 15, 2026 January 20, 2026 Marlon Viñas

Test Hole No.	BH 17 - 1	BH 17 - 2	BH 17 - 3	BH 17 - 4	BH 17 - 5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	N13	N12	N11	N10	N9
Wt Wet Sample + Tare	178.5	186.5	138.3	126.6	135.2
Wt Dry Sample + Tare	170	179	103.1	95.7	100.1
Wt Water	8.5	7.5	35.2	30.9	35.1
Wt Tare	4.5	4.5	4.5	4.5	4.5
Wt Dry Sample	165.5	174.5	98.6	91.2	95.6
Moisture Content (%)	**5.1**	**4.3**	**35.7**	**33.9**	**36.7**

Test Hole No.	BH 17 - 6	BH 17 - 7	BH 17 - 8		
Depth	6-ft	7-ft	8-ft		
Tare No.	N8	N7	N6		
Wt Wet Sample + Tare	164.9	145.9	148.8		
Wt Dry Sample + Tare	122.9	104.3	105.7		
Wt Water	42.0	41.6	43.1		
Wt Tare	4.5	4.5	4.5		
Wt Dry Sample	118.4	99.8	101.2		
Moisture Content (%)	**35.5**	**41.7**	**42.6**		

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MOISTURE CONTENT OF SOIL (ASTM D2216)

Client:	KGS Group 865 Waverley St Winnipeg, MB R3T 5P4	Project No: Test No.: Lab No.:	286-2504 9 HM 854	
Attention:	Ryan Paulus	Date Sampled / By:	January 15, 2026	CB
Project:	Regional Streets - Wilkes Avenue Geotechnical Investigation Wilkes Ave BH 18	Date Received: Date Tested / By:	January 15, 2026 January 20, 2026	 Marlon Viñas

Test Hole No.	BH 18 - 1	BH 18 - 2	BH 18 - 3	BH 18 - 4	BH 18 - 5
Depth	1-ft	2-ft	3-ft	4-ft	5-ft
Tare No.	N5	N4	N3	N2	N1
Wt Wet Sample + Tare	170.5	182.7	130.9	143.3	135.2
Wt Dry Sample + Tare	162	173.5	95.5	107	100.1
Wt Water	8.5	9.2	35.4	36.3	35.1
Wt Tare	4.5	4.5	4.5	4.5	4.5
Wt Dry Sample	157.5	169.0	91.0	102.5	95.6
Moisture Content (%)	**5.4**	**5.4**	**38.9**	**35.4**	**36.7**
Test Hole No.	BH 18 - 6	BH 18 - 7	BH 18 - 8		
Depth	6-ft	7-ft	8-ft		
Tare No.	N8	N7	N6		
Wt Wet Sample + Tare	164.9	145.9	148.8		
Wt Dry Sample + Tare	122.9	104.5	105.7		
Wt Water	42.0	41.4	43.1		
Wt Tare	4.5	4.5	4.5		
Wt Dry Sample	118.4	100.0	101.2		
Moisture Content (%)	**35.5**	**41.4**	**42.6**		

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Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 2
(Charleston St to Harstone Rd)

BH7 - Eastbound Lane

BH7 - Site Photo

BH8 - Westbound Lane

BH8 - Site Photo

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Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 2
(Charleston St to Harstone Rd)

BH9 - Eastbound Lane

BH9 - Site Photo

BH10 - Westbound Lane

BH10 - Site Photo

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Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 2
(Charleston St to Harstone Rd)

BH11 - Eastbound Lane

BH11 - Site Photo

BH12 - Westbound Lane

BH12 - Site Photo

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Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 2
(Charleston St to Harstone Rd)

BH13 - Eastbound Lane

BH13 - Site Photo

BH14 - Westbound Lane

BH14 - Site Photo

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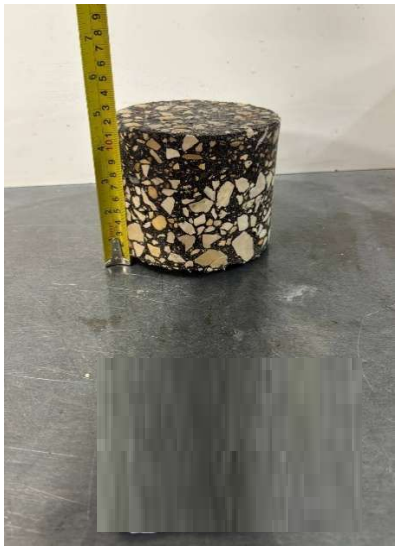
Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 2
(Charleston St to Harstone Rd)

BH15 - Eastbound Lane

BH15 - Site Photo



BH16 - Westbound Lane

BH16 - Site Photo

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Rehabilitation Sites

Picture of Cores

Wilkes Avenue – Segment 2
(Charleston St to Harstone Rd)

BH17 - Eastbound Lane

BH17 - Site Photo

BH18 - Westbound Lane

BH18 - Site Photo