

APPENDIX A

GEOTECHNICAL REPORT



Quality Engineering | Valued Relationships

Stantec Consulting Ltd.

2025 Portage Avenue Pavement Renewals (25-C-02) – Portage Avenue Mill and Fill

Prepared for:

Ron Bruce, P.Eng.
Stantec Consulting Ltd.
500-311 Portage Ave
Winnipeg, MB
R3B 2B9

Project Number: 1000-240-01

Date: February 7, 2025



Quality Engineering | Valued Relationships

February 7, 2025

Our File No. 1000-240-01

Ron Bruce, P.Eng.
Stantec Consulting Ltd.
500-311 Portage Ave
Winnipeg, MB
R3B 2B9

RE: 2025 Portage Avenue Pavement Renewals (25-C-02) – Portage Avenue Mill and Fill

TREK Geotechnical Inc. is pleased to submit our Final Report for the road investigation for 2025 Portage Avenue Pavement Renewals (25-C-02) – Portage Avenue Mill and Fill.

Please contact the undersigned should you have any questions.

Sincerely,

TREK Geotechnical Inc.
Per:

A handwritten signature in blue ink, appearing to read "N. Ferreira", is written over the printed name and title of the signatory.

Nelson John Ferreira, Ph.D., P.Eng.
Senior Geotechnical Engineer

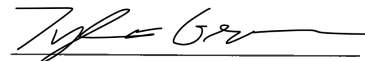
Encl.

Revision History

Revision No.	Author	Issue Date	Description
0	TG	February 7, 2025	Final Report

Authorization Signatures

Prepared By:



Tyler Green
Intermediate Technician



Reviewed By:

Nelson John Ferreira, Ph.D., P.Eng.
Senior Geotechnical Engineer



ENGINEERS
GEOSCIENTISTS
MANITOBA

Certificate of Authorization

TREK GEOTECHNICAL INC.

No. 4877

Table of Contents

Letter of Transmittal

Revision History and Authorization Signatures

1.0	Introduction	1
2.0	Road Investigation.....	1
3.0	Closure.....	1

Figures

Appendices

List of Tables

Table 1: Road Investigation Program.....	Error! Bookmark not defined.
--	-------------------------------------

List of Figures

Figure 01	Pavement Core Location Plan – Portage Avenue between Sturgeon Road and Daer Boulevard
Figure 02	Pavement Core Location Plan – Portage Avenue between Greenway Crescent West and Parkdale Street
Figure 03	Pavement Core Location Plan – Portage Avenue between Parkdale Street and Sumach Street
Figure 04	Pavement Core Location Plan – Portage Avenue between Sumach Street and David Street

List of Appendices

Appendix A	Summary Table and Pavement Core Photos – Portage Avenue (between Sturgeon Road and David Street)
------------	--

1.0 Introduction

This report summarizes the results of the road investigation completed for the 2025 Portage Avenue Pavement Renewals (25-C-02) – Portage Avenue Mill and Fill. The investigation was carried out along Portage Avenue between Sturgeon Road and David Street. Information collected describes the asphalt and concrete pavement structure. The investigation was carried out in accordance with the City of Winnipeg RFQ No. 331-2024.

2.0 Road Investigation

The investigation included coring of pavement at 60 locations on Portage Avenue between Sturgeon Road and David Street. The investigation locations are shown on Figures 01 to 04 (attached).

The road investigation was conducted between January 13, 2025 to January 22, 2025. The pavement structure (asphalt/concrete) was cored by Mark Thomsen and Tyler Green of TREK Geotechnical Inc. (TREK) using a portable coring press equipped with a hollow 100mm diameter diamond core drill bits. Core samples were also retrieved and logged at TREK's material testing laboratory. A summary table of the pavement cores and photographs of the cores are included in Appendix A.

Core and test hole logs noted on the summary tables and test hole locations are based on UTM coordinates obtained using a hand-held GPS, and their location relative to the nearest address or intersection, measured distance from the edge of pavement, or other permanent features.

3.0 Closure

The information provided in this report is in accordance with current engineering principles and practices (Standard of Practice). The findings of this report were based on information provided (field investigation).

All information provided in this report is subject to our standard terms and conditions for engineering services, a copy of which is provided to each of our clients with the original scope of work, or a mutually executed standard engineering services agreement. If these conditions are not attached, and you are not already in possession of such terms and conditions, contact our office and you will be promptly provided with a copy.

This report has been prepared by TREK Geotechnical Inc. (the Consultant) for the exclusive use of Stantec Consulting Ltd. (the Client) and their agents for the work product presented in the report. Any findings or recommendations provided in this report are not to be used or relied upon by any third parties, except as agreed to in writing by the Client and Consultant prior to use.

Figures

Z:\Projects\1000 Soils Lab\1000 Lab Projects\1000-240-01 25-C-02 Portage Ave Coring\3 Survey and Dwg\3.4 CAD\3.4.3 Working Folder\Figs 01 to 04 2025-01-29 Portage Ave 0_A 1000-240-01.dwg, 2025-02-05 9:43:40 AM



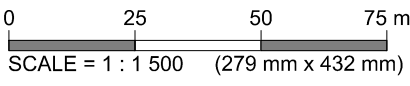
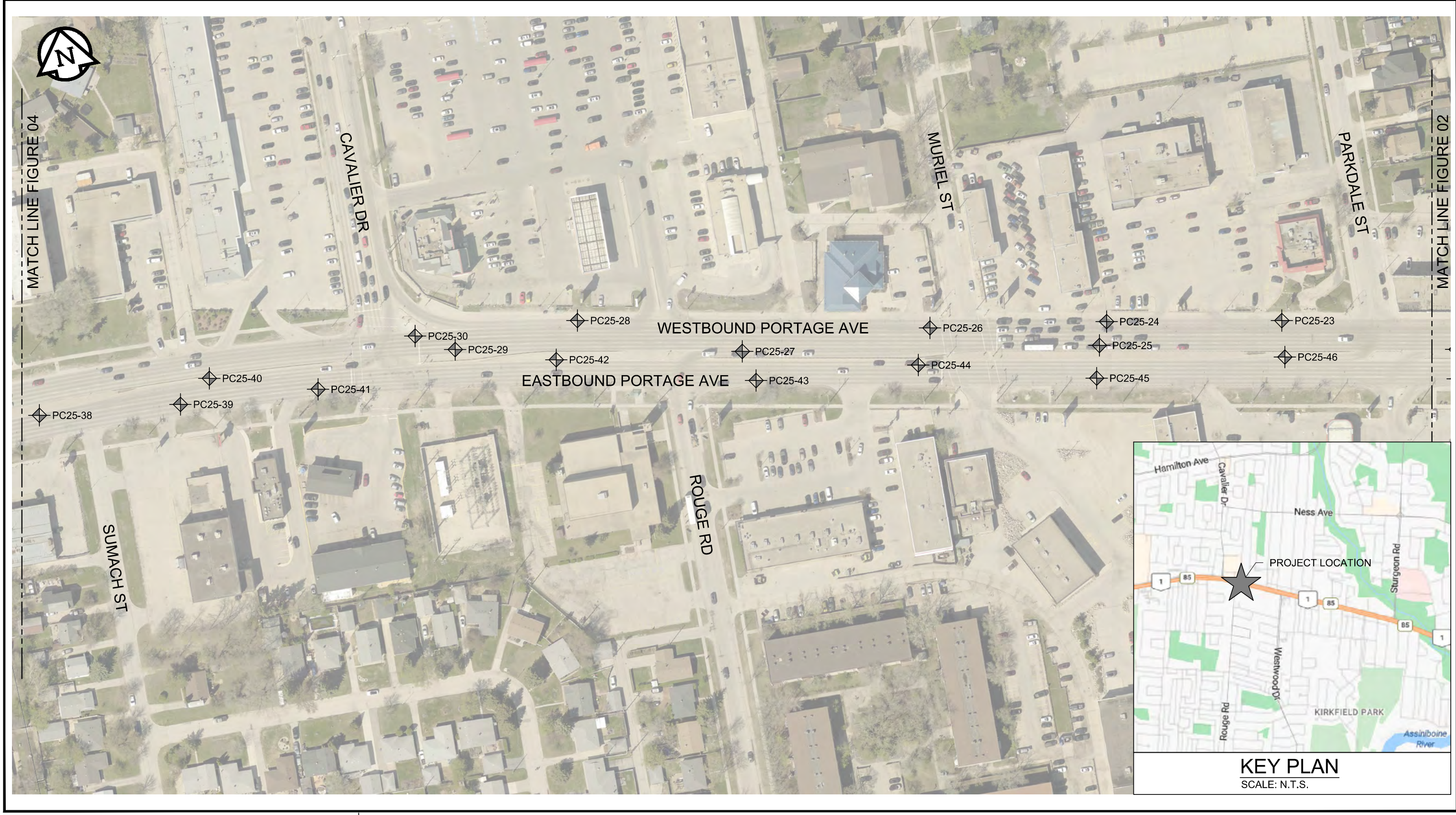
Z:\Projects\1000 Soils Lab\1000 Lab Projects\1000-240-01 25-C-02 Portage Ave Coring\3 Survey and Dwg\3.4 CAD\3.4.3 Working Folder\Figs 01 to 04 2025-01-29 Portage Ave 0_A 1000-240-01.dwg, 2025-02-05 9:43:17 AM



0 25 50 75 m
SCALE = 1 : 1 500 (279 mm x 432 mm)

Figure 02
Pavement Core Location Plan

Z:\Projects\1000 Soils Lab\1000 Lab Projects\1000-240-01 25-C-02 Portage Ave Coring\3 Survey and Dwg\3.4 CAD\3.4.3 Working Folder\Figs 01 to 04 2025-01-29 Portage Ave 0_A 1000-240-01.dwg, 2025-02-05 9:42:43 AM



LEGEND: PAVEMENT CORE (TREK, 2025)

NOTES: 1. AERIAL IMAGERY FROM CITY OF WINNIPEG (2024).

KEY PLAN
 SCALE: N.T.S.

Figure 03
 Pavement Core Location Plan

Z:\Projects\1000 Soils Lab\1000 Lab Projects\1000-240-01 25-C-02 Portage Ave Coring\3 Survey and Dwg\3.4 CAD\3.4.3 Working Folder\Figs 01 to 04 2025-01-29 Portage Ave 0_A_1000-240-01.dwg, 2025-02-05 9:42:16 AM



0 25 50 75 m
SCALE = 1 : 1 500 (279 mm x 432 mm)

LEGEND: ◆ PAVEMENT CORE (TREK, 2025)

NOTES: 1. AERIAL IMAGERY FROM CITY OF WINNIPEG (2024).

Figure 04
Pavement Core Location Plan

Appendix A

Summary Table and Pavement Core Photos

Portage Avenue – Sturgeon Road to David Street



**2025 Portage Avenue Pavement Renewals
25-C-02 Portage Avenue Coring**

Pavement Core No.	Pavement Core Location	Pavement Surface		Pavement Structure Material	
		Type	Thickness (mm)	Type	Thickness (mm)
PC25-01	UTM : 5526667 m N, 623623 m E; Located at #3011 Portage Ave, Westbound Curb Lane, 1.5 m South of North curb	Asphalt	115	Concrete	210
PC25-02	UTM : 5526678 m N, 623546 m E; Located at #3025 Portage Ave, Westbound Turning Lane, 1.2 m North of South curb	Asphalt	110	Concrete	215
PC25-03	UTM : 5526703 m N, 623482 m E; Located at #3043 Portage Ave, Westbound Curb Lane, 1.1 m South of North curb	Asphalt	80	Concrete	180
PC25-04	UTM : 5526703 m N, 623482 m E; Located at #3043 Portage Ave, Westbound Curb Lane, 1.2 m South of North curb	Asphalt	85	Concrete	205
PC25-05	UTM : 5526707 m N, 623403 m E; Located at #3081 Portage Ave, Westbound Turning Lane, 1.4 m North of South curb	Asphalt	130	Concrete	185
PC25-06	UTM : 5526735 m N, 623335 m E; Located at #3074 Portage Ave, Westbound Curb Lane, 1.3 m South of North curb	Asphalt	110	Concrete	210
PC25-07	UTM : 5526731 m N, 623289 m E; Located at #3095 Portage Ave, Westbound Turning Lane, 1.4 m North of South curb	Asphalt	60	Concrete	225
PC25-08	UTM : 5526746 m N, 623256 m E; Located at #3111 Portage Ave, Westbound Median Lane, 1.3 m North of South curb	Asphalt	75	Concrete	220
PC25-09	UTM : 5526775 m N, 623174 m E; Located at #3129 Portage Ave, Westbound Curb Lane, 1.5 m South of North curb	Asphalt	100	Concrete	220
PC25-10	UTM : 5526778 m N, 623104 m E; Located at #3143 Portage Ave, Westbound Turning Lane, 1.5 m North of South curb	Asphalt	110	Concrete	190
PC25-11	UTM : 5526801 m N, 623049 m E; Located at #3161 Portage Ave, Westbound Curb Lane, 1.0 m South of North curb	Asphalt	90	Concrete	190
PC25-12	UTM : 5526802 m N, 623993 m E; Located at #3180 Portage Ave, Westbound Turning Lane, 1.0 m North of South curb	Asphalt	70	Concrete	190
PC25-13	UTM : 5526822 m N, 623930 m E; Located at #3197 Portage Ave, Westbound Curb Lane, 1.0 m South of North curb	Asphalt	65	Concrete	195
PC25-14	UTM : 5526816 m N, 622930 m E; Located at #3197 Portage Ave, Westbound Turning Lane, 1.5 m North of South curb	Asphalt	90	Concrete	200



**2025 Portage Avenue Pavement Renewals
25-C-02 Portage Avenue Coring**

Pavement Core No.	Pavement Core Location	Pavement Surface		Pavement Structure Material	
		Type	Thickness (mm)	Type	Thickness (mm)
PC25-15	UTM : 5526841 m N, 622859 m E; Located at #3217 Portage Ave, Westbound Curb Lane, 1.3 m South of North curb	Asphalt	225	Concrete	215
PC25-16	UTM : 5526839 m N, 622811 m E; Located at #3217 Portage Ave, Westbound Turning Lane, 1.5 m North of South curb	Asphalt	75	Concrete	205
PC25-17	UTM : 5526841 m N, 622764 m E; Located at #3247 Portage Ave, Westbound Curb Lane, 1.4 m South of North curb	Asphalt	140	Concrete	210
PC25-18	UTM : 5526851 m N, 622739 m E; Located at #3247 Portage Ave, Westbound Turning Lane, 1.2 m North of South curb	Asphalt	90	Concrete	250
PC25-19	UTM : 5526872 m N, 622666 m E; Located at #3261 Portage Ave, Westbound Turning Lane, 1.5 m North of South curb	Asphalt	110	Concrete	200
PC25-20	UTM : 5526886 m N, 622670 m E; Located at #3261 Portage Ave, Westbound Curb Lane, 1.3 m South of North curb	Asphalt	105	Concrete	210
PC25-21	UTM : 55226900 m N, 622599 m E; Located at #3269 Portage Ave, Westbound Curb Lane, 1.4 m South of North curb	Asphalt	70	Concrete	200
PC25-22	UTM : 5526904 m N, 622521 m E; Located at #3305 Portage Ave, Westbound Turning Lane, 1.3 m North of South curb	Asphalt	90	Concrete	180
PC25-23	UTM : 5526931 m N, 622453 m E; Located at #3315 Portage Ave, Westbound Curb Lane, 1.2 m South of North curb	Asphalt	70	Concrete	200
PC25-24	UTM : 5526946 m N, 622382 m E; Located at #3335 Portage Ave, Westbound Curb Lane, 1.1 m South of North curb	Asphalt	90	Concrete	180
PC25-25	UTM : 5526935 m N, 622377 m E; Located at #3335 Portage Ave, Westbound Turning Lane, 1.4 m North of South curb	Asphalt	65	Concrete	200
PC25-26	UTM : 5526959 m N, 622310 m E; Located at #3365 Portage Ave, Westbound Curb Lane, 1.3 m South of North curb	Asphalt	65	Concrete	200
PC25-27	UTM : 5526966 m N, 622232 m E; Located at #3369 Portage Ave, Westbound Turning Lane, 1.3 m North of South curb	Asphalt	65	Concrete	190
PC25-28	UTM : 5526997 m N, 622168 m E; Located at #3393 Portage Ave, Westbound Curb Lane, 1.2 m South of North curb	Asphalt	95	Concrete	225
PC25-29	UTM : 5526984 m N, 622116 m E; Located at #3401 Portage Ave, Westbound Turning Lane, 1.3 m North of South curb	Asphalt	65	Concrete	200
PC25-30	UTM : 5527000 m N, 622102 m E; Located at #3401 Portage Ave, Westbound Curb Lane, 1.3 m South of North curb	Asphalt	70	Concrete	170



**2025 Portage Avenue Pavement Renewals
25-C-02 Portage Avenue Coring**

Pavement Core No.	Pavement Core Location	Pavement Surface		Pavement Structure Material	
		Type	Thickness (mm)	Type	Thickness (mm)
PC25-31	UTM : 5526922 m N, 621437 m E; Located at #3580 Portage Ave, Eastbound Curb Lane, 1.5 m North of South curb	Asphalt	125	Concrete	210
PC25-32	UTM : 5526942 m N, 621504 m E; Located at #3570 Portage Ave, Eastbound Turning Lane, 1.3 m South of North curb	Asphalt	100	Concrete	220
PC25-33	UTM : 5526948 m N, 621572 m E; Located at #3550 Portage Ave, Eastbound Curb Lane, 1.3 m North of South curb	Asphalt	70	Concrete	110
PC25-34	UTM : 5526969 m N, 621650 m E; Located at #3530 Portage Ave, Eastbound Turning Lane, 1.4 m South of North curb	Asphalt	130	Concrete	200
PC25-35	UTM : 5526976 m N, 621723 m E; Located at #3500 Portage Ave, Eastbound Curb Lane, 1.2 m North of South curb	Asphalt	90	Concrete	230
PC25-36	UTM : 5526996 m N, 621794 m E; Located at #3480 Portage Ave, Eastbound Turning Lane, 1.4 m South of North curb	Asphalt	110	Concrete	200
PC25-37	UTM : 5526994 m N, 621860 m E; Located at #3580 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	70	Concrete	200
PC25-38	UTM : 5527002 m N, 621942 m E; Located at #3451 Portage Ave, Eastbound Median Lane, 1.6 m South of North curb	Asphalt	110	Concrete	210
PC25-39	UTM : 5526994 m N, 622000 m E; Located at #3428 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	75	Concrete	200
PC25-40	UTM : 5527003 m N, 622015 m E; Located at #3428 Portage Ave, Eastbound Turning Lane, 1.3 m South of North curb	Asphalt	155	Concrete	215
PC25-41	UTM : 5526988 m N, 622057 m E; Located at #3400 Portage Ave, Eastbound Curb Lane, 1.5 m North of South curb	Asphalt	90	Concrete	180
PC25-42	UTM : 5526979 m N, 622156 m E; Located at #3390 Portage Ave, Eastbound Turning Lane, 1.6 m South of North curb	Asphalt	55	Concrete	220
PC25-43	UTM : 5526952 m N, 622236 m E; Located at #3380 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	70	Concrete	200
PC25-44	UTM : 5526945 m N, 622301 m E; Located at #3354 Portage Ave, Eastbound Median Lane, 1.6 m South of North curb	Asphalt	130	Concrete	160
PC25-45	UTM : 5526922 m N, 622373 m E; Located at #3330 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	95	Concrete	205
PC25-46	UTM : 5526915 m N, 622450 m E; Located at #3316 Portage Ave, Eastbound Turning Lane, 1.5 m South of North curb	Asphalt	155	Concrete	200



**2025 Portage Avenue Pavement Renewals
25-C-02 Portage Avenue Coring**

Pavement Core No.	Pavement Core Location	Pavement Surface		Pavement Structure Material	
		Type	Thickness (mm)	Type	Thickness (mm)
PC25-47	UTM : 5526890 m N, 622519 m E; Located at #3296 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	105	Concrete	205
PC25-48	UTM : 5526880 m N, 622595 m E; Located 20 m West of Westwood Drive on Portage Ave, Eastbound Median Lane, 1.7 m South of North curb	Asphalt	165	Concrete	185
PC25-49	UTM : 5526781 m N, 623038 m E; Located at #3166 Portage Ave, Eastbound Median Lane, 1.5 m South of North curb	Asphalt	105	Concrete	205
PC25-50	UTM : 5526755 m N, 623044 m E; Located at #3166 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	90	Concrete	200
PC25-51	UTM : 5526756 m N, 623102 m E; Located at #3140 Portage Ave, Eastbound Curb Lane, 1.4 m North of South curb	Asphalt	120	Concrete	210
PC25-52	UTM : 5526741 m N, 623184 m E; Located at #3120 Portage Ave, Eastbound Curb Lane, 1.7 m North of South curb	Asphalt	120	Concrete	245
PC25-53	UTM : 5526706 m N, 623324 m E; Located at #3074 Portage Ave, Eastbound Curb Lane, 1.8 m North of South curb	Asphalt	125	Concrete	225
PC25-54	UTM : 5526686 m N, 623468 m E; Located at #3042 Portage Ave, Eastbound Curb Lane, 1.5 m North of South curb	Asphalt	120	Concrete	130
PC25-55	UTM : 5526639 m N, 623606 m E; Located at #3010 Portage Ave, Eastbound Curb Lane, 1.5 m North of South curb	Asphalt	40	Concrete	160
PC25-56	UTM : 5526766 m N, 623104 m E; Located at #3140 Portage Ave, Eastbound Median Lane, 1.3 m South of North curb	Asphalt	130	Concrete	180
PC25-57	UTM : 5526734 m N, 623255 m E; Located at #3104b Portage Ave, Eastbound Median Lane, 1.6 m South of North curb	Asphalt	105	Concrete	205
PC25-58	UTM : 5526699 m N, 623411 m E; Located at #3060 Portage Ave, Eastbound Median Lane, 1.8 m South of North curb	Asphalt	95	Concrete	195
PC25-59	UTM : 5526687 m N, 623474 m E; Located at #3042 Portage Ave, Eastbound Turning Lane, 1.7 m South of North curb	Asphalt	105	Concrete	215
PC25-60	UTM : 5526675 m N, 623550 m E; Located at #3020 Portage Ave, Eastbound Turning Lane, 1.8 m South of North curb	Asphalt	125	Concrete	175



Photo 1: Pavement Core Sample at PC25-01



Photo 2: Pavement Core Sample at PC25-02



Photo 3: Pavement Core Sample at PC25-03



Photo 4: Pavement Core Sample at PC25-04



Photo 5: Pavement Core Sample at PC25-05



Photo 6: Pavement Core Sample at PC25-06



Photo 7: Pavement Core Sample at PC25-07



Photo 8: Pavement Core Sample at PC25-08



Photo 9: Pavement Core Sample at PC25-09



Photo 10: Pavement Core Sample at PC25-10



Photo 11: Pavement Core Sample at PC25-11



Photo 12: Pavement Core Sample at PC25-12

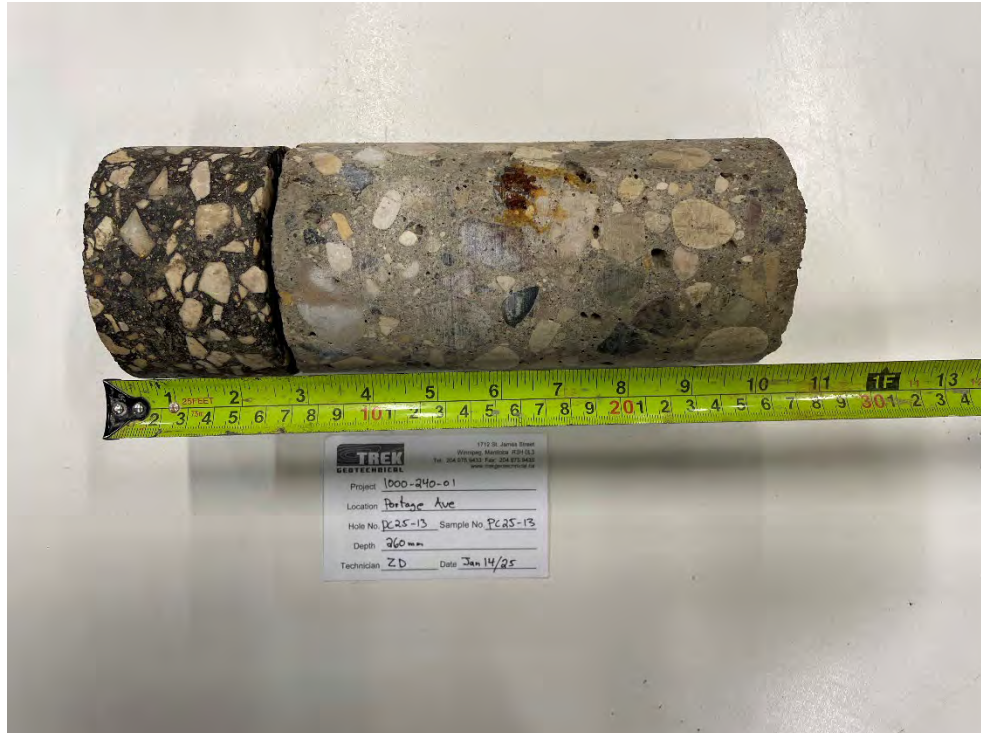


Photo 13: Pavement Core Sample at PC25-13



Photo 14: Pavement Core Sample at PC25-14



Photo 15: Pavement Core Sample at PC25-15



Photo 16: Pavement Core Sample at PC25-16



Photo 17: Pavement Core Sample at PC25-17



Photo 18: Pavement Core Sample at PC25-18



Photo 19: Pavement Core Sample at PC25-19



Photo 20: Pavement Core Sample at PC25-20



Photo 21: Pavement Core Sample at PC25-21



Photo 22: Pavement Core Sample at PC25-22



Photo 23: Pavement Core Sample at PC25-23



Photo 24: Pavement Core Sample at PC25-24



Photo 25: Pavement Core Sample at PC25-25



Photo 26: Pavement Core Sample at PC25-26



Photo 27: Pavement Core Sample at PC25-27



Photo 28: Pavement Core Sample at PC25-28



Photo 29: Pavement Core Sample at PC25-29



Photo 30: Pavement Core Sample at PC25-30



Photo 31: Pavement Core Sample at PC25-31



Photo 32: Pavement Core Sample at PC25-32



Photo 33: Pavement Core Sample at PC25-33



Photo 34: Pavement Core Sample at PC25-34



Photo 35: Pavement Core Sample at PC25-35



Photo 36: Pavement Core Sample at PC25-36



Photo 37: Pavement Core Sample at PC25-37



Photo 38: Pavement Core Sample at PC25-38



Photo 39: Pavement Core Sample at PC25-39



Photo 40: Pavement Core Sample at PC25-40



Photo 41: Pavement Core Sample at PC25-41



Photo 42: Pavement Core Sample at PC25-42



Photo 43: Pavement Core Sample at PC25-43



Photo 44: Pavement Core Sample at PC25-44



Photo 45: Pavement Core Sample at PC25-45



Photo 46: Pavement Core Sample at PC25-46



Photo 47: Pavement Core Sample at PC25-47



Photo 48: Pavement Core Sample at PC25-48



Photo 49: Pavement Core Sample at PC25-49



Photo 50: Pavement Core Sample at PC25-50



Photo 51: Pavement Core Sample at PC24-51



Photo 52: Pavement Core Sample at PC25-52

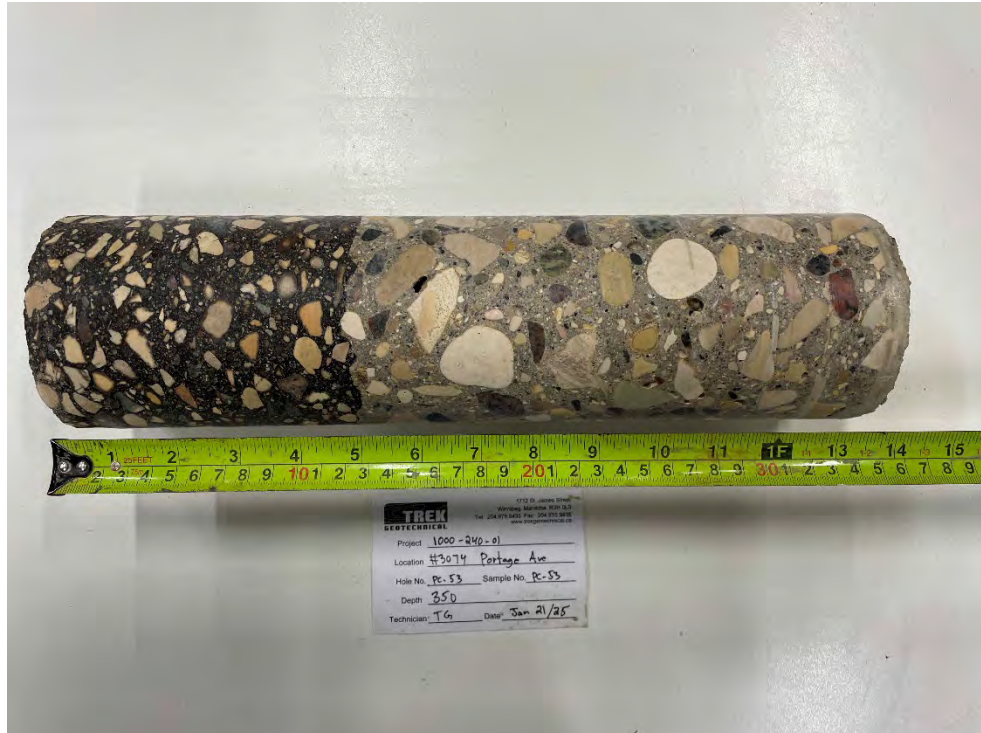


Photo 53: Pavement Core Sample at PC25-53



Photo 54: Pavement Core Sample at PC25-54



Photo 55: Pavement Core Sample at PC25-55



Photo 56: Pavement Core Sample at PC25-56



Photo 57: Pavement Core Sample at PC25-57



Photo 58: Pavement Core Sample at PC25-58



Photo 59: Pavement Core Sample at PC25-59



Photo 60: Pavement Core Sample at PC25-60