

APPENDIX 'G'

GEOTECHNICAL REPORT

APPENDIX 'G' - GEOTECHNICAL REPORT

The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

City of Winnipeg

2019 – 2023 Downtown Pavement Renewals – Broadway (Memorial Boulevard to Main Street)

Table 01 – Pavement Core Hole Summary

Core Hole No.	Core Hole Location	Pavement Structure		Remarks	Soil Description	Sample Depth (m)	Moisture Content (%)	Hydrometer Analysis				Atterberg Limits		
		Type	Thickness (mm)					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
CH22-01	Broadway E/B – 27.5 m W of Kennedy St., 1.6 m N of S curb (Pavement Joint)	Asphalt	100	Partially recovered.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										
CH22-02	Broadway E/B – 32.4 m W of Kennedy St., 2.6 m N of S curb (Pavement Slab)	Asphalt	210											
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										
CH22-03	Broadway W/B – 9.5 m W of Kennedy St., 1.5 m S of N curb (Pavement Slab)	Asphalt	100											
		Concrete	150	Partially recovered.										
CH22-04	Broadway W/B – 27.1 m W of Kennedy St., 4.1 m S of N curb (Pavement Slab)	Asphalt	75											
		Concrete	200											
CH22-05	Broadway W/B – 22.5 m W of Kennedy St., 2.1 m N of Median curb (Pavement Slab)	Asphalt	130											
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										

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Table 02 –Pavement Core Hole Summary

Core Hole No.	Core Hole Location	Pavement Structure		Remarks	Soil Description	Sample Depth (m)	Moisture Content (%)	Hydrometer Analysis				Atterberg Limits		
		Type	Thickness (mm)					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
CH22-06	Broadway E/B – 16.2 m E of Fort St., 1.4 m N of S curb (Pavement Joint)	Asphalt	0	No recovery. Specimen decomposed to granular and irretrievable.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										
CH22-07	Broadway E/B – 24.0 m W of Main St., 4.5 m S of median curb (Pavement Joint)	Asphalt	0	No recovery. Specimen decomposed to granular and irretrievable.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										
CH22-08	Broadway E/B – 18.1 m W of Main St., 1.6 m S of median curb (Pavement Slab)	Asphalt	150											
		Concrete	180											
CH22-09	Broadway W/B – 25.0 m W of Main St., 1.9 m S of N curb (Pavement Slab)	Asphalt	110											
		Concrete	180											
CH22-10	Broadway W/B – 29.9 m W of Main St., 1.9 m S of N curb (Pavement Joint)	Asphalt	60	Partially recovered.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										

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Table 03 – Pavement Core Hole Summary

Core Hole No.	Core Hole Location	Pavement Structure		Remarks	Soil Description	Sample Depth (m)	Moisture Content (%)	Hydrometer Analysis				Atterberg Limits		
		Type	Thickness (mm)					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
CH22-11	Broadway W/B – 23.9 m E of Fort St., 4.6 m S of N curb (Pavement Joint)	Asphalt	100	No recovery. Specimen decomposed to granular and irretrievable.										
		Concrete	0											
CH22-12	Broadway W/B – 33.8 m E of Garry St., 1.5 m S of N curb (Pavement Joint)	Asphalt	60	Partially recovered.										
		Concrete	160	Partially recovered.										
CH22-13	Broadway W/B – 30.7 m E of Garry St., 3.8 m S of N curb (Pavement Slab)	Asphalt	60											
		Concrete	200											
CH22-14	Broadway W/B – 18.7 m E of Garry St., 1.4 m N of median curb (Pavement Joint)	Asphalt	0	No recovery. Specimen decomposed to granular and irretrievable.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										
CH22-15	Broadway E/B – 22.8 m E of Garry St., 1.4 m N of S curb (Pavement Joint)	Asphalt	0	No recovery. Specimen decomposed to granular and irretrievable.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										

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2019 – 2023 Downtown Pavement Renewals – Broadway (Memorial Boulevard to Main Street)

Table 04 – Pavement Core Hole Summary

Core Hole No.	Core Hole Location	Pavement Structure		Remarks	Soil Description	Sample Depth (m)	Moisture Content (%)	Hydrometer Analysis				Atterberg Limits		
		Type	Thickness (mm)					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
CH22-16	Broadway E/B – 31.0 m E of Garry St., 1.4 m N of S curb (Pavement Slab)	Asphalt	70	Partially recovered.										
		Concrete	0	No recovery. Specimen decomposed to granular and irretrievable.										
CH22-17	Broadway E/B – 37.2 m E of Garry St., 3.8 m N of S curb (Pavement Joint)	Asphalt	60											
		Concrete	100	Partially recovered.										
CH22-18	Broadway W/B – 45.8 m E of Smith St., 4.5 m S of N curb (Pavement Joint)	Asphalt	100											
		Concrete	175											
CH22-19	Broadway W/B – 40.5 m E of Smith St., 4.3 m S of N curb (Pavement Slab)	Asphalt	60											
		Concrete	210											
CH22-20	Broadway W/B – 37.9 m E of Smith St., 1.3 m N of median curb (Pavement Joint)	Asphalt	0	No recovery. Specimen decomposed to granular and irretrievable.										
		Concrete	130	Partially recovered.										

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Table 05 – Pavement Core Hole Summary

Core Hole No.	Core Hole Location	Pavement Structure		Remarks	Soil Description	Sample Depth (m)	Moisture Content (%)	Hydrometer Analysis				Atterberg Limits		
		Type	Thickness (mm)					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
CH22-21	Broadway W/B – 38.6 m E of Donald St., 4.4 m S of N curb (Pavement Joint)	Asphalt	50	Partially recovered.										
		Concrete	160											
CH22-22	Broadway W/B – 34.8 m E of Donald St., 1.4 m N of median curb (Pavement Slab)	Asphalt	60											
		Concrete	200											
CH22-23	Broadway W/B – 30.3 m E of Donald St., 1.5 m N of median curb (Pavement Joint)	Asphalt	50											
		Concrete	160											



Photograph 1: CH22-01 – Broadway



Photograph 2: CH22-02 – Broadway



Photograph 3: CH22-03 – Broadway



Photograph 4: CH22-04 – Broadway



Photograph 5: CH22-05 – Broadway



Photograph 6: CH22-08 – Broadway



Photograph 7: CH22-09 – Broadway



Photograph 8: CH22-10 – Broadway



Photograph 9: CH22-11 – Broadway



Photograph 10: CH22-12 – Broadway



Photograph 11: CH22-13 – Broadway



Photograph 12: CH22-16 – Broadway



Photograph 13: CH22-17 – Broadway



Photograph 14: CH22-18 – Broadway



Photograph 15: CH22-19 – Broadway



Photograph 16: CH22-20 – Broadway



Photograph 17: CH22-21 – Broadway



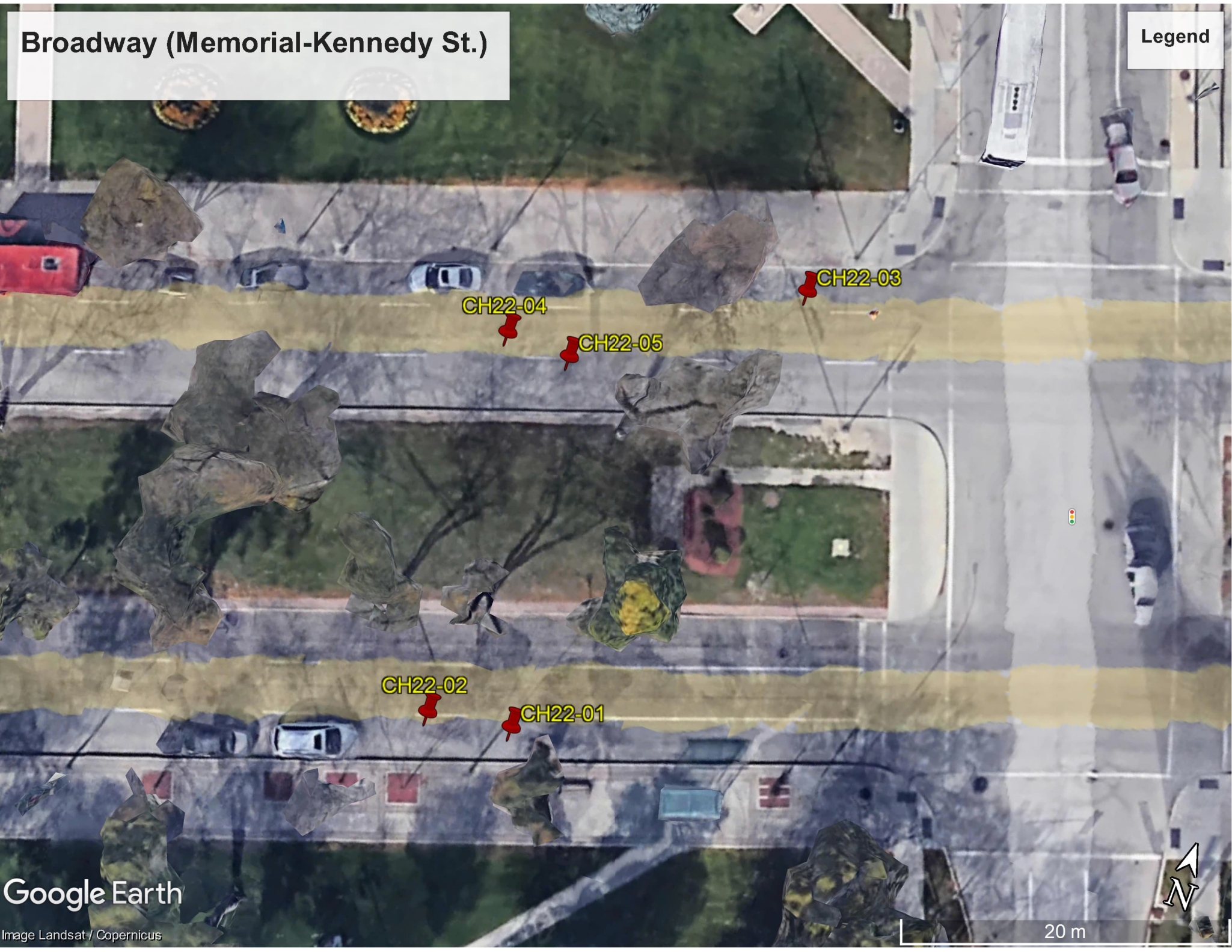
Photograph 18: CH22-22 – Broadway



Photograph 19: CH22-23 – Broadway

Broadway (Memorial-Kennedy St.)

Legend



Google Earth

Image Landsat / Copernicus



20 m

Broadway (Fort St - Main St.)

Legend

Wawanesa Insurance

P Parking - Main Street & Broadway

CH22-11

CH22-10

CH22-09

CH22-08

CH22-07

CH22-06

52

Google Earth

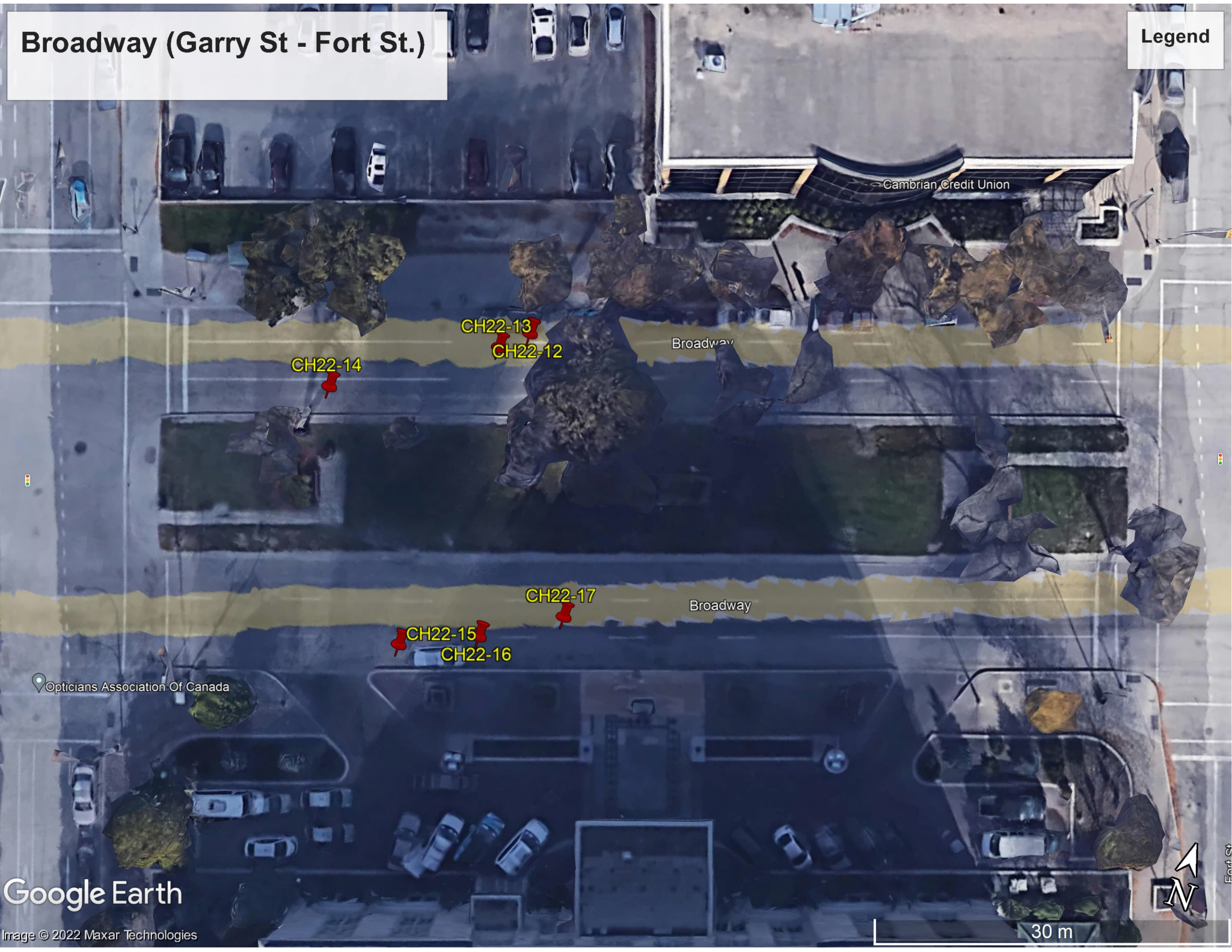
Image © 2022 Maxar Technologies



30 m

Broadway (Garry St - Fort St.)

Legend



Cambrian Credit Union

Broadway

Broadway

Opticians Association Of Canada

Google Earth

Image © 2022 Maxar Technologies

30 m



Fort St

Broadway (Smith St - Garry St.)

Legend

275 Trans-Canada Hwy Parking

CH22-20
CH20-19
CH22-18

Google Earth

Image © 2022 Maxar Technologies

Nelson Apartments

30 m



Broadway (Donald St. - Smith St.)

Legend

Starbucks

Legal Aid Manitoba

CH20-21

CH22-23

CH22-22

RBC Royal Bank ATM

Broadway

Google Earth

Espresso Bar
Image © 2022 Maxar Technologies

30 m

