MUNICIPALITY OF SOUTH BRUCE

Road Condition Assessment

DECEMBER 2020

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1. INTRODUCTION

The Municipality of South Bruce retained Cobide Engineering (Cobide) to provide engineering services related to the completion of a Road Condition Assessment for all roadways within the Municipality.

In 1987 the Ministry of Transportation and Communication published a "Methods and Inventory Manual - Road Management Plan for Small Lower Tier Municipalities." The Ministry, which is now the Ministry of Transportation Ontario (MTO), encourages the municipalities in the small lower tier group to undertake a road management study and formulate a road management plan using the guidelines set out in the manual.

This assessment, which will include the five (5) year period of 2021 – 2026, is the third assessment undertaken by the Municipality of South Bruce as part of its Asset Management Plan. The previous studies completed in 2008 and 2016 were built upon and used as background for this report. The road network and conditions however was not included in Public Sector Digest's (PSD's) previously completed Asset Management Plan however condition ratings were given to each segment of road. A base template was provided by PSD to compile information regarding the road sections.

1.1 PURPOSE

The purpose for undertaking a road management study is to:

- a) Clearly identify the Municipality's road system;
- b) Inventory the road system by road section taking into account its use, condition, geometric elements and surface type;
- Identify those road sections in need of improvement, the type of improvement and an estimate of cost;
- d) Prepare a five (5) year maintenance and construction program within existing levels of expenditures.

In addition, the study will be a reference document for the Municipality of South Bruce for long range financial planning of the Municipality's road needs to ensure that the level of service is provided within the expectations of ratepayers, Council and Staff.

Maps showing the various road segments are shown in Appendix A.

2. STUDY METHODS

2.1 GENERAL

Data for the road segments were collected and analyzed based on the procedures outlined in "SP-022 Flexible Pavement Rating – Guideline for Municipalities" (Ministry of Transportation (MTO), 1989) and "PAV-86-02 Pavement Condition Index (PCI) for Flexible Pavements" (Ministry of Transportation, 1992). The paved road segments were evaluated by identifying a specific set of pavement defect on the surface of the road and recording their severity and density as a proportion of the overall road segment in order to establish the Distress Manifestation Index (DMI).

A Ride Comfort Rating (RCR) was also established for each segment of paved road evaluated. As per SP-022 from the MTO, RCR is a subjective evaluation by a driver travelling at the posted speed limit and rating the road on a scale of 1-10. A rating of 10 would indicate a smooth ride with no discomfort to the driver while a rating of 0 would indicate a very rough road with significant discomfort to the driver.

The DMI and RCR are then used to establish the Pavement Condition Index (PCI) using a mathematical formula outlined in PAV-86-02 by the MTO. The PCI ranges from 0 to 100 and is a common performance indicator. The greater the PCI value, the higher the performance of the roadway.

Gravel Roads were analyzed based on the surface distresses outlined in "SP-025 Manual for Condition Rating of Gravel Surface Roads" (Ministry of Transportation, 1989). This document outlines distresses that are unique to gravel roads. Severity and density of distresses were then used to make recommendations for treatment. A Condition Rating (CR) was also provided for the gravel roads. Its important to note that the CR for gravel roads cannot be directly correlated to the RCR or PCI for paved roads and should only be used for comparing against other gravel roads.

The MTO recommends that the field work be complete in the spring when frost action is still visible and before routine maintenance has been completed. Due to the timing of award of the contract, this was not possible and field work was completed in the late summer and early fall. Based on this, some of the road segments ratings may be higher than they would have been if the field data had been collected in the spring. This will be most evident with the gravel road sections as they typically receive new gravel and are graded every spring to correct rutting, washboard etc that is caused by frost action.

2.2 INVENTORY AND APPRAISAL

An inventory of all the roads in the Municipality of South Bruce was reviewed and revised as necessary. A visual assessment of the structural integrity (condition rating) was made for each road section.

For inventory purposes, the road system has been divided into sections. Generally, a section is a street from one intersection to the next in an urban setting, or from concession to concession in a rural setting. Some sections are multiple blocks in length if there are similar surface types, roadside environments and in service dates. Each road has been assigned an asset ID number. The section numbers are shown on Maps SP1, SP2, SP3 and SP4 enclosed.

221 SURFACE TYPE

The surface type can be defined as Asphalt which is High Class Bituminous (HCB) Asphalt (Hot Mix), Surface Treatment which is Low Class Bituminous (LCB) also known as Tar & Chip or Gravel.

Table 1 - Road Surface Type Summary

CROSS SECTION	LENGTH (KM)	PERCENTAGE
Hot Mix (HCB)	64.73	15.7%
Surface Treatment	174.07	42.1%
Gravel	174.45	42.2%
Total	413.25	100%

2.2.2 ROADSIDE ENVIRONMENT

Describes the location of the road and the existing characteristics of the road.

For inventory purposes, road sections have been identified as Urban, Semi-urban and Rural depending on their design elements and environment.

Urban Roads with curb and gutter on both sides.

Semi-urban Roads located in an urban environment without curb and gutter.

Rural Roads that abut agricultural or forested lands typically with ditches. Some

segments do not have any roadside drainage.

Table 2 shows a summary of the total length of road by cross section within the Municipality.

Table 2 - Roadside Environment Summary

CROSS SECTION	LENGTH (KIVI)	PERCENTAGE
Rural	389.99	94.4%
Semi Urban	9.51	2.3%
Urban	13.75	3.3%
Total	413.25	100%

2.2.3 CONDITION RATING

In general, the rating system is shown in Table 3 as follows:

Table 3 - Ride Comfort Rating Outline

RIDE COMFORT RATING

9-10	Excellent	Very Smooth Ride
7-8	Good	Smooth Ride with few bumps
5-6	Fair	Comfortable with intermittent bumps
		Uncomfortable with moderately
2-4	Poor	rough and uneven surface
		Uncomfortable with very rough and
0-1	Very Poor	uneven surface – Nearly impassable

Table 4 shows a summary of the total length of each type of road per condition.

Table 4 - Ride Comfort Rating Summary

		2020	
Comfort Rating	LCB	НСВ	Gravel
9 – 10 (Excellent)	10.39	17.76	0
7 – 8 (Good)	49.64	28.73	93.39
5 – 6 (Fair)	76.28	16.95	70.67
2 – 4 (Poor)	37.76	1.29	10.39
0 – 1 (Very Poor)	0	0	0

2.2.4 DISTRESS MANIFESTATION INDEX

The paved road segments were evaluated by identifying a specific set of pavement defect on the surface of the road and recording their severity and density as a proportion of the overall road segment in accordance with the MTO Flexible Pavement Condition Rating Manual. The inspection looked for the following defects:

- Surface Defects:
 - Ravelling and Coarse Aggregate Loss
 - Flushing
- Surface Deformations:
 - Rippling and Shoving
 - Wheel Track Rutting
 - Distortion
- Cracking:
 - Longitudinal
 - Centerline
 - o Pavement Edge
 - Transverse
 - Mid-lane
 - o Random

The pavement defects were also categorized based on the severity and density.

Examples of some of the Pavement Distresses can be seen in Appendix B.

For gravel roads the following defects were assessed:

- Surface Defects:
 - Loose Gravel
 - o Dust
 - Potholes

- Breakup
- Surface Deformations:
 - Washboard
 - Rutting
 - o Flat/ Reverse Crown
 - Distortion

The gravel defects were also categorized based on the severity and density.

All of the defect information is then combined to establish a DMI for the road segment.

2.2.5 PAVEMENT CONDITION INDEX

Upon completion of the road network inspection and rating, a Pavement Condition Index was established for each segment. The PCI value represents the overall road condition rating and is a combination of the DMI and RCR values. Based on the PCI, an estimated timeline to improvements can be estimated.

Improvement timelines are based on the criteria shown in Table 5 below:

Table 5 - Road Improvement Timeline

TIME OF IMPROVEMENT	PCI
Acceptable for	
Foreseeable Future	>80
6 to 10 Years	70 – 80
1 to 5 Years	50 – 70
Resurface Now	30 – 50
Rehabilitate Now	<30

2.2.6 ROAD IMPROVEMENTS AND COSTS

A sample recommended improvement has been determined based on past experience and relative to the condition rating and traffic use for the section. Prior to implementing the recommended improvements in future years, each segment should be assessed to determine if deterioration has continued as projected.

The cost is based on the "2020 Benchmark Costs" which are listed in Appendix C. These costs should be reviewed on an annual basis as the cost of asphalt, surface treatment and Micro Surfacing continue to increase.

An inventory summary of the road sections is presented in Appendix D. The summary includes the pertinent details relating to each section.

2.3 TRAFFIC VOLUMES

The traffic ranges shown on the appraisal sheets have been carried forward from the previous Roads Needs Study. On some roads the traffic ranges vary considerably from summer to winter.

It would be useful to the Municipality of South Bruce to have more actual recorded traffic counts on the roads. The information would help support decisions made by Council and the Manager of Operations

with respect to design elements for road improvements, and priorities for improvements and maintenance. It is therefore important to ensure that the proper traffic volume is recorded for each road section.

2.4 ROAD LIFE SPANS

Like all assets road experience "wear and tear" and must be maintained. The typical lifespan for each surface type is outlined below:

- Asphalt (HCB) 20 year expected lifespan
- Surface Treatment (LCB) 7 year expected lifespan
- Gravel 80+ year expected lifespan however yearly maintenance is required
 - Since gravel roads require yearly maintenance, they deteriorate very slowly and are easily maintained at their current condition. Based on this it is very unlikely that a gravel road segment will require reconstruction.

As road deteriorate and resurfacing works are undertaken, there will typically be a reduction in lifespan each time resurfacing works are undertaken as existing deficiencies will eventually mirror from the existing base to the new surface.

2.5 GEOMETRIC DEFICIENCIES

The review of the horizontal and vertical alignments of the roads is beyond the scope of this study and have not been assessed. As roads are reconstructed or resurfaced, the segment should be reviewed to determine if there are geometric deficiencies and if they can be addressed via the proposed construction method.

SPECIFIC MAINTENANCE AND CONSTRUCTION NEEDS

Road sections with a condition rating of five (5) or less at the time of the road appraisal and roads that have been forecasted to become deficient within the five (5) year study period, the proposed rehabilitation has been costed. It should be noted that the report assumes that a like for like replacement program will be undertaken i.e. a surface treated road will have surface treatment re-applied. The Municipality may consider improvements based the increased life expectancies if budgets or funding sources allow. A decision to upgrade a road to a different surface type is a level of service decision that is beyond the scope of this report with the exception of in Town streets. If a full reconstruction is warranted, it is assumed that the segment would be urbanized.

The improvement strategies that can be applied to a segment of road are as follows:

IMPROVEMENT DESCRIPTION CODE Asphalt Overlay (50mm HL4) includes minor padding and OV repairs and shoulder gravel Single Surface Treatment SST **DST Double Surface Treatment Gravel Resurfacing** GR PP Pulverize and Pave (Rural or Semi Urban) MP Mill and Pave (Urban Only) **REC-G** Full Depth Excavation of Gravel Road and new Granulars Full Depth Excavation of Surface Treated Road, new REC-ST **Granulars and Double Surface Treatment** Full Depth Excavation of Asphalt Road, new Granulars and REC-A Two (2) lifts of Asphalt (50mm HL4 and 40mm HL3) Urban Reconstruction including Full Depth Excavation of Asphalt Road, new Granulars, curb and gutter on both UR sides and Two (2) lifts of Asphalt (50mm HL4 and 40mm HL3). Does not include sidewalk installation

Table 6 - Road Improvement Strategies

Reconstruction improvements are basically activities that will improve the structural adequacy of the road. This will typically occur at the same time as the replacement of the underground infrastructure if the road segment is in an urban environment.

The estimated costs of proposed improvements are based on the 2020 Benchmark Costs referred to previously in this report, and listed in Appendix C.

FIVE YEAR IMPROVEMENT PLAN

The recommended five (5) year improvement program is presented below based on timeline of need.

The road sections that have been recommended for improvement have been selected by analyzing the data from the road inventory. The timing of some segments may need to be modified to align with other Asset Management Goals and replacement schedules for underground infrastructure.

The types of improvement proposed have been determined on the basis of the guidelines in the manual and consultation with the Operations Manager with respect to practicability and cost. These should be individually reviewed on a project specific basis prior to implementation to ensure the proposed improvement is still viable and makes sense to improve the road segment.

The recommended improvement program should be reviewed annually by Council and the Operations Manager. Revisions to the program may be necessary because of unexpected changes in the condition of some roads, or where work that was programmed could not be completed or conversely, where more work was completed than was scheduled due to Budget surplus.

In addition to the annual review of the program, it is recommended that a major update of this Study be undertaken in approximately five (5) years.

4.1 RECONSTRUCT NOW

Based on the Pavement Condition Index, the following segments require full reconstruction as soon as possible.

Table 7 - Segments Requiring Immediate Reconstruction

Section ID	Street Name	From	То	Surface Material	PCI	Improvement	Projected Cost
4030	OTTER CR	Pinkerton St	Gray Court	НСВ	12	Urban Reconstruction	\$102,500.00
4031	OTTER CR	Gray Court	Dead End	НСВ	12	Urban Reconstruction	\$194,750.00
4032	GRAY CT	Otter Cres	Dead End	НСВ	12	Urban Reconstruction	\$102,500.00
4033	MELBA CT	Otter Cres	Dead End	НСВ	12	Urban Reconstruction	\$71,750.00
4057	LOUIS ST	Adam St	Louis St	НСВ	17	Urban Reconstruction	\$61,500.00
4058	LOUIS ST	Louis St	Dead End	НСВ	17	Urban Reconstruction	\$41,000.00
1022	CONCESSION 4	Bruce County Rd. 12	Side Rd. 5A	LCB	19	Reconstruction - Surface Treatment	\$887,400.00
2037	CONCESSION 12 E	Hwy 9	Side Rd 15 N	LCB	19	Reconstruction - Surface Treatment	\$290,000.00

4051	ADAM ST N	Absalom W	Dead End	НСВ	22	Urban Reconstruction	\$102,500.00
2046	CONCESSION 10 EAST	Hwy 9	Side Rd 15 N	LCB	22	Reconstruction - Surface Treatment	\$632,200.00
1030	CONCESSION 10	Side Rd. 25 N	Side Rd. 20 B	LCB	23	Reconstruction - Surface Treatment	\$603,200.00
1064	SIDEROAD 32	Conc. 10	Conc. 12	LCB	24	Reconstruction - Surface Treatment	\$597,400.00
1032	CONCESSION 10	Bruce County Rd.	Side Rd. 10 B	LCB	24	Reconstruction - Surface Treatment	\$591,600.00
1034	CONCESSION 10	Side Rd. 5 B	Side Rd. 1 B	LCB	25	Reconstruction - Surface Treatment	\$591,600.00
2032	CONCESSION 10	B-Line	Bruce Rd 12	LCB	27	Reconstruction - Surface Treatment	\$591,600.00
1026	CONCESSION 8	Bruce Rd. 4	Side Rd. 25 N	LCB	30	Reconstruction - Surface Treatment	\$1,183,200.00
2026	CONCESSION 6 EAST	Side Rd 25	Side Rd 30 N	LCB	30	Reconstruction - Surface Treatment	\$585,800.00

Staff and Council will need to factor in the amount of traffic on some of these segments before making decisions. Some segments only serve a limited number of users and therefore will be a lower priority than the road segments that have more users.

It should be noted that Cobide Staff have had previous discussions with the former Manager of Operations regarding the reconstruction of Otter Crescent, Gray Court and Melba Court along with Pinkerton Street.

4.2 RESURFACE NOW

Based on the Pavement Condition Index, the following segments require resurfacing as soon as possible.

Table 8 - Segments Requiring Immediate Resurfacing

Section ID	Street Name	From	То	Surface Material	PCI	Improvement	Projected Cost
1033	CONCESSION 10	Side Rd. 10 B	Side Rd. 5 B	LCB	32	Double Surface Treatment	\$192,850.00
1047	CONCESSION 14 W	Bruce County Rd. 12	Side Rd. 5 B	LCB	33	Double Surface Treatment	\$289,750.00
2079	SIDEROAD 20 NORTH	Bruce Rd 6	240m south of Bruce Road 6	LCB	33	Double Surface Treatment	\$22,800.00
1031	CONCESSION 10	Side Rd. 20 B	Bruce County Rd. 4	LCB	34	Double Surface Treatment	\$191,900.00
2050	CONCESSION 14	Side Rd 30N	Side Rd 25	LCB	34	Double Surface Treatment	\$193,800.00
2045	CONCESSION 10 EAST	Side Rd 15 N	Side Rd 20 N	LCB	35	Double Surface Treatment	\$195,700.00
2044	CONCESSION 10 EAST	Side Rd 20 N	Side Rd 25 N	LCB	35	Double Surface Treatment	\$193,800.00

						Double Surface	
2035	SCHAEFER ROAD	Conc. 12 E	Bruce Rd 3	LCB	35	Treatment	\$140,600.00
4048	ADAM STREET	Church St	Louis St	НСВ	36	Mill and Pave	\$21,000.00
		Bruce					, ,
1036	CONCESSION 12	County Rd.	Side Rd. 5 B	LCB		Double Surface	
		12			36	Treatment	\$285,000.00
2042	CONCESSION 10	SIL DIOEN	C: D 20 N	LCD		Double Surface	
2043	EAST	Side Rd 25 N	Side Rd. 30 N	LCB	39	Treatment	\$192,850.00
2042	CONCESSION 10	Side Rd. 30	West Grey	LCB		Double Surface	
2042	EAST	N	Boundary	LCB	40	Treatment	\$167,200.00
4047	ADAM ST S	Church St	Road Close	НСВ			
4047	ADAIVI 31 3	Church St	Sign	псь	40	Pulverize and Pave	\$115,050.00
		200m South					
1073.1	SIDEROAD 25	of	300m South of	LCB			
10/3.1	SOUTH	Concession	Concession 2	LCD		Double Surface	
		2			42	Treatment	\$9,500.00
1029	CONCESSION 10	Side Rd. 32	Scott Court	LCB		Double Surface	
1023	CONCLOSION 10	Side Nd. 32	Scott Court	LCD	43	Treatment	\$77,900.00
1029.2	CONCESSION 10	Side Rd. 32	Side Rd. 25 N	LCB		Double Surface	
1029.2	CONCESSION 10	Side Nd. 32	Side Rd. 25 N	LCB	43	Treatment	\$38,000.00
1002	TURNBERRY-	Bruce Rd 4	Side Rd. 25	LCB		Double Surface	
1002	CULROSS WEST	Bruce Ru 4	Side Rd. 25	LCB	44	Treatment	\$237,500.00
4009	BEVERLEY ST	Absalom E	Dead End	НСВ	44	Pulverize and Pave	\$38,350.00
4053	FIRST STREET	Adam St	Peter St	НСВ	44	Mill and Pave	\$21,000.00
2107	CARRICK-BRANT	LIMB O	Glesson	LCD		Double Surface	
2107	EAST	Hwy9	Avenue	LCB	46	Treatment	\$49,400.00
4068	JANE ST N	Absalom	Ellen St	НСВ			
4000	JAINE 31 IN	StW	Elleli St	псв	46	Pulverize and Pave	\$29,500.00
4075	GUNN ST	Carroll	Ellen St	HCB	46	Pulverize and Pave	\$26,550.00
1015	CONCESSION 2	Kings Rd.	Side Rd. 25	HCB	46	Pulverize and Pave	\$595,900.00
2099	MAPLE CREEK DR	Bruce Rd 3	Dead End	LCB		Double Surface	
2099	IVIAPLE CREEK DK	Bruce Ru 3	Dead Ella	LCB	46	Treatment	\$68,400.00
2000	HURON-BRUCE	B-Line	Bruce Rd 12	LCB		Single Surface	
2000	RD	D-LINE	Diuce Nu 12	LCD	47	Treatment	\$51,500.00
1044	CONCESSION 14	Bruce Road	Side Rd 25 N	LCB		Single Surface	
1044	WEST	4	Side Nd 25 N	LCD	47	Treatment	\$102,000.00
2100	HIGHLAND CR	Maple	Dead End	LCB		Double Surface	
2100	HIGHLAND CK	Creek Dr	Dead Liid	LCD	49	Treatment	\$38,000.00
5013	WEISS DR	Bruce road	Dead End	НСВ			
3013	WEISS DIX	12		ПСБ	49	Pulverize and Pave	\$132,750.00
1028	CONCESSION 10	Side Rd. 32	Kinloss	LCB		Double Surface	
1020	CONCESSION 10	Jiue Nu. 32	Boundary	LCD	50	Treatment	\$101,650.00
4046	CHURCH ST	Peter St S	Adam St	HCB	50	Pulverize and Pave	\$35,400.00
1012	CONCESSION 2	Side Rd. 20	Bruce County	ЦСР			
1013	CONCESSION 2	Side Nu. 20	Rd. 4	HCB	50	Asphalt Overlay	\$252,500.00
4029	PINKERTON ST	Clark St	Otter Cres	HCB	50	Pulverize and Pave	\$32,450.00

Staff and Council will need to factor in the amount of traffic on some of these segments before making decisions. Some segments only serve a limited number of users and therefore will be a lower priority than the road segments that have more users. When making decisions regarding priority, it is important to note the Ride Comfort Rating as some of these roads still drive relatively well considering the pavement distresses.

4.3 RESURFACE IN 1 - 5 YEARS

Based on the Pavement Condition Index, the following segments require resurfacing in the next 1 to 5 years.

Table 9 - Segments Requiring Resurfacing within 5 Years

	Table 9 - Segments Requiring Resurfacing within 5 Years								
Section ID	Street Name	From	То	Surface Material	PCI	Improvement	Projected Cost		
4000	OLA D.V. GTD 5.57		B: 1			Pulverize and			
4023	CLARK STREET	Lambert St	Pinkerton St	HCB	51	Pave	\$26,550.00		
4021	KLEIST ST	Dietz St	Clark St	НСВ		Pulverize and			
4021	KLEIST ST	Dietz 3t	Clark St	ПСВ	51	Pave	\$26,550.00		
4022	CLARK ST	Kleist St	Lambert St	НСВ		Pulverize and			
4022		KICISC SC	Editiber 50	TICB	51	Pave	\$26,550.00		
2034	SCHAEFER	Bruce Rd 3	Conc. 10	LCB		Single Surface			
2001	ROAD	Brace Na 3	00110. 10	200	52	Treatment	\$29,250.00		
4036	LAMBERT ST	Dietz St	Absalom St	НСВ		Pulverize and			
					53	Pave	\$38,350.00		
4034	OTTER CR	Pinkerton St	Clark St	НСВ		Pulverize and	4		
					53	Pave	\$56,050.00		
1037	CONCESSION	Side Rd. 5 B	Side Rd. 10 B	LCB		Single Surface	454 000 00		
40.40	12		F: . 6.		53	Treatment	\$51,000.00		
4049	ADAM ST.	Louis St	First St	НСВ	54	Mill and Pave	\$17,500.00		
4050	ADAM ST	First St	Absalom W	НСВ	54	Mill and Pave	\$21,000.00		
4076	GUNN ST	Ellen St	Absalom W	НСВ		Pulverize and			
4076	GUNN 31	Ellen St	ADSalotti vv	псв	55	Pave	\$29,500.00		
2033	CONCESSION	Schaefer Rd	B-Line	LCB		Single Surface			
2055	10	Schaeler Ku	b-Lille	LCB	55	Treatment	\$33,000.00		
4042	PETER ST S	Absalom St W	First S	НСВ		Pulverize and			
4042	TETERSTS	Absalom St W	111303	TICD	55	Pave	\$35,400.00		
4069	JANE ST S	Ellen St	Carroll St	НСВ		Pulverize and			
4003		Life ii St	carron sc	TICB	55	Pave	\$29,500.00		
2038	CONCESSION	Side Rd 15 N	Side Rd 20 N	LCB		Single Surface			
	12 E	0.00.10.20.1		100	56	Treatment	\$51,750.00		
2029	CONCESSION 8	Side Rd 5 S	Absalom	LCB		Single Surface			
	WEST		Street		56	Treatment	\$61,250.00		
2019	SIDEROAD 41	Conc. 4	Hwy9	LCB		Single Surface	405 500 00		
			,		56	Treatment	\$25,500.00		
2027	CONCESSION 6	Side Rd 20 N	Side Rd 25	LCB	F.C.	Single Surface	¢54 500 00		
	EAST		Davies Courts		56	Treatment	\$51,500.00		
1038	CONCESSION	Side Rd. 10 B	Bruce County	LCB	E 7	Single Surface	¢E1 000 00		
	12		Rd. 4	L	57	Treatment	\$51,000.00		

	CONCESSION 8					Single Surface	
2031	WEST	B-Line	Bruce Rd 12	LCB	58	Treatment	\$51,000.00
	CONCESSION 4				30	Double Surface	731,000.00
2021	E	Grey Cty Rd 10	Side Rd 30 N	LCB	59	Tratment	\$151,050.00
	CONCESSION					Single Surface	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
2039	12 EAST	Side Rd 20 N	Side Rd 25	LCB	59	Treatment	\$50,750.00
1016	CONCESSION 2	Kinloss Boundary	Kings Rd.	НСВ			
1010	(East Portion)	Killioss Boulluary	Kiligs Ku.	псь	59	Asphalt Overlay	\$100,000.00
2040	CONCESSION	Side Rd 25	Side Rd 30 N	LCB		Single Surface	
20.0	12 EAST	3146 114 23	3142 114 30 11	200	59	Treatment	\$51,000.00
4067	ELLEN ST	Jane St N	Dead End	НСВ		Pulverize and	400 550 00
	CIDEDOAD 3E				59	Pave	\$26,550.00
1069	SIDEROAD 25 NORTH	Conc. 8	Dead End	LCB	59	Single Surface Treatment	\$26,000.00
4006	GEORGE ST	Absalom St	Daniel St	НСВ	59	Mill and Pave	\$14,000.00
4000	GLONGE 31	100 m West of		TICB	33	Willi alia i ave	714,000.00
4007	DANIEL ST	George St	Jonathan Cr	HCB	59	Mill and Pave	\$5,250.00
	JONATHAN				100		70,200.00
4008	CRESCENT	Daniel St	Daniel St	НСВ	59	Mill and Pave	\$45,500.00
4065		Inha Ct	Course St	LICD		Pulverize and	, ,
4065	ELLEN ST	John St	Gunn St	НСВ	59	Pave	\$38,350.00
4066	ELLEN ST	Gunn	Jane St N	НСВ		Pulverize and	
4000	ELLEN 31	Guilli	Jane St N	псь	59	Pave	\$32,450.00
2036	CONCESSION	Hwy9	Schaefer Rd	LCB		Single Surface	
2030	12 E	1100 y 3	Schaerer Na	LCD	60	Treatment	\$32,250.00
1009	MARGARET ST	Huron Bruce Rd	Dead End	НСВ		Pulverize and	
	001105001011				60	Pave	\$76,700.00
2105	CONCESSION	Schmidt Rd	Hwy9	LCB	60	Single Surface	¢50,000,00
	14				60	Treatment Pulverize and	\$50,000.00
4042.1	PETER ST S	First St	Louis	НСВ	61	Pave Pave	\$29,500.00
					01	Single Surface	\$25,500.00
1017	CONCESSION 4	Kinloss Boundary	Side Rd. 25	LCB	62	Treatment	\$96,750.00
					1	Pulverize and	700,00000
4039	DIETZ ST	Lambert St	Kleist St	НСВ	62	Pave	\$29,500.00
2052	SIDEROAD 30	Cana 14 W	Dun alstan Dale	LCD		Single Surface	
2053	NORTH	Conc. 14 W	Brockton Bdy	LCB	62	Treatment	\$31,750.00
1014	CONCESSION 2	Side Rd. 25	Side Rd. 20	НСВ	62	Asphalt Overlay	\$255,000.00
4056	LOUIS ST	Peter St S	Adam St	НСВ	62	Mill and Pave	\$21,000.00
2028	CONCESSION 6	Hwy9	Side Rd 20 N	LCB		Single Surface	
2020	EAST	1100 y 5	Side Na 2014	LCD	63	Treatment	\$41,250.00
2049	CONCESSION	Side Rd 25 N	Side Rd 20N	LCB		Single Surface	
	14				63	Treatment	\$51,000.00
2006	HURON-BRUCE	Grey Road 10	Highway# 9	НСВ	60	Single Surface	404.500.00
	RD	,	, -		63	Treatment	\$34,500.00
4077	MEL ST	Absalom W	Fred St	НСВ	62	Pulverize and	¢3E 400 00
					63	Pave Surface	\$35,400.00
2103	SCHMIDT ROAD	Conc. 14	Carrick-Brant	LCB	62	Single Surface	\$21 250 00
					63	Treatment	\$31,250.00

1066	KINLOSS- CULROSS	Conc. 8	Bruce County Rd. 6	LCB	64	Single Surface Treatment	\$50,000.00
	COLNOSS		Nu. 0		04	Pulverize and	\$30,000.00
4024	CLARK STREET	Pinkerton	Stinson St.	HCB	64	Pave	\$29,500.00
					101	Pulverize and	\$23,300.00
4025	STINSON ST	Clark St	Dietz St	HCB	64	Pave	\$26,550.00
1046	CONCESSION 14 WEST	Side Rd. 5 B	Side Rd. 10 B	LCB	64	Single Surface Treatment	\$51,000.00
	14 00 (3)				04	Single Surface	\$31,000.00
1020	CONCESSION 4	Bruce Rd. 4	Side Rd. 10	LCB	65	Treatment	\$50,750.00
2404			5 15 1			Single Surface	
2101	WOODLAND CT	Maple Creek Dr	Dead End	LCB	65	Treatment	\$3,500.00
2016	CONCESSION 4	Bruce Rd 28	Side Rd 5 S	LCB		Single Surface	
2010	CONCESSION 4	Bruce Nu 26	Side Nd 5 5	LCB	66	Treatment	\$50,750.00
4045	CHURCH ST	Hwy9	Peter St. S	НСВ		Pulverize and	
		-			66	Pave	\$29,500.00
2012	CONCESSION 2	B-Line	Side Rd 5 S	НСВ	66	Asphalt Overlay	\$255,000.00
1006	HURON-BRUCE	Side Rd. 5 A	London Road	LCB		Single Surface	
	RD				66	Treatment	\$102,000.00
1027	CONCESSION 8	Side Rd. 25 N	Kinloss	LCB	67	Single Surface	¢07.750.00
			Boundary Concession		67	Treatment Single Surface	\$97,750.00
2112.1	SIDEROAD 30	Hwy9	6E	LCB	67	Treatment	\$24,750.00
	CONCESSION		OL .		107	Single Surface	724,730.00
1035	10	Side Rd. 1 B	Bruce Rd. 12	LCB	67	Treatment	\$25,750.00
	CONCESSION	West Grey			1	Single Surface	7-07:00:00
2051	14	Boundary	Side Rd 30 N	LCB	67	Treatment	\$46,750.00
4043	PETER ST S	Louis St	Church St	НСВ		Pulverize and	
4043	PETER ST S	Louis St	Church St	нсв	67	Pave	\$35,400.00
2014	CONCESSION 4	B-Line	B-Line	LCB		Single Surface	
2014	CONCLOSION 4	D-LINE	D-LIIIC	LCD	67	Treatment	\$51,250.00
1025	CONCESSION 8	Bruce Rd. 4	Side Rd. 10 A	LCB		Single Surface	
1023	2011023310110	Drace Na. 4	5.ac Na. 10 A	LCD	68	Treatment	\$50,750.00
2024	SIDEROAD 45	Hwy 9	Seip Road	LCB		Single Surface	
		, -	- 3-12 - 1-2-2-2-		69	Treatment	\$26,000.00
4035	LAMBERT ST	Clark St	Dietz St	НСВ	60	Pulverize and	¢26 FF2 22
2012	CONCECCION 3	D D.I.42	Downer Del 42	LICD	69	Pave	\$26,550.00
2013	CONCESSION 2	Bruce Rd 12	Bruce Rd 12	НСВ	70	Asphalt Overlay	\$257,500.00
4038	DIETZ ST	Pinkerton	Lambert St	НСВ	70	Pulverize and Pave	\$26 550 00
					/U	rave	\$26,550.00

Staff and Council will need to factor in the amount of traffic on some of these segments before making decisions. Some segments only serve a limited number of users and therefore will be a lower priority than the road segments that have more users. When making decisions regarding priority, it is important to note the Ride Comfort Rating as some of these roads still drive relatively well considering the pavement distresses. These segments also need to be reassessed prior to resurfacing to determine if they have continued to deteriorate to a point for requiring resurfacing or if they maintain an acceptable PCI.

4.4 OVERALL CONDITION ASSESSMENT

Overall, the roadways within South Bruce are in good condition. On a distance weighted assessment, the PCI for the Municipality is 68.3. Based on the majority of roads being LCB and gravel, which have relatively short life spans before requiring intervention, this is a good PCI. More than 60% of the roads are more than 5 years away from requiring resurfacing.

Since the cost to rehabilitate roads in poor condition is significantly more pre kilometer than maintaining or improving roads in fair condition, it would be financially prudent to address the roads in better condition and keep them there while trying to address the worst roads rather than ignoring the roads in fair condition and only focusing on the worst roads.

There are a number of roads that have a low PCI based on pavement distresses which play a large role in the determination of the PCI but that still drive relatively well. Therefore, the roads may actually deteriorate fairly slowly and may not need immediate attention. There may be an opportunity to delay works on these roads to focus capital investments on other road segments. Since the PCI has not been determined in previous Roads Needs Studies it is impossible to determine the rate they are deteriorating at. Some of the roads requiring improvements specifically in the urban centers may align with other priorities for infrastructure replacements.

Since there is no way to keep all roads at high PCI's it is important to keep the roads that are at a high PCI where they are so the early interventions such as crack sealing and replacing shoulder gravel that have minimal costs and high return on investment need to be a priority.

Crack sealing of any HCB roads that are in good shape needs to remain a priority as it provides a costeffective method of prolonging the service life of asphalt surfaces. Based on the changing weather patterns, there are a lot more freeze thaw cycles in recent years. Freeze thaw cycles are the hardest on roads and if the moisture can be kept out of the road base it will ensure the roads can last longer.

With climate change intensifying the freeze/thaw cycles crack sealing is a means to stretch limited funds to extend the life of asphalt road assets. When water penetrates into a crack in asphalt or into the granular base and it freezes, the volume increases by 9%. This results in pressure of +/- 8,700 psi at -5°C to +/- 29,000 psi at -21°C which eventually opens the cracks wider and breakdowns the asphalt resulting in cracks spreading out from the initial moisture entry point.

The Municipality of South Bruce has demonstrated the benefits and effectiveness of this technique to seal the asphalt surface from moisture penetration. In the areas where the municipality has sealed the various cracks, the cracks remain in excellent condition and performance to date do not show any failure of cohesion which is an early indicator of crack widening.

As expected, due to underlining structural issues and age there are new cracks developing, however the new cracks are not originating from these sealed cracks. The timely maintenance to prevent moisture penetration never ends.

Shouldering edges of HCB and LCB assists in structural integrity of the road base and drains water away from edge of pavement. As evident from the collection of the road data for this study, the municipality is doing a commendable job on maintaining the critical edge of pavement. Attention and maintenance to any drop-off area or low granulars will extend the life of that section of road.

Due to the nature of LCB, when it is overlayed with another layer of Surface Treatment, it has a short lifespan and also mirrors through any deficiencies in the existing roadway. Therefore, if a road has irregular crossfall or significant deficiencies it doesn't make sense to do a single surface treatment to extend the life as the full lifespan of the surface treatment will not be achieved due to the deficiencies mirroring though. This means that there may be some roads that are not worth trying to keep at the service level they are at and could left a couple of years to deteriorate to a point where it makes sense to proceed with a bigger project to repair the deficiencies and get a longer lifespan from the newly reconstructed road.

Prior to selecting segments to be upgraded it is important to review types, severity and density of the distresses in the subject road segment to understand the circumstances that may have caused the distinct distresses and if any modifications are warranted in certain sections of this project.

There may also be opportunity to improve small sections of a segment that are in the worst shape to increase the overall PCI of the road network without having to invest as much capital.

CONCLUSIONS & RECOMMENDATIONS

- This study has been provided to aid the Municipality of South Bruce in completion of their Asset Management Plan. It is intended as a guide and needs to be reviewed in conjunction with other infrastructure assets needs.
- The costs of gravel, asphalt and surface treatment should be closely monitored by the Municipality of South Bruce, as the studies benchmark costs will be affected by these increases.
- 3. The Municipality should set aside funds from the maintenance budget each year for crack sealing and shoulder gravel of the roads that have a high PCI to ensure the rate of deterioration is minimized.
- 4. That a major update of the Road Management Study be undertaken in five (5) years.
- 5. That if any federal or provincial infrastructure programs are announced during the five (5) year study period, the Municipality of South Bruce should consider using all or part of the funding for road improvements.

Sincerely,

Cobide Engineering Inc.

Travis Burnside, P. Eng.

n Bull

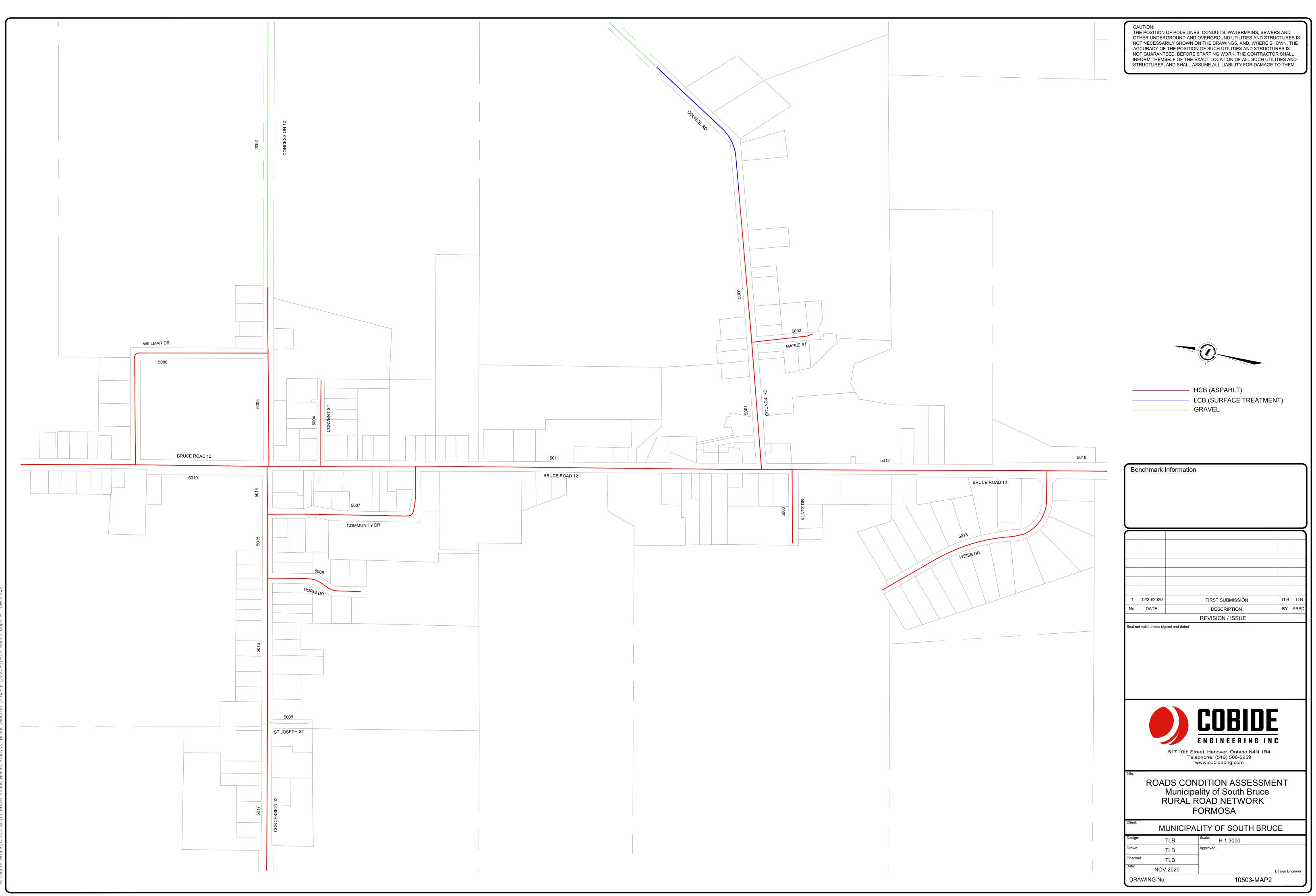
David Burnside, Technologist

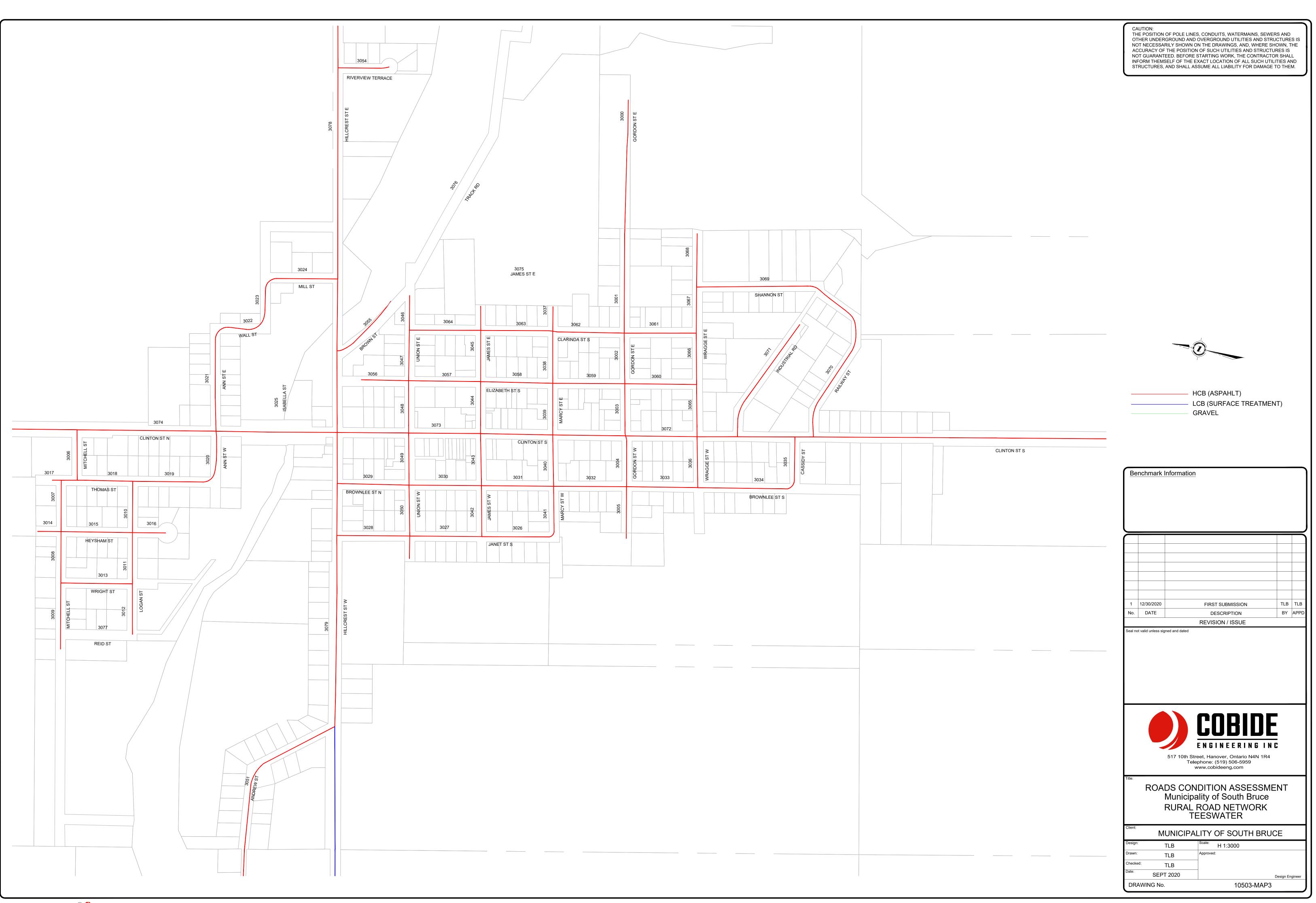
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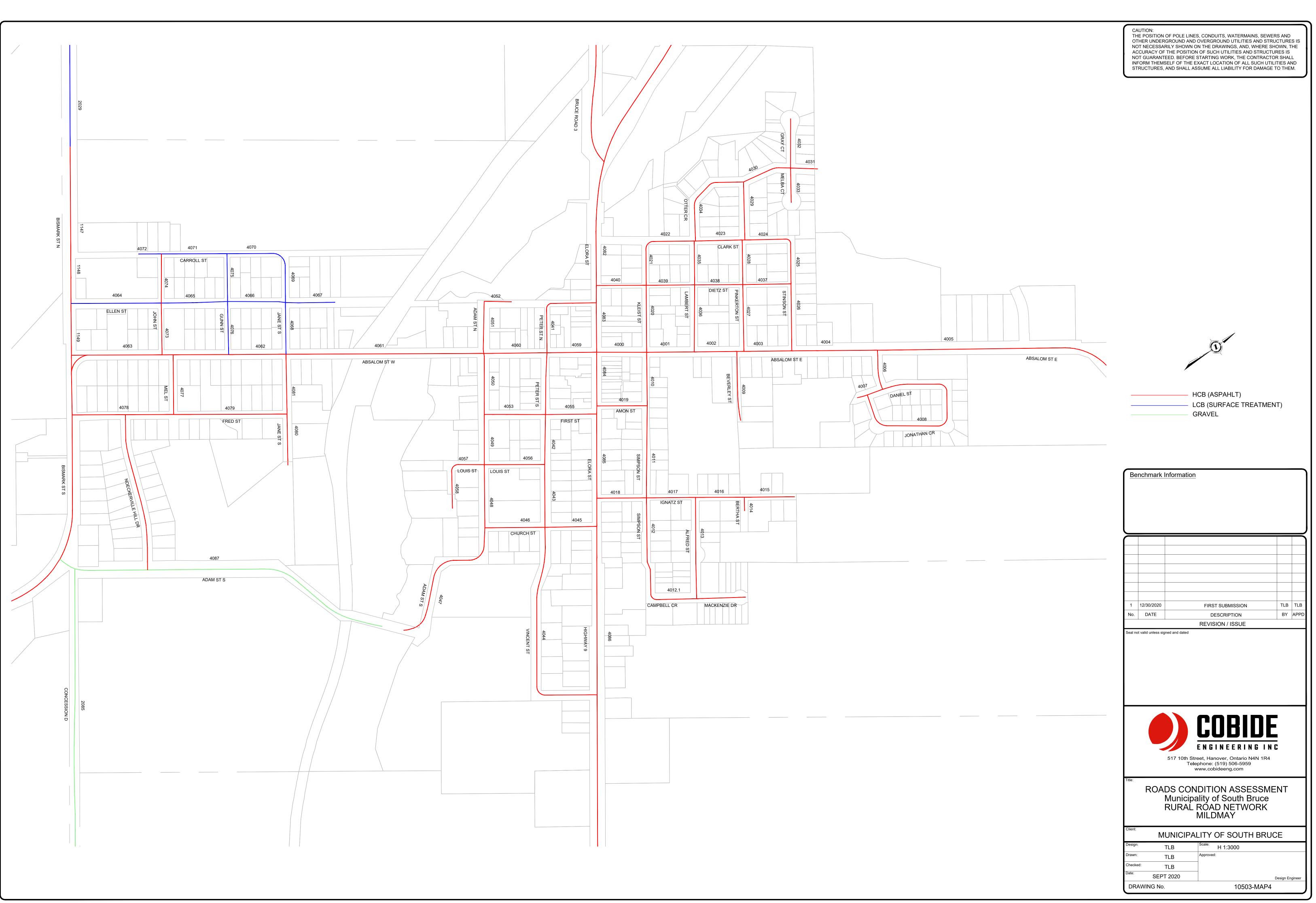
APPENDIX A

ROAD INVENTORY MAPPING









APPENDIX B

DISTRESS EXAMPLES





- → Base Failure
- → Poor Drainage
- → Wheel Track Rutting
- → Longitudinal Cracking
- → Pavement Edge Cracking
- → Transverse Cracking
- → Pot Holes→ Rutting

POSSIBLE CAUSES

→ Numerous surface distresses indicate inadequate structural road base / poor compaction resulting in multiple defects, severe alligator cracking results in moisture penetration resulting into wheel rutting & distortion resulting in water ponding accelerating the severity and density of the various pavement distresses.

MAINTENANCE SUGGESTIONS

Short Term

→ As evident from the various patches and the replacement of various sections of the road any maintenance activities are short term fix as the road will continue to deteriorate quickly due to base and granular structure.

Long Term

→ Complete rebuild, improve drainage, raise roadbed, salvage adequate granulars, add new granulars and repave.







→ Centerline Cracking

POSSIBLE CAUSES

→ A poor quality constructed joint, thermal reaction, poor compaction, shrinkage or reflected crack.

MAINTENANCE SUGGESTIONS

→ Excellent example of crack sealing to lengthen the service life of assets





- → Centerline Cracking
- → Wheel Track Rutting
- → Longitudinal Cracking

POSSIBLE CAUSES

→ Flat centreline crossfall resulting in inadequate compaction at centre line asphalt joint resulting in moisture penetration into granulars and subsequent severe cracking.

MAINTENANCE SUGGESTIONS

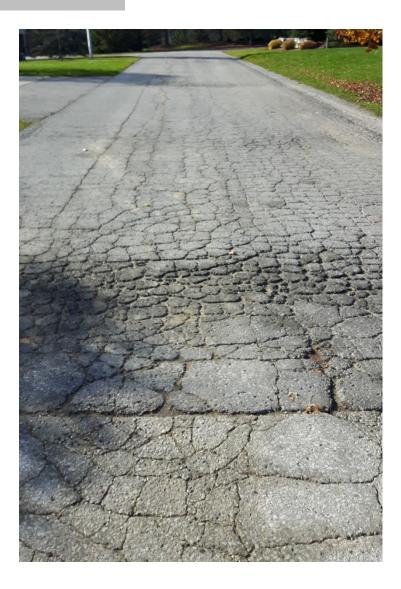
Short Term

→ Seal all cracks to stop the migration of moisture into road base.

Long Term

→ Pulverize asphalt, add granulars to reshape for crossfall and place asphalt.





- → Base Failure
- → Poor Drainage
- → Wheel Track Rutting
- → Longitudinal Cracking
- → Centerline Cracking
- → Pavement Edge Cracking
- → Transverse Cracking
- → Rutting

POSSIBLE CAUSES

- → Poor compaction
- → Flat negative crown
- → Poor drainage
- → Inadequate road structure

MAINTENANCE SUGGESTIONS

Short Term

→ Seal all cracks to stop the migration of moisture into road base however due to severity of cracking this may not be a worthwhile investment.

Long Term

→ Complete rebuild, improve drainage, raise roadbed, salvage adequate granulars, add new granulars and repave.





→ Multiple and Severe Distresses

POSSIBLE CAUSES

- → Poor compaction
- → Inadequate road structure

MAINTENANCE SUGGESTIONS

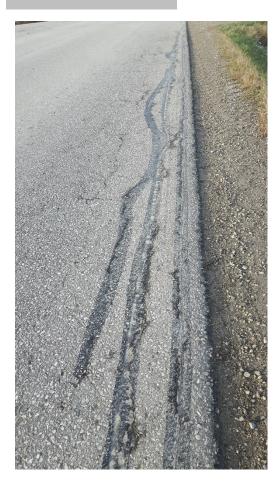
Short Term

→ Do Nothing as this segment is near the end of its service life

Long Term

→ Complete rebuild, improve drainage, raise roadbed, salvage adequate granulars, add new granulars and repave.







→ Longitudinal Cracking

POSSIBLE CAUSES

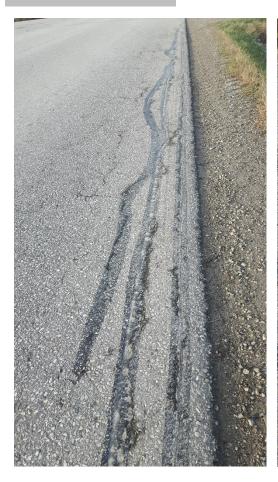
- → Slippage Cracking
- → Note: Previous crack sealing remains in good condition and new cracks are not originating from these sealed cracks. However, the timely maintenance to prevent moisture penetration never ends.

MAINTENANCE SUGGESTIONS

Short Term

→ Seal all cracks to stop the migration of moisture into the road base







→ Longitudinal Cracking

POSSIBLE CAUSES

- → Slippage Cracking
- → Note: Previous crack sealing remains in good condition and new cracks are not originating from these sealed cracks. However, the timely maintenance to prevent moisture penetration never ends.

MAINTENANCE SUGGESTIONS

Short Term

→ Seal all cracks to stop the migration of moisture into the road base





- → Wheel Track Rutting
- → Water Ponding
- → Longitudinal Cracking

POSSIBLE CAUSES

- → Inadequate Structural Road Base
- → Poor Compaction
- → Poor Drainage

MAINTENANCE SUGGESTIONS

Short Term

→ Minor patches and maintenance, road at or near end of service life.

Long Term

→ Complete rebuild, improve drainage, raise roadbed, salvage adequate granulars, add new granulars and repave.



APPENDIX C

CONSTRUCTION COSTS

2020 Construction Co	ests	
Item	Unit	Cost
Excavation	m3	\$ 15.00
Pulverize Asphalt	m2	\$ 5.00
Mill Existing Asphalt	m2	\$ 5.00
Remove Existing Asphalt	m2	\$ 3.00
Supply and Place Granular B	tonne	\$ 15.00
Supply and Place Granular A	tonne	\$ 17.00
Supply and Place Hot Mix	tonne	\$ 115.00
Single Surface Treatment	m2	\$ 3.50
Double Surface Treatment	m2	\$ 6.50
Curb and Gutter (Remove and Replace)	m	\$ 75.00
Supply and Install Subdrain	m	\$ 25.00
Storm Sewer (Remove and Replace)	m	\$ 500.00
Ditch Cleanout	m	\$ 25.00

Road Improvement Costs (per KM)	
Improvement Strategy	Cost
OV - Apshalt Overlay	\$ 125,000
SST - Single Surface Treatment	\$ 25,000
DST - Double Surface Treatment	\$ 95,000
GR - Gravel Resurfacing	\$ 30,000
PP - Pulverize and Pave	\$ 295,000
MP - Mill and Pave	\$ 175,000
REC-G - Reconstruction Gravel Road	\$ 220,000
REC-ST - Reconstruction Surface Treatment	\$ 290,000
REC-A - Reconstruction Asphalt Road	\$ 390,000
UR - Urban Reconstruction	\$ 1,025,000

APPENDIX D

ROAD INVENTORY AND ASSESSMENTS



ENGINEERING INC	Asset Pool:	Road Network		1		PHYSICAL PR	ODEDTIES	ΑΤΛ									FINANCIAL DATA	INTERVENTION DATA	
	IDENTIFIERS & I	OCATION				PHISICALP	OPERTIES D	AIA				n: 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pavement					INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS) Road Speed Range	Ride Comfort Rating (RCR 0 - 10	Condition Action Required	Notes	Assessed By	Date Assessed (yyyy- mm-dd)	Current Replacement Value (Road)	Intervention Type Intervention Description	Cost
1000	SIDEROAD 15	Bruce Rd 4	Huron Bruce Rd	Carrick	LCB	2	0.22	7	Rural	0-49	6 80		8 83		Cobide Engineering	October/ November 2020	\$63,800.00		
1002	TURNBERRY-CULROSS WEST	Bruce Rd 4	Side Rd. 25	Culross	LCB	2	2.50	7	Rural	50-199	4 80		4 44 Resurface	Standing Water, Negative/ No Cross fall	Cobide Engineering	October/ November	\$725,000.00 D	Double Surface Treatment	\$237,500.00
1003 1003.1	TURNBERRY-CULROSS WEST TURNBERRY-CULROSS WEST	Side Rd. 25 1km west of Sideroad 25	1km west of Sideroad 25 Kings Rd.	Culross Culross	LCB Gravel	2 2	1.00 1.05	4.5 4.5	Rural Rural	50-199 50-199	4 80 4 80		8 83 6 67		Cobide Engineering	October/ November October/ November	\$290,000.00 \$231,000.00		
1004	TURNBERRY-CULROSS WEST	Kings Rd.	Kinloss Boundary	Culross	Gravel	2	1.80	4.5	Rural	0-49 200-399	6 80		4 49 1	Narrow/ No Winter	Cobide Engineering	2020 October/ November	\$396,000.00		
1006	HURON-BRUCE RD	Side Rd. 5 A	London Road	Culross	LCB	2	4.08	7	Rural	200-399	4 80		6 66 Resurface in 1-5 yrs		Cobide Engineering		\$1,183,200.00 S	SST Single Surface Treatment	\$102,000.00
1007	HURON-BRUCE RD	Side Rd. 1 A	Side Rd. 5 A	Culross	LCB	2	2.05	7	Rural	200-399	4 80		8 72 Resurface in 6-10 Yrs		Cobide Engineering		\$594,500.00		
1008	HURON-BRUCE RD	Bruce County Rd. 12	Side Rd. 1 A	Culross	LCB	2	0.88	7	Rural	0-49	4 80		8 77 Resurface in 6-10 Yrs		Cobide Engineering		\$255,200.00		
1009	MARGARET ST	Huron Bruce Rd	Dead End	Culross	HCB	2	0.26	7	Semi-Urban	400-999	6 80		6 60 Resurface in 1-5 yrs		Cobide Engineering		\$266,500.00 P	P Pulverize and Pave	\$76,700.00
1010	CONCESSION 2	Side Rd. 1 A	Bruce County Rd. 12	Culross	HCB	2	1.03	7	Rural		4 80		8 84		Cobide Engineering		\$401,700.00		
1011	CONCESSION 2	Side Rd. 5 A	Side Rd. 1 A	Culross	HCB	2	2.04	7	Rural	400-999	4 80		8 84		Cobide Engineering		\$795,600.00		
1012	CONCESSION 2	Bruce County Rd. 4	Side Rd. 5 A	Culross	HCB	2	4.12	7	Rural	400-999	4 80		8 77 Resurface in 6-10 Yrs		Cobide Engineering		\$1,606,800.00		
1013	CONCESSION 2	Side Rd. 20	Bruce County Rd. 4	Culross	HCB	2	2.02	7	Rural	400-999	4 80		6 50 Resurface		Cobide Engineering		\$787,800.00 O	OV Asphalt Overlay	\$252,500.00
1014	CONCESSION 2	Side Rd. 25	Side Rd. 20	Culross	HCB	2	2.04	7	Rural	332-370	4 80		6 62 Resurface in 1-5 yrs		Cobide Engineering	2020	\$795,600.00 O	OV Asphalt Overlay	\$255,000.00
1015	CONCESSION 2	Kings Rd.	Side Rd. 25	Culross	HCB	2	2.02	7	Rural	400-999	4 80		6 46 Resurface		Cobide Engineering		\$787,800.00 P	Pulverize and Pave	\$595,900.00
1016	CONCESSION 2 (East Portion)	Kinloss Boundary	Kings Rd.	Culross	HCB	2	0.80	7	Rural	400-999	4 80		6 59 Resurface in 1-5 yrs		Cobide Engineering		\$312,000.00 O	OV Asphalt Overlay	\$100,000.00
1016.1	CONCESSION 2 (West Portion)	Kinloss Boundary	Kings Rd.	Culross	HCB	2	1.00	7	Rural	400-999	4 80		8 84		Cobide Engineering	October/ November 2020	\$390,000.00		
1017	CONCESSION 4	Kinloss Boundary	Side Rd. 25	Culross	LCB	2	3.87	7	Rural	200-399	4 80		6 62 Resurface in 1-5 yrs		Cobide Engineering	October/ November 2020	\$1,122,300.00 S	SST Single Surface Treatment	\$96,750.00
1018	CONCESSION 4	Side Rd. 25	Side Rd. 20	Culross	LCB	2	2.02	7	Rural	200-399	4 80	1	10 88		Cobide Engineering	October/ November 2020	\$585,800.00		
1019	CONCESSION 4	Side Rd. 20	Bruce County Rd 4	Culross	LCB	2	2.03	7	Rural	200-399	4 80		8 81		Cobide Engineering	October/ November	\$588,700.00		
1020	CONCESSION 4	Bruce Rd. 4	Side Rd. 10	Culross	LCB	2	2.03	7	Rural	200-399	4 80		8 65 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$588,700.00 \$	SST Single Surface Treatment	\$50,750.00
1021	CONCESSION 4	Side Rd. 10	Side Rd. 5A	Culross	LCB	2	2.08	7	Rural	50-199	4 80		8 75 Resurface in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$603,200.00		
1022	CONCESSION 4	Bruce County Rd. 12	Side Rd. 5A	Culross	LCB	2	3.06	7	Rural	200-399	4 80		4 19 Reconstruct	Various HCB Patches	Cobide Engineering	October/ November	\$887,400.00 R	REC-ST Reconstruction - Surface Treatment	\$887,400.00
1023	CONCESSION 8	Bruce County Rd. 12	Side Rd. 1B	Culross	HCB	2	1.03	7	Rural	400-999	4 80	1	10 89		Cobide Engineering	October/ November	\$401,700.00		,
1024	CONCESSION 8	Side Rd. 1B	Side Rd. 10 A	Culross	НСВ	2	4.08	7	Rural	317-484	4 80		8 87		Cobide Engineering	October/ November	\$1,591,200.00		
1025	CONCESSION 8	Bruce Rd. 4	Side Rd. 10 A	Culross	LCB	2	2.03	7	Rural	400-999	4 90		8 68 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$588,700.00 \$	SST Single Surface Treatment	\$50,750.00
1026	CONCESSION 8	Bruce Rd. 4	Side Rd. 25 N	Culross	LCB	2	4.08	7	Rural	200-399	4 80		4 30 Reconstruct		Cobide Engineering	October/ November	\$1,183,200.00 R		\$1,183,200.00
1027	CONCESSION 8	Side Rd. 25 N	Kinloss Boundary	Culross	LCB	2	3.91	7	Rural	200-399	4 80		6 67 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$1,133,900.00 \$		\$97,750.00
1028	CONCESSION 10	Side Rd. 32	Kinloss Boundary	Culross	LCB	2	1.07	7	Rural	200-399	4 80		6 50 Resurface		Cobide Engineering	October/ November	\$310.300.00 D		\$101,650.00
1029	CONCESSION 10	Side Rd. 32	Scott Court	Culross	LCB	2	0.82	7	Rural	200-399	4 80					October/ November	\$310,300.00 D		\$77,900.00
										200-399	4 80		6 43 Resurface	Should Be used as Test Case to see how long	Cobide Engineering	2020	\$237,800.00 D	Double Surface Treatment	\$77,900.00
1029.1	CONCESSION 10	Side Rd. 32	Side Rd. 25 N	Culross	LCB	2	1.60	7	Rural				l t	before defects mirror through new Surface		October/ November			
											4 80			Treatment	Cobide Engineering	2020	\$464,000.00		
1029.2	CONCESSION 10	Side Rd. 32	Side Rd. 25 N	Culross	LCB	2	0.40	7	Rural	200-399	4 80		6 43 Resurface	III - L. D. C. L. C. L.	Cobide Engineering	October/ November 2020	\$116,000.00 D	DST Double Surface Treatment	\$38,000.00
1030	CONCESSION 10	Side Rd. 25 N	Side Rd. 20 B	Culross	LCB	2	2.08	7	Rural	200-399				High Point is in North Lane, Section of HCB at		October/ November	_	_	
1031	CONCESSION 10	Side Rd. 20 B	Bruce County Rd. 4	Culross	LCB	2	2.02	7	Rural	200-399	4 80			Bridge High Point is in Center of	Cobide Engineering	October/ November	\$603,200.00 R		\$603,200.00
1032	CONCESSION 10	Bruce County Rd. 4	Side Rd. 10 B	Culross	LCB	2	2.04	7	Rural	200-399	4 80			North Lane	Cobide Engineering	October/ November	\$585,800.00 D		\$191,900.00
1033	CONCESSION 10	Side Rd. 10 B	Side Rd. 5 B	Culross	LCB	2	2.03	7	Rural	200-399	4 80		4 24 Reconstruct		Cobide Engineering	October/ November	\$591,600.00 R		\$591,600.00
1034	CONCESSION 10	Side Rd. 5 B	Side Rd. 1 B	Culross	LCB	2	2.04	7	Rural	209-227	4 80		4 32 Resurface		Cobide Engineering	October/ November	\$588,700.00 D		\$192,850.00
1035	CONCESSION 10	Side Rd. 1 B	Bruce Rd. 12	Culross	LCB	2	1.03	7	Rural	200-399	4 80		4 25 Reconstruct		Cobide Engineering	October/ November	\$591,600.00 R		\$591,600.00
1036	CONCESSION 12	Bruce County Rd. 12	Side Rd. 5 B	Culross	LCB	2	3.00	7	Rural	400-999	4 80		6 67 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$298,700.00 S		\$25,750.00
1037	CONCESSION 12		Side Rd. 10 B		LCB		2.04	7	Rural	400-999	4 80		4 36 Resurface		Cobide Engineering	2020 October/ November	\$870,000.00 D		\$285,000.00
		Side Rd. 5 B		Culross		2				151-202	4 80		6 53 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$591,600.00 S		\$51,000.00
1038	CONCESSION 12	Side Rd. 10 B	Bruce County Rd. 4	Culross	LCB	2	2.04	7	Rural	50-199	4 80		6 57 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$591,600.00 \$	SST Single Surface Treatment	\$51,000.00
1039	CONCESSION 12	Bruce Cty Rd 4	500m West of Side Rd 20	Culross	LCB	2	4.04		Rural	50-199	4 80		8 83		Cobide Engineering	2020 October/ November	\$1,171,600.00		
1039.1	CONCESSION 12	500m West of Side Rd 20	700m East of Side Rd 25 N	Culross	Gravel	2	4.04	7	Rural	50-199	4 80		4 51		Cobide Engineering		\$888,800.00		
1039.2	CONCESSION 12	700m East of Side Rd 25 N	Side Rd 25 N	Culross	Gravel	2	4.04	7	Rural	50-199	4 80		8 82	Narrow/ No Winter	Cobide Engineering		\$888,800.00		
1040	CONCESSION 12	Side Rd. 25 N	Side Rd 32	Culross	Gravel	2	2.85	5.1	Rural	50-199	4 80			Maintenance	Cobide Engineering		\$627,000.00		
1041	CONCESSION 12	Side Rd. 32	Kinloss Boundary	Culross	Gravel	2	1.10	7	Rural	0-49	4 80		8 82		Cobide Engineering		\$242,000.00		
1042	CONCESSION 14 WEST	Kinloss Boundary	Side Rd. 32	Culross	Gravel	2	1.12	6	Rural		6 80		6 73		Cobide Engineering		\$246,400.00		
1043	CONCESSION 14 WEST	Side Rd 32	Side Rd 25 N	Culross	Gravel	2	2.85	6	Rural	50-199	4 80		6 73		Cobide Engineering		\$627,000.00		
1044	CONCESSION 14 WEST	Bruce Road 4	Side Rd 25 N	Culross	LCB	2	4.08	7	Rural		4 80		6 47 Resurface		Cobide Engineering		\$1,183,200.00 \$	SST Single Surface Treatment	\$102,000.00
1045	CONCESSION 14 WEST	Side Rd. 10 B	Bruce Road 4	Culross	HCB	2	2.04	7	Rural	50-199	4 80		8 84		Cobide Engineering	2020	\$795,600.00		
1046	CONCESSION 14 WEST	Side Rd. 5 B	Side Rd. 10 B	Culross	LCB	2	2.04	7	Rural	50-199	4 80		6 64 Resurface in 1-5 yrs		Cobide Engineering	October/ November 2020 October/ November	\$591,600.00 S	SST Single Surface Treatment	\$51,000.00
1047	CONCESSION 14 WEST	Bruce County Rd. 12	Side Rd. 5 B	Culross	LCB	2	3.05	7	Rural	137-252	4 80		4 33 Resurface		Cobide Engineering	2020	\$884,500.00 D	DOUBLE Surface Treatment	\$289,750.00
1048	MOSCOW SIDEROAD	Conc. 14 W	Greenock Bdy	Culross	Gravel	2	1.15	6	Rural	50-199	4 80		8 82		Cobide Engineering	October/ November 2020	\$253,000.00		
1049	CULROSS-GREENOCK EAST	Side Rd 5 B	SideRd10B	Culross	Gravel	2	2.02	4.5	Rural	0-49	6 80		8 82		Cobide Engineering	October/ November 2020	\$444,400.00		
1049.1	CULROSS-GREENOCK EAST	Side Rd 5 B	Dead End	Culross	Gravel	2	0.13	4.5	Rural	0-49	6 80		8 82		Cobide Engineering	October/ November 2020	\$28,600.00		
1050	SIDEROAD 10B	Greenock Bdy	Conc. 14 W	Culross	Gravel	2	1.15	5	Rural	0-49	6 80		8 82		Cobide Engineering	October/ November 2020	\$253,000.00		
1051	SIDEROAD 10B	Conc. 14 W	Conc. 12	Culross	Gravel	2	2.05	7	Rural	0-49	6 80		8 82		Cobide Engineering	October/ November 2020	\$451,000.00		
1052	SIDEROAD 10B	Conc. 12	Conc. 10	Culross	Gravel	2	2.03	6.5	Rural	0-49	6 80		6 74		Cobide Engineering	October/ November 2020	\$446,600.00		
1053	SIDEROAD 5B	Conc. 10	Conc. 12	Culross	Gravel	2	2.04	6.5	Rural	50-199	4 80	<u> </u>	8 82		Cobide Engineering	October/ November 2020	\$448,800.00		
1054	SIDEROAD 5B	Conc. 12	Conc. 14 W	Culross	Gravel	2	2.05	6	Rural	50-199	4 80		6 75		Cobide Engineering	October/ November	\$451,000.00		
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ENGINEERING INC	Asset Pool:	Road Networ	·k																			
	IDENTIFIERS & I	LOCATION				PHYSICAL PR	OPERTIES D	ATA											FINANCIAL DATA		INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range Ri	ide Comfort Rating (RCR) 0 - 10	Pavement Condition Action	on Required	Notes	Assessed By	Date Assessed (yyyy- mm-dd)	- Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
1055	SIDEROAD 5B	Conc. 14 W	Greenoek Boundary	Culross	Gravel	2	1.11	5	Rural	50-199	4	80	s	3 82			Cobide Engineering	October/ November	\$244,200.00			
1056	SIDEROAD 18	Conc. 14 W	Conc. 12	Culross	Gravel	2	2.09	5	Rural	0-49	6	80		3 87		Narrow/ No Winter Maintenance	Cobide Engineering	October/ November	\$459.800.00			
1057	SIDEROAD 20B	Conc. 12	Conc. 10	Culross	Gravel	2	2.04	4.5	Rural	0-49	6	80	4	52		Narrow/ No Winter Maintenance	Cobide Engineering	October/ November	\$448,800.00			
1058	SIDEROAD 25 NORTH	Conc. 12 W	Conc. 10 W	Culross	LCB	2	2.05	7	Rural	50-199	4	80	8	3 83			Cobide Engineering	October/ November	\$594,500.00			
1059	SIDEROAD 25 NORTH	Conc. 12	Conc. 14 W	Culross	LCB	2	2.03	8	Rural	46-60	4	80	8	83			Cobide Engineering	October/ November	\$588,700.00			
1060	SIDEROAD 25 NORTH	Conc. 14 W	Greenock bdy	Culross	Gravel	2	1.01	5	Rural	0-49	6	80	8	80		Narrow	Cobide Engineering	October/ November	\$222,200.00			
1061	CULROSS-GREENOCK WEST	Side Rd. 25 N	Dead End	Culross	Gravel	2	1.01	4	Rural	0-49	6	80	8	80		Narrow	Cobide Engineering	October/ November 2020	\$222,200.00			
1062	EGYPT SIDEROAD	Egypt	Dead End	Culross	Gravel	2	0.52	4	Rural	0-49	6	80	4	56		Narrow/ Dead End	Cobide Engineering	October/ November 2020	\$114,400.00			
1063	SIDEROAD 32 (North Portion)	Conc. 14 W	Conc. 12	Culross	Gravel	2	1.00	5.7	Rural	50-199	4	80	8	82			Cobide Engineering	October/ November 2020	\$220,000.00			
1063.1	SIDEROAD 32 (South Portion)	Conc. 14 W	Conc. 12	Culross	Gravel	2	1.00	5.7	Rural	50-199	4	80	8	82			Cobide Engineering	October/ November	\$220,000.00			
1064	SIDEROAD 32	Conc. 10	Conc. 12	Culross	LCB	2	2.06	6	Rural	50-199	4	80	4	1 24 Reconst	ruct		Cobide Engineering	October/ November 2020	\$597,400.00	REC-ST	Reconstruction - Surface Treatment	\$597,400
1065	KINLOSS-CULROSS	Conc. 10	Conc. 8	Culross	НСВ	2	2.00	7	Rural	50-199	4	80	8	82			Cobide Engineering	October/ November 2020	\$780,000.00			
1066	KINLOSS-CULROSS	Conc. 8	Bruce County Rd. 6	Culross	LCB	2	2.00	7	Rural	50-199	4	80	6	64 Resurfac	ce in 1-5 yrs		Cobide Engineering	October/ November 2020	\$580,000.00	SST	Single Surface Treatment	\$50,000
1067	BRUCE ROAD 6	Bruce County Rd. 6	Wolfe St	Culross	HCB	2		7	Rural	50-199	4	80				Not Municipal Road	Cobide Engineering	October/ November 2020	\$195,000.00			
1068	SIDEROAD 25 NORTH	Conc. 10	Dead End	Culross	LCB	2	0.90	4	Rural	0-49	6	80	6	5 75 Resurfac	ce in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$261,000.00			
1069	SIDEROAD 25 NORTH	Conc. 8	Dead End	Culross	LCB	2	1.04	7	Rural	50-199	4	80	6	5 59 Resurfac	ce in 1-5 yrs		Cobide Engineering	October/ November 2020	\$301,600.00	SST	Single Surface Treatment	\$26,000
1070	SIDEROAD 25 NORTH	Conc. 8	Bruce County Rd. 6	Culross	Gravel	2	2.07	5.2	Rural	0-49	6	80	8	82		Narrow/ No Winter Maintenance	Cobide Engineering		\$455,400.00			
1071	SIDEROAD 25 NORTH	Bruce County Rd. 6	Conc. 4	Culross	Gravel	2	1.90	5.2	Rural	0-49	6	80	8	82		No Winter Maintenance	Cobide Engineering	October/ November 2020	\$418,000.00			
1072	SIDEROAD 25 SOUTH	Conc. 4	Conc. 2	Culross	Gravel	2	2.10	4.5	Rural	0-49	6	80	6	73		Narrow/ No Winter Maintenance	Cobide Engineering	October/ November 2020	\$462,000.00			
1073	SIDEROAD 25 SOUTH	Conc. 2	200m South of Concession 2	Culross	LCB	2	0.20	7	Rural	0-49	6	80	6	5 75 Resurfac	ce in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$58,000.00			
1073.1	SIDEROAD 25 SOUTH	200m South of Concession 2	300m South of Concession 2	Culross	LCB	2	0.10	7	Rural	0-49	6	80	4	42 Resurfac	ce		Cobide Engineering	October/ November 2020	\$29,000.00	DST	Double Surface Treatment	\$9,500.
1073.2	SIDEROAD 25 SOUTH	300m South of Concession 2	Turnberry/Culross Bdy	Culross	LCB	2	2.16	7	Rural	0-49	6	80	8	83			Cobide Engineering	October/ November 2020	\$626,400.00			
1074	KINGS ROAD	Turnberry/Culross Bdy	Conc. 2	Culross	Gravel	2	2.53	4.5	Rural	0-49	6	80	6	70		Narrow/ No Winter Maintenance	Cobide Engineering		\$556,600.00			
1075	KINGS ROAD	Conc. 2	Dead End	Culross	Gravel	2	0.29	4.5	Rural	0-49	6	80	6	70 Resurfac	ce in 1-5 yrs		Cobide Engineering	October/ November 2020	\$63,800.00			
1076	SIDEROAD 20	Bruce Rd 6	Conc. 4	Culross	Gravel	2	1.98	4.5	Rural	0-49	6	80	6	66		No Winter Maintenance	Cobide Engineering	October/ November 2020	\$435,600.00			
1076.1	SIDEROAD 20	Side Rd 20A	Bruce Rd 6	Culross	Gravel	2	0.09	4.5	Rural	0-49	6	80	6	66		No Winter Maintenance	Cobide Engineering	October/ November 2020	\$19,800.00			
1076.2	SIDEROAD 20A	Bruce Rd 6	Dead End	Culross	Gravel	2		4.5	Rural	0-49	6	80				Closed	Cobide Engineering	October/ November 2020	\$26,400.00			
1077	SIDEROAD 20	Conc. 4	Conc. 2	Culross	Gravel	2	2.05	5.5	Rural	0-49	6	80	6	60		No Winter Maintenance	Cobide Engineering	October/ November 2020	\$451,000.00			
1078	SIDEROAD 20	Conc. 2	Turnberry Bdy	Culross	Gravel	2	2.39	5.3	Rural	0-49	6	80	E	66		No Winter Maintenance	Cobide Engineering		\$525,800.00			
1079	SIDEROAD 5A	Huron Bruce Rd	Conc. 2	Culross	Gravel	2	2.15	4	Rural	0-49	6	80	8	82		No Winter Maintenance	Cobide Engineering	October/ November 2020	\$473,000.00			
1080	SIDEROAD 1A	Conc. 2	Huron Bruce Rd	Culross	Gravel	2	2.07	4	Rural	0-49	6	80	8	80		Narrow/ No Winter Maintenance	Cobide Engineering	October/ November 2020	\$455,400.00			
1081	SIDEROAD 5A	Conc. 2	Conc4	Culross	Gravel	2	2.05	5.5	Rural	0-49	6	80	8	82		Narrow/ No Winter Maintenance	Cobide Engineering	October/ November 2020	\$451,000.00			
1083	SIDEROAD 10	Conc. 4	Bruce Rd 6	Culross	Gravel	2	2.05	3	Rural	0-49	6	80	8	82			Cobide Engineering	October/ November 2020	\$451,000.00			
1084	SIDEROAD 10	Bruce Rd 6	Conc. 8	Culross	Gravel	2	2.14	6.3	Rural	0-49	6	80	8	82			Cobide Engineering	October/ November 2020	\$470,800.00			
1085	SIDEROAD 1B	Conc. 8	Conc. 10	Culross	Gravel	2	2.06	5	Rural	0-49	6	80	8	82			Cobide Engineering	October/ November 2020	\$453,200.00			
1086	SIDEROAD 1C	Conc. 12	Dead End	Culross	Gravel	2	0.55	3.7	Rural	0-49	6	80	6	73			Cobide Engineering	October/ November 2020	\$121,000.00			
1087	SIDEROAD 5A	Conc. 4	Bruce Rd. 6	Culross	Gravel	2	2.05	5.2	Rural	0-49	6	80	6	71		No Winter Maintenance	Cobide Engineering	October/ November 2020	\$451,000.00			
1147	BISMARK STREET N	VILLAGE EDGE	CARROLL ST ROW		НСВ	2	0.02		Rural				8	80 Resurfac	ce in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$8,190.00			
1148	BISMARK STREET N	CARROLL ST ROW	ELLEN ST		HCB	2	0.01		Rural				ε	80 Resurfac	ce in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$3,900.00			
1149	BISMARK STREET N	ELLEN ST	ABSOLOM ST		НСВ	2	0.01		Rural				8	80 Resurfac	ce in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$3,900.00			



ENGINEERING INI	IDENTIFIERS &					PHYSICAL PR	OPERTIES D	ATA								FINANCIAL DATA	INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range	Ride Comfort Rating (RCR) Pavement Condition	Action Required	Notes Assessed By Date Assessed (yyyy-	Current Replacement Value Intervention Type	Intervention Description	Cost
2000	HURON-BRUCE RD	B-Line	Bruce Rd 12	Carrick	LCB	2	2.06	7	Rural	400-999	4	80	6 47	Resurface	Cobide Engineering 2020	\$597,400.00 SST	Single Surface Treatment	\$51,500.00
2001	HURON-BRUCE RD	Side Rd 5 S	B-Line	Carrick	НСВ	2	2.04	7	Rural	362-396	4	80	10 89		Cobide Engineering 2020	\$795,600.00		
2002	HURON-BRUCE RD	Bruce Rd 28	Side Rd 5 S	Carrick	LCB	2	2.05	7	Rural	400-999	4	80	8 81		Cobide Engineering 2020	\$594,500.00		
2003	HURON-BRUCE RD	Inglis Cres	Bruce Rd 28	Carrick	HCB	2	2.48	7	Rural	400-999	4	80	10 89		Cobide Engineering 2020 Uccoper/ November	\$967,200.00		
2004	INGLIS CRESCENT	Huron Bruce Rd	Huron Bruce Rd	Carrick	Gravel	2	0.48	5.6	Rural	0-49 400-999	6	80	8 82		Cobide Engineering 2020 October/ November	\$105,600.00		
2005	HURON-BRUCE RD HURON-BRUCE RD	Ingils Cres Grey Road 10	Hwy9	Carrick Carrick	HCB HCB	2	5.80 1.38	7	Rural	400-999	4	80	10 87		Cobide Engineering 2020 October/ November	\$2,262,000.00		
2007	FIELD ROAD	Huron Bruce Rd	Highway# 9 Side Rd 45	Carrick	Gravel	2	1.57	8	Rural	50-199	4	80	6 63	Resurface in 1-5 yrs	Cobide Engineering 2020 Uctober/ November	\$538,200.00 SST \$345,400.00	Single Surface Treatment	\$34,500.00
2008	FIELD ROAD	Side Rd 45	Tack Rd	Carrick	LCB	2	1.85	8	Rural	50-199	4	80	8 81		Cobide Engineering 2020 Cobide Engineering 2020 2020	\$345,400.00		+
2009	CONCESSION 2	Side Rd 15 S	Tack Rd	Carrick	LCB	2	2.04	8	Rural	50-199	4	80	8 83		Cobide Engineering 2020	\$591,600.00		
2010	CONCESSION 2	Bruce Rd 28	Side Rd 15 S	Carrick	LCB	2	2.05	7	Rural	50-199	4	80	8 83		Cobide Engineering 2020	\$594,500.00		
2011	CONCESSION 2	Side Rd 5 S	Bruce Rd 28	Carrick	HCB	2	2.05	7	Rural	200-399	4	80	8 77	Resurface in 6-10 Yrs	Cobide Engineering 2020	\$799,500.00		
2012	CONCESSION 2	B-Line	Side Rd 5 S	Carrick	HCB	2	2.04	7	Rural	200-399	4	80	6 66	Resurface in 1-5 yrs	Cobide Engineering 2020	\$795,600.00 OV	Asphalt Overlay	\$255,000.00
2013	CONCESSION 2	Bruce Rd 12	Bruce Rd 12	Carrick	HCB	2	2.06	7	Rural	200-399	4	80	6 70	Resurface in 1-5 yrs	Cobide Engineering 2020	\$803,400.00 OV	Asphalt Overlay	\$257,500.00
2014	CONCESSION 4	B-Line	B-Line	Carrick	LCB	2	2.05	7	Rural	200-399	4	80	6 67	Resurface in 1-5 yrs	Bline 250 West gra. Cobide Engineering 2020 October/ November	\$594,500.00 SST	Single Surface Treatment	\$51,250.00
2015	CONCESSION 4	Side Rd 5 S	B-Line	Carrick	LCB	2	2.05	7	Rural	200-399	4	80		Resurface in 6-10 Yrs	Cobide Engineering 2020 October/ November	\$594,500.00		+
2016	CONCESSION 4 CONCESSION 4	Bruce Rd 28 Side Rd 15 S	Side Rd 5 S Bruce Rd 28	Carrick Carrick	LCB	2	2.03	7	Rural Rural	200-399	4	80	6 66	Resurface in 1-5 yrs	Cobide Engineering 2020 October/ November	\$588,700.00 SST	Single Surface Treatment	\$50,750.00
2017	CONCESSION 4 CONCESSION 4	Side Rd 15 S Conc. D	Side Rd 15 S	Carrick	LCB LCB	2	1.05	7	Rural	200-399	4	80	10 88		Cobide Engineering 2020	\$591,600.00 \$304,500.00		+
2019	SIDEROAD 41	Conc. 4	Hwy9	Carrick	LCB	2	1.02	7	Rural	200-399	4	80	10 88	Resurface in 1-5 yrs	Cobide Engineering 2020 Uctober/ November Cobide Engineering 2020	\$304,500.00 \$295,800.00 SST	Single Surface Treatment	\$25,500.00
2020	CONCESSION 4 E	Side Rd 30 N	Concession C	Carrick	LCB	2	2.30	7	Rural	84-132	4	80	8 81	Nesurface III 1-5 yrs	new surrace treatment, irregular crossfall Cobide Engineering 2020	\$667,000.00	Single Surface Treatment	\$25,500.00
2021	CONCESSION 4 E	Grey Cty Rd 10	Side Rd 30 N	Carrick	LCB	2	1.59	7	Rural	200-399	4	80	6 59	Resurface in 1-5 yrs	Overlay Cobide Engineering 2020	\$461,100.00 DST	Double Surface Tratment	\$151,050.00
2022	CONCESSION 2 E	Grey Cty Rd 10	Side Rd 30 N	Carrick	LCB	2	1.54	7	Rural	200-399	4	80	10 81		new súriace treatment, October/ November irregular crossfall Cobide Engineering 2020	\$446,600.00		
2023	CONCESSION 2 E	Side Rd 30 N	Side Rd 45	Carrick	LCB	2	1.54	7	Rural	58-96	4	80	10 87		Cobide Engineering 2020	\$446,600.00		
2024	SIDEROAD 45	Hwy9	Seip Road	Carrick	LCB	2	1.04	7	Rural	200-399	4	80	6 69	Resurface in 1-5 yrs	Cobide Engineering 2020 October/ November	\$301,600.00 SST	Single Surface Treatment	\$26,000.00
2025	CONCESSION 6 EAST	Side Rd 30 N	Grey Road 10	Carrick	LCB	2	1.65	7	Rural	200-399 167-193	4	80		Resurface in 6-10 Yrs	Cobide Engineering 2020 Uctober/ November	\$478,500.00		
2026	CONCESSION 6 EAST	Side Rd 25	Side Rd 30 N	Carrick	LCB	2	2.02	7	Rural	200-399	4	80		Reconstruct	Cobide Engineering 2020 October/ November	\$585,800.00 REC-ST	Reconstruction - Surface Treatment	\$585,800.00
2027	CONCESSION 6 EAST	Side Rd 20 N Hwy9	Side Rd 25 Side Rd 20 N	Carrick Carrick	LCB LCB	2	2.06 1.65	7	Rural Rural	200-399	4	80		Resurface in 1-5 yrs	Cobide Engineering 2020 October/ November	\$597,400.00 SST	Single Surface Treatment	\$51,500.00
2029	CONCESSION 8 WEST	Side Rd 5 S	Absalom Street	Carrick	LCB	2	2.45	7	Rural	400-999	4	80		Resurface in 1-5 yrs Resurface in 1-5 yrs	Cobide Engineering 2020 Uctober/ November Cobide Engineering 2020	\$478,500.00 SST \$710,500.00 SST	Single Surface Treatment Single Surface Treatment	\$41,250.00 \$61,250.00
2030	CONCESSION 8 WEST	Side Rd 5 S	B-Line	Carrick	LCB	2	2.05	7	Rural	400-999	4	80		Resurface in 6-10 Yrs	Cobide Engineering 2020 Cobide Engineering 2020	\$594 500.00	Single Surface Treatment	361,230.00
2031	CONCESSION 8 WEST	B-Line	Bruce Rd 12	Carrick	LCB	2	2.04	7	Rural	400-999	4	80		Resurface in 1-5 yrs	Cobide Engineering 2020	\$591,600.00 SST	Single Surface Treatment	\$51,000.00
2032	CONCESSION 10	B-Line	Bruce Rd 12	Carrick	LCB	2	2.04	7	Rural	400-999	4	80		Reconstruct	Cobide Engineering 2020	\$591,600.00 REC-ST	Reconstruction - Surface Treatment	\$591,600.00
2033	CONCESSION 10	Schaefer Rd	B-Line	Carrick	LCB	2	1.32	7	Rural	400-999	4	80	6 55	Resurface in 1-5 yrs	Cobide Engineering 2020	\$382,800.00 SST	Single Surface Treatment	\$33,000.00
2034	SCHAEFER ROAD	Bruce Rd 3	Conc. 10	Carrick	LCB	2	1.17	7	Rural	400-999	4	80	6 52	Resurface in 1-5 yrs	Cobide Engineering 2020	\$339,300.00 SST	Single Surface Treatment	\$29,250.00
2035	SCHAEFER ROAD	Conc. 12 E	Bruce Rd 3	Carrick	LCB	2	1.48	7	Rural	400-999 302-410	4	80	4 35	Resurface	Cobide Engineering 2020 October/ November	\$429,200.00 DST	Double Surface Treatment	\$140,600.00
2036	CONCESSION 12 E	Hwy9	Schaefer Rd	Carrick	LCB	2	1.29	7	Rural Rural	400-999	4	80	6 60	Resurface in 1-5 yrs	Cobide Engineering 2020 Uctober/ November	\$374,100.00 SST	Single Surface Treatment	\$32,250.00
2038	CONCESSION 12 E	Hwy9 Side Rd 15 N	Side Rd 15 N Side Rd 20 N	Carrick Carrick	LCB LCB	2	2.07	7	Rural	400-999	4	80		Reconstruct	Cobide Engineering 2020 October/ November	\$290,000.00 REC-ST	Reconstruction - Surface Treatment	\$290,000.00
2039	CONCESSION 12 EAST	Side Rd 20 N	Side Rd 25	Carrick	LCB	2	2.03	7	Rural	400-999	4	80		Resurface in 1-5 yrs	Cobide Engineering 2020 UCCOOET/ NOVEMBER Cobide Engineering 2020 2020	\$600,300.00 SST \$588,700.00 SST	Single Surface Treatment Single Surface Treatment	\$51,750.00 \$50,750.00
2040	CONCESSION 12 EAST	Side Rd 25	Side Rd 30 N	Carrick	LCB	2	2.04	7	Rural	400-999	4	80		Resurface in 1-5 yrs Resurface in 1-5 yrs	Cobide Engineering 2020 Cobide Engineering 2020	\$591,600.00 SST	Single Surface Treatment	\$51,000.00
2041	CONCESSION 12 EAST	West Grey Boundary	Side Rd. 30 N	Carrick	LCB	2	1.81	7	Rural	400-999	4	80		Resurface in 6-10 Yrs	Cobide Engineering 2020	\$524,900.00	Single Surface Treatment	\$31,000.00
2042	CONCESSION 10 EAST	Side Rd. 30 N	West Grey Boundary	Carrick	LCB	2	1.76	7	Rural	400-999	4	80		Resurface	Cobide Engineering 2020	\$510,400.00 DST	Double Surface Treatment	\$167,200.00
2043	CONCESSION 10 EAST	Side Rd 25 N	Side Rd. 30 N	Carrick	LCB	2	2.03	7	Rural	400-999	4	80	6 39	Resurface	Cobide Engineering 2020	\$588,700.00 DST	Double Surface Treatment	\$192,850.00
2044	CONCESSION 10 EAST	Side Rd 20 N	Side Rd 25 N	Carrick	LCB	2	2.04	7	Rural	797-865	4	80	6 35	Resurface	Cobide Engineering 2020 Uctober/ November	\$591,600.00 DST	Double Surface Treatment	\$193,800.00
2045	CONCESSION 10 EAST	Side Rd 15 N	Side Rd 20 N	Carrick	LCB	2	2.06	7	Rural	400-999	4	80	6 35	Resurface	Cobide Engineering 2020 Uctober/ November	\$597,400.00 DST	Double Surface Treatment	\$195,700.00
2046	CONCESSION 10 EAST	Hwy9	Side Rd 15 N	Carrick	LCB	2	2.18	7	Rural	400-999	4	80		Reconstruct	Cobide Engineering 2020 October/ November	\$632,200.00 REC-ST	Reconstruction - Surface Treatment	\$632,200.00
2047	CONCESSION 14	Side Rd 15 N Side Rd 20 N	Hwy9 Side Rd 15 N	Carrick	LCB	2	2.04	7	Rural Rural	890-1006	4	80	8 78	Resurface in 6-10 Yrs	Cobide Engineering 2020 October/ November	\$591,600.00		
2048	CONCESSION 14 CONCESSION 14	Side Rd 20 N Side Rd 25 N	Side Rd 15 N Side Rd 20N	Carrick Carrick	LCB LCB	2	2.05	7	Rural	400-999	4	80	10 87		Cobide Engineering 2020 Cobide Engineering 2020 Cobide Engineering 2020 Cobide Engineering 2020	\$594,500.00 \$591,600.00 SST	Single Surface Treatment	\$51,000.00
2050	CONCESSION 14	Side Rd 30N	Side Rd 25	Carrick	LCB	2	2.04	7	Rural	400-999	4	80		Resurface in 1-5 yrs	Cobide Engineering 2020 Cobide Engineering 2020 Cobide Engineering 2020 Cobide Engineering 2020	\$591,600.00 DST	Single Surface Treatment Double Surface Treatment	\$193,800.00
2051	CONCESSION 14	West Grey Boundary	Side Rd 30 N	Carrick	LCB	2	1.87	7	Rural	400-999	4	80		Resurface in 1-5 yrs	Cobide Engineering 2020 Cobide Engineering 2020 Cobide Engineering 2020	\$542,300.00 DST	Single Surface Treatment	\$193,800.00
2053	SIDEROAD 30 NORTH	Conc. 14 W	Brockton Bdy	Carrick	LCB	2	1.27	7	Rural	200-399	4	80		Resurface in 1-5 yrs	Cobide Engineering 2020	\$368,300.00 SST	Single Surface Treatment	\$31,750.00
2059	SIDEROAD 30 NORTH	Conc. 14	Conc. 12 E	Carrick	Gravel	2	2.00	7	Rural	200-399	4	80	6 72		Cobide Engineering 2020 Uctober/ November Cobide Engineering Uctober/ November	\$440,000.00		
2060	SIDEROAD 30 NORTH	Conc. 12 E	Conc. 10	Carrick	Gravel	2	2.07	5	Rural	50-199	4	80	8 79		No Winter Maintenance Cobide Engineering 2020	\$455,400.00		
2061	SIDEROAD 30 NORTH	Conc. 10	Brice Rd 6 E	Carrick	Gravel	2	2.08	5.5	Rural	50-199	4	80	8 82		Cobide Engineering 2020 Cobide Engineering 2020 October/ November	\$457,600.00		
2062	SIDEROAD 30 NORTH	Bruce Rd 6 E	Conc. 6 E	Carrick	Gravel	2	2.08	5.5	Rural	50-199	4	80	6 74		Cobide Engineering 2020 INSTITUTE OCCUPATION NO WHITEE	\$457,600.00		
2063	SIDEROAD 30 NORTH	Conc. 6 E	Conc. 4 E	Carrick	Gravel	2	2.04	4.5	Rural	0-49	6	80	8 82		Maintenance Cobide Engineering 2020 Uctober/ November	\$448,800.00		+
2064	SIDEROAD 30 NORTH	Conc. 4 E	Seip Rd	Carrick	Gravel	2	1.76	4.5	Rural	0-49	6	80	8 82		Cobide Engineering 2020 October/ November	\$455,400.00		+
2065	SIDEROAD 50 SIDEROAD 50	Seip Rd Hwy9	Hwy9 Huron Bruce Rd	Carrick Carrick	Gravel Gravel	2	0.89	3.7	Rural	0-49	6	80	8 82 8 82		No Winter Maintenance Cobide Engineering 2020 INGRITOWY NO WINTER COMMITTEE CONTROL OF	\$387,200.00		+
2000	SIDENOAD 30	y5	naron bruce nu	COLLEG	Graver	-		J.,			1 6	80	8 82	1	Maintenance Cobide Engineering 2020	\$195,800.00	<u> </u>	



ENGINEERING INC	IDENTIFIERS &	LOCATION				PHYSICAL PR	ROPERTIES D)ATA										FINANCIAL DATA		INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range	Ride Comfort Rating (RCR) 0 - 10 Paven Condi	tion Action Rec	quired	Notes Assessed By	Date Assessed (yyyy mm-dd)	Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
2067	SIDEROAD 45	Field Rd	Hwy9	Carrick	Gravel	2	1.03	8	Rural	50-199	4	80	8	82		Cobide Engineering	2020 Uctober/ November	\$226,600.00			
2068	SIDEROAD 25	Side Rd 45	Conc. 4 E	Carrick	Gravel	2	1.58	4	Rural	0-49 50-199	6	80	8	82	No W	Vinter Maintenance Cobide Engineering	October/ November	\$347,600.00			
2069	SIDEROAD 25 SIDEROAD 25	Conc. 4 E Conc. 6 E	Conc. 6 E Bruce Rd 6 E	Carrick Carrick	Gravel Gravel	2	2.05	4.7 5.5	Rural Rural	50-199	4	80	8	82		Cobide Engineering	October/ November	\$451,000.00			+
2071	SIDEROAD 25	Bruce Rd 6 E	Conc. 10	Carrick	Gravel	2	2.05	5.5	Rural	0-49	4	80	3 8	81	No W	Cobide Engineering Vinter Maintenance Cobide Engineering	October/ November	\$451,000.00 \$451,000.00			+
2072	SIDEROAD 25	Conc. 10 E	Conc. 12 E	Carrick	Gravel	2	2.07	5	Rural	0-49	6	80	8	82		Vinter Maintenance Cobide Engineering Cobide Engineering	October/ November	\$455,400.00			+
2073	SIDEROAD 25	Conc. 12 E	Conc. 14	Carrick	Gravel	2	2.00	5	Rural	0-49	6	80	8	82	No W	vinter Maintenance	October/ November	\$440,000.00			
2074	SIDEROAD 25	Conc. 14	Brockton Bdy	Carrick	Gravel	2	1.26	5	Rural	0-49	6	80	6	73		Cobide Engineering	October/ November	\$277,200.00			
2075	SIDEROAD 20 NORTH	Brockton Bdy	Conc. 14	Carrick	LCB	2	1.24	8	Rural	200-399	4	80	8	79 Resurface in 6-	10 Yrs		2020 October/ November	\$359,600.00			
2076	SIDEROAD 20 NORTH	Conc. 14	Conc. 12 E	Carrick	Gravel	2	2.00	6.7	Rural	200-399	4	80	6	68		Cobide Engineering	2020	\$440,000.00			
2077	SIDEROAD 20 NORTH	Conc. 12 E	Conc. 10	Carrick	Gravel	2	2.08	6.7	Rural	200-399	4	80	6	72		Cobide Engineering		\$457,600.00			
2078	SIDEROAD 20 NORTH	Conc. 10	Bruce Rd 6	Carrick	Gravel	2	2.05	6.7	Rural	200-399	4	80	6	73		Cobide Engineering	2020 October/ November	\$451,000.00			
2079	SIDEROAD 20 NORTH	Bruce Rd 6	240m south of Bruce Road 6	Carrick	LCB	2	0.24	6.3	Semi-Urban	200-399	4	80	4	33 Resurface		Cobide Engineering	2020 October/ November	\$69,600.00	DST	Double Surface Treatment	\$22,800.00
2079.1	SIDEROAD 20 NORTH	240m south of Bruce Road 6	Conc. 6 E	Carrick	Gravel	2	1.81	6.3	Rural	0-49	4	80	6	65		Cobide Engineering	October/ November	\$398,200.00			+
2080	CONCESSION C	Conc. 6 E	Side Rd 41	Carrick	Gravel	2	3.00 1.05	4	Rural Rural	50-199	6	80	6	72		Cobide Engineering	October/ November	\$660,000.00			
2082	SIDEROAD 40 TACK ROAD	Hwy9 Conc. D	Conc. D	Carrick Carrick	Gravel Gravel	2	0.96	5.7	Rural	50-199	4	80	6	73		Cobide Engineering	October/ November	\$231,000.00			+
2082	CONCESSION D	Side Rd 40	Conc. 2	Carrick	Gravel	2	1.70	6	Rural	50-199	4	80	8	82		Cobide Engineering	October/ November	\$211,200.00 \$374,000.00			+
2084	CONCESSION D	Conc. 4	Side Rd 30 N	Carrick	Gravel	2	2.40	6	Rural	50-199	1 .	80	5	72		Cobide Engineering	October/ November	\$374,000.00 \$528,000.00			+
2085	CONCESSION D	Side Rd 30	Bruce Rd 28	Carrick	Gravel	2	1.62	6	Rural	50-199	4	80	8	02		Cobide Engineering Cobide Engineering	October/ November	\$356,400.00			+
2086	B LINE	Huron Bruce Rd	Conc. 2	Carrick	Gravel	2	2.04	5.7	Rural	50-199		80	8	87		Cobide Engineering	October/ November	\$448,800.00			+
2087	B LINE	Conc. 2	Conc. 4	Carrick	Gravel	2	2.05	5.7	Rural	50-199	4	80		82		Cobide Engineering	October/ November	\$451,000.00			
2088	B LINE	Conc. 4	Bruce Rd 6	Carrick	Gravel	2	2.05	6.4	Rural	50-199	4	80	6	74		Cobide Engineering	October/ November 2020	\$451,000.00			
2089	B LINE	Bruce Rd 6 E	Conc. 8	Carrick	Gravel	2	2.05	6	Rural	50-199	4	80	8	82		Cobide Engineering	2020	\$451,000.00			
2090	B LINE	Conca w	Conc. 10	Carrick	Gravel	2	2.05	7	Rural	50-199	4	80	6	74		Cobide Engineering	October/ November	\$451,000.00			
2091	B LINE	Conc. 10	Concil Rd	Carrick	Gravel	2	1.61	6	Rural	50-199	4	80	8	82		Cobide Engineering	October/ November	\$354,200.00			
2092	CONCESSION 12	Concil Rd	Formosa East Town limits	Formosa	Gravel	2	1.73	4.3	Rural	0-49	6	80	6	70		Cobide Engineering	2020	\$380,600.00			
2093	COUNCIL ROAD	Formosa East Limit	B-Line	Formosa	Gravel	2	1.40	6	Rural	50-199	4	80	8	82		Cobide Engineering	2020 October/ November	\$308,000.00			
2094	B LINE	B-Line (Southerly)	Bruce Rd 3	Carrick	Gravel	2	1.03	7	Rural	50-199	4	80	8	80		Cobide Engineering	2020 October/ November	\$226,600.00			
2095	TOWER ROAD	Bruce Rd 3	Grubb Rd	Carrick	Gravel	2	0.98	7	Rural	50-199	4	80	8	82	кета	Cobide Engineering	2020 October/ November	\$215,600.00			
2096	CARRICK-BRANT WEST	300m West of Bruce Road 3	Bruce Road 3	Carrick	Gravel	2	2.07	6.8	Rural	50-199 50-199	4	80	6	75	unacc	cessable Cobide Engineering	October/ November	\$455,400.00			
2097	GRUBB ROAD TOWER ROAD	Bruce Rd 12	Bruce Rd 3	Carrick	Gravel	2	2.50	6.7 4.5	Rural Rural	50-199	4	80	8	82		Cobide Engineering	October/ November	\$550,000.00			+
2098	MAPLE CREEK DR	Bruce Rd 3	Dead End Dead End	Carrick Carrick	Gravel	2	0.72	6.3	Rural	50-199	4	80	6	74		Cobide Engineering	October/ November	\$448,800.00			
2100	HIGHLAND CR	Bruce Rd 3 Maple Creek Dr	Dead End	Carrick	LCB LCB	2	0.40	6.3	Semi-Urban	50-199	6	50	4	46 Resurface		Cobide Engineering	October/ November	\$208,800.00		Double Surface Treatment	\$68,400.00
2101	WOODLAND CT	Maple Creek Dr	Dead End	Carrick	LCB	2	0.14	6.3	Semi-Urban	50-199		50	5	49 Resurface 65 Resurface in 1-	Fame	Cobide Engineering	October/ November	\$116,000.00 \$40,600.00		Double Surface Treatment Single Surface Treatment	\$38,000.00
2102	CONCESSION 14	Sideroad 10N	Bruce Road 3	Carrick	LCB	2	2.20	7	Rural	200-399	4	80	8	76 Resurface in 6-		Cobide Engineering Cobide Engineering	October/ November	\$638,000.00	331	Single Surface Treatment	\$3,500.00
2103	SCHMIDT ROAD	Conc. 14	Carrick-Brant	Carrick	LCB	2	1.25	5.6	Rural	50-199	4	80		63 Resurface in 1-		Cobide Engineering	October/ November	\$362,500.00	SST	Single Surface Treatment	\$31,250.00
2104	PLETSCH CT	Schmidt Rd	Dead End	Carrick	Gravel	2	0.51	4.5	Rural	0-49	6	80	6	75		Cobide Engineering	October/ November	\$112,200.00			
2105	CONCESSION 14	Schmidt Rd	Hwy9	Carrick	LCB	2	2.00	7	Rural	200-399	4	80	8	60 Resurface in 1-	5 yrs	Cobide Engineering	October/ November	\$580,000.00	SST	Single Surface Treatment	\$50,000.00
2106	CARRICK-BRANT EAST	Hwy9	Dead End	Carrick	Gravel	2	0.59	6	Rural	0-49	6	80	6	74		Cobide Engineering	2020	\$129,800.00			
2107	CARRICK-BRANT EAST	Hwy9	Glesson Avenue	Carrick	LCB	2	0.52	6	Rural	0-49	6	80	6	46 Resurface		Cobide Engineering	2020 Ucroper/ November	\$150,800.00	DST	Double Surface Treatment	\$49,400.00
2107.1	CARRICK-BRANT EAST	Gleeson Avenue	Dead End	Carrick	Gravel	2	0.59	6	Rural	0-49	6	80	8	82		Cobide Engineering	2020 October/ November	\$129,800.00			
2108	KINGMA CT	1.0 km of Conc. 2 sdr	Dead End	Carrick	Gravel	2	0.73	6	Rural	0-49	6	80	8	82	INATTO	Cobide Engineering	2020 October/ November	\$160,600.00			
2109	SIDEROAD 15 NORTH	Con 14 E	Conc. 15	Carrick	Gravel	2	2.02	4	Rural	0-49	6	80	8	82	warro	tenance Cobide Engineering	2020 October/ November	\$444,400.00			
2109.1	SIDEROAD 15 NORTH	Con 14 E	Dead End	Carrick	Gravel	2	2.08	4	Rural	0-49	6	80	8	82	Narro	tenance Cobide Engineering	October/ November	\$112,200.00			+
2110	SIDEROAD 15 NORTH	Conc. 12 E Conc. 10	Conc. 10 Bruce Rd 6	Carrick Carrick	Gravel Gravel	2	1.99	4.5	Rural Rural	50-199	6	80	6	74	Maint		2020 October/ November	\$457,600.00			+
2111	SIDEROAD 15 NORTH SIDEROAD 30	Conc. 10	Bruce Rd 6 Highway# 9	Carrick	Gravel	2	1.03	5	Rural	0-49	4	80	4	49		Cobide Engineering	October/ November	\$437,800.00			+
2112.1	SIDEROAD 30	Hwy9	Concession 6E	Carrick	LCB	2	0.99	7	Rural	200-399	-	80	6	75 67 Resurface in 1-	Free	Cobide Engineering Cobide Engineering	October/ November	\$226,600.00 \$287,100.00	cct	Single Surface Treatment	\$24,750.00
2112.2	BLIND LINE C	Sideroad 30	Bruce Road 6 E	Carrick	Gravel	2	1.03	5.7	Rural	50-199	4	80	, 6	67 Kesurface in 1-		Cobide Engineering Vinter Maintenance Cobide Engineering	October/ November 2020	\$287,100.00 \$226,600.00		onigie ouridee rredunent	\$24,750.00
2113	GLADYS CRESCENT	Conc. D	Dead End	Carrick	Gravel	2	0.59	6	Rural	0-49	-	80	6	74	IVO W	Cobide Engineering	October/ November	\$129,800.00			+
2114	SIDEROAD 35	Conc. D	ConcC	Carrick	Gravel	2	2.00	6.4	Rural	50-199	4	80	6	73		Cobide Engineering	October/ November	\$440,000.00			
2115	SIDEROAD 15 SOUTH	Conc. 4	Conc. 2	Carrick	Gravel	2	2.04	4	Rural	0-49	6	80	8	82		DW/ NO WINTER Itenance Cobide Engineering	2020	\$448,800.00			
2115.1	SIDEROAD 15 SOUTH	Conc. D	Conc. 2	Carrick	Gravel	2	1.11	4	Rural	0-49	6	80	8	82		Cobide Engineering	October/ November	\$244,200.00			
2116	SIDEROAD 5 SOUTH	Conc. 2	Huron Bruce Rd	Carrick	Gravel	2	2.05	3.7	Rural	0-49	6	80	8	82		bw/ No winter Itenance Cobide Engineering	October/ November	\$451,000.00			
2117	SIDEROAD 5 SOUTH	Conc. 2	Conc4	Carrick	Gravel	2	2.05	4	Rural	0-49	6	80	6	73		Cobide Engineering	October/ November	\$451,000.00			
2118	SIDEROAD 5 SOUTH	Conc. 4	Bruce Rd 6 E	Carrick	Gravel	2	2.04	5.6	Rural	50-199	4	80	6	73		Cobide Engineering	2020	\$448,800.00			
2120	SIDEROAD 5 SOUTH	Bruce Rd 6 E	Conc. 8	Carrick	Gravel	2	2.04	5	Rural	50-199	4	80	6	73		Cobide Engineering	2020 Uctoper/ November	\$448,800.00			
2121	SIDEROAD 5 SOUTH	Conc. 8	Conc. 10	Carrick	Gravel	2	2.44	6	Rural	50-199	4	80	8	83		Cobide Engineering	2020 October/ November	\$536,800.00			1
2122	SIDEROAD 20-21	Hwy9	Bruce Rd 3	Carrick	LCB	2	0.52	7	Rural	50-199	4	80	6	70 Resurface in 6-	10 Yrs	Cobide Engineering	2020	\$150,800.00			



ENGINEERING INC		ol: Road Network	K		1														
	IDENTIFIERS 8	& LOCATION			PHYSICAL	PROPERTIES I	DATA					Dayramani	•			FINANCIAL DATA		INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material Number of Lan	es Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range	Ride Comfort Rating (RCR) 0 - 10 Condition Index	Action Required	Notes	Assessed By	Date Assessed (yyyy- mm-dd) Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
3000	GORDON ST E	East Town Limits	.2 km west of east town limit	Teeswater	Gravel 2	0.29	6	Semi-Urban	0-49	6	50	6	72		Cobide Engineering	October/ November 2020 \$63,800.00			
3001	GORDON ST E	.2 km west of east town limi	Clarinda St. S	Teeswater	HCB 2	0.20	6	Urban	0-49	6	50	10	89		Cobide Engineering	October/ November 2020 \$205,000.00			
3002	GORDON ST E	Clarinda St. S	Elizabeth St S	Teeswater	HCB 2	0.10	6.7	Urban	0-49	6	50	10	89		Cobide Engineering	October/ November 2020 \$102,500.00			
3003	GORDON ST E	Elizabether St. S	Clinton St. S	Teeswater	HCB 2	0.08	6.7	Urban	0-49	6	50	8 ;	84		Cobide Engineering	October/ November 2020 \$82,000.00 October/ November			
3004	GORDON ST W	Clinton St (Hwy 4)	Brownlee St	Teeswater	HCB 2	0.12	7.4	Urban	0-49	6	50	10	89			2020 \$123,000.00 October/ November			
3005 3006	GORDON ST W MITCHELL ST	Brownlee St. Bruce Rd 4	West Limits Thomas St N	Teeswater Teeswater	HCB 2	0.09	7.4	Urban Semi-Urban	50-199	6	50	8	84		Cobide Engineering	2020 \$92,250.00 October/ November			-
3007	MITCHELL ST	Thomas St N	Hevsham St	Teeswater	HCB 2	0.10	6.3	Semi-Urban	50-199	6	50	8	84		Cobide Engineering	October/ November			+
3008	MITCHELL ST	Heysham St	Wright St	Teeswater	HCB 2	0.10	6.3	Semi-Urban	50-199	6	50	10	89		Cobide Engineering	October/ November			
3009	MITCHELL ST	Wright St	Dead End	Teeswater	HCB 2	0.12	6.3	Semi-Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$123,000.00			
3010	LOGAN ST	Thomas St	Heysham St	Teeswater	HCB 2	0.10	6.3	Semi-Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$102,500.00			
3011	LOGAN ST	Heysham St	Wright St	Teeswater	HCB 2	0.10	6.3	Semi-Urban	50-199	6	50	10	89		Cobide Engineering	October/ November 2020 \$102,500.00			
3012	LOGAN ST	Wright St	Dead End	Teeswater	HCB 2	0.09	6.3	Semi-Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$92,250.00 October/ November			
3013	WRIGHT ST	Logan	Mitchell	Teeswater	HCB 2	0.11	6.3	Semi-Urban	0-49	6	50	10	89		Cobide Engineering	2020 \$112,750.00 October/ November			-
3014 3015	HEYSHAM ST HEYSHAM ST	Mitchell Mitchell	Dead End Logan	Teeswater Teeswater	LCB 2	0.05	6.3	Semi-Urban Semi-Urban	50-199	6	50	6	76 Resurface in 6-10 Yrs			2020 \$14,500.00 October/ November			
3016	HEYSHAM ST	Logan	Dead End	Teeswater	HCB 2	0.01	6.3	Semi-Urban	0-49	6	50	8 ;	84		Cobide Engineering	October/ November			
3017	THOMAS ST	Mitchell	Dead End (north)	Teeswater	HCB 2	0.05	6	Semi-Urban	0-49	6	50	6	76 Resurface in 6-10 Yrs		Cobide Engineering Cobide Engineering	2020 \$10,250.00			
3018	THOMAS ST	Mitchell	Logan	Teeswater	HCB 2	0.11	6.3	Semi-Urban	50-199	6	50	8	84		Cobide Engineering	2020 \$112,750.00			
3019	THOMAS ST	Logan	Ann	Teeswater	HCB 2	0.16	6.3	Semi-Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$164,000.00			
3020	ANN ST W	Thomas	Bruce Rd 4	Teeswater	HCB 2	0.10	6.3	Semi-Urban	50-199 50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$102,500.00 October/ November			
3021	ANN ST E	Bruce Rd 4 (Clinton N)	Wall St	Teeswater	HCB 2	0.18	8.8	Semi-Urban	50-199	6	50	8 :	83		Cobide Engineering	2020 \$184,500.00 October/ November			
3022 3023	WALL ST	Ann St E Wall	Isabella Mill St	Teeswater Teeswater	HCB 2	0.09	6.3	Semi-Urban Semi-Urban	50-199	6	50	8	83		Cobide Engineering	2020 \$92,250.00 October/ November			+
3024	MILL ST	Isabella E	Cty Rd 6 (Hillcrest St E)	Teeswater	HCB 2	0.12	6.3	Urban	50-199	6	50	8	84			October/ November			+
3025	ISABELLA ST	Bruce Rd 4	Dead End	Teeswater	HCB 2	0.12	6.3	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November			+
3026	JANET ST S	Hillcrest W	Union W	Teeswater	HCB 2	0.14	9.1	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November			
3027	JANET ST S	Union St W	James St W	Teeswater	HCB 2	0.13	9.1	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$133,250.00			
3028	JANET ST S	James St W	Marcy St W	Teeswater	HCB 2	0.14	9.1	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$143,500.00 October/ November			
3029	BROWNLEE ST N	Hillcrest Bruce Rd 6	Union St W	Teeswater	HCB 2	0.14	9.8	Urban	50-199 50-199	6	50	8	84		Cobide Engineering	2020 \$143,500.00 October/ November			
3030 3031	BROWNLEE ST N BROWNLEE ST N	Union St W James St W	James St Marcy St W	Teeswater Teeswater	HCB 2	0.13	9.8	Urban	50-199	6	50	8	84		Cobide Engineering	2020 \$133,250.00 October/ November			+
3032	BROWNLEE ST N	Marcy St W	Gordon St W	Teeswater	HCB 2	0.17	9.8	Urban	50-199	6	50	10	89			October/ November			+
3033	BROWNLEE ST S	Gordon St W	Wragge StW	Teeswater	HCB 2	0.12	9	Urban	50-199	6	50	8	84		Cobide Engineering Cobide Engineering	October/ November			
3034	BROWNLEE ST S	Wragge St W	Cassidy St	Teeswater	HCB 2	0.29	7.3	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$297,250.00			
3035	CASSIDY ST	Brownlee St S	Bruce Cty Rd 4	Teeswater	HCB 2	0.12	7.5	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$123,000.00			
3036	WRAGGE ST W	Bruce Rd 4	Brownlee St	Teeswater	HCB 2	0.12	7.7	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$123,000.00 October/ November			
3037	MARCY ST E	Clarinda St. S	.05 km east (arena lot)	Teeswater	HCB 2	0.05	8.3	Urban	50-199 50-199	6	50	10	89		Cobide Engineering	2020 \$51,250.00 October/ November			
3038 3039	MARCY ST E	Clarinda St. S Elizabeth St S	Elizabeth St S Bruce Rd 4	Teeswater Teeswater	HCB 2	0.10	8.3 8.3	Urban	50-199	6	50	8	83		Cobide Engineering	2020 \$102,500.00 October/ November			
3040	MARCY ST W	Bruce Rd 4	Brownlee St S	Teeswater	HCB 2	0.12	9.1	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November			+
3041	MARCY ST W	Brownlee St S	Janet St S	Teeswater	HCB 2	0.10	6.1	Urban	50-199	6	50	8	84		Cobide Engineering Cobide Engineering	October/ November			1
3042	JAMES ST W	Janet St S	Brownlee St S	Teeswater	HCB 2	0.10	8.6	Urban	50-199	6	50	8	84		Cobide Engineering	2020 \$102,500.00 October/ November 2020 \$102,500.00 October/ November			
3043	JAMES ST W	Brownlee St S	Bruce Rd 4	Teeswater	HCB 2	0.12	9.5	Urban	50-199	6	50	10	89		Cobide Engineering	October/ November 2020 \$123,000.00 October/ November			
3044 3045	JAMES ST E	Bruce Rd 4 Elizabeth St S	Elizabeth St S .05 km East of Clarinda S	Teeswater Teeswater	HCB 2	0.12	8.4	Urban Urban	50-199	6	50	8	84		Cobide Engineering	2020 \$123,000.00			
3046	UNION ST E	Dead End	Clarinda St.	Teeswater	HCB 2	0.12	8.5	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November			
3047	UNION ST E	Clarinda St. S	Elizabeth St	Teeswater	HCB 2	0.10	8.5	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$102,500.00			
3048	UNION ST E	Elizabeth St S	Bruce Rd 4	Teeswater	HCB 2	0.09	6.6	Urban	50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$92,250.00			
3049	UNION ST W	Bruce Rd 4	Brownlee St S	Teeswater	HCB 2	0.12	8.5	Urban	50-199	6	50	10	89		Cobide Engineering				
3050 3051	UNION ST W ANDREW ST	Brownlee St S Bruce Rd 6	.05 km west of Janet St S Dead End	Teeswater Teeswater	HCB 2	0.12	8.5 6.7	Urban	50-199 50-199	6	50		84		Cobide Engineering	2020 \$123,000.00 October/ November 2020 \$543,250.00			+
3054	RIVERVIEW TERRACE	Bruce Rd 6	Dead End	Teeswater	HCB 2	0.10	6.7	Semi-Urban	0-49	6	50	8	83		Cobide Engineering	October/ November			
3055	BROWN ST	Bruce Rd 6	Dead End	Teeswater	HCB 2	0.25	7	Semi-Urban	0-49	6	50	8	84		Cobide Engineering	October/ November 2020 \$256,250.00			
3056	ELIZABETH ST S	Dead End	Union St E	Teeswater	HCB 2	0.14	6	Urban	0-49	6	50	8	84			October/ November 2020 \$143,500.00 October/ November			
3057	ELIZABETH ST S	Union St E	James St E	Teeswater	HCB 2	0.13	7	Urban	50-199 50-199	6	50	8	84		Cobide Engineering	October/ November 2020 \$133,250.00 October/ November			
3058	ELIZABETH ST S	James St E	Marcy St E	Teeswater	HCB 2	0.12	11	Urban	50-199	6	50	8	84		Cobide Engineering	2020 \$123,000.00 October/ November			
3059 3060	ELIZABETH ST S	Marcy St E Gordon St E	Gordon St E Wragge St E	Teeswater Teeswater	HCB 2	0.12	8	Urban	50-199	6	50	10	89		Cobide Engineering	2020 \$123,000.00 October/ November			
3061	CLARINDA ST S	Wragge St E	Wragge St E Gordon St E	Teeswater	HCB 2	0.12	7	Urban	50-199	6	50	10	89		Cobide Engineering	October/ November			+
3062	CLARINDA ST S	Gordon St E	Marcy St E	Teeswater	HCB 2	0.12	8.6	Urban	50-199	6	50	10	89		Cobide Engineering Cobide Engineering	October/ November			+
	1	1	1	1	I	1	1			ь	50	10	0.7	1	CODIUC LIIGHIEEHING	\$123,000.00	1		



ENGINEERING INC	Asset Pool:	Road Network		ī									Ī								
	IDENTIFIERS &	LOCATION				PHYSICAL PR	ROPERTIES D	ATA										FINANCIAL DATA		INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range	Ride Comfort Rating (RCR) 0 - 10 Pavement Condition Index	Action Required	Notes	Assessed By	Date Assessed (yyyy- mm-dd)	Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
3063	CLARINDA ST S	Marcy St E	James St E	Teeswater	НСВ	2	0.12	7.1	Urban	50-199	6	50	8 84			Cobide Engineering	October/ November 2020	\$123,000.00			
3064	CLARINDA ST S	James St E	Union St E	Teeswater	HCB	2	0.13	9.1	Urban	50-199	6	50	8 84			Cobide Engineering	October/ November 2020	\$133,250.00			
3065	WRAGGE ST E	Bruce Rd 4	Elizabeth St S	Teeswater	HCB	2	0.18	8.3	Urban	50-199	6	50	10 89			Cobide Engineering		\$184,500.00			
3066	WRAGGE ST E	Elizabeth St S	Clarinda St S	Teeswater	HCB	2	0.10	8.3	Urban	50-199	6	50	10 89			Cobide Engineering		\$102,500.00			
3067	WRAGGE ST E	Clarinda St. S	Shannon St	Teeswater	НСВ	2	0.09	8.3	Urban	50-199	6	50	10 89			Cobide Engineering	October/ November 2020	\$92,250.00			
3068	WRAGGE ST E	Shannon St	Dead End	Teeswater	НСВ	2	0.10	8.3	Urban	50-199	6	50	10 89			Cobide Engineering	October/ November 2020	\$102,500.00			
3069	SHANNON ST	Wragge St E	Railway St	Teeswater	НСВ	2	0.23	7	Urban	50-199	6	50	10 89			Cobide Engineering	October/ November 2020	\$235,750.00			
3070	RAILWAY ST	Shannon St	Bruce Rd 4	Teeswater	НСВ	2	0.34	6.7	Urban	50-199	6	50	10 89			Cobide Engineering		\$348,500.00			
3071	INDUSTRIAL ROAD	Bruce Rd 4	Dead End	Teeswater	HCB	2	0.30	9.3	Urban	50-199	6	50	8 84			Cobide Engineering		\$307,500.00			
3072	BRUCE ROAD 4	Railway St	Marcy St	Teeswater	НСВ	2		0	Urban	>1000	5	50	8 83			Cobide Engineering					
3073	CLINTON ST S	Marcy St	Bruce Rd 6 (Hillcrest St)	Teeswater	HCB	2		0	Urban	>1000	5	50	8 8:			Cobide Engineering	October/ November 2020				
3074	CLINTON ST N	(Hillcrest) Bruce Rd 6	Mitchell St	Teeswater	НСВ	2		0	Urban	>1000	5	50	8 84			Cobide Engineering	October/ November 2020				
3075	JAMES ST E	Track Rd	Gordon St	Teeswater	HCB	2	0.42	7	Urban	0-49	6	50	8 8:			Cobide Engineering	October/ November 2020	\$430,500.00			
3076	TRACK ROAD	James St	Gordon St	Teeswater	Gravel	2	0.86	4.6	Semi-Urban	0-49	6	50	6 73	Resurface in 6-10 Yrs		Cobide Engineering	October/ November 2020	\$189,200.00			
3077	REID STREET	Logan Street	Mitchel Street	Teeswater	Gravel	2		6.3	Rural	0-49	6	50			No Constructed	Cobide Engineering		\$24,200.00			
3078	HILLCREST ST E	Clinton St (Hwy 4)	MunicipalBoundary	Teeswater	НСВ	2			Urban		6	50			Not Municipal Road	Cobide Engineering	October/ November 2020				
3079	HILLCREST ST W	Clinton St (Hwy 4)	MunicipalBoundary	Teeswater	НСВ	2			Urban		6	50			Not Municipal Road	Cobide Engineering	October/ November 2020				

ENGINEERINGING	Asset Po	ool: Road Network		•																	
	IDENTIFIERS	& LOCATION				PHYSICAL PROPE	RTIES DATA											FINANCIAL DATA		INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes Leng	h (km) Surf	ace Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range	Ride Comfort Rating (RCR 0 - 10	Pavement Condition Action Rec	uired Notes	Assessed By	Date Assessed (yyyy- mm-dd)	Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
4000	ABSALOM ST W	Hwy 9 (Elora St)	Simpson St	Mildmay	LCB	2		12	Urban	400-999	-		50	Index	Not Municipal Road	Cabida Fasinaasina	October/ November				
4001	ABSALOM ST W	Simpson St	Lambert St	Mildmay	LCB	2		9.3	Urban	400-999	5		50		Not Municipal Road	Cobide Engineering Cobide Engineering	October/ November				
4002	ABSALOM ST W	Lambert St	Pinkerton St	Mildmay	HCB	2		9.3	Urban	400-999	5		50		Not Municipal Road	Cobide Engineering	October/ November				
4003	ABSALOM ST E	Pinkerton St	Stinson St.	Mildmay	НСВ	2		6.5	Urban	400-999	5		50		Not Municipal Road	Cobide Engineering	October/ November 2020				
4004	ABSALOM ST E	Stinson St	George St	Mildmay	HCB	2		6.5	Urban	400-999	5		50		Not Municipal Road	Cobide Engineering	October/ November 2020				
4005	ABSALOM ST E	George St	East Town Limits	Mildmay	HCB	2		7	Rural	400-999	5		50		Not Municipal Road	Cobide Engineering	October/ November 2020	\$456,300.00			
4006	GEORGE ST	Absalom St	Daniel St	Mildmay	HCB	2	.08	8.5	Urban	50-199	6		50	6 59 Resurface in 1-	yrs	Cobide Engineering	October/ November 2020 October/ November	\$82,000.00	MP	Mill and Pave	\$14,000.00
4007	DANIEL ST	100 m West of George St	Jonathan Cr	Mildmay	HCB		.03	8.5	Urban	50-199	6		50	6 59 Resurface in 1-	yrs	Cobide Engineering	2020 October/ November	\$30,750.00	MP	Mill and Pave	\$5,250.00
4008	JONATHAN CRESCENT	Daniel St	Daniel St	Mildmay	HCB		.26	8.5	Urban	50-199 0-49	6		50	6 59 Resurface in 1-	yrs	Cobide Engineering	2020 October/ November	\$266,500.00	MP	Mill and Pave	\$45,500.00
4009	BEVERLEY ST	Absalom E	Dead End	Mildmay	HCB		.13	6	Semi-Urban	50-199	6		50	6 44 Resurface		Cobide Engineering		\$133,250.00	PP	Pulverize and Pave	\$38,350.00
4010	SIMPSON ST	Absalom St E	Amon St	Mildmay	HCB		.10	6.8	Urban	50-199	6		50	8 83		Cobide Engineering	2020 October/ November	\$102,500.00			+
4011	SIMPSON ST	Amon St	Ignatz St	Mildmay	HCB		.18	6.8	Urban	50-199	6		50	8 83		Cobide Engineering	October/ November	\$184,500.00			
4012 4012.1	SIMPSON ST	Ignatz St	Dead End	Mildmay	HCB		.12	6.2	Urban	50-199	6		50 1	0 89		Cobide Engineering	October/ November	\$123,000.00			+
4012.1	CAMPELL CRESCENT	Alfred St	Simpson St	Mildmay	HCB	-	.10	8.5	Urban	0-49	6		50	8 84		Cobide Engineering	October/ November	\$266,500.00			+
4012.2	MCKENZIE DRIVE	Alfred St	Dead End	Mildmay	HCB		.12			50-199	6		50	8 84		Cobide Engineering	October/ November	\$102,500.00			+
4013 4014	ALFRED ST BERTHA ST	Ignatz	Dead End	Mildmay	HCB		.02	6.2	Urban Semi-Urban	0-49	6		50 1	0 89		Cobide Engineering	October/ November	\$123,000.00			+
4014	IGNATZ ST	Ignatz St Dead End	Dead End Bertha St	Mildmay	HCB HCB		.02	6.1	Semi-Urban Urban	50-199	6		50 1	0 89		Cobide Engineering	October/ November	\$20,500.00			+
4015	IGNATZ ST	Dead End Alfred St	Bertha St Bertha St	Mildmay	HCB	-	.09	6.1	Urban	50-199	6		50 1	0 89		Cobide Engineering	October/ November	\$92,250.00			+
4017	IGNATZ ST	Alfred St	Simpson St	Mildmay	HCB		.10	6.1	Urban	50-199	6		50 1	0 89		Cobide Engineering	October/ November	\$92,250.00			+
4018	IGNATZ ST	Simpson	Elora St Hwy 9	Mildmay	HCB		.10	6.1	Urban	50-199	6		50 1	0 89		Cobide Engineering	October/ November	\$102,500.00			+
4019	AMON ST	Elora St	Simpson St	Mildmay	HCB		.10	5.9	Urban	50-199	6		50 1	0 89		Cobide Engineering	October/ November	\$102,500.00			+
4020	KLEIST ST	Absalon St	Dietz St	Mildmay	HCB		.13	5.4	Urban	50-199	6		50	8 82		Cobide Engineering	October/ November	\$102,500.00			+
4021	KLEIST ST	Dietz St	Clark St	Mildmay	HCB		.09	5.4	Semi-Urban	0-49	6		50	8 70 Resurface in 6-		Cobide Engineering	October/ November	\$133,250.00 \$92,250.00		D. Landara and David	\$26,550.00
4022	CLARK ST	Kleist St	Lambert St	Mildmay	HCB		.09	6.3	Semi-Urban	50-199	6		50	6 51 Resurface in 1-		Cobide Engineering	October/ November	\$92,250.00		Pulverize and Pave Pulverize and Pave	\$26,550.00
4023	CLARK STREET	Lambert St	Pinkerton St	Mildmay	HCB		.09	6.3	Semi-Urban	50-199	6		50	6 51 Resurface in 1- 6 51 Resurface in 1-		Cobide Engineering	October/ November	\$92,250.00		Pulverize and Pave	\$26,550.00
4024	CLARK STREET	Pinkerton	Stinson St.	Mildmay	HCB	2	.10	6.1	Urban	50-199	6		50	6 64 Resurface in 1-		Cobide Engineering Cobide Engineering	October/ November	\$102,500.00		Pulverize and Pave	\$29,500.00
4025	STINSON ST	Clark St	Dietz St	Mildmay	HCB	2	.09	6.1	Urban	50-199	6		50	6 64 Resurface in 1-		Cobide Engineering	October/ November	\$92,250.00		Pulverize and Pave	\$26,550.00
4026	STINSON ST	Dietz St	Absalom E	Mildmay	HCB	2	.13	6.1	Urban	50-199	6		50	6 72 Resurface in 6-		Cobide Engineering	October/ November	\$133,250.00		ruiveize and rave	320,330.00
4027	PINKERTON ST	Absalom St E	Dietz St	Mildmay	HCB	2	.13	6	Urban	50-199	6		50	8 81	0.113	Cobide Engineering	October/ November	\$133,250.00			
4028	PINKERTON ST	Dietz St	Clark St	Mildmay	HCB	2	.09	6	Semi-Urban	50-199	6		50	8 81		Cobide Engineering	October/ November	\$92,250.00			
4029	PINKERTON ST	Clark St	Otter Cres	Mildmay	HCB	2	.11	7	Semi-Urban	50-199	6		50	6 50 Resurface		Cobide Engineering	October/ November	\$112,750.00	PP	Pulverize and Pave	\$32,450.00
4030	OTTER CR	Pinkerton St	Gray Court	Mildmay	HCB	2	.10	7	Semi-Urban	50-199	6		50	4 12 Reconstruct		Cobide Engineering	October/ November 2020	\$102,500.00	UR	Urban Reconstruction	\$102,500.00
4031	OTTER CR	Gray Court	Dead End	Mildmay	HCB	2	.19	6.5	Semi-Urban	0-49	6		50	4 12 Reconstruct		Cobide Engineering	October/ November 2020	\$194,750.00	UR	Urban Reconstruction	\$194,750.00
4032	GRAY CT	Otter Cres	Dead End	Mildmay	HCB	2	.10	7	Semi-Urban	0-49	6		50	4 12 Reconstruct		Cobide Engineering	October/ November 2020	\$102,500.00	UR	Urban Reconstruction	\$102,500.00
4033	MELBA CT	Otter Cres	Dead End	Mildmay	HCB	2	.07	7	Semi-Urban	0-49	6		50	4 12 Reconstruct		Cobide Engineering	October/ November 2020	\$71,750.00	UR	Urban Reconstruction	\$71,750.00
4034	OTTER CR	Pinkerton St	Clark St	Mildmay	HCB	2	.19	7.2	Semi-Urban	50-199	6		50	6 53 Resurface in 1-	yrs	Cobide Engineering		\$194,750.00	PP	Pulverize and Pave	\$56,050.00
4035	LAMBERT ST	Clark St	Dietz St	Mildmay	HCB	2	.09	6.4	Urban	50-199	6		50	6 69 Resurface in 1-	yrs	Cobide Engineering	October/ November 2020	\$92,250.00	PP	Pulverize and Pave	\$26,550.00
4036	LAMBERT ST	Dietz St	Absalom St	Mildmay	HCB	2	.13	6.4	Semi-Urban	50-199	6		50	6 53 Resurface in 1-	yrs	Cobide Engineering	October/ November 2020	\$133,250.00	PP	Pulverize and Pave	\$38,350.00
4037	DIETZ ST	Stinson	Pinkerton St	Mildmay	HCB	2	.09	6.2	Semi-Urban	50-199	6		50	6 72 Resurface in 6-	0 Yrs	Cobide Engineering	2020 October/ November	\$92,250.00			
4038	DIETZ ST	Pinkerton	Lambert St	Mildmay	HCB	2	.09	6.1	Urban	50-199	6		50	6 70 Resurface in 1-	yrs	Cobide Engineering	2020	\$92,250.00	PP	Pulverize and Pave	\$26,550.00
4039	DIETZ ST	Lambert St	Kleist St	Mildmay	HCB	2	.10	5	Semi-Urban	50-199	6		50	6 62 Resurface in 1-	yrs	Cobide Engineering	October/ November 2020 October/ November	\$102,500.00	PP	Pulverize and Pave	\$29,500.00
4040	DIETZ ST	Kleist St	Elora St	Mildmay	HCB	2	.10	5	Urban	50-199	6		50	8 84		Cobide Engineering		\$102,500.00			<u> </u>
4041	PETER ST N	Elora	Absalom St W	Mildmay	HCB		.19	6.5	Urban	50-199	6		50 1	0 89		Cobide Engineering	2020 October/ November	\$194,750.00			<u> </u>
4042	PETER ST S	Absalom St W	First S	Mildmay	HCB		.12	8.3	Urban	50-199	6		50	6 55 Resurface in 1-	yrs	Cobide Engineering	2020 October/ November	\$123,000.00	PP	Pulverize and Pave	\$35,400.00
4042.1	PETER ST S	First St	Louis	Mildmay	HCB		.10	8.3	Urban	50-199	6		50	6 61 Resurface in 1-	yrs	Cobide Engineering	2020 October/ November	\$102,500.00	PP	Pulverize and Pave	\$29,500.00
4043	PETER ST S	Louis St	Church St	Mildmay	HCB		.12	8.3	Urban	50-199	6		50	6 67 Resurface in 1-	yrs	Cobide Engineering	2020 October/ November	\$123,000.00	PP	Pulverize and Pave	\$35,400.00
4044	VINCENT ST	Church St	Hwy9	Mildmay	HCB		.44	6	Urban	50-199	6		50 1	0 89		Cobide Engineering	2020 October/ November	\$451,000.00			
4045	CHURCH ST	Hwy9	Peter St. S	Mildmay	HCB		.10	7.2	Urban	50-199	6		50	6 66 Resurface in 1-	yrs	Cobide Engineering		\$102,500.00	PP	Pulverize and Pave	\$29,500.00
4046	CHURCH ST	Peter St S	Adam St	Mildmay	HCB		.12	5.7	Urban	0-49	6		50	4 50 Resurface		Cobide Engineering		\$123,000.00	PP	Pulverize and Pave	\$35,400.00
4047	ADAM STREET	Church St	Road Close Sign	Mildmay	HCB		.39	7	Semi-Urban	50-199	6		50	4 40 Resurface		Cobide Engineering	2020 October/ November	\$399,750.00		Pulverize and Pave	\$115,050.00
4048 4049	ADAM STREET ADAM ST.	Church St	Louis St	Mildmay	HCB		.12	7	Urban	50-199	6		50	4 36 Resurface		Cobide Engineering		\$123,000.00		Mill and Pave	\$21,000.00
4049	ADAM ST	Louis St	First St		HCB		.12	7	Urban	50-199	6		50	6 54 Resurface in 1-	yrs	Cobide Engineering	2020 October/ November	\$102,500.00		Mill and Pave	\$17,500.00
		First St	Absalom W	Mildmay	HCB					0-49	6		50	6 54 Resurface in 1-	yrs	Cobide Engineering	October/ November	\$123,000.00		Mill and Pave	\$21,000.00
4051 4052	ADAM ST N PETER ST N	Absalom W Adam St N	Dead End Dead End	Mildmay	HCB		.10	5.9	Semi-Urban Semi-Urban	0-49	6		50	4 22 Reconstruct		Cobide Engineering	October/ November	\$102,500.00	UR	Urban Reconstruction	\$102,500.00
4052	FIRST STREET	Adam St N	Peter St	Mildmay	HCB		.12	6	Semi-Urban Urban	50-199	6		50		0 Yrs Two Users	Cobide Engineering	October/ November	\$102,500.00			+
4053	FIRST STREET	Adam St Peter St	Peter St Elora St	Mildmay	HCB		.10	8.6	Urban	50-199	6		50	6 44 Resurface		Cobide Engineering	October/ November	\$123,000.00		Mill and Pave	\$21,000.00
4056	LOUIS ST	Peter St S	Adam St	Mildmay	HCB		.12	6	Urban	50-199	6		50	6 73 Resurface in 6-		Cobide Engineering	October/ November	\$102,500.00			+'
4056	LOUIS ST	Peter St S Adam St	Adam St Dead End	Mildmay	HCB		.06	6.6	Semi-Urban	0-49	6		50	6 62 Resurface in 1-	yrs	Cobide Engineering	October/ November	\$123,000.00		Mill and Pave	\$21,000.00
4037	1001331	Audili ST	peau crid	iviliumay	nus	4		0.0	Semi-orddl1		6		50	4 17 Reconstruct		Cobide Engineering	2020	\$61,500.00	UR	Urban Reconstruction	\$61,500.00



ENGINEERING INC	IDENTIFIERS 8					PHYSICAL PR	ROPERTIES D	ATA										FINANCIAL DATA		INTERVENTION DATA	
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS)	Road Speed Range	Ride Comfort Rating (RCR) 0 - 10	Pavement Condition Action Required	Notes	Assessed By	Date Assessed (yyyy- mm-dd)	- Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
4058	LOUIS ST	Louis St	Dead End	Mildmay	НСВ	2	0.04	6	Semi-Urban	0-49	6	51	0 4	17 Reconstruct		Cobide Engineering	October/ November 2020	\$41,000.00	UR	Urban Reconstruction	\$41,000.00
4059	ABSALOM ST W	Elora St	Peter St	Mildmay	НСВ	2		10.5	Urban	400-999	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4060	ABSALOM ST W	Peter St S	Adam St	Mildmay	НСВ	2		6.8	Urban	400-999	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4061	ABSALOM ST W	Adam St	Jane	Mildmay	НСВ	2		6.8	Urban	400-999	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4062	ABSALOM ST W	Jane St	Gunn St	Mildmay	НСВ	2		7.3	Urban	400-999	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4063	ABSALOM ST W	Gunn St	John then to Bismark	Mildmay	НСВ	2		7.3	Urban	400-999	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4064	ELLEN ST	Bismark N	John St	Mildmay	HCB	2	0.18	6.3	Semi-Urban	50-199	6	51		77 Resurface in 6-10 Yrs		Cobide Engineering	October/ November	\$184,500.00			
4065	ELLEN ST	John St	Gunn St	Mildmay	HCB	2	0.13	7.2	Semi-Urban	50-199	6	51	0	59 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$133,250.00	PP	Pulverize and Pave	\$38,350.0
4066	ELLEN ST	Gunn	Jane St N	Mildmay	НСВ	2	0.11	7.7	Semi-Urban	50-199	6	51		59 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$112,750.00	PP	Pulverize and Pave	\$32,450.0
4067	ELLEN ST	Jane St N	Dead End	Mildmay	НСВ	2	0.09	6.5	Semi-Urban	0-49	6	51		59 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$92,250.00	PP	Pulverize and Pave	\$26,550.00
4068	JANE ST N	Absalom StW	Ellen St	Mildmay	НСВ	2	0.10	5.9	Urban	50-199	6	51	0 6	46 Resurface		Cobide Engineering	October/ November	\$102,500.00		Pulverize and Pave	\$29,500.00
4069	JANE ST S	Ellen St	Carroll St	Mildmay	HCB	2	0.10	6.4	Semi-Urban	50-199	6	51	0 6	55 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$102,500.00		Pulverize and Pave	\$29,500.00
4070	CARROLL ST	Jane St N	Gunn St	Mildmay	НСВ	2	0.11	6	Urban	50-199	6	51	10	89		Cobide Engineering	October/ November	\$112,750.00			
4071	CARROLL ST	Gunn St	John St	Mildmay	НСВ	2	0.13	6	Urban	50-199	6	51	10	89		Cobide Engineering	October/ November	\$133,250.00			
4072	CARROLL ST	John St	Dead End	Mildmay	НСВ	2	0.04	6	Urban	50-199	6	51	10	89		Cobide Engineering	October/ November	\$41,000.00			
4073	JOHN ST	Absalom St	Ellen St	Mildmay	НСВ	2	0.10	6	Urban	50-199	6	51	0 8	81		Cobide Engineering	October/ November	\$102,500,00			
4074	JOHN ST	Ellen St	Carroll St	Mildmay	НСВ	2	0.10	6	Urban	50-199	6	51	10	89		Cobide Engineering	October/ November	\$102,500.00			
4075	GUNN ST	Carroll	Ellen St	Mildmay	НСВ	2	0.09	6.5	Semi-Urban	50-199	6	51	0 6	46 Resurface		Cobide Engineering	October/ November	\$92,250.00	PP	Pulverize and Pave	\$26,550.00
4076	GUNN ST	Ellen St	Absalom W	Mildmay	HCB	2	0.10	6	Urban	50-199	6	51	0 6	55 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$102,500.00		Pulverize and Pave	\$29,500.00
4077	MEL ST	Absalom W	Fred St	Mildmay	НСВ	2	0.12	6.3	Semi-Urban	50-199	6	51		63 Resurface in 1-5 yrs		Cobide Engineering	October/ November	\$123,000.00		Pulverize and Pave	\$35,400.00
4078	FRED ST	Bismark Cly Rd 28	Mel St	Mildmay	HCB	2	0.20	6.4	Semi-Urban	50-199	6	51	0 8	80		Cobide Engineering	October/ November	\$205,000.00			
4079	FRED ST	Mel	Jane St S	Mildmay	НСВ	2	0.22	6.4	Semi-Urban	50-199	6	51	0 8	80		Cobide Engineering	October/ November	\$225,500,00			
4080	JANE ST S	Fred St	Dead End	Mildmay	НСВ	2	0.10	6	Semi-Urban	0-49	6	51	0 8	84		Cobide Engineering	October/ November	\$102,500,00			
4081	JANE ST S	Fred St	Absalom SIW	Mildmay	НСВ	2	0.12	6	Semi-Urban	50-199	6	5	1 8	78 Resurface in 6-10 Yrs		Cobide Engineering	October/ November	\$123,000.00			
4082	ELORA ST	North Connecting Link Boundary	Dietz St	Mildmay	нсв	2		11	Urban	>1000	5	5	1	70 Headinge III 0 20 113	Not Municipal Road	Cobide Engineering	October/ November	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
4083	ELORA ST	Dietz St	Absalom St	Mildmay	НСВ	2		13.5	Urban	>1000	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4084	ELORA ST	Absalom	First	Mildmay	НСВ	2		13.5	Urban	>1000	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4085	ELORA ST	First St	Church St	Mildmay	НСВ	2		11	Urban	>1000	,	51	0		Not Municipal Road	Cobide Engineering	October/ November				
4086	HIGHWAY 9	Church St	Vincent St	Mildmay	НСВ	2		9.5	Urban	>1000	5	51			Not Municipal Road	Cobide Engineering	October/ November				
4087	ADAM ST S	Bismark/Bruce Cty Rd 28	Dead End Road Close	Mildmay	Gravel	2	0.61	8	Rural	0-49	6	51		75		Cobide Engineering	October/ November	\$134,200.00			
4088	Noeckerville Hill Drive	Fred St	Adam St	Mildmay	HCB	2	0.31	8.5	Urban	50-199	6	51	10	89		Cobide Engineering	October/ November	\$317,750.00			



ENGINEERING INC	Asset Poo	ol: Road Network	k																			
IDENTIFIERS & LOCATION					PHYSICAL PROPERTIES DATA								FINANCIAL DATA							INTERVENTION DATA		
Unique ID / Import ID	Street Name	Street From	Street To	Former Township/ Town	Surface Material	Number of Lanes	Length (km)	Surface Width (m)	Roadside Environment	Traffic Count	MTO CLASS (MMS) Roa	d Speed Range	Ride Comfort Rating (RCR)	Pavement Condition Index	Action Required	Notes	Assessed By	Date Assessed (yyyy- mm-dd)	Current Replacement Value (Road)	Intervention Type	Intervention Description	Cost
5000	COUNCIL RD	Formosa East Town Limit	Maple St	Formosa	HCB	2	0.52	6.2	Rural	50-199	6	50		8 84			Cobide Engineering	October/ November 2020	\$202,800.00			
5001	COUNCIL RD	Maple St	Bruce Rd 12	Formosa	HCB	2	0.24	8	Urban	50-199	6	50		8 84			Cobide Engineering	October/ November 2020	\$246,000.00			
5002	MAPLE ST	Council Rd	Dead End	Formosa	HCB	2	0.16	4.8	Urban	50-199	6	50	:	8 84			Cobide Engineering	October/ November	\$164,000.00			
5003	KUNTZ DR	Bruce Rd 12	Dead End	Formosa	LCB	2	0.15	6.5	Urban	0-49	6	50	10	0 88			Cobide Engineering	October/ November 2020	\$43,500.00			
5004	CONVENT ST	Bruce road 12	Dead End	Formosa	HCB	2	0.16	7.2	Urban	0-49	6	50	:	8 84			Cobide Engineering	October/ November 2020	\$164,000.00			
5005	CONCESSION 12	Bruce road 12	East Town Limits	Formosa	НСВ	2	0.12	7	Urban	50-199	6	50	:	8 82			Cobide Engineering	October/ November 2020	\$123,000.00			
5006	WILLMAR DR	Conc. 12	Bruce road 12	Formosa	НСВ	2	0.48	7	Semi-Urban	0-49	6	50	10	0 89				October/ November 2020 October/ November	\$492,000.00			
5007	COMMUNITY RD	Conc. 12	Bruce road 12	Formosa	HCB	2	0.38		Semi-Urban	50-199	6	50	10	0 89			Cobide Engineering	2020	\$389,500.00			
5008	DORIS DR	Conc. 12	Dead end	Formosa	HCB	2	0.19		Semi-Urban	0-49	6	50		8 84			Cobide Engineering		\$194,750.00			
5009	ST JOSEPH ST	Conc. 12	Dead end	Formosa	Gravel	2	0.08		Rural	0-49	6	50		8 82			Cobide Engineering		\$17,600.00			
5010	BRUCE ROAD 12	Willmar Dr	Conc. 12	Formosa	HCB	2			Urban	>1000	5	50			N	ot Municipal Road	Cobide Engineering	October/ November 2020 October/ November				
5011	BRUCE ROAD 12	Conc. 12	Council rd	Formosa	HCB	2			Urban	>1000	5	50			N	ot Municipal Road	Cobide Engineering	October/ November 2020 October/ November				
5012	BRUCE ROAD 12	Council Rd	Weiss dr	Formosa	HCB	2		9.8	Urban	>1000	5	50			Ne	ot Municipal Road	Cobide Engineering	October/ November 2020 October/ November				
5013	WEISS DR	Bruce road 12	Dead end	Formosa	HCB	2	0.45	7.2	Rural	50-199	6	50	-	6 49 F	Resurface		Cobide Engineering	2020	\$175,500.00	PP	Pulverize and Pave	\$132,750.00
5014	CONCESSION 12	Community dr	Bruce road 12	Formosa	HCB	2	0.09	8.3	Semi-Urban	50-199	6	50	10	0 88			Cobide Engineering		\$92,250.00			
5015	CONCESSION 12	Doris dr	Community dr	Formosa	HCB	2	0.125	8.3	Semi-Urban	50-199	6	50	10	0 88			Cobide Engineering	October/ November 2020	\$128,125.00			
5016	CONCESSION 12	St joseph st	Doris dr	Formosa	HCB	2	0.19	8.3	Semi-Urban	50-199	6	50	10	0 88			Cobide Engineering	October/ November 2020	\$194,750.00			
5017	CONCESSION 12	Sideroad 1c	St joseph st	Formosa	HCB	2	0.52	8.3	Rural	50-199	6	50	10	0 88			Cobide Engineering	October/ November 2020	\$202,800.00			
5018	BRUCE ROAD 12	Weiss rd	Conc. 10	Formosa	HCB	2		7.2	Urban	>1000	5	50		8 84			Cobide Engineering	October/ November 2020	\$0.00			