



**Engineering Ltd.**

**Report for:**



# **TOWN OF WESTLOCK**

## **Transportation Master Plan Update**

Date: December 09, 2019

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5454-001-00

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December 12, 2019

Town of Westlock  
10003 – 106 Street  
Westlock, AB T7P 2K3

Attention: Beth Thola  
GIS / Asset Management Coordinator

Dear Ms. Thola:

**Re: Transportation Master Plan Update**

MPE Engineering Ltd. is pleased to submit one (1) electronic and three (3) hard copies of our Report entitled *Transportation Master Plan Update*.

Should you have any questions, or require clarification on any item, please do not hesitate to contact the undersigned at 780-509-4315 or at [tlockie@mpe.ca](mailto:tlockie@mpe.ca).

Yours truly,

**MPE ENGINEERING LTD.**



Todd Lockie  
Senior Technologist

TL:lp

Enclosure

## EXECUTIVE SUMMARY

The Town of Westlock is responsible for the administration of a paved roadway network consisting of Collector and Local roadways. The Town also maintains sidewalk facilities along many of the roadway corridors, as well as the Rotary Trail facility. These infrastructure networks form valuable assets to be managed in a cost-effective manner, in order to provide a desirable level of service to the stakeholders of the network.

In 2019, the Town retained the services of MPE Engineering Ltd. (MPE) to undertake a comprehensive pavement, sidewalk, and trail evaluation program. Pavement roughness, surface distress, and structural testing were conducted on the entire paved road network, totalling 73 lane-kilometres. In addition, a detailed inspection was conducted along 40 centreline-kilometres of sidewalks, and 7 centreline-kilometres of trails, within the Town's jurisdiction. The breakdown of the current data collection and reporting program are as follows:

- ❑ Collection of pavement roughness and surface distress data on the entire paved Roadway network.
- ❑ Collection of pavement structural deflection data using a Falling Weight Deflectometer (FWD).
- ❑ Collection of condition data on the defined Sidewalk and Trail networks.
- ❑ Implementation of the RUBIX rMD asset management dashboard to facilitate the pavement assessment and the ongoing asset management of the roadway network and other infrastructure assets.
- ❑ Preparation of the roadway, sidewalk, and trail evaluation report including the network present status and the development of a 10-year roadway rehabilitation needs priority program.

## PERFORMANCE INDICATORS

Performance indicators serve to describe the present status or current condition of the pavement and infrastructure networks. The present status of the network serves as the “benchmark” for the future maintenance and rehabilitation requirements of the roadway network. The performance indicators summarized for the analysis are presented herein.

The data collected during the field surveys was used to identify the present status of the pavements in terms of four (4) performance indicators, and sidewalks and trails in terms of overall condition indices:

- ❑ **Ride Comfort Index (RCI)** – Index representing measured roughness for the perceived riding comfort experienced by the users of a pavement segment, and represented by a value on a scale of zero (0) to 100, where zero is considered an extremely rough surface and 100 is an extremely smooth surface.
- ❑ **Pavement Condition Index (PCI)** – Index representing the presence, severity, and extent of various surface distresses (e.g., cracking, potholes, etc.) occurring throughout a given pavement segment, and represented by a value on a scale of zero (0) to 100, where zero is considered an extremely distressed surface and 100 is surface with no distress present.
- ❑ **Overall Condition Index (OCI)** – Index representing the overall condition of a pavement segment, and represented by a value on a scale of zero (0) to 100, where zero is considered the worst case and 100

is considered the best case. The value is calculated as a function of the RCI, PCI, and Structural Adequacy Index (SAI), when available.

- ❑ **Structural Adequacy Index (SAI)** – Index representing the ability of a pavement section to support expected loading (traffic) conditions and is indicative of pavement strength, and represented by a value on a scale of zero (0) to 100, where 50 is a pivot point that indicates the pavement’s structure is just adequate to support the expected traffic loads. An index less than 50 represents inadequate structural support, and greater than 50 represents adequate structural support.
- ❑ **Sidewalk Condition Index (SWCI)** – Index representing the presence, severity and extent of various surface distresses (e.g., cracking, faulting, etc.) occurring throughout a given sidewalk segment, and represented by a value on a scale of zero (0) to 100, where zero is considered an extremely distressed surface and 100 is surface with no distress present.
- ❑ **Trail Condition Index (TPCI)** – Index representing the presence, severity and extent of various surface distresses (e.g., cracking, distortion, etc.) occurring throughout a given trail segment, and represented by a value on a scale of zero (0) to 100, where zero is considered an extremely distressed surface and 100 is surface with no distress present.

Over time, weathering, traffic loading, and aging cause pavement quality to deteriorate. Maintenance and/or rehabilitation options applied at the appropriate time can renew and extend the life of a road network. The objective of pavement management is to maximize the present and future value and level of service of the road network by cost-effective management of available public capital funds.

The minimum acceptable OCI values, or rehabilitation trigger levels, for each functional class are set as follows:

- ❑ OCI min. of 50 for Collector network
- ❑ OCI min. of 45 for Local network

*There were 2 segments of roadway that were not included in the analysis as they were under construction during the field data collection period. These sections were 104<sup>th</sup> Street (110<sup>th</sup> Avenue to 111<sup>th</sup> Avenue) and 108<sup>th</sup> Street (100<sup>th</sup> Street to 97<sup>th</sup> Avenue).* These segments are identified on the coverage map on the following page **Figure E1**.

**For the purpose of this report, the first year (Base Year) of the pavement analysis was set to 2019.**

**2019 PAVED ROAD NETWORK CONDITION**

The results of the 2019 pavement present status analysis are provided in **Table ES.1**.

**Table ES.1: 2019 Pavement Network Present Status**

FUNCTIONAL CLASS	SEGMENTS	LANE-KM	OCI	PCI	RCI	SAI	IRI (m/km)
Collector Network	122	35.4	48	46	42	45	4.57
Local Network	152	37.8	48	50	40	41	4.74
<b>Entire Paved Network</b>	<b>274</b>	<b>73.2</b>	<b>48</b>	<b>48</b>	<b>41</b>	<b>43</b>	<b>4.66</b>

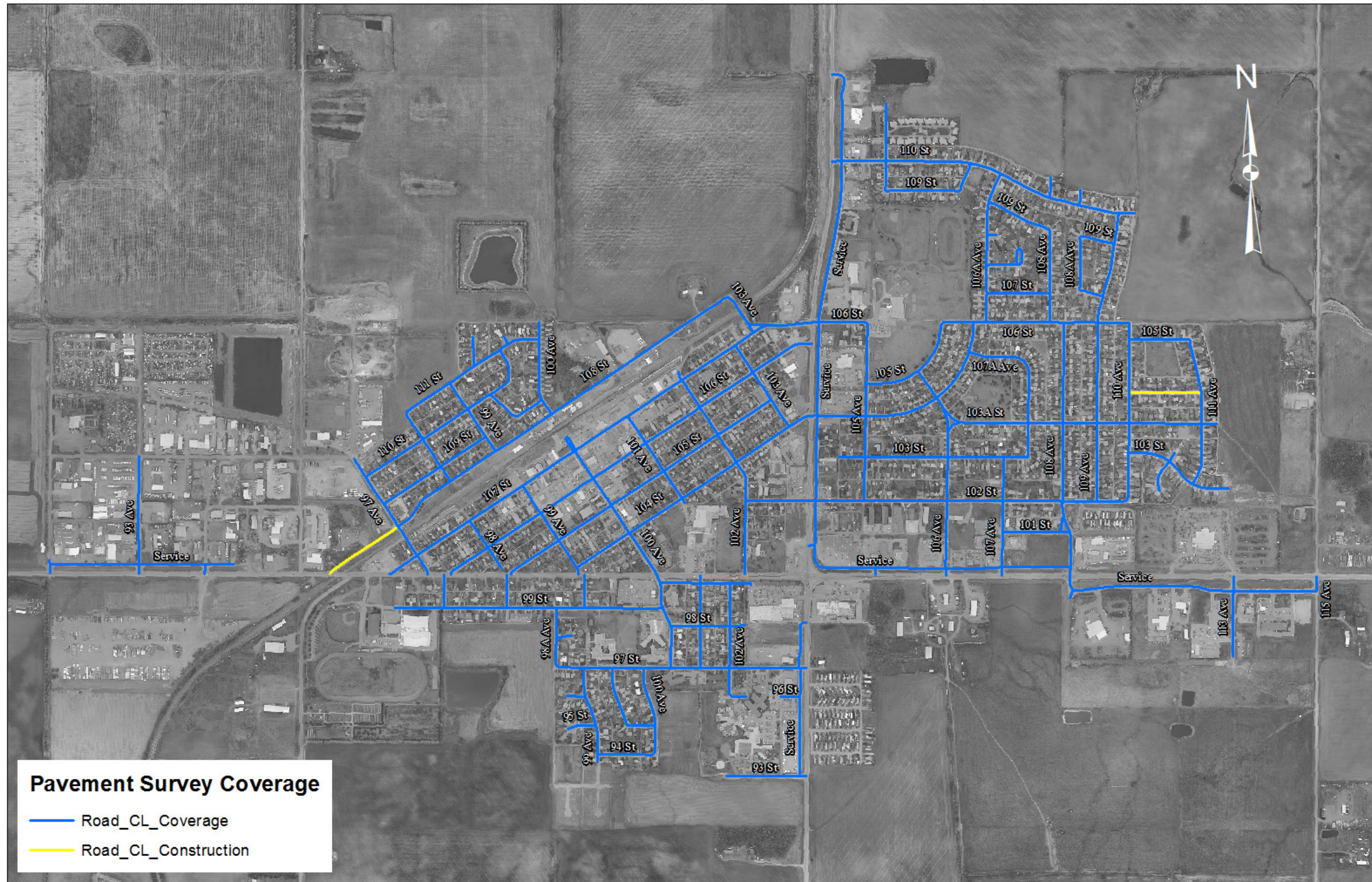


Figure E1: Pavement Survey Coverage - 2019

The analysis of the collected condition data indicates the majority of the Town’s network is providing a marginal level of service given the network average OCI is 48 and the 2019 needs backlog is 57.7%. Due to the marginal performance of the network, the backlog is well above the range of 10%–25%, traditionally considered a healthy backlog. The roughness and structural capacity indicators in the network are showing the most deterioration.

The results of the 2019 backlog analysis are provided in **Table ES.2**.

**Table ES.2: 2019 Paved Road Network Backlog Status**

FUNCTIONAL CLASS	2019 NETWORK NEEDS (% LANE-LENGTH)	2019 NETWORK NEEDS (LANE-KM)
Collector Network	61.0	21.6
Local Network	54.5	20.6
<b>Entire Paved Network</b>	<b>57.7</b>	<b>42.2</b>

**ROAD NETWORK BUDGET PROGRAMMING**

The rMD budget optimization analysis generates prioritized work programs that are the most cost effective based on annual budget constraints or target performance levels. For the purpose of this report, the analysis was run over a 10-year programming period, **with the first year of the programming set to 2019**.

The results of the budget programming analysis are provided in **Table ES.3**.

**Table ES.3: 10-Year Budget Analysis Summary**

BUDGET ID	BUDGET SCENARIO	10-YEAR BUDGET	2019		10-YEAR (2028)	
			OCI	%DEF	OCI	%DEF
Do Nothing	No Funding	\$0	48	57.7	34	81.3
Need Driven	Unconstrained	\$24.7M	84	0.0	72	0.0
\$1.0M/Year	Current Funding	\$10.0M	52	51.0	52	43.9
\$1.75M/Year	Recommended Funding	\$17.5M	50	51.7	70	19.1

The current level of backlog in the network will require \$21M (85%) of the needs budget allocations in the first year of the program (2019). The results of the rehabilitation decision analysis show 72 network segments, or 22.5 lane-kilometres, of the network will require reconstruction over the next 10 years, requiring \$18.1M in funding.

The results of the first annual funding scenario (\$1.0M/Year) show that the network performance will maintain its current OCI level of service, with a backlog decreasing to 43.9%.

This scenario shows the predicted performance of the Town’s current budget and should be considered the minimum level of funding.

The results of the second annual funding scenario (\$1.75M/Year) show that the network performance will improve to an OCI of 70 in 2028, with a backlog of 19.1%. This scenario will achieve a better OCI performance in 2027, but the predicted backlog will fall into the recommended range of between 10-25%, which will stabilize network management and funding demands beyond 2028.

**2019 SIDEWALK NETWORK CONDITION**

The 2019 present status of the Town’s sidewalk network is summarized in **Table ES.4. Figure E2** on the following page shows the sidewalk survey coverage.

**Table ES.4: 2019 Sidewalk Network Performance Summary**

FACILITY	SWCI	SEGMENTS	LENGTH (KM)	#PANELS	MAINT. COST
Westlock Sidewalk Network	72	311	40.4	30,716	\$776,890

The analysis of the collected condition data indicates the majority of the Town’s sidewalk network is providing a good level of service, given the network average SWCI is 72. The sidewalk results show only 68 sidewalk panels (0.2% of the network length) are affected by moderate to high levels of trip hazards, and two Para-Ramps that require attention.

The results of the maintenance level review identify 7,657 m (19%) of the sidewalk network require either maintenance or replacement. The budget analysis shows the sidewalk network requires \$776,890 in total funding, with maintenance needs requiring \$376,698, and capital projects requiring \$400,192 in funding.

**2019 TRAIL NETWORK CONDITION**

The 2019 present status of the Town trail network is summarized in **Table ES.5. Figure E3** on page vii displays the trail survey coverage.

**Table ES.5: 2019 Trail Network Performance Summary**

FACILITY	PCI	SEGMENTS	LENGTH (KM)	AREA (m <sup>2</sup> )	%POOR CONDITION
Westlock Trail Network	18	23	6.629	12,437	83.1

The analysis of the collected condition data indicates the majority of the Town’s trail network is providing a poor level of service, given the network average Trail-PCI is 18. The trail results show over half of the trail network is failed with PCI scores below 10. The Town’s trail network is exhibiting the signs of unintended motor vehicle usage. The presence of motor vehicles on the trail system has exposed the facility to loading that it was simply not designed to support.

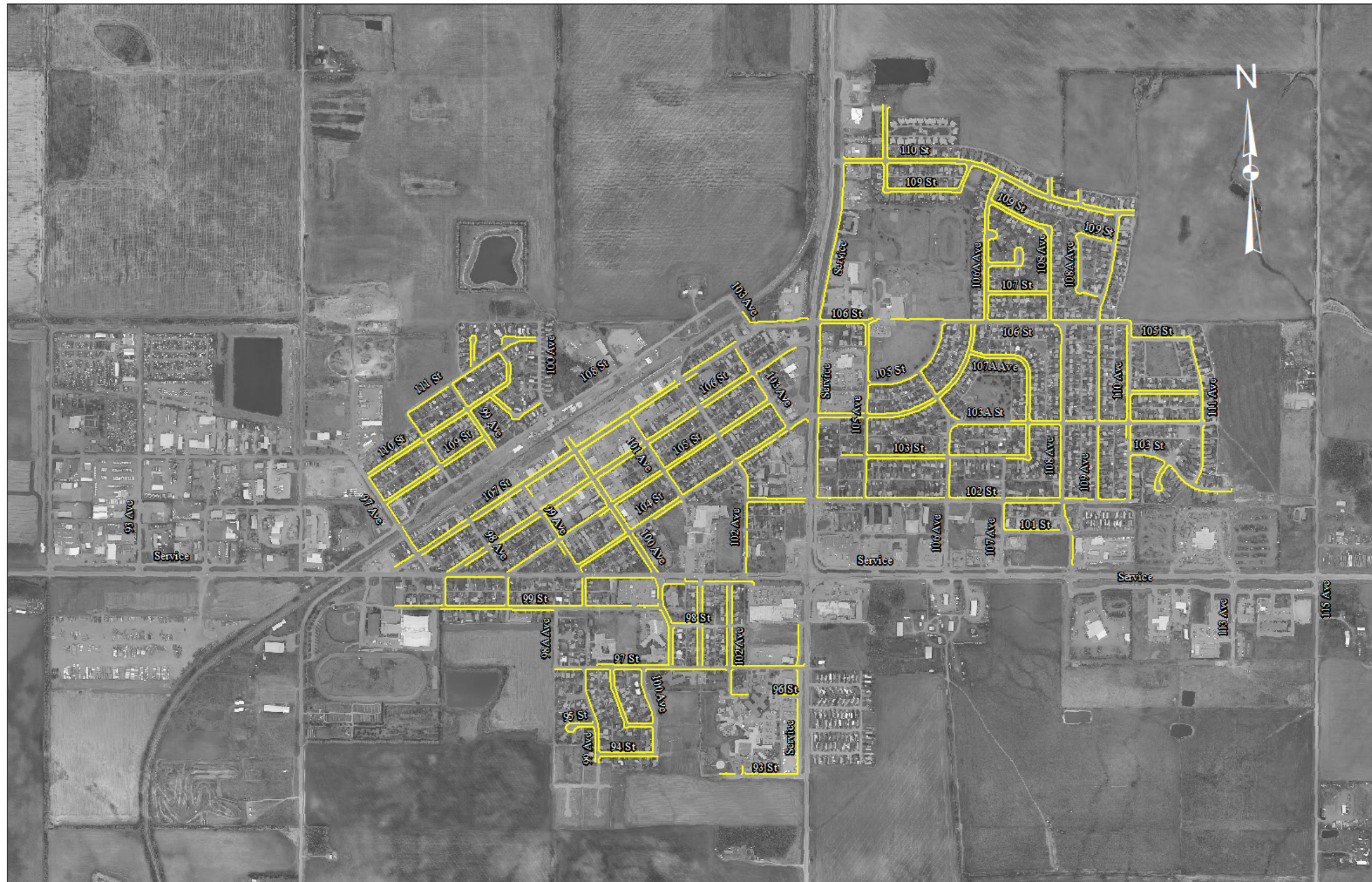


Figure E2: Sidewalk Survey Coverage - 2019



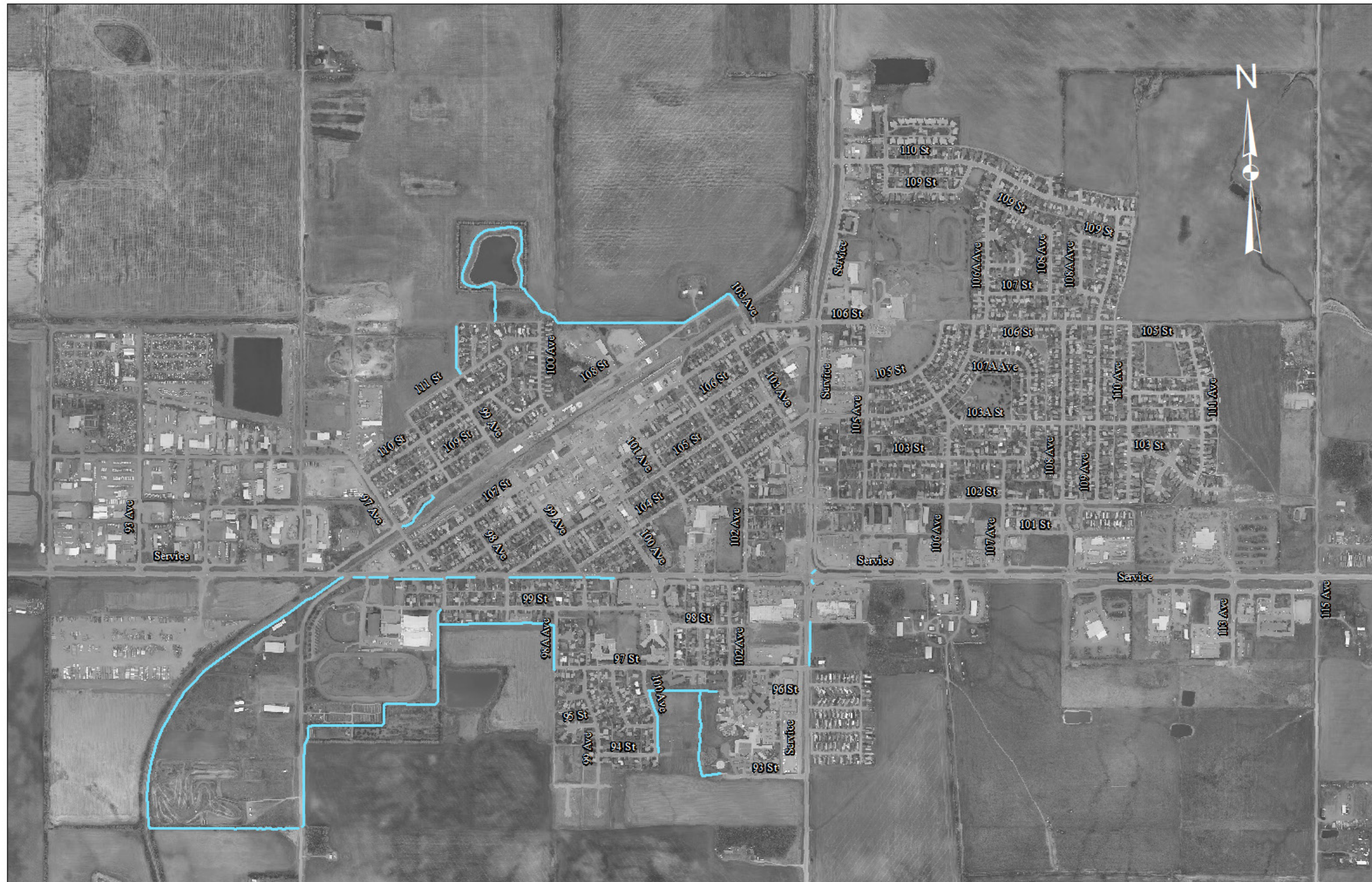


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## 1.0 PROJECT OVERVIEW

### 1.1 Background

The Town of Westlock is responsible for the administration of a paved roadway network consisting of Collector and Local roadways. The Town also maintains sidewalk facilities along many of the roadway corridors, as well as the Rotary Trail facility. These infrastructure networks form valuable assets to be managed in a cost-effective manner, in order to provide a desirable level of service to the stakeholders of the network.



### 1.2 Scope and Objectives

In 2019, the Town retained the services of MPE Engineering Ltd. (MPE) to undertake a comprehensive pavement, sidewalk, and trail evaluation program. Pavement roughness, surface distress, and structural testing were conducted on the entire paved road network, totalling 73 lane-kilometres. In addition, a detailed inspection was conducted along 40 centreline-kilometres of sidewalks, and 7 centreline-kilometres of trails, within the Town's jurisdiction. The breakdown of the current data collection and reporting program are as follows:

- ❑ Collection of pavement roughness and surface distress data on the entire paved Roadway network.
- ❑ Collection of pavement structural deflection data using a Falling Weight Deflectometer (FWD).
- ❑ Collection of condition data on the defined Sidewalk and Trail networks.
- ❑ Implementation of the RUBIX rMD asset management dashboard to facilitate the pavement assessment and the ongoing asset management of the roadway network and other infrastructure assets.
- ❑ Preparation of the roadway, sidewalk, and trail evaluation report including the network present status and the development of a 10-year roadway rehabilitation needs priority program.

The 2019 field survey consisted of the following:

- ❑ An automated roughness survey using MPE's data collection vehicle (73 lane-kilometres).
- ❑ A semi-automated surface distress survey using MPE's data Collection vehicle (73 lane-kilometres).
- ❑ Falling Weight Deflectometer (FWD) data collection (800 Test locations).
- ❑ A semi-automated Sidewalk condition survey using MPE's RUBIX workflow (7 centreline-kilometres).
- ❑ A semi-automated Trail condition survey using MPE's RUBIX workflow (40 centreline-kilometres).

The data collected during the pavement surveys was used to identify the present status of the pavements in terms of four (4) performance indicators:

- ❑ Ride Comfort Index (RCI)
- ❑ Pavement Condition Index (PCI)
- ❑ Structural Adequacy Index (SAI)
- ❑ Overall Condition Index (OCI)

The inspections collected during the field surveys were used to identify the present status of the sidewalks and trails in terms of their overall performance indicator:

- ❑ Sidewalk Condition Index (SWCI) – ASTM PCC
- ❑ Trail Condition Index (TPCI) – ASTM Asphalt

Over time, weathering, traffic loading and aging cause pavement quality and adjacent facilities (sidewalks and trails) to deteriorate. Maintenance and/or rehabilitation options applied at the appropriate time can renew and extend the life of these municipal networks. The objective of pavement management is to maximize the present and future value and level of service of the road network by cost-effective management of available public capital funds.

An effective pavement management system should have the following qualities:

- ❑ **Method** of data collection that is uniform, consistent and repeatable.
- ❑ **Logical** and functional database.
- ❑ **Objective** method of present status calculation and reporting.
- ❑ **User-definable** methodology of needs analysis to develop rehabilitation strategies.
- ❑ **Analytical** engine for optimization of network rehabilitation, following a user-definable set of goals.



MPE implemented the RUBIX rMD application as the basis for the 2019 pavement evaluation analysis. The framework will enable MPE to update the pavement management program moving forward.

**Figure 1.1** and **Figure 1.2** on the following page shows the 2019 pavement, sidewalk, and trail survey coverage.

*There were 2 segments of roadway that were not tested or included in the analysis as they were under construction during the field data collection period. These sections are 104<sup>th</sup> Street (110<sup>th</sup> Avenue to 111<sup>th</sup> Avenue) and 108<sup>th</sup> Street (100<sup>th</sup> Street to 97<sup>th</sup> Avenue). These segments are identified on the coverage map on the next page Figure 1.1.*

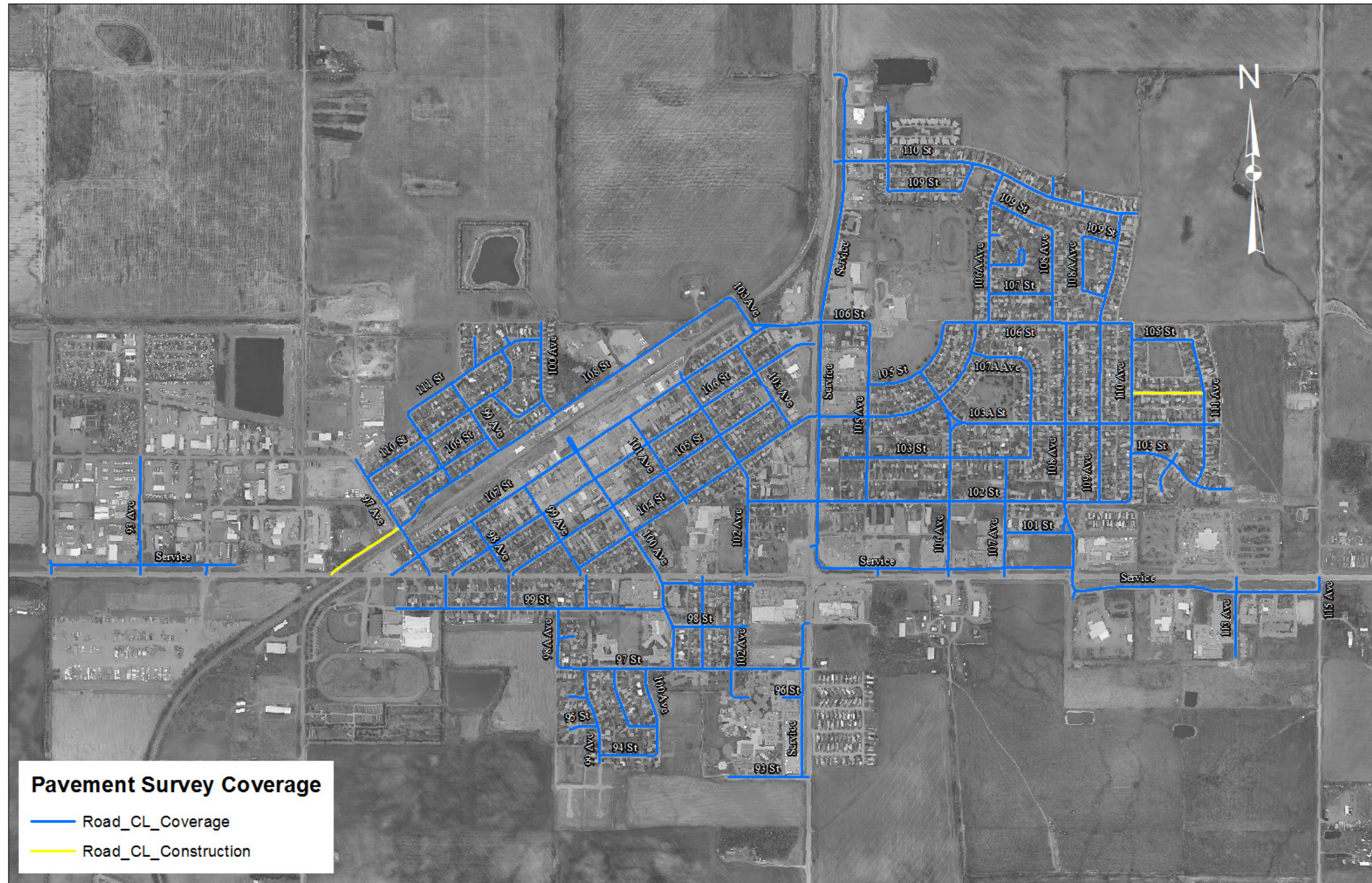


Figure 1.1: Pavement Survey Coverage - 2019



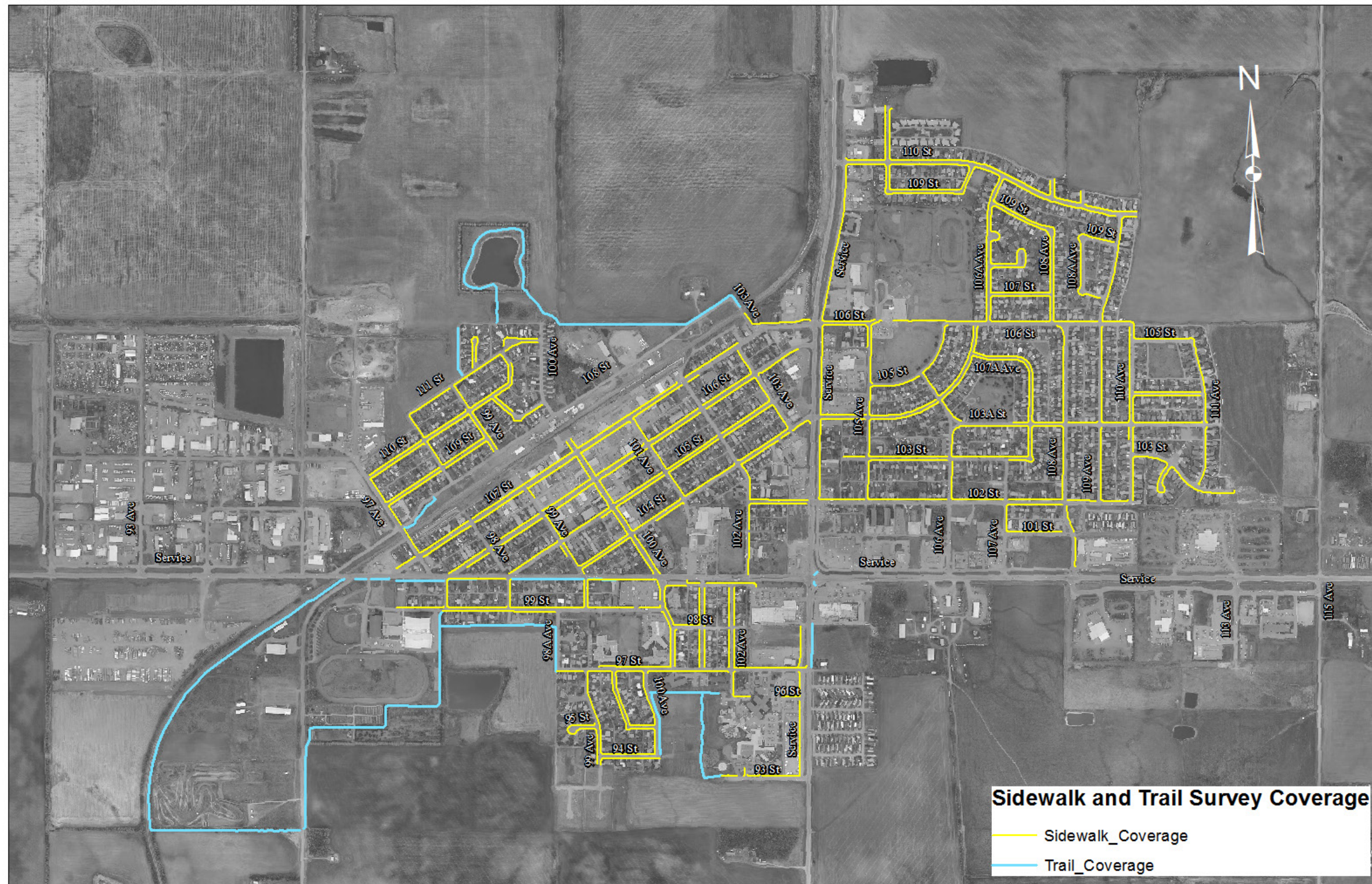


Figure 1.2: Sidewalk and Trail Survey Coverage - 2019

## 2.0 PAVEMENT DATA COLLECTION

### 2.1 Network Definition and Attribute Data

The 2019 network definition and attribute data setup consisted of the following:

- ❑ Define the Town’s roadway network based on modifications to the Town’s existing GIS road centreline file. Roadway segments were identified using unique Asset IDs stored in the GIS database.
- ❑ Activate and load the RUBIX asset management framework.
- ❑ Classify network attributes used for analysis (traffic, structure, geometrics, etc.).

The roadway network definition used for the purpose of the 2019 report is based on an evolution of the Town’s current GIS network centreline files. The network definitions were cleaned up and each network segment was assigned a unique Asset ID. As part of this step, the network functional classifications used for the analysis and reporting were established. Additional modifications were made to the network definitions based on actual conditions encountered during the field survey based on the TAC Geometric Design Guide for Canadian Roads (2017).

The Town provided MPE with pavement layer design standards, and traffic design levels from Procedures and Design Standards For Development - October 2009, *Section 7.0 of the Rural and Urban Roads* design documentation. MPE used this information to classify the roadway network based on the pavement thicknesses (EGT) and traffic volumes (AADT) using the established functional classification from the GIS network definition. **Figure 2.1** on the following page shows the roadway functional classifications for 2019.

**Table 2.1** shows the roadway attribute values used for the 2019 pavement condition analysis.

**Table 2.1: Traffic and Pavement Default Attributes**

FUNCTIONAL CLASS	AADT	EGT (mm)	AC (mm)	GBC (mm)	BASE (mm)
Major Res Collector*	5,000	820	130	350	300
Collector Industrial*	1,500	760	100	350	300
Collector Residential*	2,500	605	100	300	150
Local Residential	1,000	535	90	250	150

*\*The Collector ‘sub-classes’ were combined into the overall Collector Network for the condition analysis.*

Structural testing results for the Resilient Modulus (Mr) were used to determine the threshold between adequate and inadequate subgrade strength. Additionally, the results of the effective Structural Number (S<sub>Neff</sub>) analysis are provided for each segment. The S<sub>Neff</sub> represents the calculated effective thickness (mm) of the asphalt layer, based on the FWD deflections and defined layers.

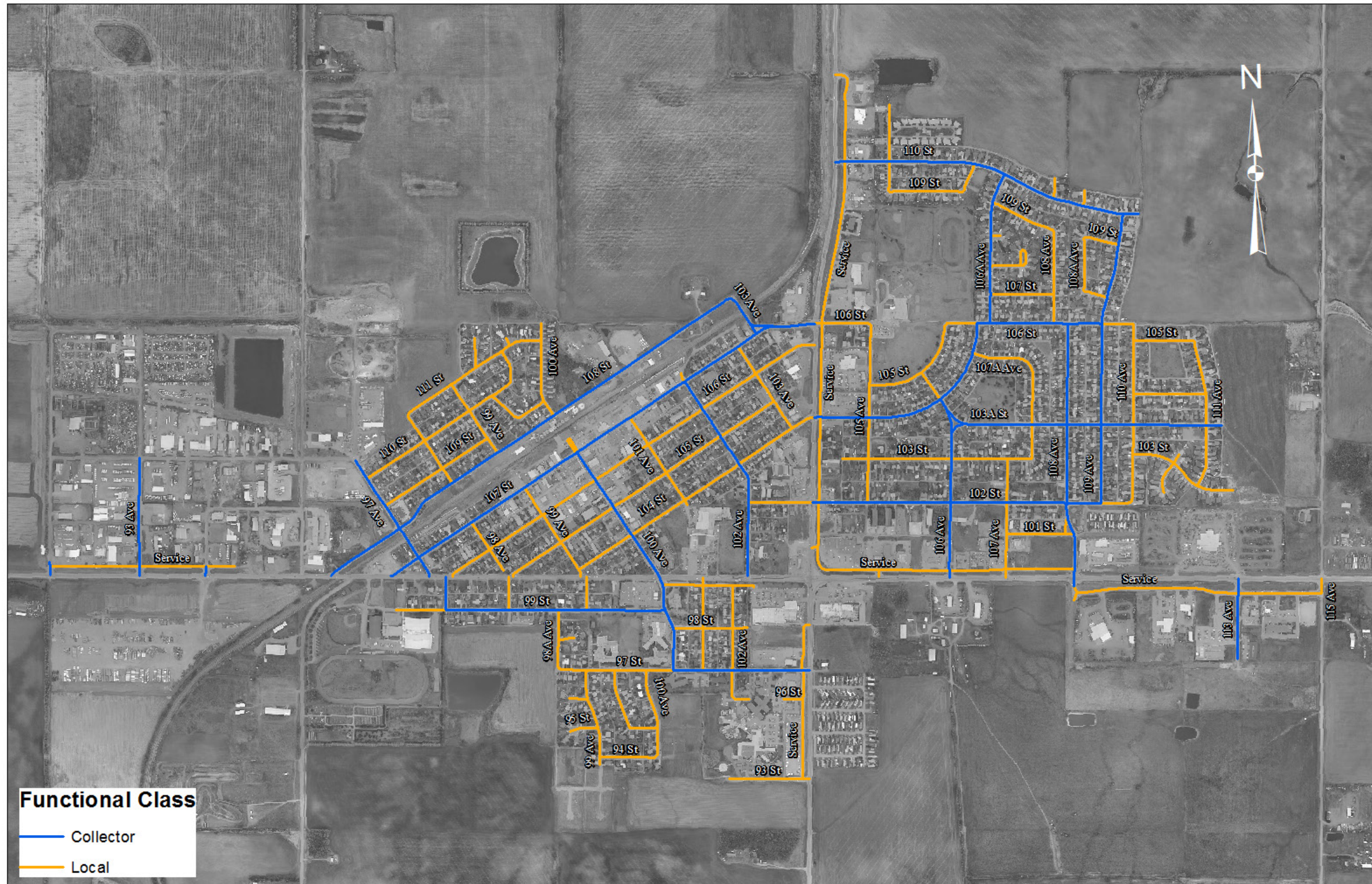


Figure 2.1: Roadway Functional Class - 2019

## 2.2 2019 Field Survey

The roughness of each segment was measured using MPE’s data collection vehicle. The data collection vehicle is a Class I Profiler, specially equipped with accelerometers and laser sensors mounted to the front bumper. This technology was used to measure the longitudinal profile of the pavement surface in each wheel path of the survey travel lane. The profile data was then used to calculate an International Roughness Index (IRI) reported at 30-metre intervals (stations).

The surface distress survey recorded the extent and severities of key distress classifications including load associated cracking, non-load associated cracking, surface deformations, and surface defects. The following 12 distress types were inventoried:

Distress Types for Flexible Pavements	
Patching and Utility Patching	Edge Cracking
Rippling/Shoving	Alligator Cracking
Raveling/Weathering	Potholes
Bleeding	Block/Map Cracking
Distortions/Deformations	Longitudinal Cracking
Rutting	Transverse Cracking

Deflection measurements, taken to determine the load-bearing capacity of the existing pavement structures, were collected with a FWD test vehicle. The survey was conducted with the FWD located in the outer wheel path of the outside lane at each test location. The deflection measurements were taken on an average of one deflection test every 100 m, or three tests on a section. The deflection measurements, along with traffic and pavement structure information derived from the documentation provided by the Town, are used to determine the Structural Adequacy Index (SAI) for each road section

MPE’s Pavement Profiler is fitted with two forward-facing camera configuration and the Trimble T3D Cam Capture video acquisition system. The geo-spatial digital images provide MPE with the ability to conduct thorough quality checks of the pavement inspections collected in the field. All pavement data collected using the automated onboard system is identified with GPS coordinates.

The following images show MPE’s mobile road testing equipment and West Coast Road Testing’s (WCRT) FWD/GPR equipment used for the pavement data collection.



***MPE Engineering Ltd. Data Collection Vehicle (Class I Profiler)***



***West Coast Road Testing FWD and GPR***

### 3.0 PAVEMENT DATA ANALYSIS

As part of the project workflow, MPE implemented the RUBIX Management Dashboard (rMD) solution to enable the 2019 evaluation and the future management of the roadway network. The RUBIX asset management solution is a lightweight, user-definable, cloud-based application that enables the user to collect, analyze, monitor, and report on the performance of various infrastructure assets, including pavements. The RUBIX platform supports multiple data collection and analysis methodologies, including Paver (ASTM D6433). MPE utilized the rMD application as the primary analysis and database platform for the pavement evaluation analysis and reporting.

The roadway pavement condition data is summarized into the following key performance indicators:

- ❑ **Pavement Condition Index (PCI)** – based on the surface distress inventory.
- ❑ **Ride Comfort Index (RCI)** – based on the longitudinal profile data.
- ❑ **Structural Adequacy Index (SAI)** – analyzed from the FWD, Layer and Traffic data.
- ❑ **Overall Condition Index (OCI)** – as a function of the PCI and RCI conditions.



The pavement condition results provide the Present Status, or current condition, of the roadway network. The condition of the network is summarized, and provided to the Town, by the entire network, and broken down by the major functional classes defined in the GIS database.

Rehabilitation triggering levels are established for each functional classification in the network based on the OCI. They determine the condition threshold at which a roadway segment is considered to be in need of rehabilitation. The rehabilitation trigger levels are typically set higher for the upper functional class networks (Arterials and Collectors), reflecting the increased importance of these traffic corridors.

Pavement deterioration curves are used to predict the future performance of the OCI score for a given segment. The rMD application defines six deterioration models based on pavement classifications built around traffic volume, structure thickness, and subgrade strength levels. The results indicate the Need Year in which a given segment will require treatment and provide the current needs, or backlog, as well as the predicted future needs of the roadway network.

The rMD application utilizes a decision matrix methodology to determine the recommended treatment based on the performance characteristics of the pavement segment.

The decision matrix methodology is designed around the fundamentals of pavement management and the four (4) main drivers of pavement deterioration. Performance condition results from the analysis of the field data are further analyzed to produce condition levels for these four main causes of **Load, Environment, Construction, and Material**.

The appropriate rehabilitation treatment option is defined in the matrix at the various levels of these ‘cause-condition’ combinations. A decision matrix will be built for each functional class, as treatment options and constraints do vary between lower and higher-volume roadways.

The final stage of the workflow is the Budget Optimization Analysis. During this step of the analysis, several 10-year budget scenarios are applied to the rehabilitation needs results. MPE analyzed four (4) budget scenarios. These scenarios show the annual cost to do all of the recommended work (Needs Budget), and the impact on the network level of service if no work is done (Do Nothing), the Town’s current annual funding level (\$1.0M/Yr), and the recommended funding level (\$1.75M/Yr).

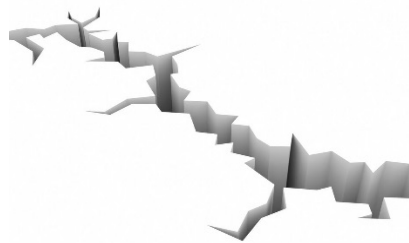
### 3.1 Roughness – Ride Comfort Index (RCI) Analysis

One of the primary operating characteristics of a road, from the user’s perspective, is the roughness, which represents the travelling public’s opinion of the smoothness, and hence, the quality of service provided by a pavement. The data collection vehicle measures the longitudinal profile of the pavement surface, reported as an International Roughness Index (IRI) value. Roughness measurements are correlated to an assessment of ride quality as perceived by the users of the pavements. This subjective assessment is termed the RCI.



The RCI condition score for each road segment ranges from zero (0) to 100, where 100 is indicative of an extremely smooth pavement and an index of zero (0) is indicative of an extremely rough pavement. When pavements are rehabilitated with an overlay or heavier treatment, an override RCI value of 80+ (IRI < 1.3 m/km) is applied. The detailed RCI methodology is provided in **Appendix A**.

### 3.2 Surface Distress – Pavement Condition Index (PCI) Analysis



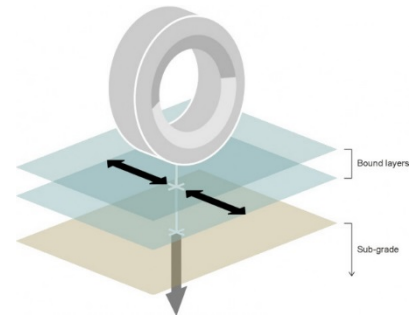
The PCI is a measure of physical pavement cracking, deformations and surface defects collectively referred to as distresses. The surface distress survey provided an inventory of the severity and extent for 12 surface distress types in each station of every segment in the network (i.e., 30-metre intervals).

These distress ratings were analyzed to produce %Area quantities, at each severity level, which were further combined using distress-specific weighting factors to generate an overall PCI for each station. A summary PCI score was then computed based on the aggregated station PCI scores for each GIS segment.

The PCI condition score for each road segment ranges from zero (0) to 100, where 100 indicates a perfect (no distress) surface and an index of zero (0) indicates a significant level of surface distress. When pavements are rehabilitated with an overlay or heavier treatment, an override PCI value of 100 is applied. The detailed PCI methodology is provided in **Appendix B**.

### 3.3 Strength – Structural Adequacy Index (SAI) Analysis

The structural adequacy of a pavement indicates the pavement’s ability to carry expected traffic loads while providing an acceptable level of service. The structural capacity of a pavement is determined by analyzing the measured deflection of the pavement under a controlled loading condition, in combination with the design ESAL loads calculated from the traffic AADT and %Trucks data.



The FWD deflection measurements are adjusted for temperature and seasonal influences, and normalized to 4,082 kg (9,000 lb) loads. Seasonally adjusted deflection measurements are analyzed along with the traffic and layer data to determine SAI values for each section. The SAI values are then loaded to the rMD database.

The SAI is represented by a value on a scale of zero (0) to 100, where a value of 50 represents a structural strength that just adequately supports the current traffic loads, a value less than 50 represents inadequate structural support, and a value greater than 50 represents more-than-adequate structural support. The detailed SAI methodology is provided in **Appendix C**.

### 3.4 Combined – Overall Condition Index (OCI) Analysis

The OCI provides an overall indication of the pavement condition with regard to present and future service to the user and is derived through a combination of the segment RCI, PCI, and SAI values.

The available methods used to calculate OCI are as follows:

For roadways without structural condition data:

$$OCI = f(RCI, PCI)$$

For roadways with structural condition data:

$$OCI = f(RCI, PCI, SAI)$$

For asphalt structures with surface distress data only (Trails):

$$OCI = f(PCI)$$



As is the case with RCI, PCI, and SAI, the OCI ranges from zero (0) to 100, where zero (0) represents the worst condition of a pavement and 100 represents the best condition of a pavement. The detailed OCI methodology is provided in **Appendix D**.

### 3.5 Performance Prediction

The OCI values of pavements typically decrease over time. In order to estimate future rehabilitation requirements of a pavement network, it is necessary to model the deterioration of OCI values. The rate of deterioration of OCI depends on several factors, but it can be demonstrated that the principal factors



are the traffic loading conditions, the properties and thickness of the pavement structure layers, and the strength of the underlying subgrade.

The factors used to model pavement performance within the rMD application are as follows:

- ❑ Equivalent granular thickness (EGT) in three levels (thin, medium, thick).
- ❑ Traffic volume or average annual daily traffic (AADT) in three levels (low, medium, high).
- ❑ Subgrade strength in two levels (strong/adequate, weak/inadequate).

The roadway design documentation provided by the Town did not identify the Major Residential Collector functional class. MPE defaulted the pavement layer thickness and traffic values between the Collector Industrial and Arterial Residential ranges. The EGT values were calculated from the layer thicknesses for each network segment.

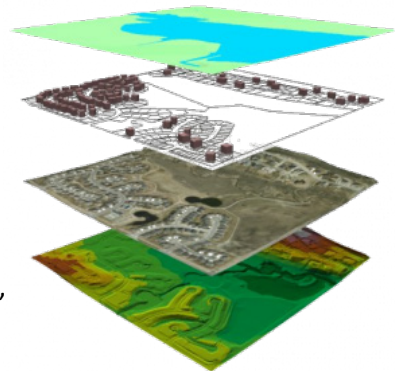
The criteria used to classify traffic (AADT) and structural (EGT) threshold levels are shown in **Table 3.1**.

**Table 3.1: Structure Thickness and Traffic Classification Limits**

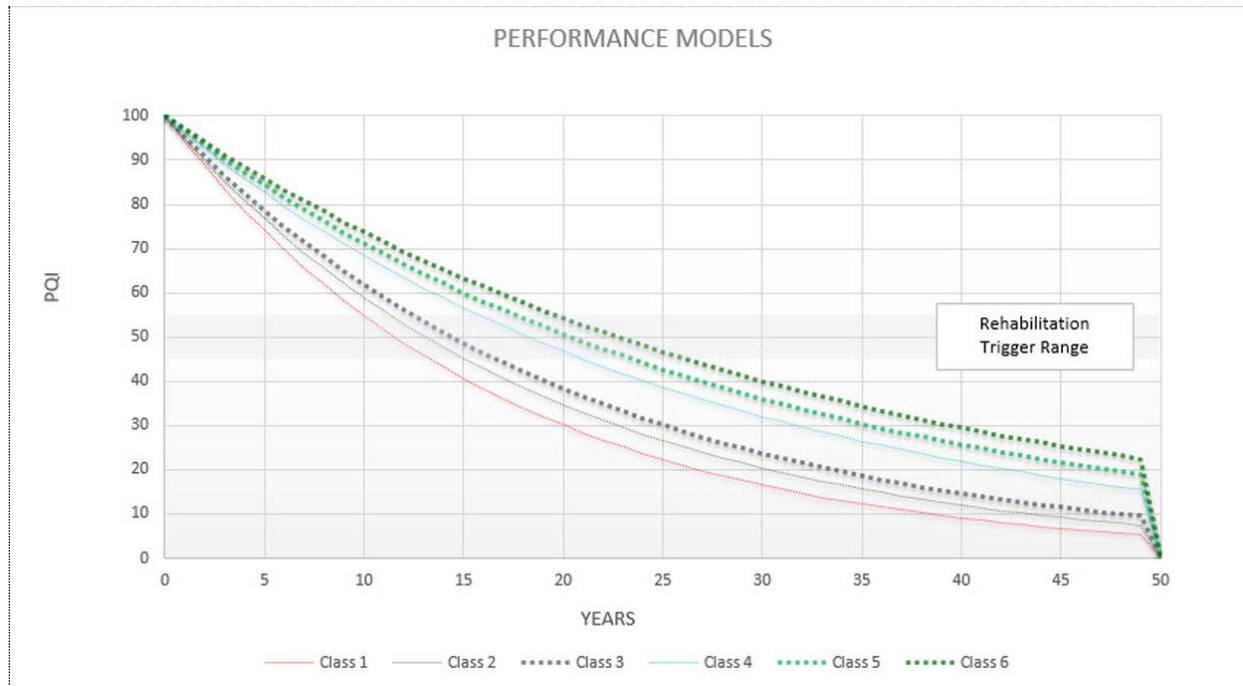
FUNCTIONAL CLASS	THICKNESS LEVEL (EGT mm) THIN ≤ MED < THICK	TRAFFIC LEVEL (AADT) LOW ≤ MED < HIGH
Entire Network	399 ≤ Medium < 700	1,999 ≤ Medium < 15,000

For the purpose of the analysis, the results of the FWD analysis were used to identify weaker subgrade conditions. Based on a review of the Subgrade Modulus (Mr), a threshold of <26,500 kPa (3,844 PSI) was set to identify pavements with ‘inadequate’ subgrade strengths. The analysis results showed that 23 lane-kilometres (32%) of the network fall into this classification, most of which are Local Residential roads.

The combination of the three classification parameters—pavement structure thickness, traffic loading, and subgrade strength—result in 6 possible performance classes of pavements, and each roadway segment in the network is assigned an individual performance curve based on its performance classification. The performance curves plot the deterioration of the OCI over time, and the difference between the curves is based on variations in levels of the pavement thickness, traffic, and subgrade strength.



The OCI performance deterioration models used for the Town are shown in **Figure 3.1**.



		EGT					
		Thin		Med		Thick	
		Subgrade					
		Weak	Strong	Weak	Strong	Weak	Strong
Traffic	Low	3	3	4	5	5	6
	Med	2	2	3	4	5	6
	High	1	2	2	3	4	6

Figure 3.1: OCI Deterioration Models

The OCI performance curves used in the analysis were established based on the historical performance of other municipal networks in Alberta.

Based on the analysis parameters setup, the Town’s roadway network ranges across most of the deterioration Classes. The majority of the network is deteriorating along the Class 5 and 6 curves, with Class 3 making up the bulk of the rest of the network.

### 3.6 Priority Programming Analysis

#### 3.6.1 Need Year Analysis

The Needs analysis is the identification of pavement segments that are deficient with regard to some specified criterion or criteria. When a given pavement segment deteriorates to, or is below its OCI trigger level, it is considered a Need candidate. For a paved road network, segments that are currently deficient are referred to as *present needs*; segments that will be deficient in the future years are referred to as *future needs*.

A Need Year Distribution graphically illustrates the annual network rehabilitation needs for segments that fall below a given level of service (i.e., OCI) and require rehabilitation. The Need Year analysis assumes an unrestricted budget for rehabilitation.

For this analysis, the minimum acceptable OCI ( $OCI_{min}$ ) is the threshold level of service used to determine if any rehabilitation should take place. The minimum acceptable OCI for each functional classification within the rMD is shown in **Table 3.2**.

**Table 3.2: Minimum OCI Thresholds**

FUNCTIONAL CLASS	LANE-LENGTH (KM)	MINIMUM OCI
Collector Network	35.4	50
Local Network	37.8	45

The higher trigger values for Arterial and Collector roads, relative to Locals, reflect that these roads are a higher priority, requiring heavier treatments, and therefore must be identified for rehabilitation earlier in their life cycle.

**3.6.2 Rehabilitation Decision Matrix**





































Once a Need Year has been calculated for a pavement segment, any potential rehabilitation strategies that may be applied to the pavement segment must be determined. In the analysis, a segment that has a deteriorated OCI of less than or equal to the trigger value requires some form of rehabilitation during its Need Year.

The foundation of the decision matrix approach is based around the causes of various distresses as outlined in the Pavement Management Guide (RTAC). The approach is centred on the relationship between Load, Environmental, Construction, and Material causes for various pavement distresses.

Using the guidelines provided by the ASTM D6433 PCI Standard, the distress, roughness and structural data collected in the field were classified for three levels of condition (Good, Fair, and Poor). The principles of distress causes were then utilized to consolidate and group these performance indicators into condition-matrices for the four main pavement deterioration drivers of Load, Environmental, Construction, and Material. The classification matrices for each driver are provided in **Appendix E**.

**Table 3.3** on the following page illustrates the relationship between deterioration cause and defect type.

**Table 3.3: Defect-Cause Relationship**

DEFECT TYPE	LOAD	MATERIAL	ENVIRONMENT	CONSTRUCTION
<b>SURFACE DEFECTS (CLASS 4)</b>				
Raveling				
Bleeding/Flushing				
Potholes				
<b>DEFORMATIONS (CLASS 3)</b>				
Rutting				
Rippling				
Depressions (Distortion)				
Upheaval (Distortion)				
Slippage/Edge Lipping				
Excessive Crown				
<b>CRACKING (CLASSES 1 &amp; 2)</b>				
Alligator/Fatigue				
Longitudinal/Meandering				
Transverse				
Progressive Edge				
Block/Map				

The final decision-making input is done at the Rehabilitation decision matrix level. At this level, the four main deterioration drivers are grouped in pairs in a cross-relational matrix structure based on common distress types and influence factors. Load and Construction are grouped on one axis, and Environmental and Material on the other.

By applying the available rehabilitation treatment levels to the appropriate condition levels of the combined deterioration drivers, a reliable program of recommended work can be generated from the pavement condition results using the cause-driven matrix approach. The decision matrices for each functional classification are provided in **Appendix F**.

**Table 3.4** shows the rehabilitation treatments and associated parameters used in the analysis.

**Table 3.4: Rehabilitation Alternatives**

CODE	TREATMENT OPTIONS	TYPE	COST/LN-KM	OCI BENEFIT
1	Micro Surface/Surface Treat	G. Maintenance	\$83,250	25
2	Overlay 50 mm	Rehabilitation	\$128,250	50
3	Overlay 75 mm	Rehabilitation	\$157,500	60
4	Edge Mill and Overlay 50 mm	Rehabilitation	\$146,250	55
5	Full Mill and Overlay 50 mm	Rehabilitation	\$171,000	60
6	Full Mill and Overlay 75 mm	Rehabilitation	\$207,000	70
7	Full Mill and Overlay + LBR	Rehabilitation	\$261,000	80
8	Local Reconstruction	Construction	\$675,000	100
9	Collector Reconstruction	Construction	\$855,000	100
10	<i>Arterial Reconstruction</i>	<i>Construction</i>	<i>\$1,012,500</i>	<i>100</i>

### 3.6.3 Priority Programming and Optimization

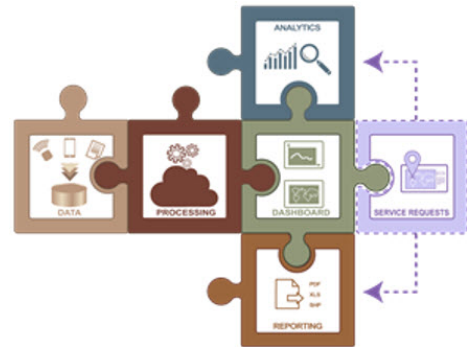
Budgetary constraints often determine the timing and implementation of rehabilitation strategies. Using different budget scenarios, the rehabilitation program analysis assembles an optimized multi-year rehabilitation program, estimates the impact on the overall network performance, and calculates the annual rehabilitation backlog. The budget optimization analysis generates prioritized work programs that are the most cost effective based on annual budget constraints. For the purpose of this report, the analysis was run over a 10-year programming period, with the first year of the programming set to 2019.

The network programming analysis was run using the following funding scenarios:

- Need Driven Budget - Unlimited funding
- Do Nothing Budget - No funding
- Fixed Annual Budget: \$1.0M/Year – Current level of funding
- Fixed Annual Budget: \$1.75M/Year – Recommended level of funding

## 4.0 PAVEMENT ANALYSIS RESULTS

The following section discusses and summarizes the condition of the Town’s entire paved roadway network and each functional classification. The network performance indicators distribution graphs are presented along with the Need Year summaries for the Town’s Entire Paved Network. A breakdown of the Defect-Cause analysis is also provided showing the breakdown of the network across the four main deterioration drivers



The 2019 present status of the Town’s roadway network is summarized in **Table 4.1**.

**Table 4.1: 2019 Network Performance Summary**

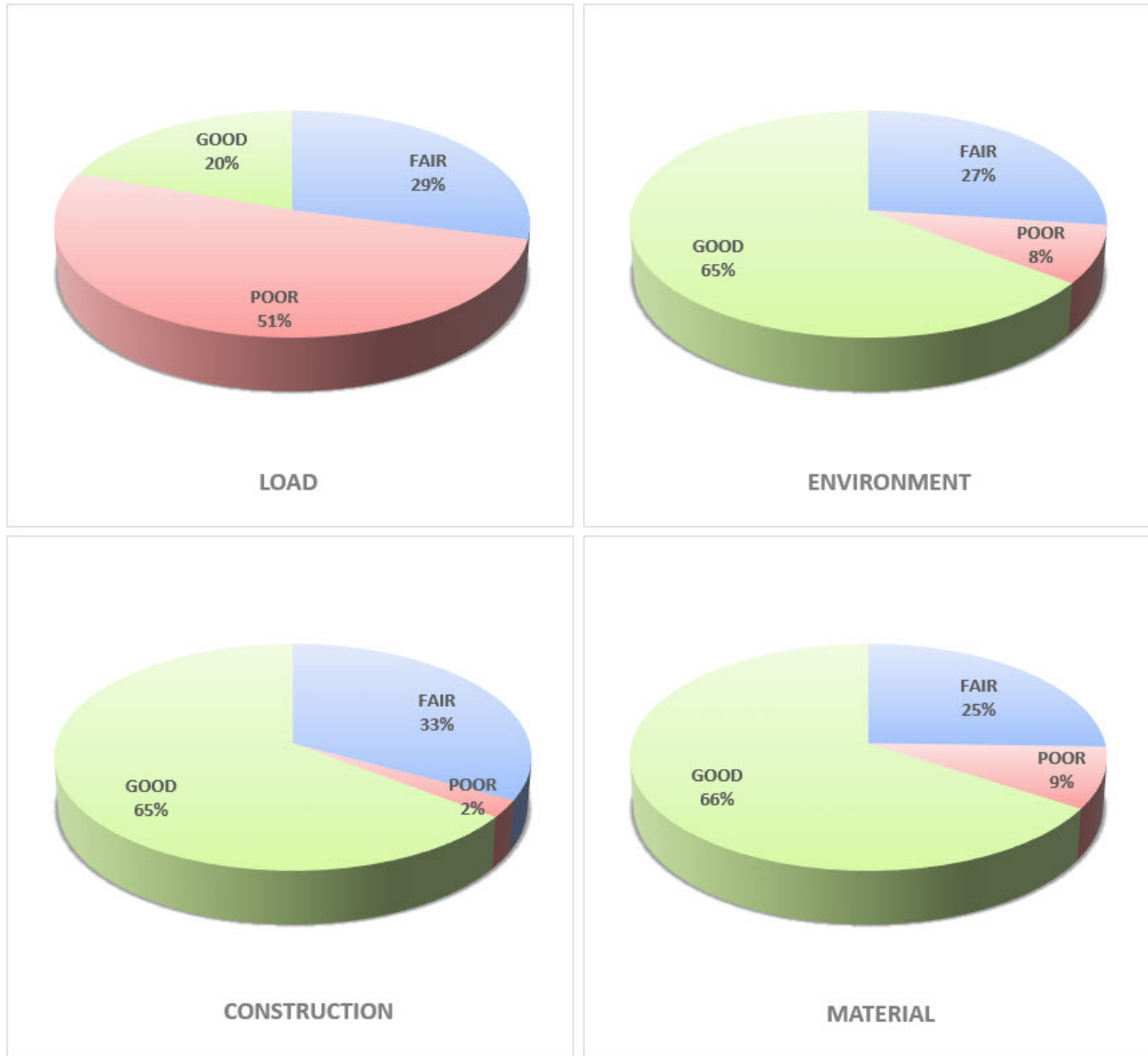
FUNCTIONAL CLASS	SEGMENTS	LANE-KM	OCI	PCI	RCI	SAI	IRI (m/km)
Collector Network	122	35.4	48	46	42	45	4.57
Local Network	152	37.8	48	50	40	41	4.74
<b>Entire Paved Network</b>	<b>274</b>	<b>73.2</b>	<b>48</b>	<b>48</b>	<b>41</b>	<b>43</b>	<b>4.66</b>

The Cause-Condition levels for the Town’s roadway network are summarized by %Lane-kilometres, in **Table 4.2**, and graphically on the following page in **Figure 4.1**.

**Table 4.2: 2019 Cause-Condition Summary**

CONDITION LEVEL	LOAD	ENVIRONMENT	MATERIAL	CONSTRUCTION
Good	20%	65%	66%	65%
Fair	29%	27%	25%	33%
Poor	51%	8%	9%	2%

The complete present status and rehabilitation recommendation listing by OCI is provided in **Appendix G**.



**Figure 4.1: Network Cause-Condition Distribution**

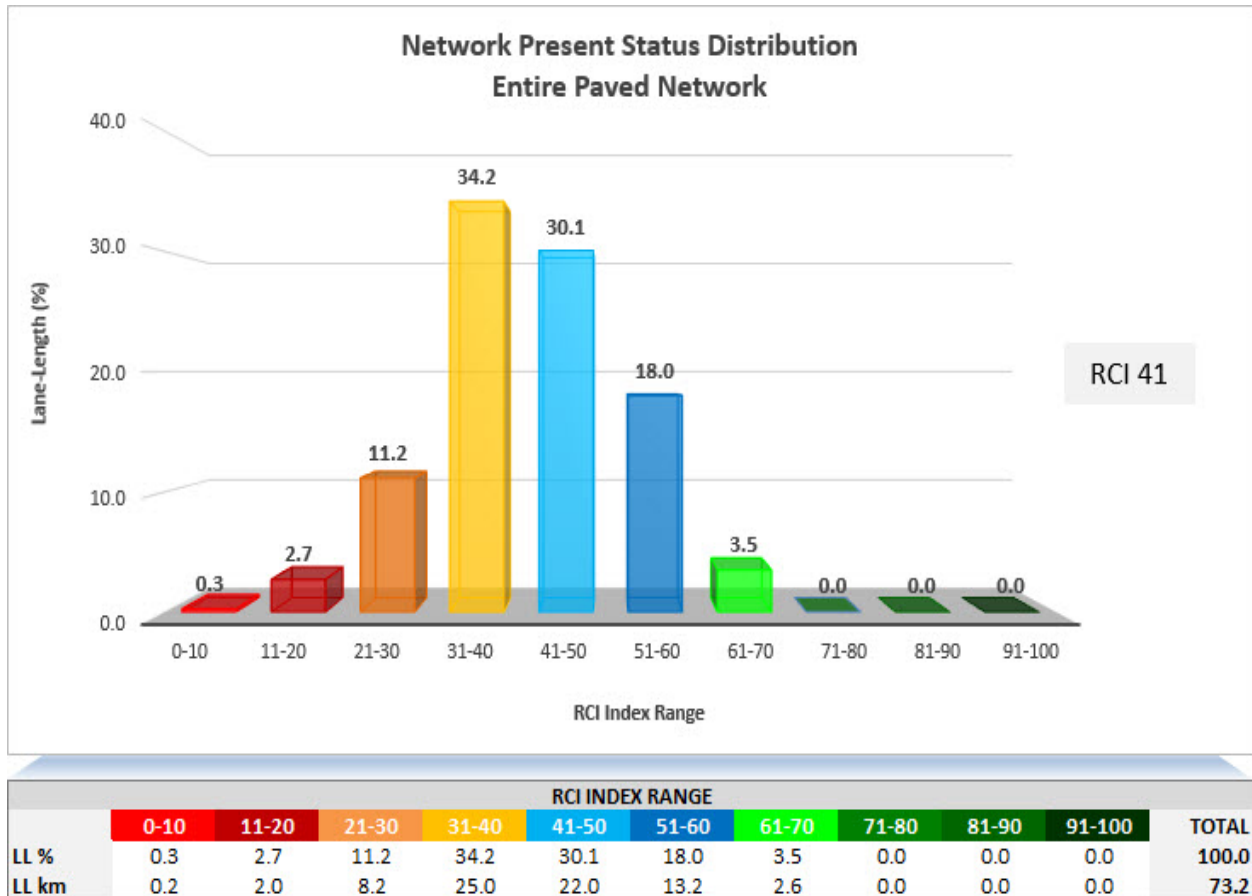
The results show that the Load related defects are the major ‘driver’ of the deterioration in the Town’s roadway network.

#### 4.1 Present Status Analysis Results – Entire Paved Network

##### 4.1.1 Roughness (RCI) Analysis Results

The results indicate the majority of the roadway network is exhibiting marginal-to-poor ride quality. **Figure 4.2** shows the distribution of RCI values, weighted by lane-kilometres. **Figure 4.2a** on the following page displays the RCI Range distribution map.

The plot indicates a mean RCI of 41 for the Entire Paved Network.



**Figure 4.2: RCI Distribution - Entire Paved Network**

**Table 4.3** shows the distribution of the network between poor, marginal, and acceptable RCI values.

**Table 4.3: RCI Distribution - Entire Paved Network**

RCI RANGE	RIDE CONDITION	LANE-KM	% OF NETWORK
RCI ≤ 40	Poor	35.4	48.4
40 < RCI ≤ 60	Marginal	35.2	48.1
RCI > 60	Acceptable	2.6	3.5



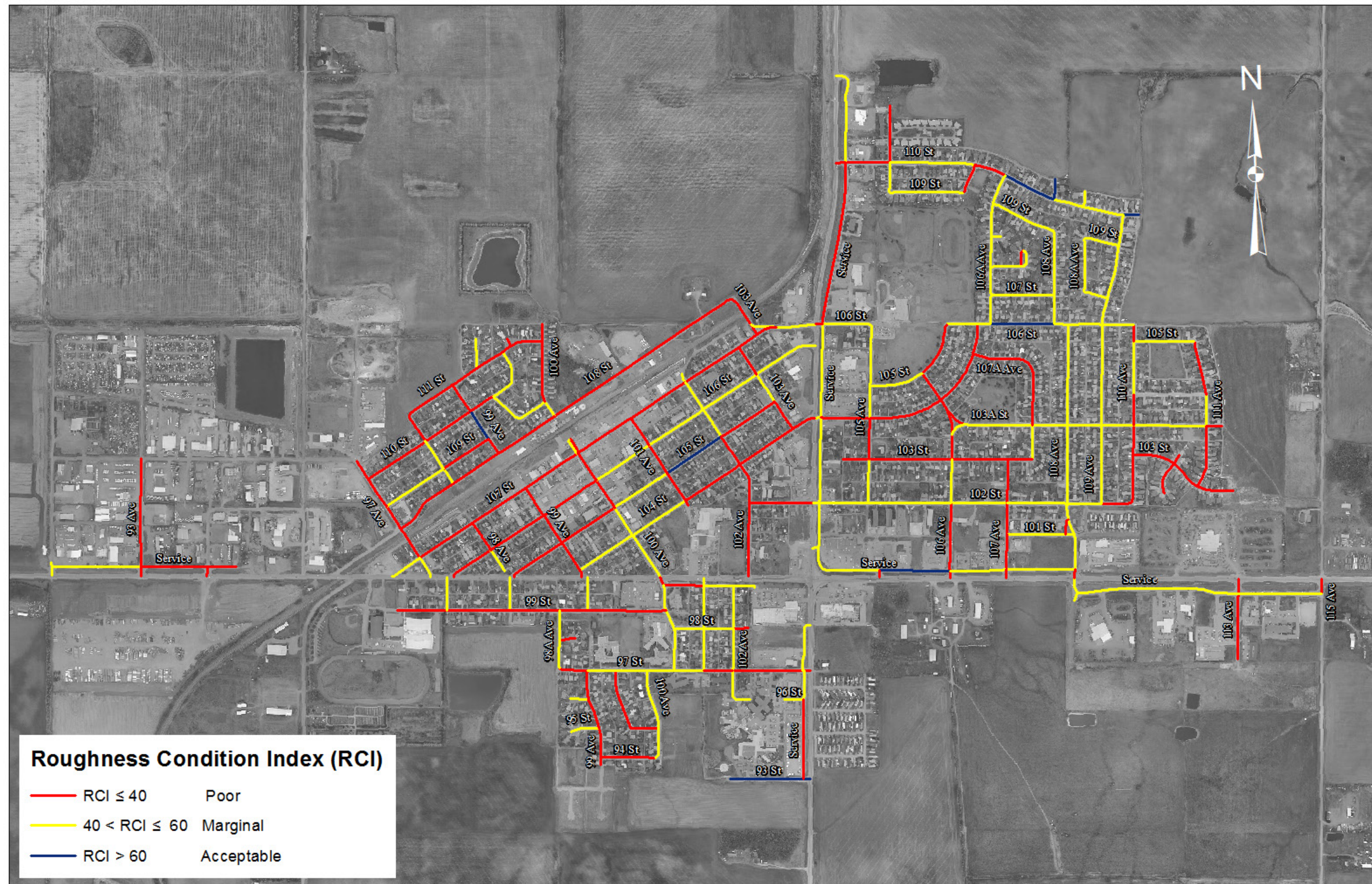
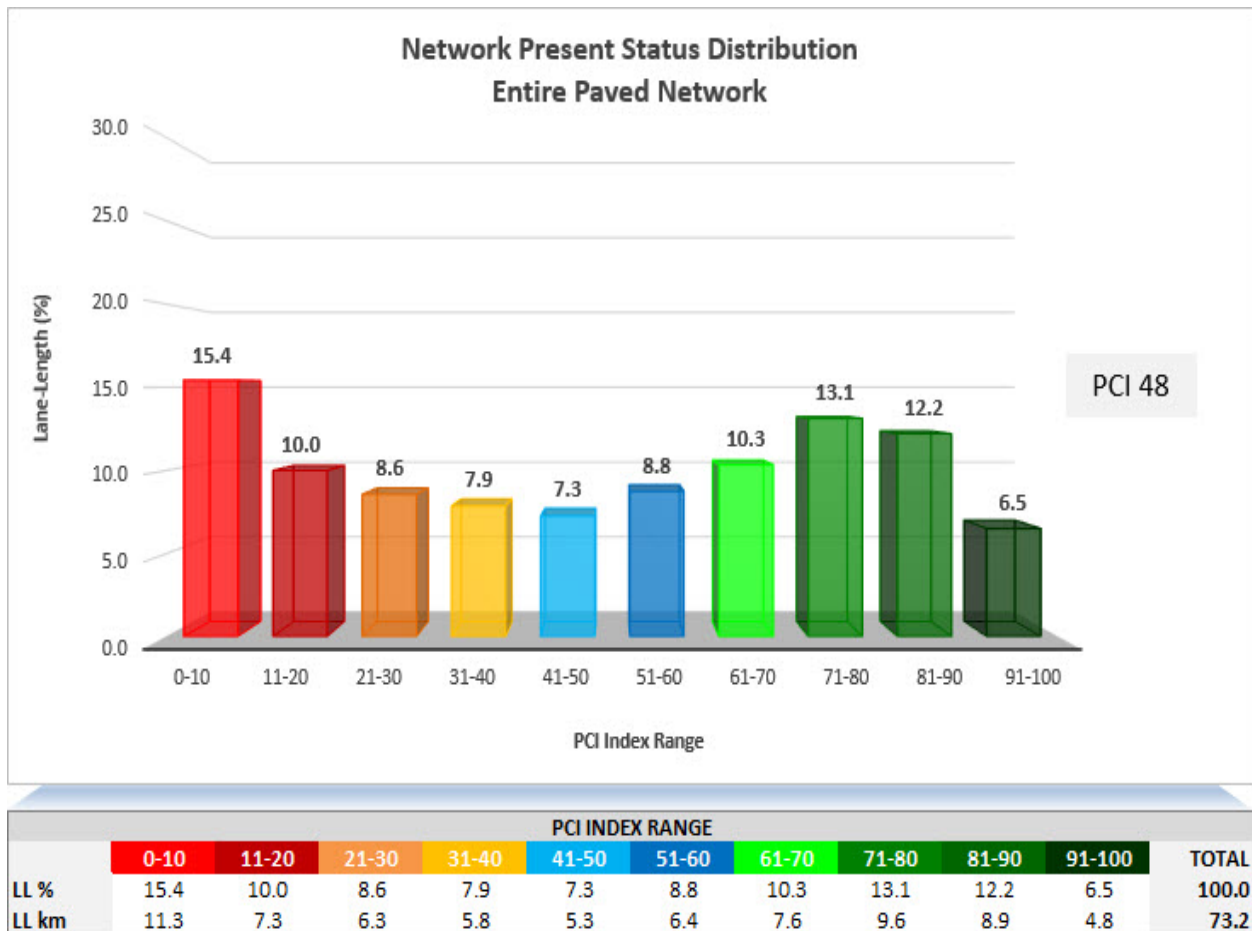


Figure 4.2a: RCI Distribution Map - Entire Paved Network

#### 4.1.2 Pavement Distress (PCI) Analysis Results

The results show a majority of the network is exhibiting marginal performance with respect to the pavement distress. **Figure 4.3** shows the distribution of PCI values, weighted by lane-kilometres. **Figure 4.3a** on the following page displays the PCI Range distribution map.

The plot indicates a mean PCI of 48 for the Entire Paved Network.



**Figure 4.3: PCI Distribution - Entire Paved Network**

**Table 4.4** shows the distribution of the network between poor, marginal, and acceptable PCI values.

**Table 4.4: PCI Distribution - Entire Paved Network**

PCI RANGE	DISTRESS CONDITION	LANE-KM	% OF NETWORK
PCI ≤ 40	Poor	30.6	41.8
40 < PCI ≤ 60	Marginal	11.7	16.0
PCI > 60	Acceptable	30.9	42.2

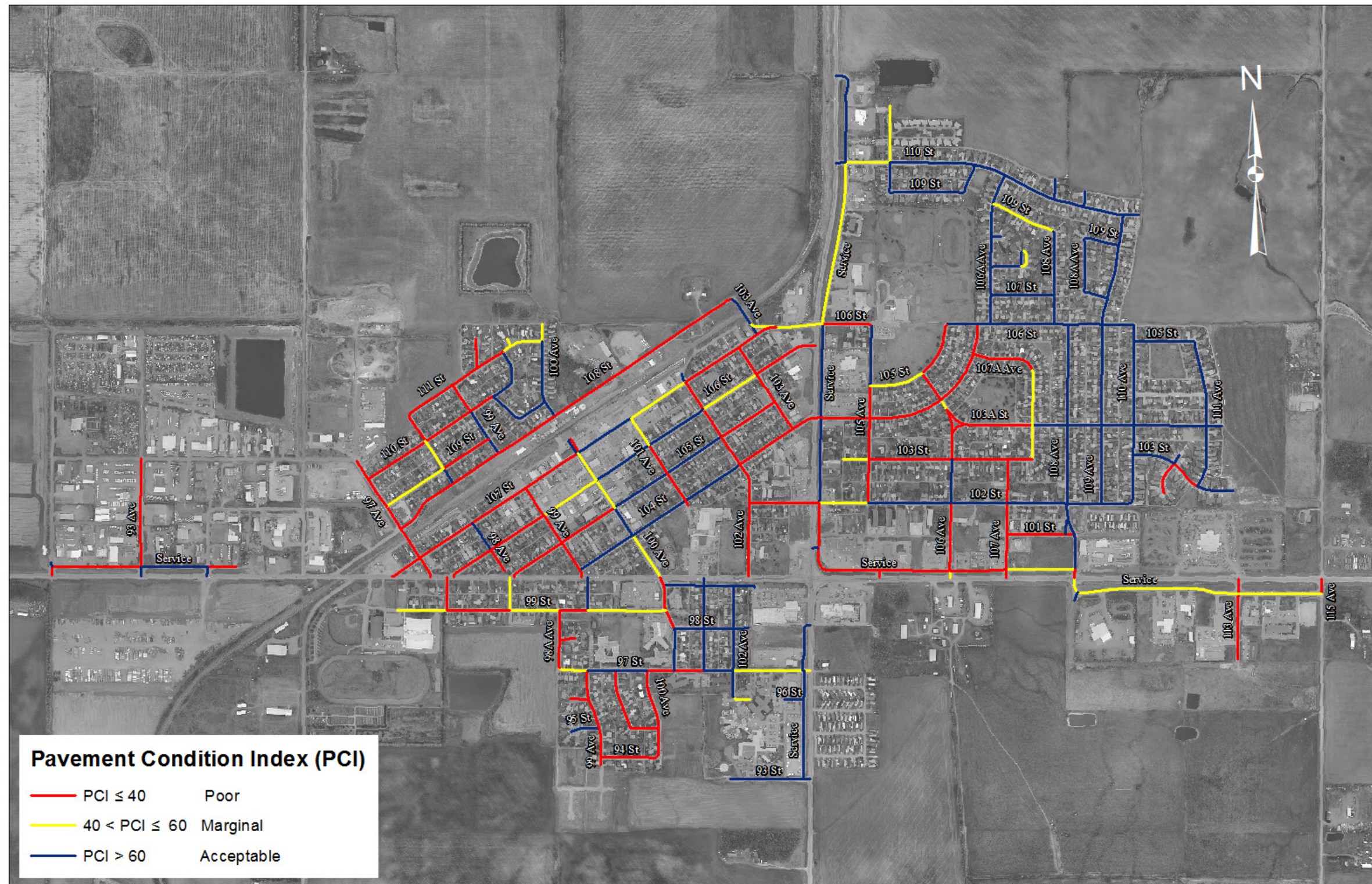


Figure 4.3a: PCI Distribution Map - Entire Paved Network

### 4.1.3 Structural Adequacy (SAI) Analysis Results

These results indicate the network as a whole is structurally inadequate to carry the expected traffic loading. Nearly two-thirds of the pavement structures surveyed show they are structurally inadequate to support the expected traffic loading over the 10-year programming period. **Figure 4.4** shows the distribution of SAI values, weighted by lane-kilometres. **Figure 4.4a** on the following page displays the SAI Range distribution map.

The plot indicates a mean SAI of 43 for the Entire Paved Network.

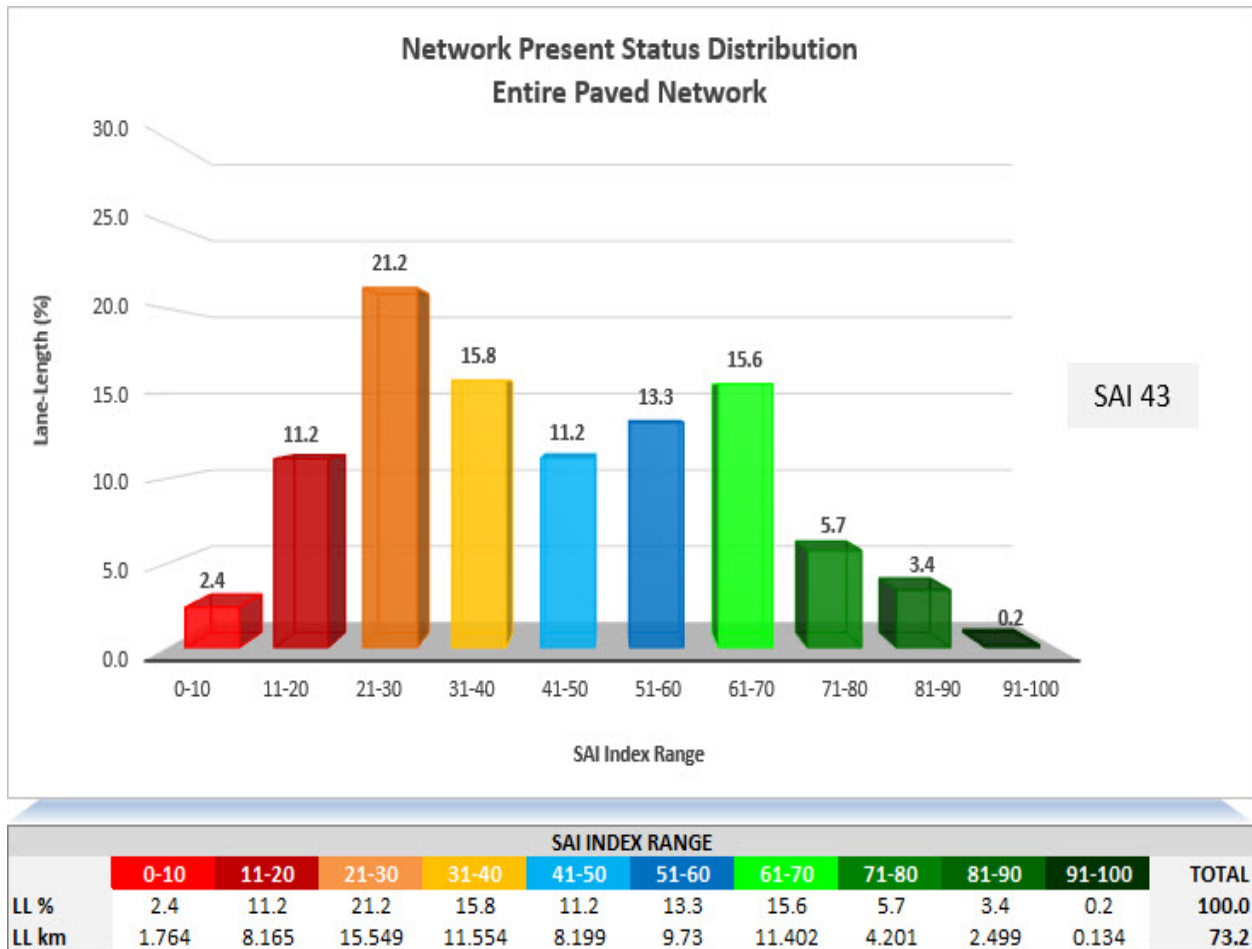


Figure 4.4: SAI Distribution - Entire Paved Network

Table 4.5 shows the distribution of the network between inadequate and adequate SAI values.

Table 4.5: SAI Distribution - Entire Paved Network

SAI RANGE	STRUCTURAL CONDITION	LANE-KM	% OF NETWORK
SAI ≤ 50	Inadequate	45.2	61.8
SAI > 50	Adequate	28.0	38.2

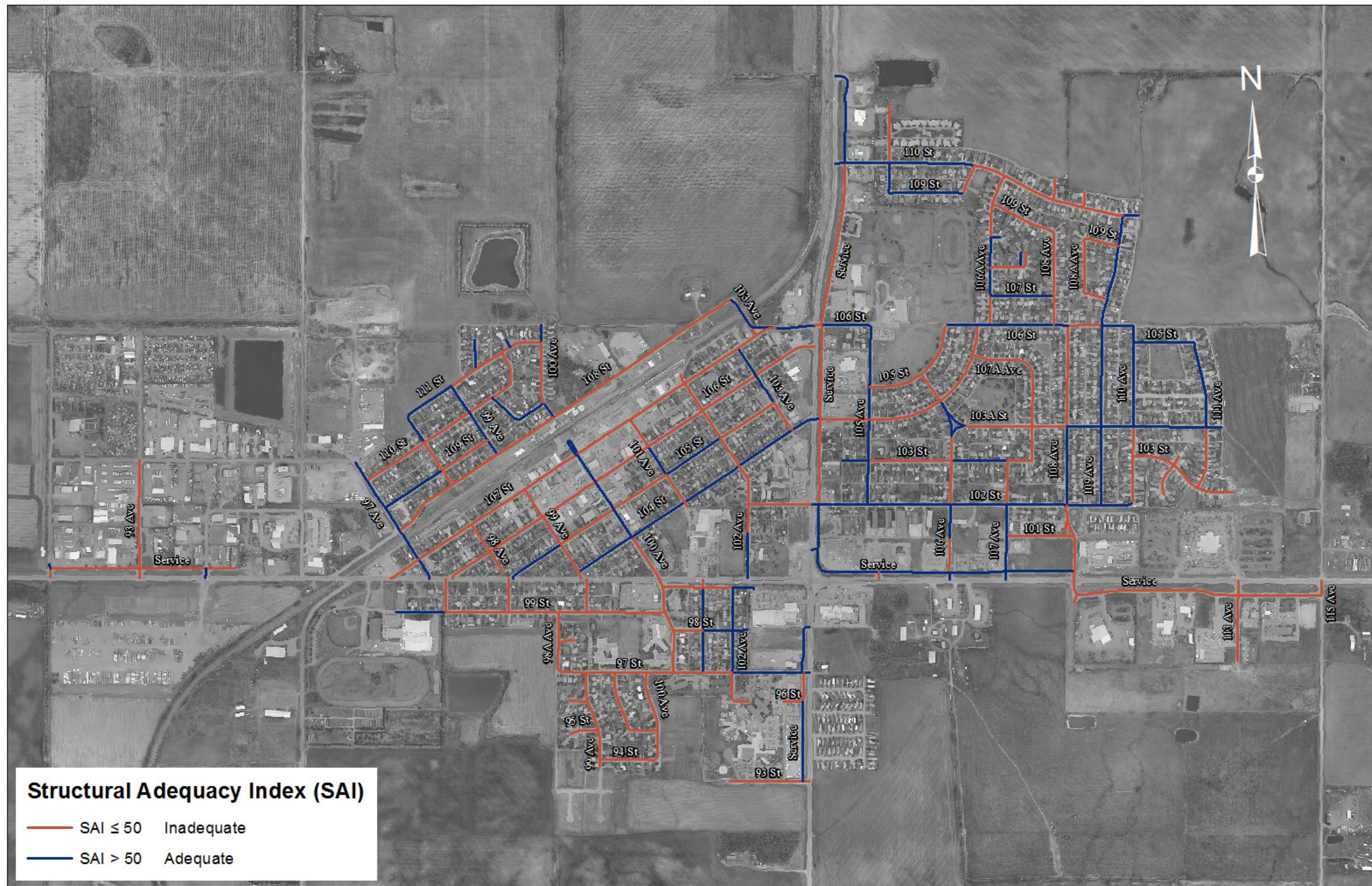
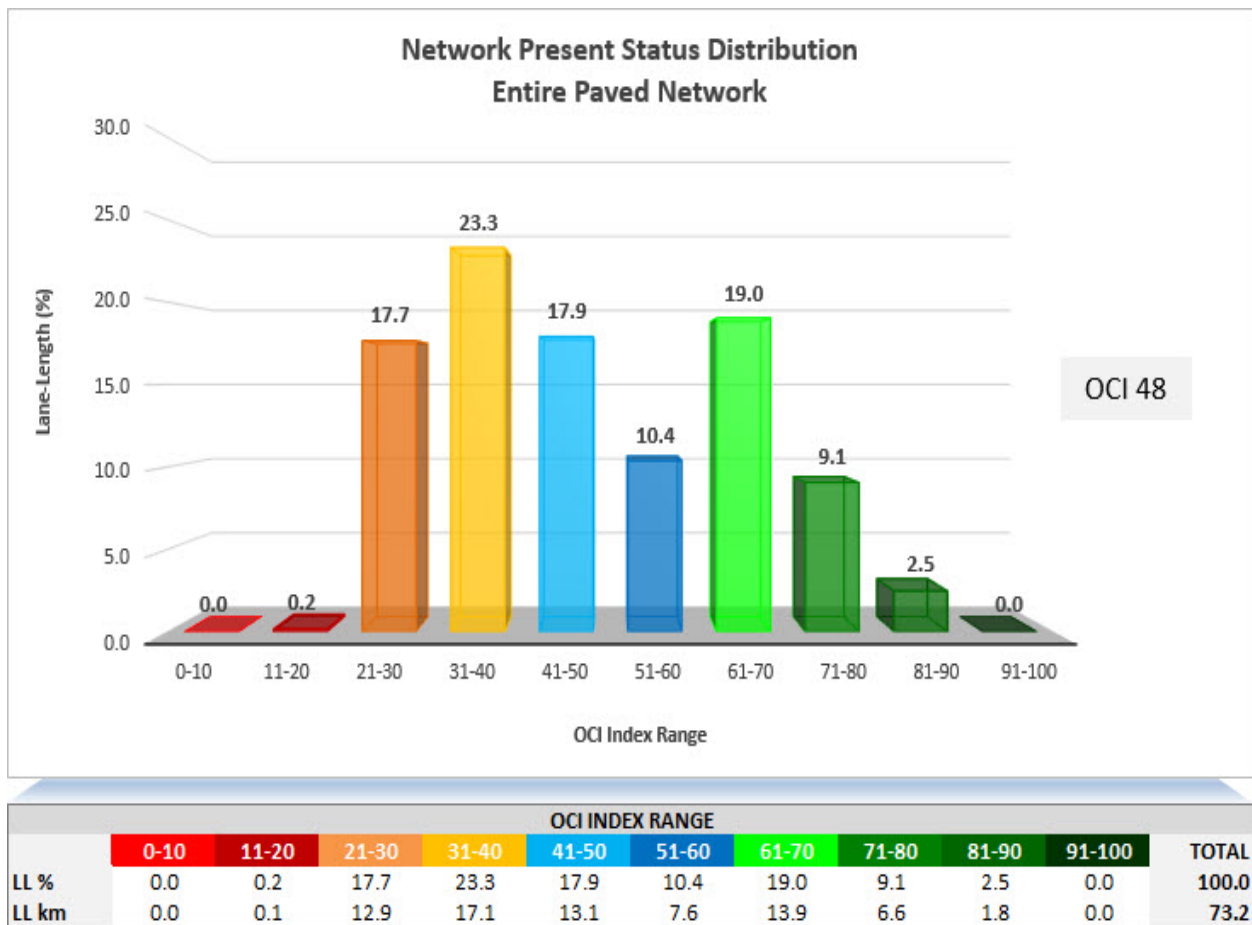


Figure 4.4a: SAI Distribution Map - Entire Paved Network

#### 4.1.4 Overall Condition (OCI) Analysis Results

The results indicate a majority of the roadway network is exhibiting signs of marginal performance, with the roughness and structural conditions showing the most deterioration. **Figure 4.5** shows the distribution of OCI values, weighted by lane-kilometres. **Figure 4.5a** on the following page displays the OCI distribution Range map.

The plot indicates a mean OCI of 48 for the Entire Paved Network.



**Figure 4.5: OCI Distribution - Entire Paved Network**

**Table 4.6** shows the distribution of the network between in-need and acceptable OCI values.

**Table 4.6: OCI Distribution - Entire Paved Network**

OCI RANGE	OVERALL CONDITION	LANE-KM	% OF NETWORK
OCI ≤ Trigger <sup>1</sup>	In-Need	42.2	57.7
OCI > Trigger <sup>1</sup>	Acceptable	31.0	42.3

<sup>1</sup> Trigger levels correspond to appropriate functional class trigger levels; i.e., Collector 50 and Local 45.

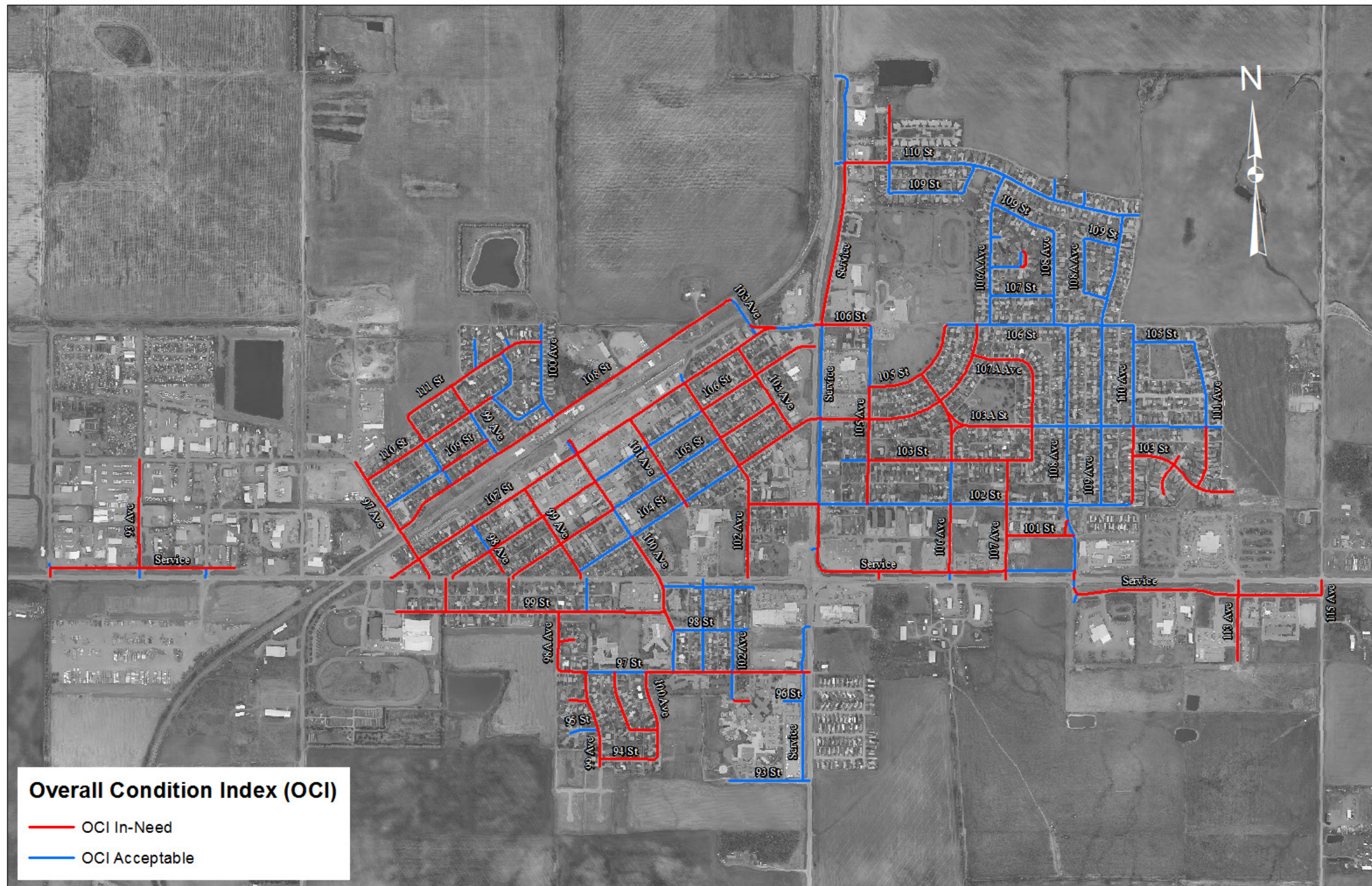


Figure 4.5a: OCI Distribution Map - Entire Paved Network

#### 4.2 Rehabilitation Needs Analysis Results

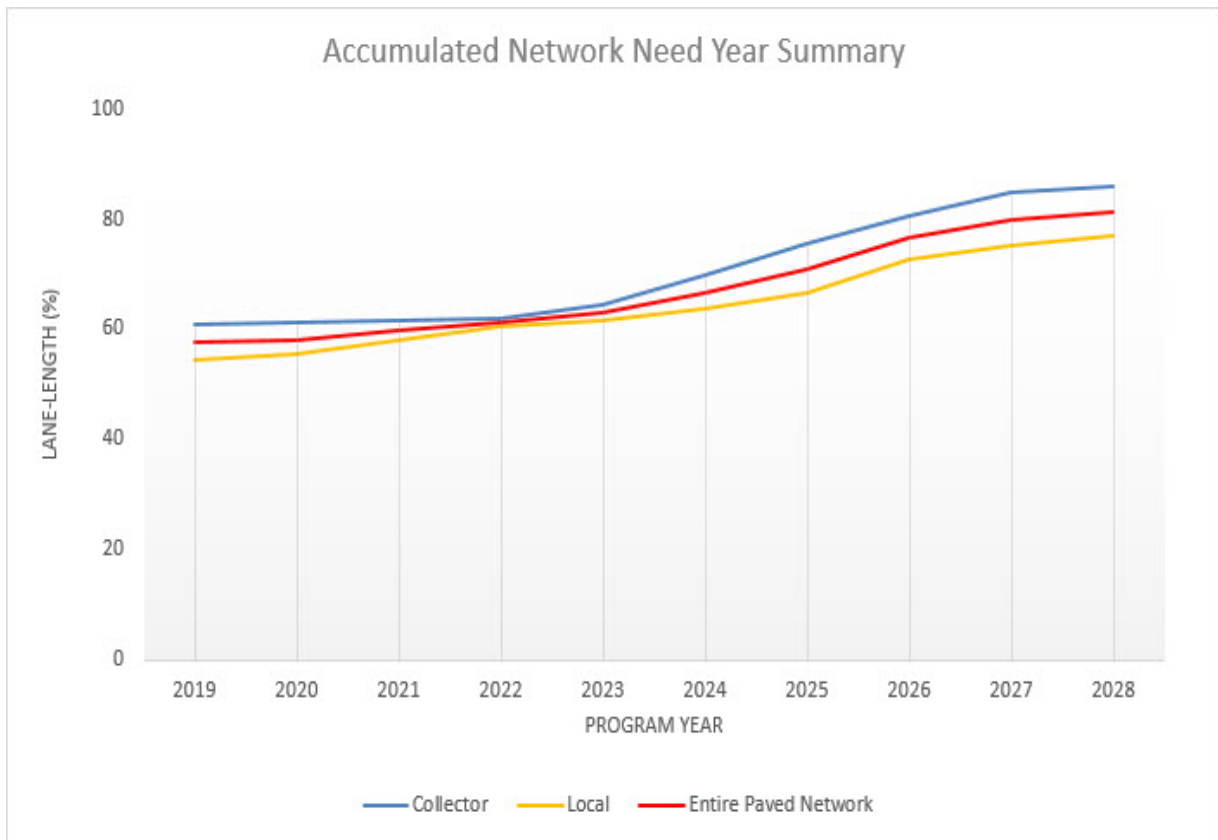
The Need Year of a pavement is defined as the year in which the OCI of the pavement falls to, or below a critical value, known as the OCI Trigger Level. For the purpose of the 2019 report, the Base Year of the analysis was set to 2019.

**Table 4.7** shows the current rehabilitation needs summary by functional class and for the Town’s entire paved roadway network.

**Table 4.7: 2019 Network Needs Summary**

FUNCTIONAL CLASS	2019 NETWORK NEEDS (% LANE-LENGTH)	2019 NETWORK NEEDS (LANE-KM)
Collector Network	61.0	21.6
Local Network	54.5	20.6
<b>Entire Paved Network</b>	<b>57.7</b>	<b>42.2</b>

The summary of the accumulating 10-year program Needs (non-funded scenario), is reported in %Lane-Length for each functional classes and the entire network, and are shown in **Figure 4.6**.



**Figure 4.6: Accumulated Needs Summary (2019–2028)**



#### 4.2.1 Network Needs Distributions – Entire Paved Network

The results show that 57.7% of the network is in current need of some form of rehabilitation.

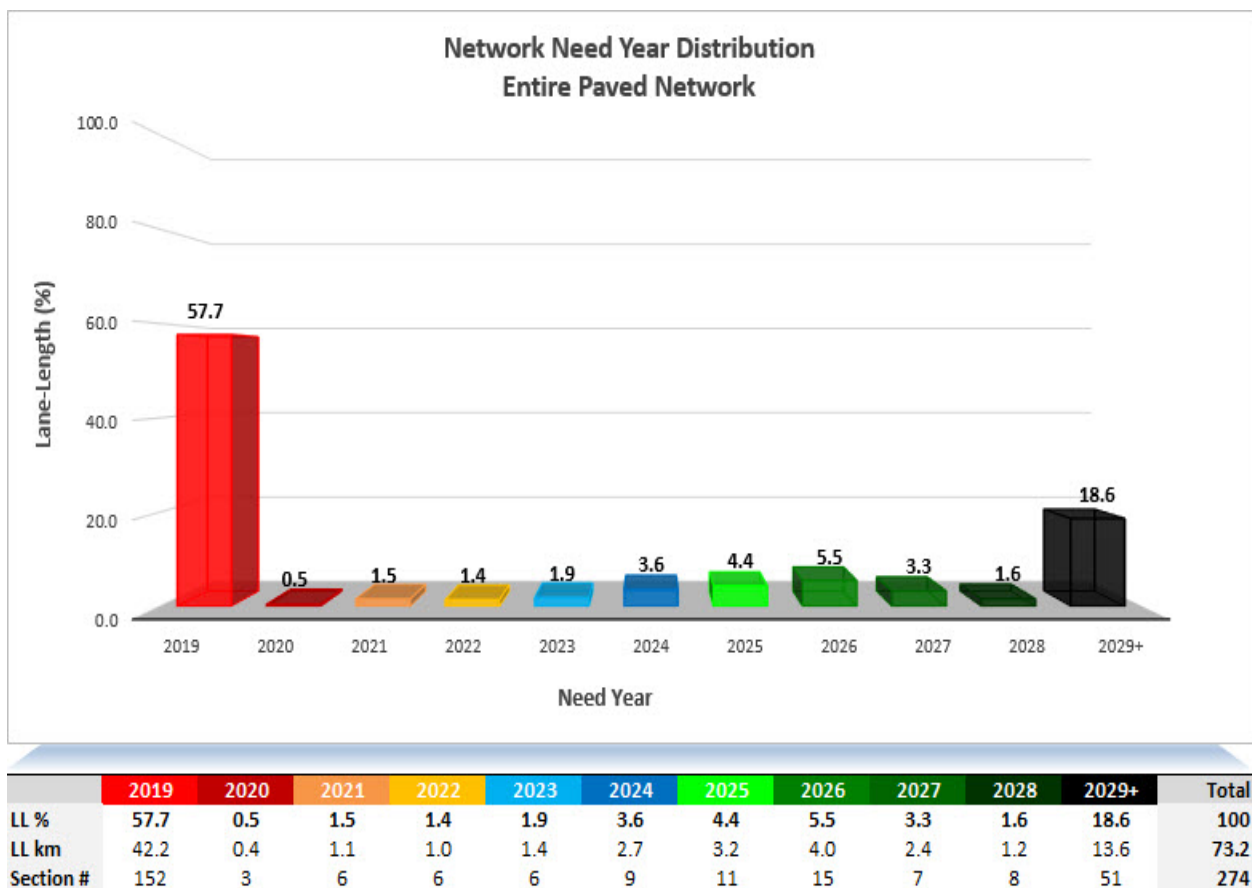
Table 4.8 shows the summary of the 10-year need driven program.

**Table 4.8: Entire Paved Network: Accumulating 10-Year Needs Summary**

PROGRAM PERIOD	NETWORK NEEDS (% LANE-LENGTH)	NETWORK NEEDS (LANE-KM)
Current (2019)	57.7	42.2
5-Year (2019 – 2023)	46.1	63.0
10-Year (2019 – 2028)	59.6	81.4

The remaining **18.6%** of the network will become a Need beyond the 10-year programming period.

The full Need Year distribution for the Town’s Entire Paved Network is presented in **Figure 4.7**.



**Figure 4.7: Need Year Distribution - Entire Paved Network**

### 4.3 2019 Priority Programming Analysis Results

The following section summarizes the results of the priority programming analysis run in the rMD application. **Table 4.9** presents the budget program results by budget scenario, network subset and impact on the overall network performance.

**Table 4.9: Priority Programming Summary**

BUDGET ID	BUDGET SCENARIO	10-YEAR BUDGET	2019		10-YEAR (2028)	
			OCI	%DEF	OCI	%DEF
Do Nothing	No Funding	\$0	48	57.7	34	81.3
Need Driven	Unconstrained	\$24.7M	84	0.0	72	0.0
\$1.0M/Year	Current Funding	\$10.0M	52	51.0	52	43.9
\$1.75M/Year	Recommended Funding	\$17.5M	50	51.7	70	19.1

#### 4.3.1 Budget Network Scenarios

The budgets run on the Entire Paved Network show the performance impact of the two budget scenarios selected for the analysis. The first budget scenario is a \$1.0M per year, over a 10-year programming period. This budget shows the predicted performance of the Town’s roadway network at the current funding level.

The second budget scenario is a \$1.75M per year, over a 10-year programming period. This budget shows the predicted performance of the Town’s roadway network at the recommended funding level.

**Table 4.10** and **Table 4.11** show the annual funding levels and performance impact on the network of the two budget scenarios.

The first budget scenario \$1.0M per year priority ranking and program year by network segment is provided in **Appendix J**.

The second budget scenario \$1.75M per year priority ranking and program year by network segment is provided in **Appendix K**.

**Figures 4.7a – Figures 4.7j** display the \$1M/YR distribution maps for the 10-year programming period.

**Figures 4.7k – Figures 4.7t** display the \$1.75M/YR distribution maps for the 10-year programming period.

**Table 4.10: Annual Program Summary (\$1.0M/Year)**

YEAR	ANNUAL BUDGET	BUDGET SPENT	OCI	%DEF
2019	\$1,000,000	\$996,534	<b>52</b>	<b>51.0</b>
2020	\$1,000,000	\$998,747	51	49.3
2021	\$1,000,000	\$994,908	51	45.5
2022	\$1,000,000	\$996,890	52	43.0
2023	\$1,000,000	\$995,766	51	42.6
2024	\$1,000,000	\$995,558	50	43.6
2025	\$1,000,000	\$999,614	49	46.0
2026	\$1,000,000	\$997,737	48	49.3
2027	\$1,000,000	\$999,696	49	47.8
2028	\$1,000,000	\$999,808	<b>52</b>	<b>43.9</b>
<b>TOTAL</b>	<b>\$10,000,000</b>	<b>\$9,975,257</b>		

**Table 4.11: Annual Program Summary (\$1.75M/Year)**

YEAR	ANNUAL BUDGET	BUDGET SPENT	OCI	%DEF
2019	\$1,750,000	\$1,746,667	<b>50</b>	<b>51.7</b>
2020	\$1,750,000	\$1,749,757	52	44.7
2021	\$1,750,000	\$1,747,282	53	41.2
2022	\$1,750,000	\$1,748,659	53	38.4
2023	\$1,750,000	\$1,746,105	55	33.2
2024	\$1,750,000	\$1,746,972	57	30.5
2025	\$1,750,000	\$1,744,341	60	29.0
2026	\$1,750,000	\$1,746,555	63	29.2
2027	\$1,750,000	\$1,745,277	65	28.1
2028	\$1,750,000	\$1,749,388	<b>70</b>	<b>19.1</b>
<b>TOTAL</b>	<b>\$17,500,000</b>	<b>\$17,471,002</b>		



Figure 4.7a: \$1M/YR Budget 2019 Distribution Map

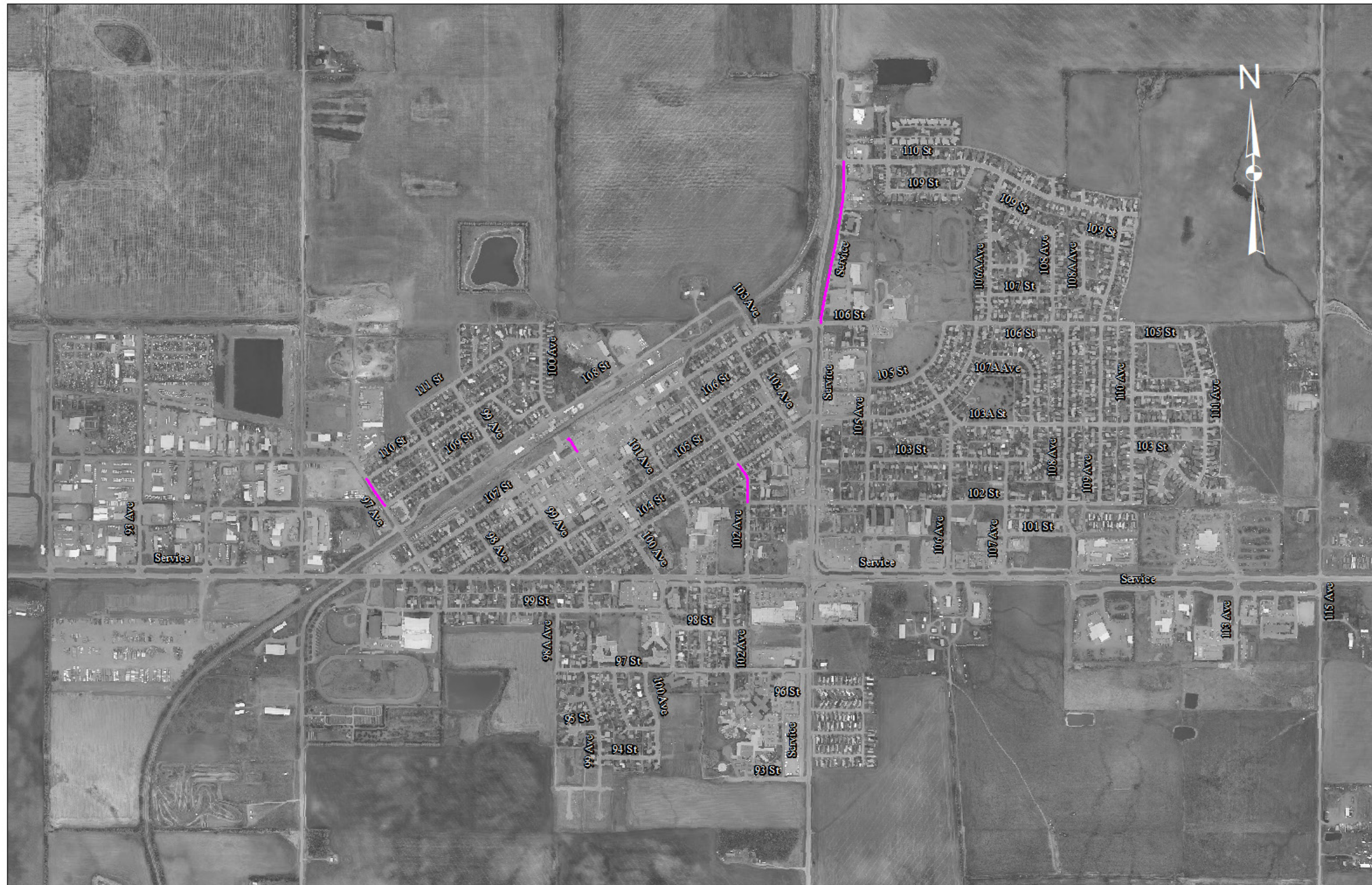


Figure 4.7b: \$1M/YR Budget 2020 Distribution Map



Figure 4.7c: \$1M/YR Budget 2021 Distribution Map



Figure 4.7d: \$1M/YR Budget 2022 Distribution Map



Figure 4.7e: \$1M/YR Budget 2023 Distribution Map





Figure 4.7f: \$1M/YR Budget 2024 Distribution Map

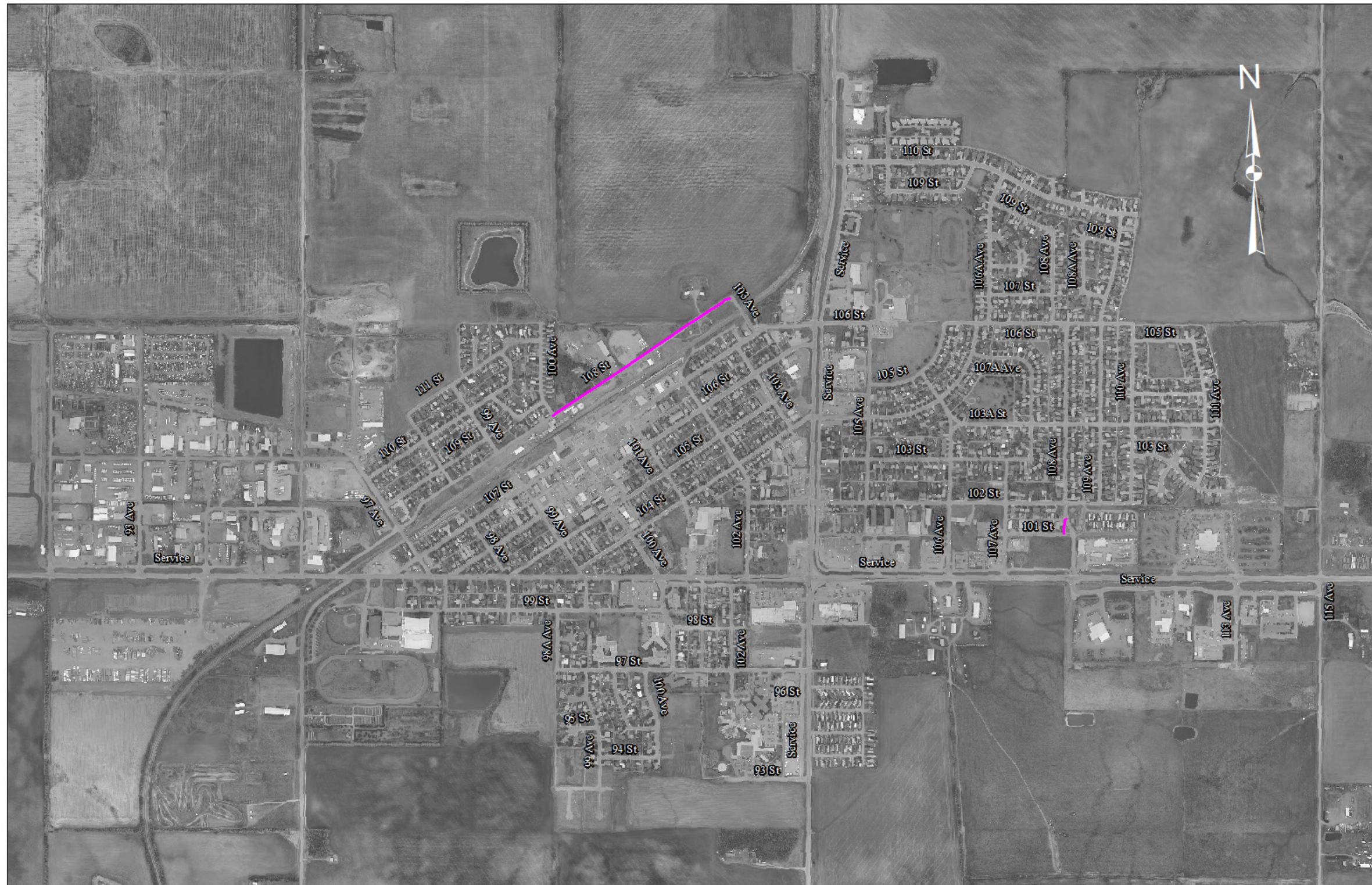


Figure 4.7g: \$1M/YR Budget 2025 Distribution Map



Figure 4.7h: \$1M/YR Budget 2026 Distribution Map







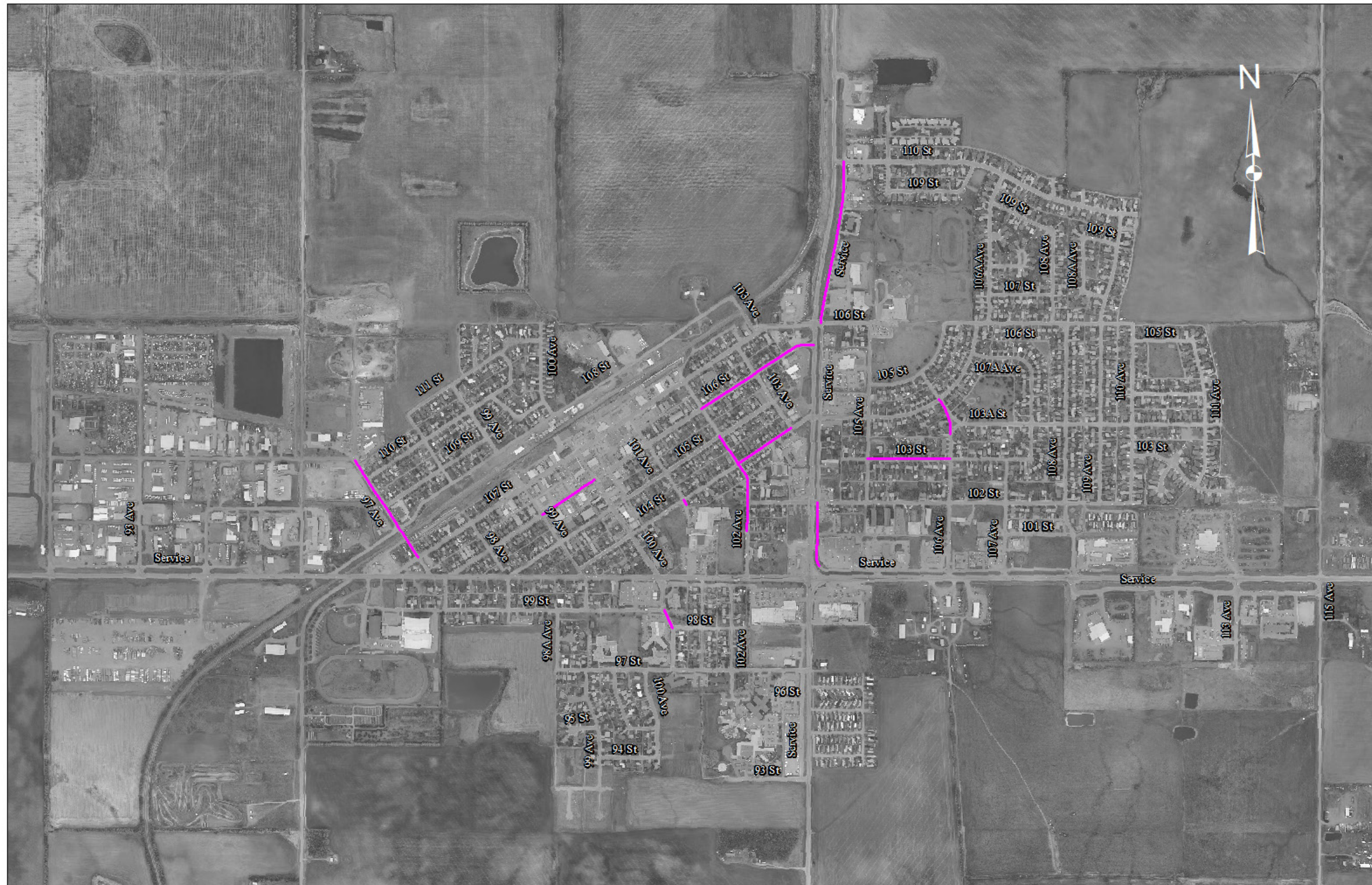


Figure 4.71: \$1.75M/YR Budget 2020 Distribution Map



Figure 4.7m: \$1.75M/YR Budget 2021 Distribution Map





Figure 4.7n: \$1.75M/YR Budget 2022 Distribution Map



Figure 4.7o: \$1.75M/YR Budget 2023 Distribution Map

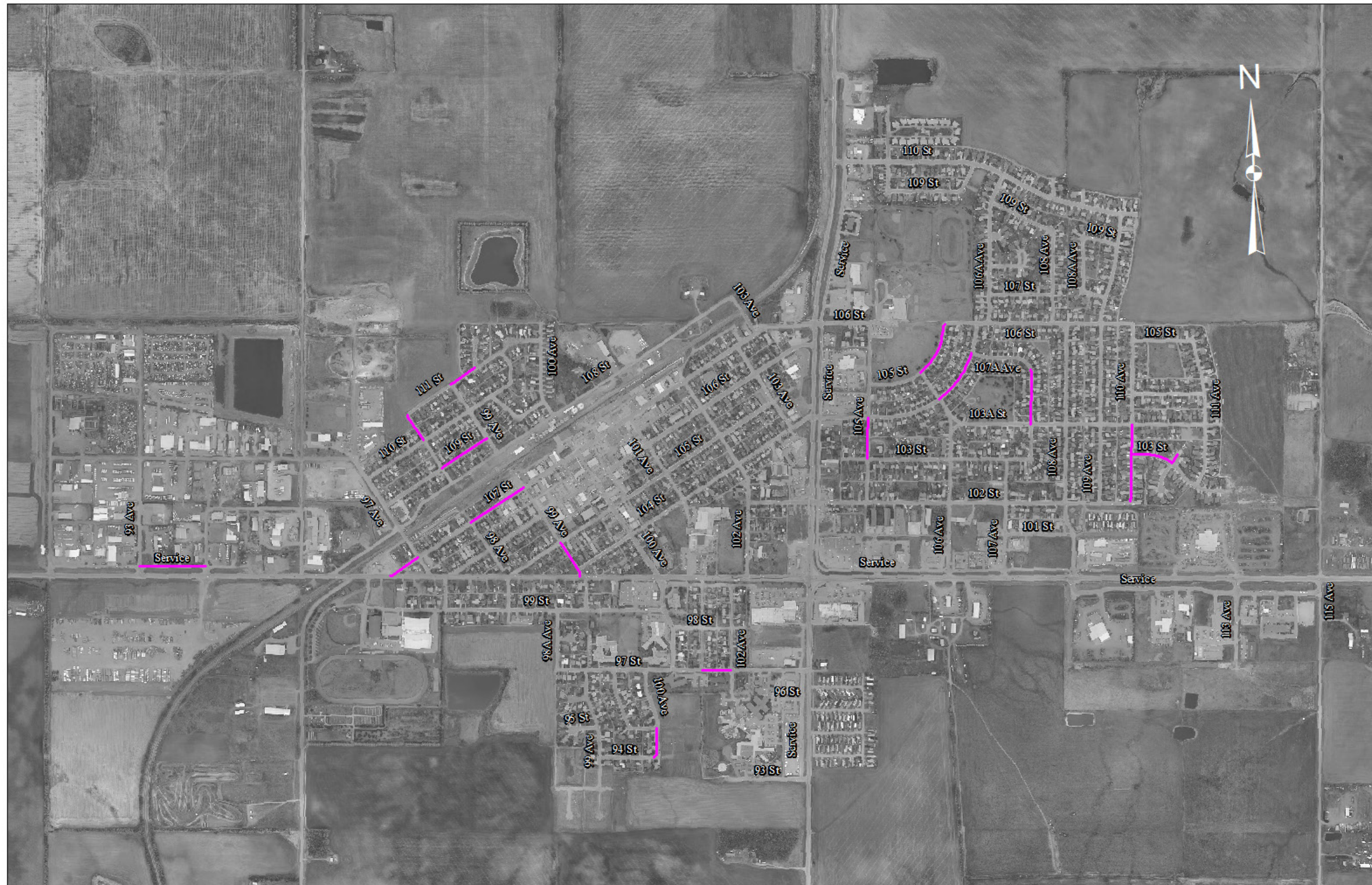


Figure 4.7p: \$1.75M/YR Budget 2024 Distribution Map

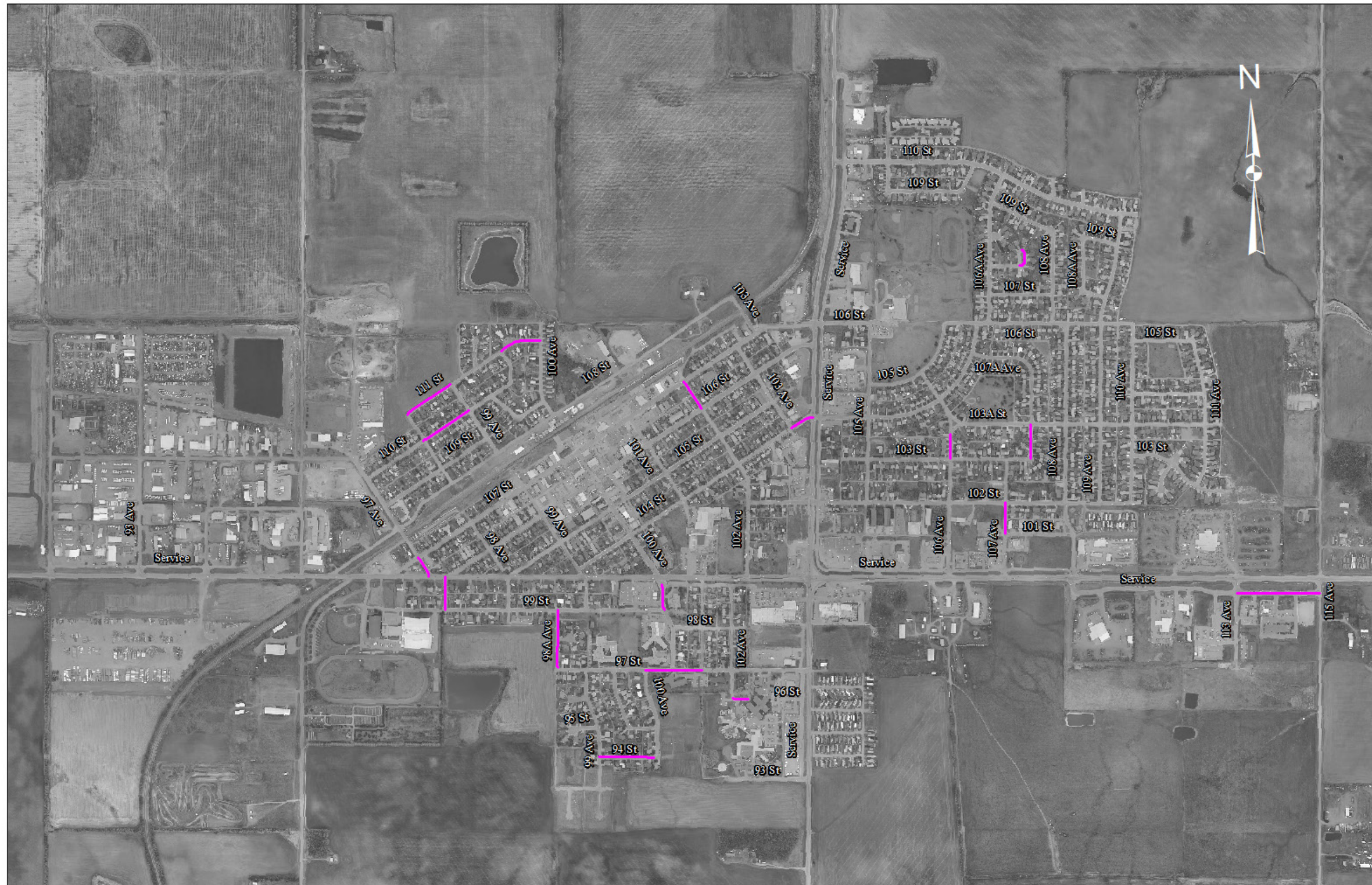


Figure 4.7q: \$1.75M/YR Budget 2025 Distribution Map

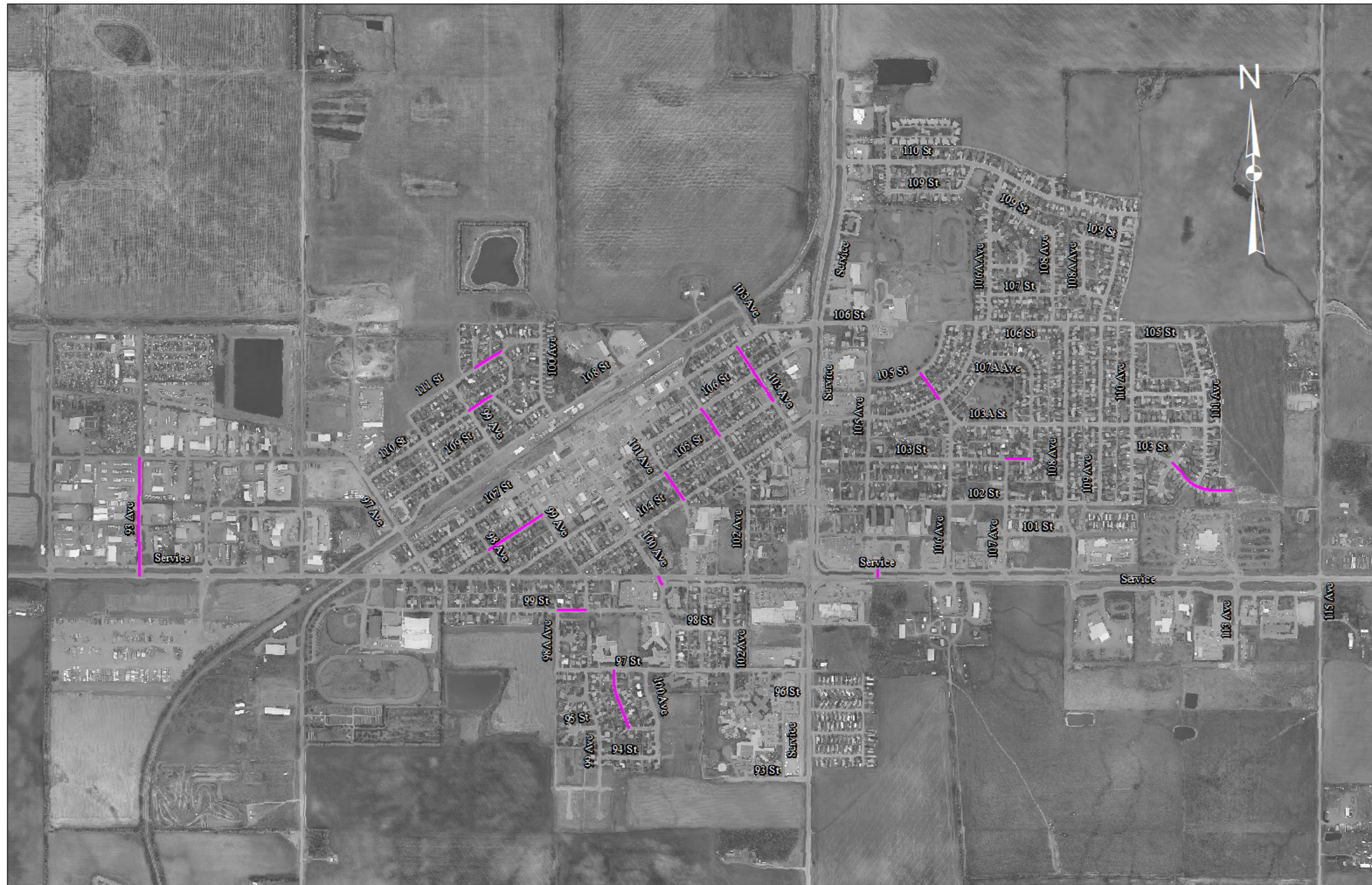


Figure 4.7r: \$1.75M/YR Budget 2026 Distribution Map

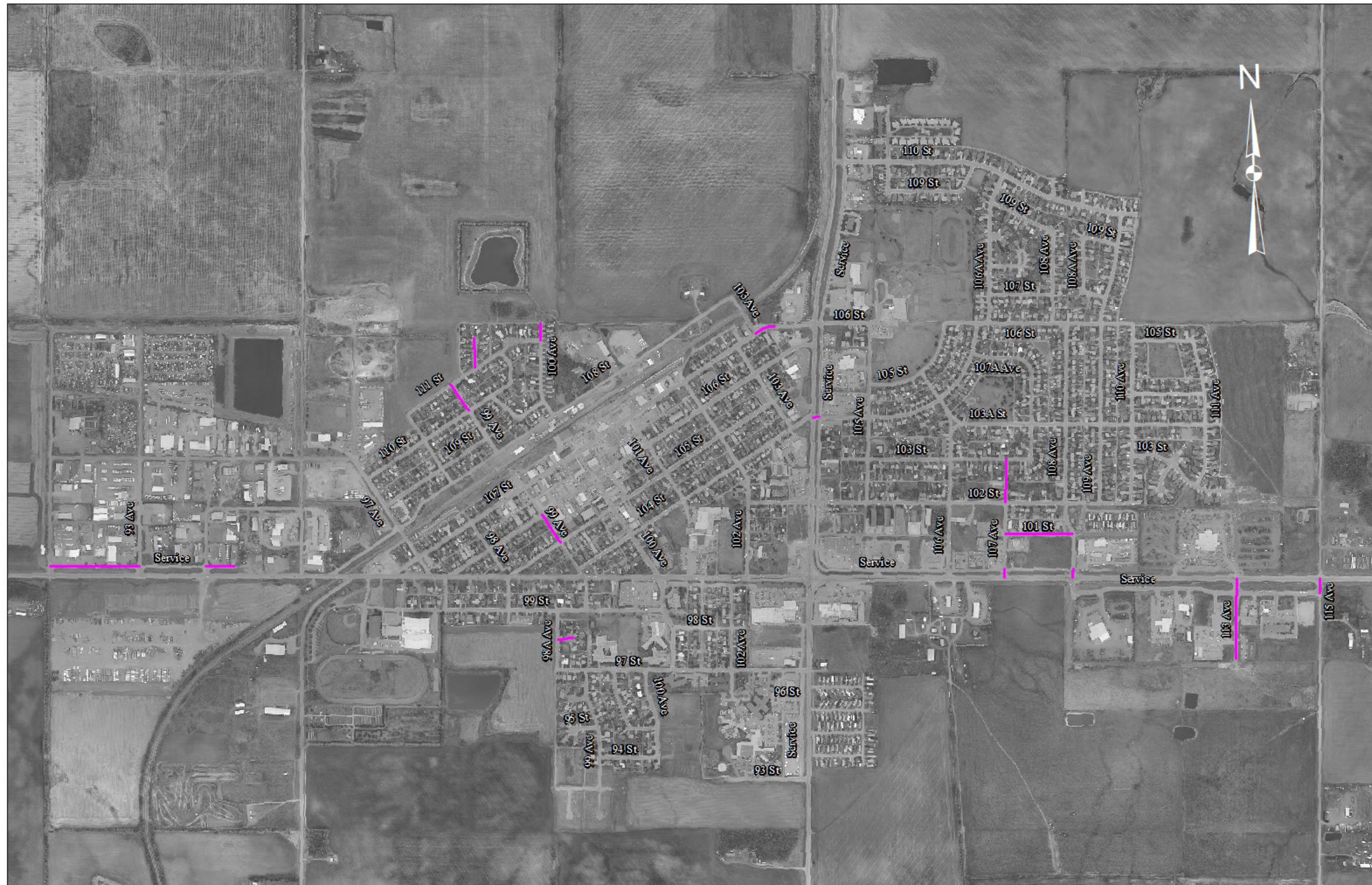


Figure 4.7s: \$1.75M/YR Budget 2027 Distribution Map

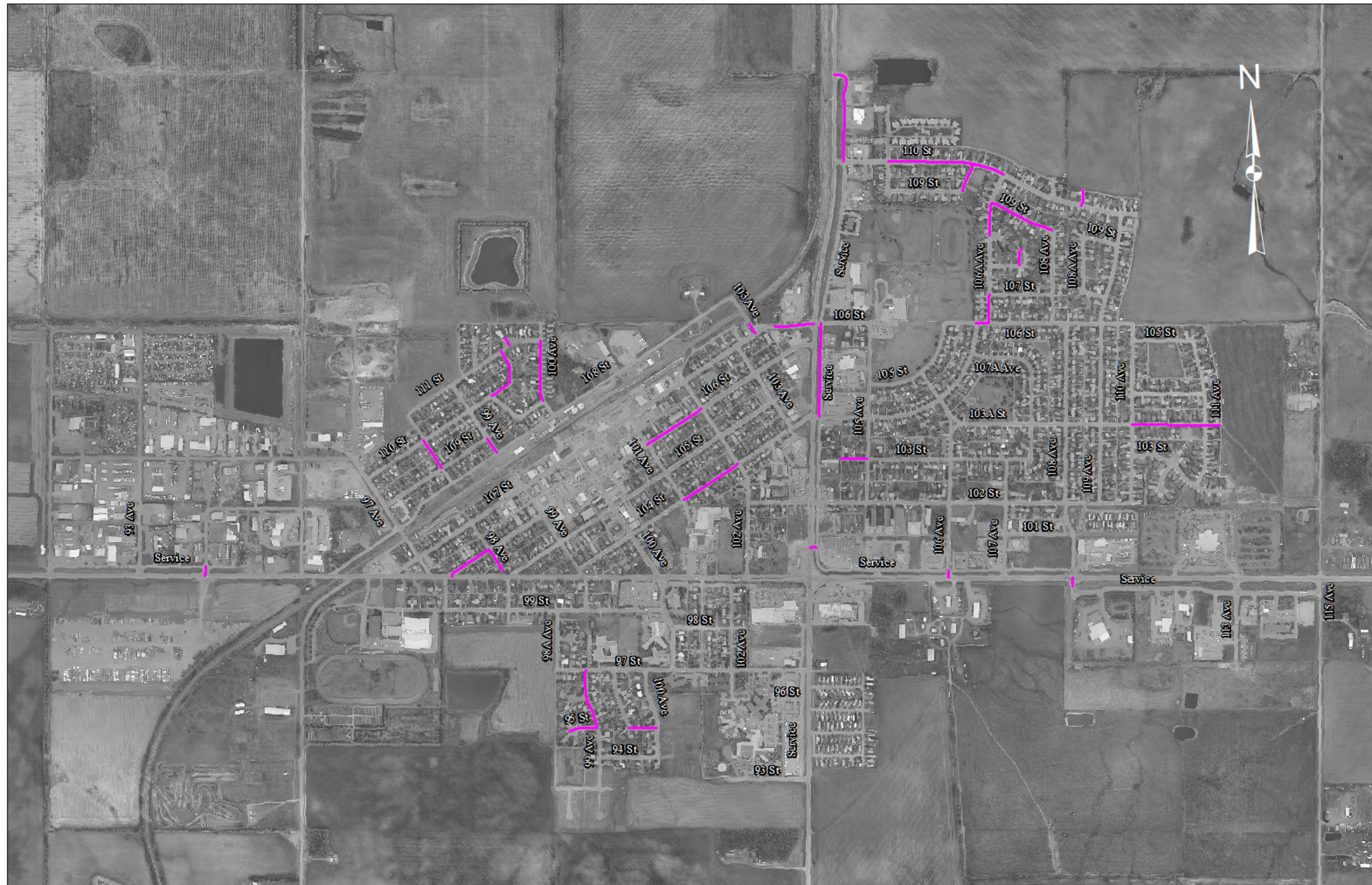


Figure 4.7t: \$1.75M/YR Budget 2028 Distribution Map

Figure 4.8 illustrates the selected funding program summaries.

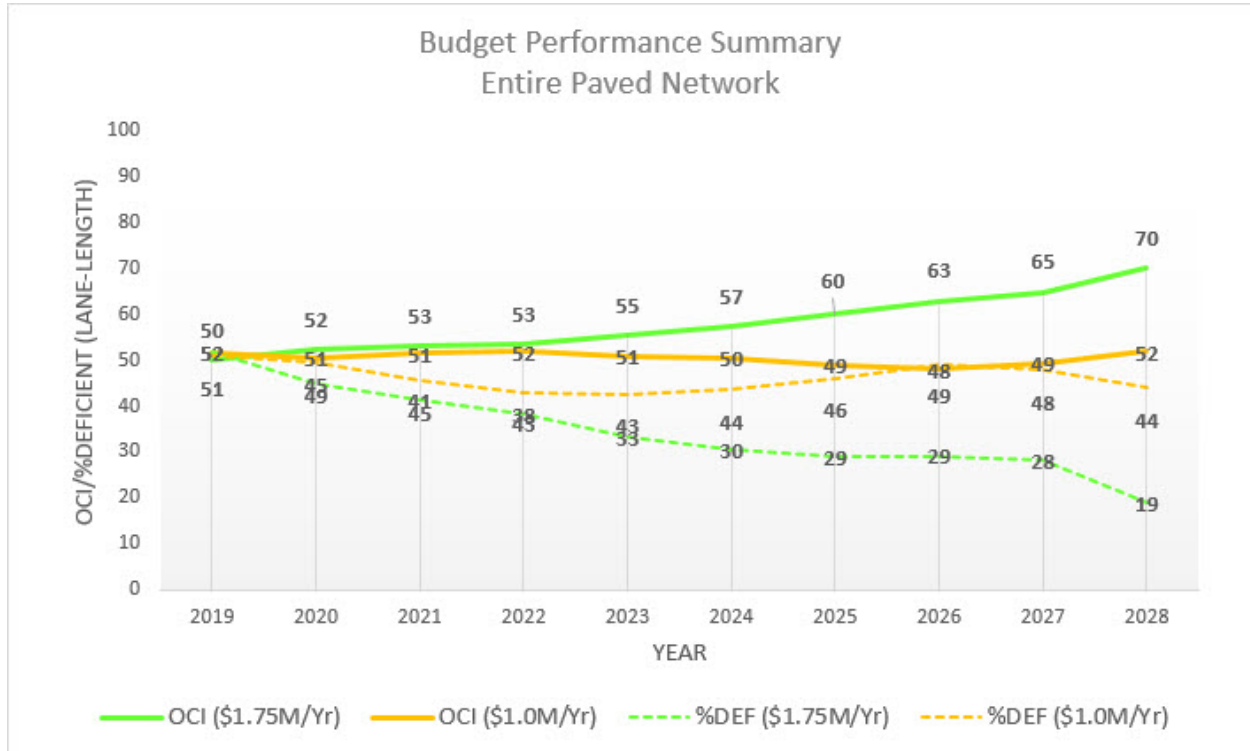


Figure 4.8 Annual Funding Program Performance

**4.3.1 Theoretical Analysis Scenarios**

The Do Nothing and Need Driven optimizations run on the Entire Paved Network show the impact on the network performance of these two extreme theoretical scenarios. The analysis is run with these scenarios as a “what if” reference datum and it is understood they are not realistic in practice.

The analysis results show the Entire Paved Network requires approximately \$24.7M over the next 10 years to address the current and predicted deficiencies. The recommended work programs will result in a network average OCI of 72 and a backlog of 0%.

Table 4.12 and Table 4.13 show the annual funding levels and performance impact on the network of the two theoretical budget scenarios.



**Table 4.12: Do Nothing Program Summary (No Funding)**

YEAR	ANNUAL BUDGET	BUDGET SPENT	OCI	%DEF
2019	\$0	\$0	<b>48</b>	<b>57.7</b>
2020	\$0	\$0	46	58.1
2021	\$0	\$0	44	59.7
2022	\$0	\$0	43	61.1
2023	\$0	\$0	41	63.0
2024	\$0	\$0	39	66.6
2025	\$0	\$0	38	71.0
2026	\$0	\$0	37	76.4
2027	\$0	\$0	35	79.7
2028	\$0	\$0	<b>34</b>	<b>81.3</b>
<b>TOTAL</b>	<b>\$0</b>	<b>\$0</b>		

**Table 4.13: Need Driven Program Summary (Unlimited Funding)**

YEAR	ANNUAL BUDGET	BUDGET SPENT	OCI	%DEF
2019	\$20,967,813	\$20,967,813	<b>84</b>	<b>0.0</b>
2020	\$52,739	\$52,739	81	0.0
2021	\$235,038	\$235,038	79	0.0
2022	\$155,734	\$155,734	78	0.0
2023	\$197,182	\$197,182	76	0.0
2024	\$860,920	\$860,920	75	0.0
2025	\$885,051	\$885,051	75	0.0
2026	\$782,272	\$782,272	75	0.0
2027	\$289,321	\$289,321	73	0.0
2028	\$281,375	\$281,375	<b>72</b>	<b>0.0</b>
<b>TOTAL</b>	<b>\$24,707,443</b>	<b>\$24,707,443</b>		

Figure 4.9 illustrates the program summaries for theoretical budget scenarios.

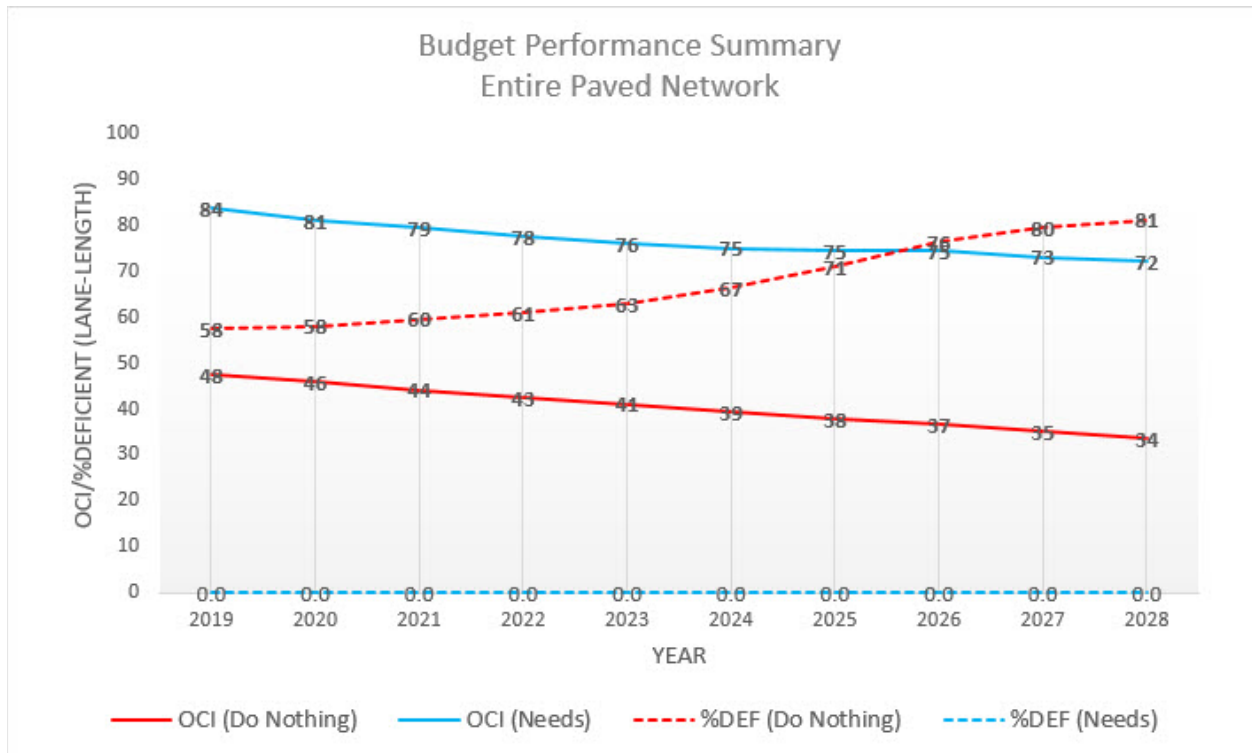


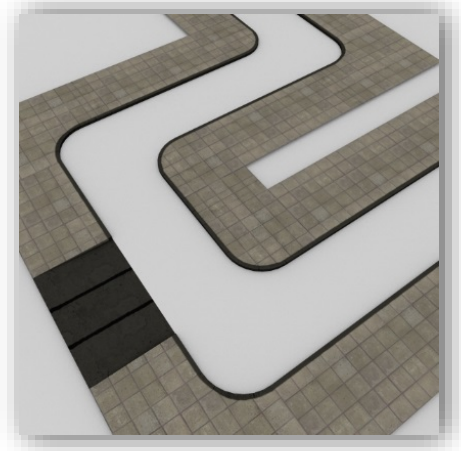
Figure 4.9: Need Driven and Do-Nothing Program Performance

## 5.0 SIDEWALK DATA COLLECTION

### 5.1 Network Definition and Attribute Data

The 2019 network definition and attribute data setup consisted of the following:

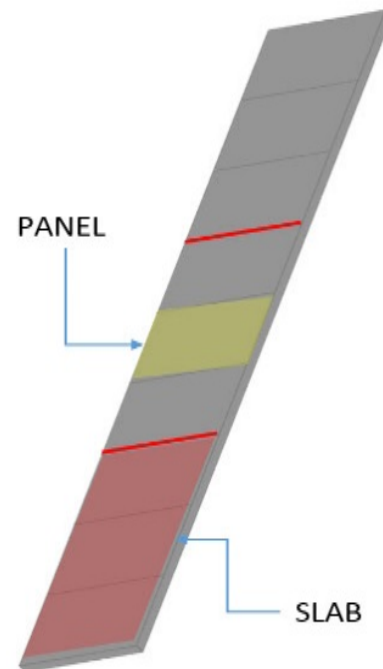
- ❑ Define and create the sidewalk network GIS layer based on the Town’s existing sidewalk placements. Sidewalk segments are identified using unique Asset IDs stored in the GIS database.
- ❑ Activate and load the RUBIX asset management framework (rDash).
- ❑ Classify network attributes used for analysis (pedestrian exposure, geometrics, etc.).



The sidewalk network definition, used for the purpose of the 2019 report, was created by MPE on behalf of the Town. The network definition maintains a direct link to a unique Asset ID convention established along similar guidelines to those used by the Town of Westlock. Some modifications were made to the network definition based on actual conditions encountered during the field surveys.

An important step in the setup of the sidewalk inspection framework is the definition of the ‘unit-of-inspection’. For the purpose of the sidewalk inspections, MPE selected the single sidewalk Panel as this unit. Panels are represented in the field by the ‘stamped’ configuration of a sidewalk structure. Typically, a sidewalk Slab (construction joint-to-construction joint) has two to three stamped panels.

MPE conducts sidewalk inspections at this level, as it is the smallest unit of maintenance typically applied to sidewalk facilities. The field survey recorded the defect conditions at each panel affected. Representative panel dimensions (length and width) are recorded with each block face, and used to calculate the total number of panels along a sidewalk segment. Defect quantities are determined as a function of the #panels-affect/#total-panels.



As part of the network definition, the sidewalk segments are classified for Pedestrian Exposure. This classification involves the definition of the levels (Low, Medium, or High) of the following contributing factors:

- ❑ **Urgency/Severity** (Hazard Condition) – Assessed based on the Hazard Index calculation from the field inspections.
- ❑ **Importance/Context** (Placement) – Assessed based on land usage (i.e., retirement home, hospital, school etc.).

- **Pedestrian Generation (Usage)** – Assessed based on pedestrian traffic (i.e., CBD, retail corridors, residential neighborhoods etc.).

For the purpose of this study, MPE field inspections included the classification of sidewalk exposure based on their observed placement and pedestrian usage.

## 5.2 2019 Field Survey

The sidewalk inspections were conducted by walking survey over the full length of the sidewalk network, recording the occurrence of defects at each affected panel. In the field, additional data is collected for geometrics, condition of para-ramps, and curbs. The sidewalk inventory logged the presence and severity of trip hazards and obstructions, as well as the extent and severities for the main distress types affecting concrete sidewalk structures.

The following ASTM concrete distress types, and other conditions, were inventoried:

Sidewalk Distress Types and Other Conditions	
Divided Slab	Patching, Small
Corner Break	<b>Other Conditions</b>
Spalling, Corner	Trip Hazards
Spalling, Joint	Obstructions
Linear Cracking	Para Ramp Condition
Faulting	Curb Condition
Scaling, Map Cracking, Cracking	Other (Notes)

The following image depicts MPE’s hand-held tablet, with the RUBIX rRate/rInspector application, used for the logging of the sidewalk inspections.



**MPE rRate Data Collection Tablet (RUBIX)**

## 6.0 SIDEWALK DATA ANALYSIS

The detailed sidewalk inspection data was analyzed to produce key performance indicators for each sidewalk segment. The main indicator is the Sidewalk Condition Index (SWCI) score, or sidewalk PCI, which is calculated based on the ASTM concrete PCI methodology. The SWCI represents the current condition of the sidewalk segment and/or interval. The inspection data is further analyzed to produce a Hazard Index (HI) and a Distress Index (DI) for each segment.

The sidewalk condition results provide the Present Status, or current condition, of each sidewalk segment. The condition is also summarized for the entire sidewalk network.

The next phase of the analysis takes into consideration the pedestrian exposure level in the sidewalk network. A matrix methodology is applied to quantify the level of exposure of the facility to pedestrian liability, defined as the Pedestrian Index (PI).

The Pedestrian Index is a function of the following:

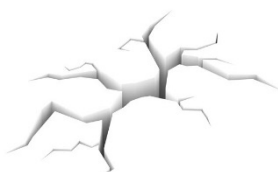
- ▶ **Urgency/Severity** (Hazard Condition) – assessed based on the Hazard Index (HI) calculation from the field inspections.
- ▶ **Importance/Context** (Placement) – assessed based on frontage or zoning (e.g., Retirement Home, Hospital, School, etc.)
- ▶ **Pedestrian Generation** (Usage) – assessed based on the pedestrian traffic (e.g., CBD, retail corridors, residential neighborhoods etc.).

The PI score is represented on a 10-scale, or converted to a 100-scale, where the higher the index value the more critical the pedestrian exposure.

Once the pedestrian exposure has been defined, a Priority Value (PV) is calculated. The Priority Value differentiates the sidewalk network based on urgency. The PV is calculated as a function of the Distress Index (DI) and the Pedestrian Index (PI). It provides a numerical value representing the combined sidewalk condition and pedestrian exposure level. When sorted from highest to lowest it produces an action priority ranking.

Sidewalk prioritization lists are created by sorting the network based on a combination of summary indicators, reflecting the objectives of the municipality. Typically, priority sorts are based first on the Hazard Index (highest-to-lowest), and then by the Priority Value (highest-to-lowest).

### 6.1 Surface Distress – Sidewalk Condition Index (SWCI) Analysis



The detailed sidewalk inspection data is analyzed to produce key performance indicators for each station and sidewalk segment. The main indicator is the Sidewalk Condition Index (SWCI) score, which is calculated based on the ASTM concrete PCI methodology.

Modified ASTM Deduct Value (DV) models are assigned to each sidewalk defect type. These models calculate the individual defect deduct scores. Multiple defect scores are combined using further models to produce Adjusted Deduct Values. The resulting scores are referred to as the Distress Index (DI) and are reported on a 10-scale, or converted to a 100-scale, where the higher the value the more severe the distress condition.

The Sidewalk Condition Index (SWCI) score is calculated as a function of the Distress Index (DI) score and is reported on a 100-scale.

As part of the defect analysis, the Hazard Index (HI) is calculated from the aggregation of the individual Trip Hazards identified for each sidewalk segment. A separate DV model is used to calculate the HI based on the trip hazard inspections. The results of the HI analysis determine whether a segment is considered to have a Low, Moderate, or High hazard level.

**6.2 Pedestrian Exposure – Pedestrian Index (PI) Analysis**

The pedestrian exposure analysis takes into consideration the importance/usage of the sidewalk structure, the level of pedestrian traffic, and most importantly, the criticality of the pedestrian hazards (trip and slip) identified in the field inspections. Each of these three influence factors are summarized as Low, Medium, or High for each unique block-face.



The combination of the influence factors analyzed through a criticality matrix produces a sidewalk Pedestrian Index (PI) based on a 10-scale, or converted to a 100-scale, where the higher the index score the more critical the asset from a pedestrian exposure perspective.

Figure 6.1 illustrates the pedestrian exposure matrix used for the 2019 analysis.

PEDESTRIAN INDEX		Importance/Context								
		High			Med			Low		
		Pedestrian Generation								
		High	Med	Low	High	Med	Low	High	Med	Low
Urgency/Severity	High	10	10	10	9	9	8	9	8	7
	Med	8	8	7	7	6	5	6	5	4
	Low	6	5	5	4	4	3	3	2	1

**Figure 6.1 Pedestrian Exposure Matrix**

### 6.3 Prioritization – Priority Value (PV) Analysis

Once the pedestrian exposure has been defined, a Priority Value (PV) is calculated. The Priority Value differentiates the sidewalk network based on urgency. The PV is calculated as a function of the Distress Index (DI) and the Pedestrian Index (PI). It provides a numerical value representing the combined sidewalk condition and pedestrian exposure level. When sorted from highest to lowest it produces a priority ranking from most urgent to least urgent.

Sidewalk prioritization lists are created by sorting the network based on a combination of summary indicators, reflecting the objectives of the Municipality. Typical priority sorts are based first on the Hazard Index (highest-to-lowest), and then by the Priority Value (highest-to-lowest).

### 6.4 Other Conditions

As part of the detailed inspections, the condition of several other sidewalk-related facilities were also collected.

The other conditions analyzed as part of the sidewalk assessment are as follows:

- ❑ Curb Condition – classified as a Good, Fair, or Poor condition level.
- ❑ Para-Ramp Condition – classified as a Good, Fair, or Poor level-of-service.
- ❑ Obstructions – classified as having a Low, Medium, or High impact on pedestrian movement. They include vegetation overgrowth, utility encroachment, debris and other obstacles with in the sidewalk R.O.W.

### 6.5 Maintenance Analysis

The maintenance analysis uses a defect-treatment approach to determine the number of panels that require a specific application of maintenance or rehabilitation. The defects identified in the field survey are summarized by segment and the matrix methodology is applied to determine the treatments required for each affect panel in the sidewalk segment. Additional criteria are applied to identify short (partial segment), and long run (full segment) reconstruction requirements.

**Table 6.1** summarizes the sidewalk maintenance methodology used for the 2019 analysis.



**Table 6.1: Maintenance Criteria**

APPLICATION LEVEL	MAINTENANCE CRITERIA	MAINTENANCE ACTIVITY
Panel/Slab	Recommended to repair localized areas of moderate severity corner and joint spalling	Patching
Panel/Slab	Recommended to treat linear cracking of medium to high severity	Crack Sealing
Panel/Slab	Applied in areas of high severity scaling, medium to high severity corner breaks, and high severity corner and joint spalling	MG-KRETE Surface Repair
Panel/Slab	Recommended to treat faulting of all severities	PCC Grinding
Panel/Slab	Recommended for high severity joint faulting when no other distresses are present in the slab	Mudjacking
Partial Segment	Recommended when more than 25% of the panels within a segment contain a high severity distress of any type, and the SWCI of the segment is less than 60	Replacement
Full Segment	Recommended when more than 35% of the panels within a segment contain a high severity distress of any type, and the SWCI of the segment is less than 60	Replacement

The maintenance unit costs applied to the analysis are based on similar project experience with other municipalities and the 2019 unit rates are shown in **Table 6.2**.

**Table 6.2: Maintenance Costs**

APPLICATION LEVEL	UNIT COST	UNIT
Crack Sealing	\$15.00	m
Patching	\$20.00	m <sup>2</sup>
PCC Grinding	\$22.00	m <sup>2</sup>
Mudjacking	\$120.00	m <sup>2</sup>
MG-KRETE Surface Repair	\$150.00	m <sup>2</sup>
Partial Segment Reconstruction	\$400.00	m <sup>2</sup>
Full Segment Reconstruction	\$550.00	m <sup>2</sup>

## 7.0 SIDEWALK ANALYSIS RESULTS

The following section discusses and summarizes the condition of the Town’s Sidewalk Network. The complete sidewalk condition and prioritized listing, summarized by network segment, is provided in **Appendix H**.

The 2019 present status of the Town’s sidewalk network is summarized in **Table 7.1**.

**Table 7.1: 2019 Sidewalk Network Performance Summary**

FACILITY	SEGMENTS	LENGTH (KM)	#PANELS	SWCI
Westlock Sidewalk Network	311	40.4	30,716	<b>72</b>

The results of the other conditions analysis, including trip hazards, para-ramp deficiencies, and curb rail failures are summarized in **Table 7.2**.

**Table 7.2: 2019 Sidewalk Critical Conditions Summary**

FACILITY	TRIP HAZARDS (MOD&SEV)		MISSING/FAILED SIDEWALKS (#SEGMENTS)	#PARA-RAMPS (MOD/SEV)	FAILED CURB (#RAILS)
	#PANELS	%PANELS			
Westlock Sidewalk Network	68	0.2%	0	2	23

The results of the pedestrian exposure analysis show the network distribution across the matrix classes, and are summarized in **Table 7.3**.

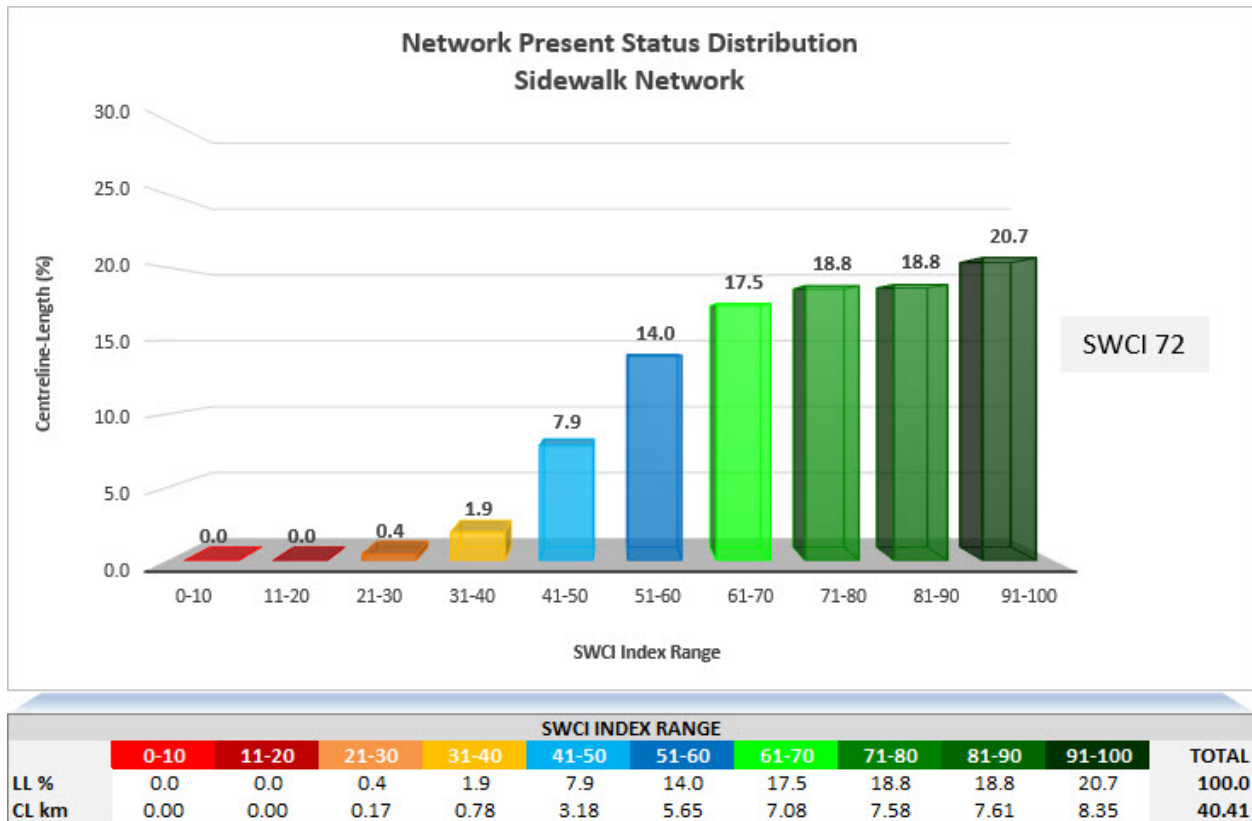
**Table 7.3: Pedestrian Exposure and Condition Summary**

CONDITION LEVEL	LENGTH (KM)	HAZARDS		IMPORTANCE		PED. LEVEL	
		LENGTH	%LEN	LENGTH	%LEN	LENGTH	%LEN
Low	40.4	35.9	<b>88.9</b>	0.1	<b>0.2</b>	1.0	<b>2.4</b>
Medium		3.0	<b>7.4</b>	35.0	<b>86.7</b>	36.3	<b>89.9</b>
High/Severe		1.5	<b>3.7</b>	5.3	<b>13.1</b>	3.1	<b>7.7</b>

### 7.1 Sidewalk Condition Analysis (SWCI) Results

The results indicate almost all of the sidewalk network is exhibiting signs of good condition with respect to the defects present. **Figure 7.1** shows the distribution of SWCI values, weighted by centreline length. **Figure 7.1a** on the following page displays the SWCI Range distribution map. **Figure 7.1b** shows the distribution of trips hazards on Page 64.

The plot indicates a mean SWCI of 72 for the sidewalk network.



**Figure 7.1: SWCI Distribution - Sidewalk Network**

**Table 7.4** shows the distribution of the network between poor, marginal and acceptable SWCI values.

**Table 7.4: SWCI Distribution - Sidewalk Network**

SWCI RANGE	SIDEWALK CONDITION	LENGTH-KM	% OF NETWORK
SWCI ≤ 40	Poor	1.0	2.4
40 < SWCI ≤ 60	Marginal	8.8	21.8
SWCI > 60	Acceptable	30.6	75.8

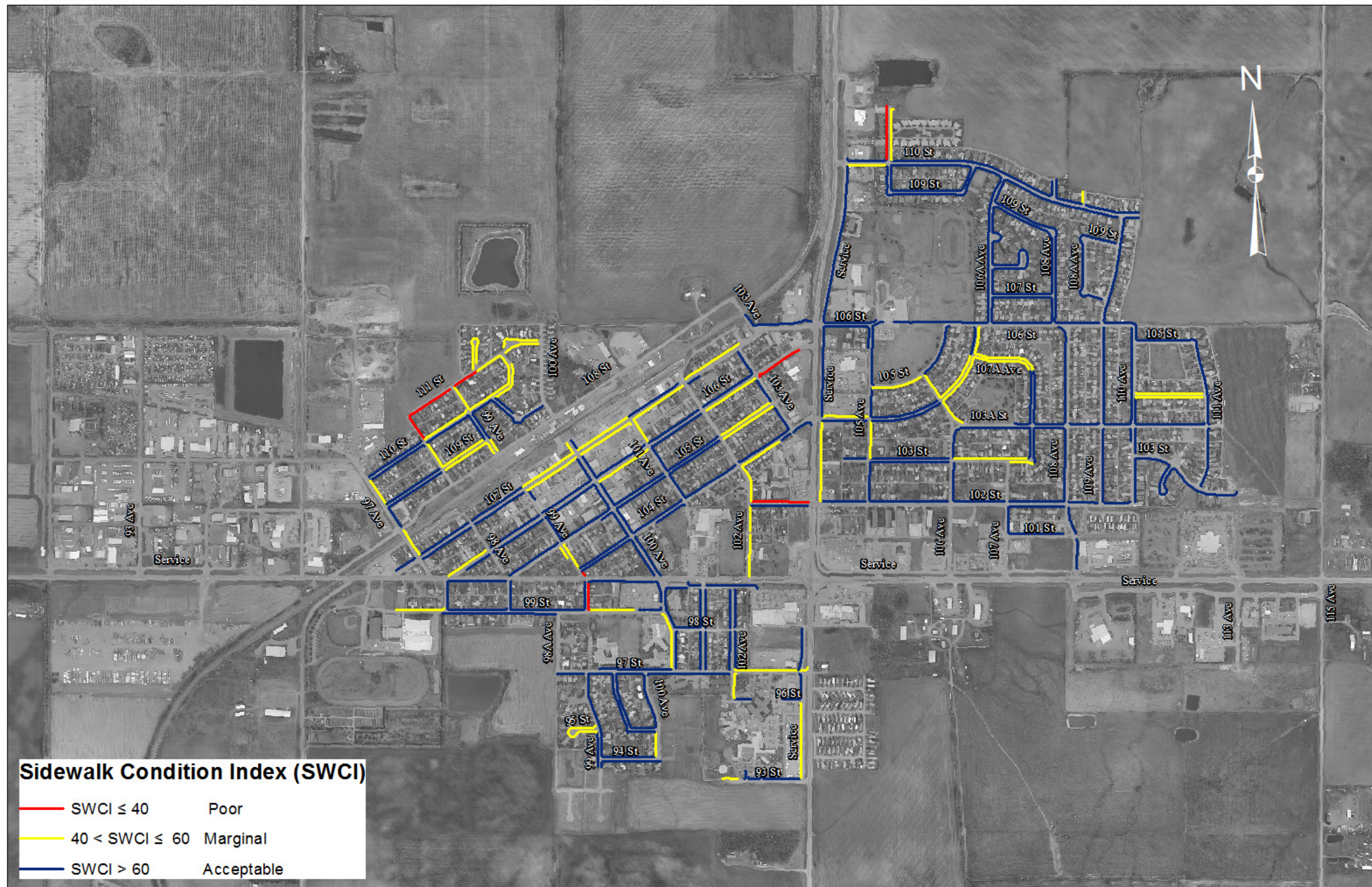


Figure 7.1a: SWCI Distribution Map - Sidewalk Network



Figure 7.1b: Trip Hazard Distribution Map - Sidewalk Network

## 7.2 Maintenance Analysis Results

The results of the maintenance assessment show the number of panels requiring treatment at each maintenance level.

**Table 7.5** shows the current maintenance needs summary for the Town’s entire sidewalk network.

**Table 7.5: Sidewalk Maintenance Level Summary**

TREATMENT	MAINTENANCE PROGRAM	TREATMENT LENGTH (m)	TREATMENT COST	TOTAL COST
Crack Sealing	Maintenance	5,903	\$89,827	\$376,698
Patching		205	\$5,779	
PCC Grinding		138	\$3,967	
Mudjacking		0	\$0	
MG-KRETE Surface Repair		361	\$77,282	
Partial Segment Reconstruction		280	\$199,843	
Full Segment Reconstruction	Capital Projects	770	\$400,192	\$400,192
<b>TOTAL</b>		<b>7,657</b>		<b>\$776,890</b>

The summary of the maintenance cost requirements show that the sidewalk network is closely split between maintenance programs (48%) and capital projects (52%). Maintenance needs are primarily Panel/Slab replacement, crack sealing, and surface repair treatments.

A review of the segment results indicates that approximately 1.5 km of the network have a high priority for maintenance requiring an estimated \$310,475.00 in treatment costs, the majority of which are reconstruction costs. **Figure 7.1c** on the following page displays the high priority segments.

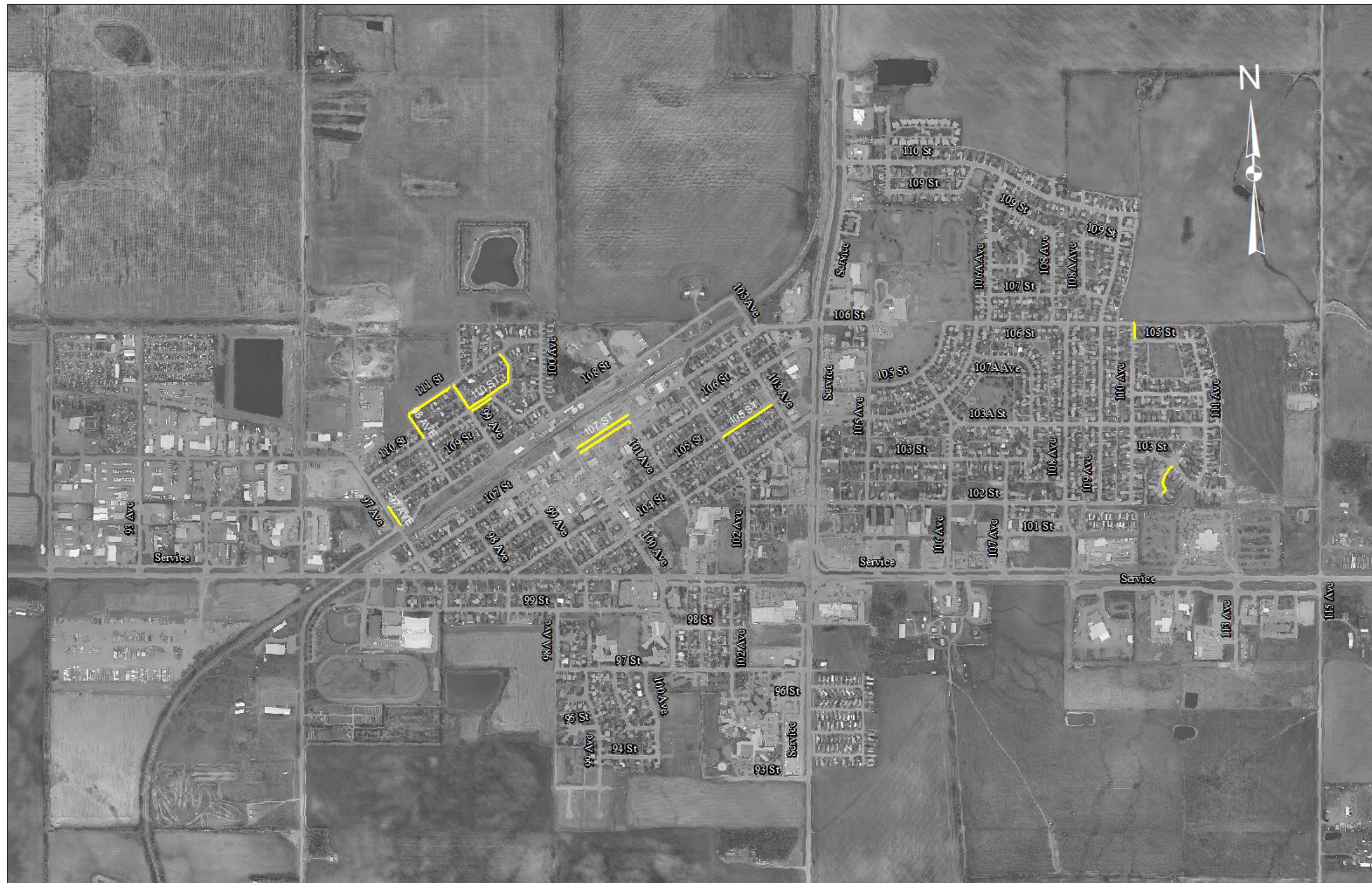


Figure 7.1c: Top Priorities Map - Sidewalk Network

## 8.0 TRAIL DATA COLLECTION

### 8.1 Network Definition and Attribute Data

The 2019 network definition and attribute data setup consisted of the following:

- ❑ Define and create the trail network GIS layer based on the Town’s existing Rotary Trail placements. Trail segments are identified using unique Asset IDs stored in the GIS database.
- ❑ Activate and load the RUBIX asset management framework (rDash).
- ❑ Analyze inspection data to produce a Trail PCI (ASTM) condition summary.



The Trail network definition, used for the purpose of the 2019 report, was created by MPE on behalf of the Town. The network definition maintains a direct link to a unique Asset ID convention established along similar guidelines to those used for the roads and sidewalk phases. Some modifications were made to the network definition based on actual conditions encountered during the field surveys.

The final network condition survey was conducted on 6.6 centreline-kilometres of surfaced (asphalt) trail segments. The trail condition survey did not include segments that were gravel or unsurfaced.

### 8.2 2019 Field Survey

The trail inspections were conducted by a walking survey over the full length of the trail network, recording the occurrence of defects at each affected location. In the field, additional data is collected for geometrics, condition of para-ramps, and geo-referenced images. The trail inventory logged the presence and severity of trip hazards and obstructions, as well as the extent and severities for the main distress types affecting asphalt trail structures.

The following ASTM asphalt distress types, and other conditions, were inventoried:

Trail Distress Types and Other Conditions	
Edge Cracking	Other Conditions
Alligator Cracking	Trip Hazards
Pothole	Obstructions
Block Cracking	Para Ramp Condition
Linear Cracking	Other (Notes)
Patching	
Distortion	
Ponding	
Raveling	
Rutting	



MPE utilized the same inspection technique used for the sidewalk survey, employing a hand-held tablet with the RUBIX rRate/rInspector application. MPE implemented an asphalt inspection methodology based on the ASTM guidelines, and that analysis platform forms the basis of the trail PCI calculations.

## 9.0 TRAIL DATA ANALYSIS

The detailed Trail inspection data was analyzed to produce a PCI score for each trail segment, which is calculated based on the ASTM asphalt PCI methodology. The PCI represents the current condition of the trail segment.

The trail condition results provide the Present Status, or current condition, of each sidewalk segment. The condition is also summarized for the entire trail network.

### 9.1 Surface Distress – Trail Condition Index (PCI) Analysis

The detailed trails were summarized to produce percent areas of each distress and severity. Modified ASTM Deduct Value (DV) models are assigned to each trail defect type. These models calculate the individual defect deduct scores. Multiple defect scores are combined using further models to produce Adjusted Deduct Values. These adjusted deducts are used to calculate the PCI score reported on the 100-scale, where 100 represents an excellent condition and 0 represents a failed condition.

As part of the detailed inspections, the condition of several other trail-related facilities were also collected.

The other conditions analyzed as part of the sidewalk assessment are as follows:

- ❑ Para-Ramp Condition – classified as a Good, Fair, or Poor level-of-service.
- ❑ Obstructions – classified as having a Low, Medium, or High impact on pedestrian movement. They include vegetation overgrowth, utility encroachment, debris and other obstacles within the trail R.O.W.

Note: During the field survey, three segments we encountered that had a recycled-rubberized surface material. No rating methodology was assigned to these segments and their PCI score was assessed as an override score based on the overall condition of the surface material.

## 10.0 TRAIL ANALYSIS RESULTS

The following section discusses and summarizes the condition of the Town’s Trail Network. The complete surfaced trail condition listing, summarized by priority ranking, is provided in **Appendix I**.

The 2019 present status of the Town’s trail network is summarized in **Table 10.1**.

**Table 10.1: 2019 Trail Network Performance Summary**

FACILITY	SEGMENTS	LENGTH (KM)	AREA (m <sup>2</sup> )	PCI
Westlock Trail Network	23	6.629	12,437	<b>18</b>

The breakdown of the critical distresses is summarized in **Table 10.2**.

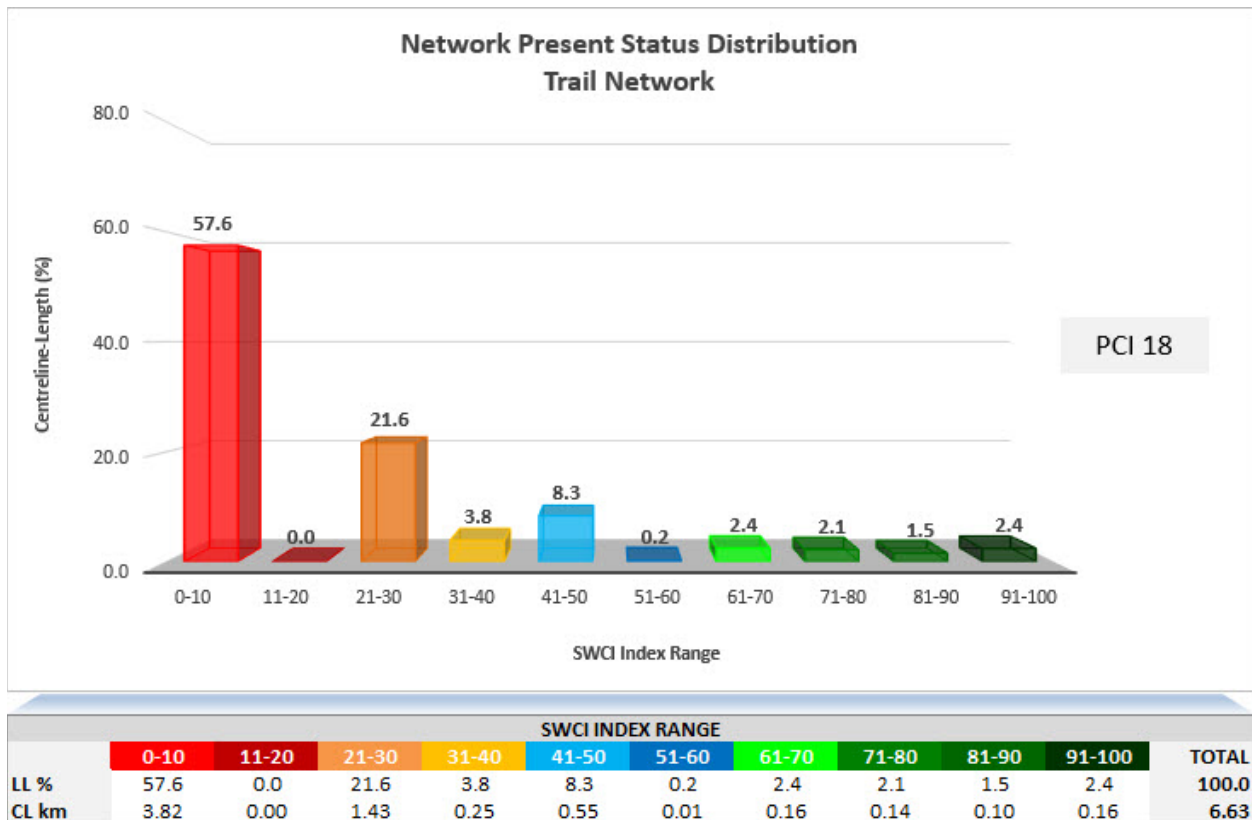
**Table 10.2: 2019 Trail Critical Conditions Summary**

FACILITY	EDGE CRACKING-SEV		ALLIGATOR CR-SEV (m <sup>2</sup> )	LINEAR CR-SEV (m)	RAVELING-SEV (m <sup>2</sup> )
	(m)	%LENGTH			
Westlock Trail Network	3,528	<b>53.2%</b>	133 (2.1%)	700 (10.6%)	788 (6.3%)

### 10.1 Trail Condition Analysis (TPCI) Results

The results indicate a large portion of the trail network is exhibiting signs of poor condition with respect to the defects present. **Figure 10.1** shows the distribution of Trail-PCI values, weighted by centreline length. **Figure 10.1a** on the following page displays the distribution of Trail-PCI values for each segment. **Figure 10.1b** displays the trail network top priorities.

The plot indicates a mean TPCI of 18 for the trail network.



**Figure 10.1: Trail-PCI Distribution - Trail Network**

**Table 10.3** shows the distribution of the network between poor, marginal and acceptable TPCI values.

**Table 10.3: Trail-PCI Distribution - Trail Network**

SWCI RANGE	SIDEWALK CONDITION	LENGTH-KM	% OF NETWORK
TPCI ≤ 40	Poor	5.50	<b>83.1</b>
40 < TPCI ≤ 60	Marginal	0.57	<b>8.5</b>
TPCI > 60	Acceptable	0.56	<b>8.4</b>

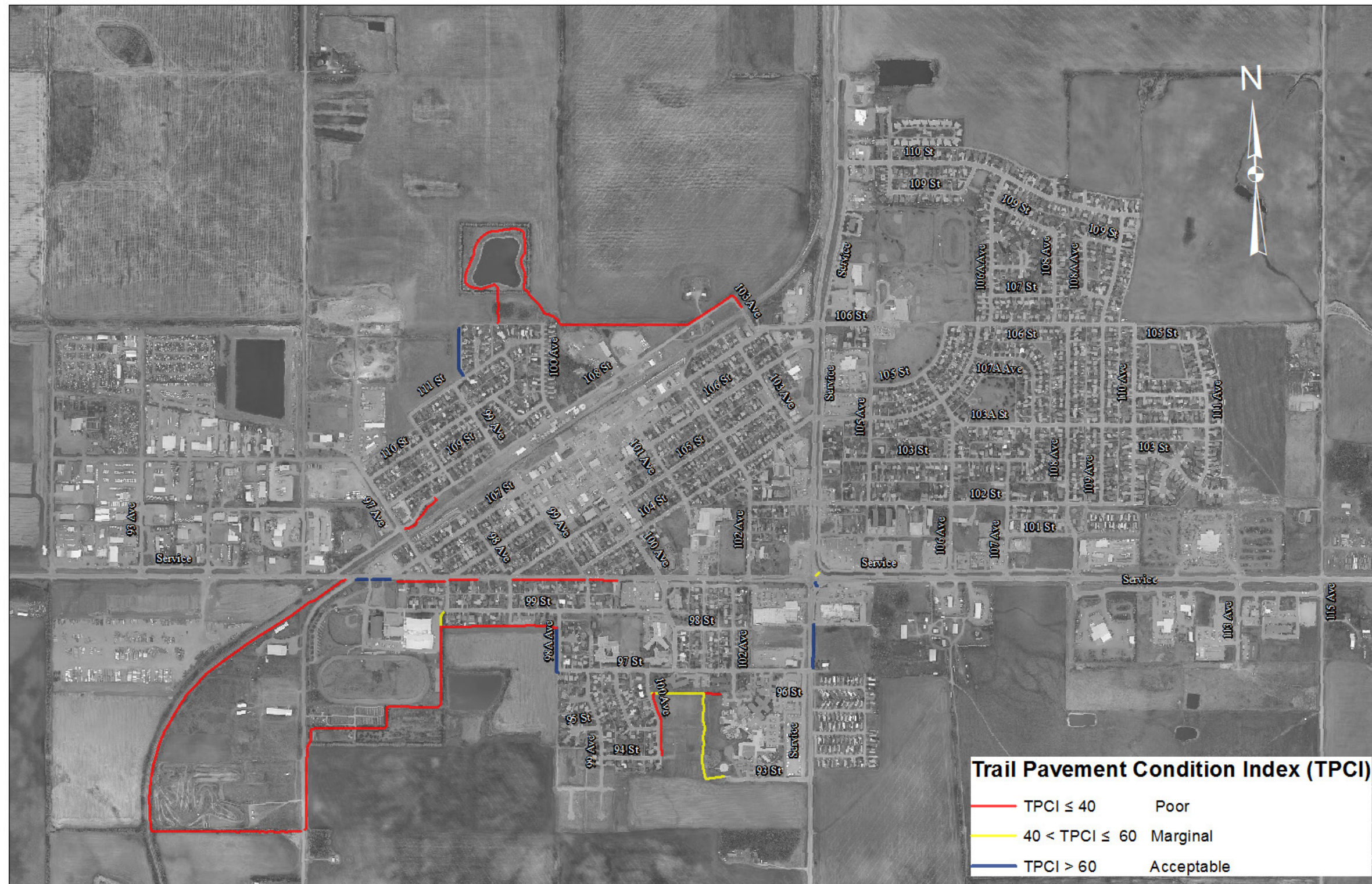


Figure 10.1a: Trail-PCI Distribution Map - Trail Network

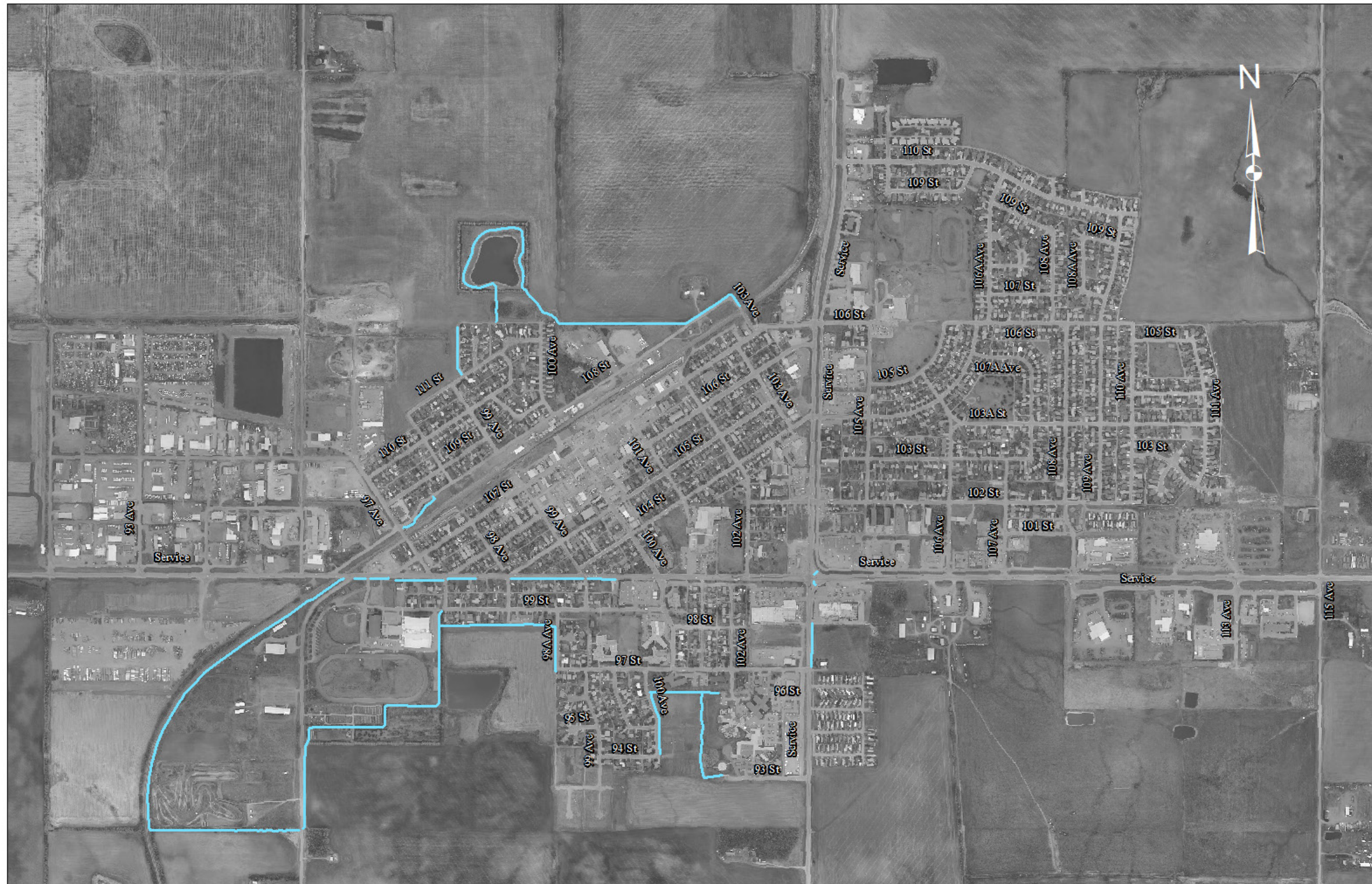


Figure 10.1b: Trail Top Priorities - Trail Network

## 11.0 CONCLUSIONS AND RECOMMENDATIONS

### 11.1 Paved Road Network

#### 11.1.1 Road Network: Present Condition

The analysis of the collected condition data indicates the majority of the Town's network is providing a marginal level of service given the network average OCI is 48 and the 2019 needs backlog is 57.7%. Due to the marginal performance of the network, the backlog is well above the range of 10%–25%, traditionally considered a healthy backlog.

The results show the Town's paved roadway network is showing some distress-related deterioration in each functional classification, with a network average PCI of 48. The LOAD condition related defects are showing the most deterioration with 80% of the network in the Marginal-to-Poor range. The Collector network is showing the most deterioration as noted by the network average PCI of 46, which is just slightly below the network average.

The roughness condition of the network is showing the lowest performance of the three measured indices. The roughness condition of the network is at the threshold between the Marginal and Poor range, with a network average RCI of 41. The Local network is showing the most roughness deterioration as noted by the network average RCI of 40, which is just below the network average.

The average SAI of 43 is below a threshold of 50, which indicates the roadways as a group are structurally inadequate to carry the predicted traffic loading. The Local network is showing the weakest structures, as noted by the average SAI of 41, which indicates an inadequate strength condition. The FWD results show the average network  $SN_{eff}$  is 117 mm of AC, and the average  $M_R$  of 30,009 kPa.

#### 11.1.2 Road Network: Rehabilitation Programming

The results of the rehabilitation Needs and priority programming analysis show that the roadway network will require approximately \$27.4M over the next 10 years. This will result in a predicted network OCI of 72 and 0.0% backlog in 2028. The "Do Nothing" scenario shows the network will deteriorate to a predicted OCI of 34, with a backlog of 81.3% in 2028.

The current level of backlog in the network will require \$21M (85%) of the needs budget allocations in the first year of the program (2019). The results of the rehabilitation decision analysis show 72 network segments, or 22.5 lane-kilometres, of the network will require reconstruction over the next 10 years, requiring \$18.1M in funding.

The results of the first annual funding scenario (\$1.0M/Year) show that the network performance will maintain its current OCI level of service, with a backlog decreasing to 43.9%. This scenario shows the predicted performance of the Town's current budget and should be considered the minimum level of funding.

The results of the second annual funding scenario (\$1.75M/Year) show that the network performance will improve to an OCI of 70 in 2028, with a backlog of 19.1%. This scenario will achieve an improved OCI performance in 2027, but the predicted backlog will fall into the recommended range of between 10-25%, which will stabilize network management and funding demands beyond 2028.

### **11.1.3 Road Network: Recommendations**

The paved road network in the Town of Westlock is showing the effects of under investment in pavement life-cycle renewal. MPE recommends the Town focus its infrastructure planning to address the network backlog over the next ten years. As rehabilitation backlogs approach extremely high levels, networks are at risk of reaching a state of 'rust-out', and require heavier treatment alternatives (usually reconstruction) as the only options to improving network performance.

Based on the findings of this assessment the network should be funded at a level between \$1.0M/Year (current level) and \$1.75M/Year (recommended level). Budget analysis results show there is a significant early burden in funding needs and the Town should consider securing additional funding for the roadway network if priorities allow.

The rehabilitation needs results should be taken in context with the overall Infrastructure Master Plan recommendations, as timing of certain roadway capital improvement projects should be optimized to strike a balance between network level of service and future development goals.

## **11.2 Sidewalk Network**

### **11.2.1 Sidewalk Network: Present Condition**

The analysis of the collected condition data indicates the majority of the Town's sidewalk network is providing a good level of service, given the network average SWCI is 72. The sidewalk results show only 68 sidewalk panels (0.2% of the network length) are affected by moderate to high levels of trip hazards, and two Para-Ramps that require attention.

### **11.2.2 Sidewalk Network: Maintenance Prioritization**

The results of the maintenance level review identify 7,657 m (19%) of the sidewalk network require either maintenance or replacement. The budget analysis shows the sidewalk network requires \$776,890.00 in total funding, with maintenance needs requiring \$376,698.00, and capital projects requiring \$400,192.00 in funding.

### **11.2.3 Sidewalk Network: Recommendations**

The Town's sidewalk network is performing at a good level and it is recommended that the Town continue to monitor and routinely maintain the sidewalk facilities as the Town's infrastructure demands and usage grow.



### 11.3 Trail Network

#### 11.3.1 Trail Network: Present Condition

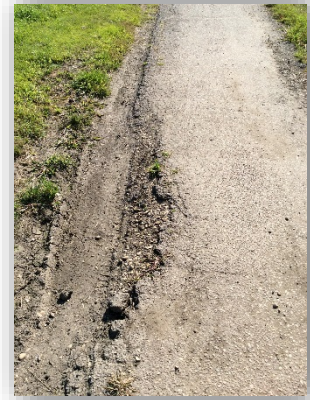
The analysis of the collected condition data indicates the majority of the Town's trail network is providing a poor level of service, given the network average Trail-PCI is 18. The trail results show over half of the trail network is failed with PCI scores below 10.

The poor performance of the trail network is primarily caused by the significant presence of severe edge cracking, which occurs along 3.5 kilometres of the trail system and accounts for 53% of its overall length. Compared with the presence of other contributing defects, the edge cracking is a notable driver of the failing condition of the trail network.

#### 11.3.2 Trail Network: Recommendations

The Town's trail network is exhibiting signs of unintended motor vehicle usage. The presence of motor vehicles on the trail system has exposed the facility to loading that it was simply not designed to support. Vehicle traffic is the primary cause of the severe edge cracking condition. It is also contributing to other load associated distresses being present in what is otherwise a pedestrian environment.

Until vehicle access to the trail network is mitigated, the ability of the Town to maintain the trail network at an acceptable level of service will be difficult, if not impossible, given the repeated damage caused by this kind of loading.



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## **APPENDIX A**

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### Determination of Ride Comfort Index (RCI)

Pavement roughness may be classified into three types:

- ❑ The most commonly used roughness measurement relates to the longitudinal profile of the pavement, generally along the wheel path and involves a range of wave amplitudes and frequencies related to the smoothness of ride.
- ❑ The second type is transverse profile roughness and is generally perpendicular to the direction of travel with hydro-planning (rut depths) and vehicle maneuver considerations being important. Information with respect to transverse profile is very useful at the detailed project level of rehabilitation analysis, but not for the network level pavement management.
- ❑ A third type of roughness is micro-roughness, as determined by the surface texture of the pavement; this type is related to skid resistance.

At the network level of pavement management, the longitudinal roughness is of prime importance and thus, for this project, is the only type of roughness that is considered.

In order to represent a pavement's performance from a user perspective, a Ride Comfort Index (RCI) is determined. Acceptable performance can be gauged from a lack of persistent complaints by the traveling public and/or maintenance personnel. This complaint level is representative of a pavement's ability to carry traffic under normal operating conditions while meeting the expectations of the users.

Ride comfort can be determined by asking drivers of automobiles for their considered opinions. A systematic approach is to form a panel of raters made up of a group of local people who represent the average user of the road system and then have them rate the riding quality of a given pavement. This rating is based on the "feel" of the road that they experience and describes the riding comfort as "good," "fair," "poor," etc. It would not be very practical to have the entire network evaluated in this manner for obvious reasons; therefore, a simpler, more convenient method is employed.

The longitudinal roughness of a road segment is collected using a specially equipped van with two piezo-electric accelerometer and five laser sensors mounted rigidly to the front bumper. An on-board microprocessor transforms the acceleration and sensor readings into an International Roughness Index (IRI). In this way, all roadway distortions affecting ride are measured by vertical actions imposed on the vehicle. It is generally accepted the movement felt by a passenger would be a consequence of the movement of the vehicle; therefore, this provides for a reliable comparison between subjective ride ratings and objective mechanical measurements as collected by a test unit.

Once the network has been surveyed for roughness, segments may be rated by a panel of stakeholders such that the entire range of roughness numbers are covered. The panel's rating of "very good" to "very poor" are then converted onto a scale of zero (0) to 100, where zero represents an unacceptable ride comfort and 100 represents the best possible ride comfort. The next step involves a correlation of these converted ratings to the collected roughness numbers.

The resulting regression equation obtained from the correlation analysis represents the total spectrum of riding comfort versus unit-measured roughness. **Figure A.1** provides a graphical presentation typical of this relationship. Once this is done, all roughness numbers from the collection unit can be converted to a Ride Comfort Index (RCI). This developed procedure allows for an economical, consistent representation of the acceptability of all segments within an agency’s road network.

When an agency has established an IRI–RCI correlation, it should remain reasonably stable for several years, although of course, much more frequent recalibration of the roughness device may be needed. It should be noted panel ratings might change with time and/or region. This is primarily due to the range of serviceability levels experienced by the users and to a lesser degree, to the changes in the overall serviceability spectrum of the specific network in a region and changes in vehicle characteristics.

**TOWN OF WESTLOCK RCI MODEL**

The current Model to convert measured IRI (mm/m) to an RCI index score in the analysis is as follows:

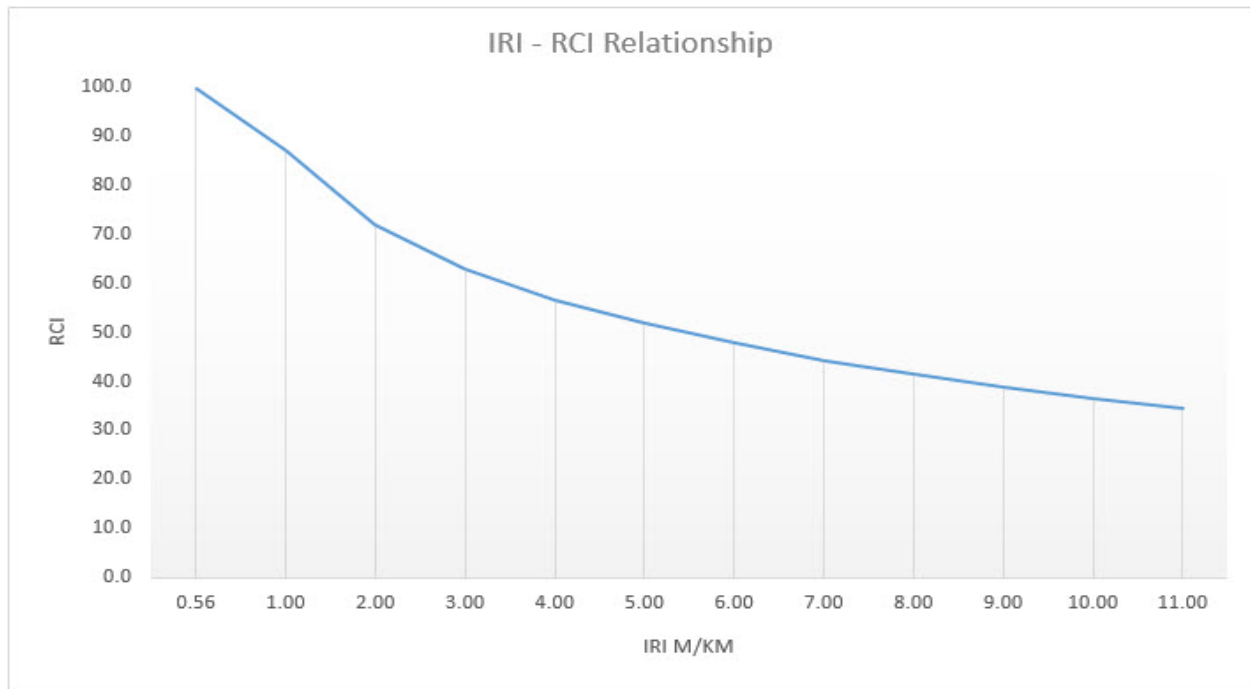
$$RCI = 10 \times [8.809 - (3.3 \times \ln(IRI))]$$

where

**IRI** = International Roughness Index (mm/m or m/km)

RCI values determined at 30-metre intervals were used to calculate segment equivalents. These segment values were then used to generate a summary distribution and mean for the network.

**Figure A.1** graphically shows the relationship between IRI and RCI used for the analysis.



**Figure A.1: Town of Westlock IRI – RCI Model**

## **APPENDIX B**

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### Determination of Pavement Condition Index (PCI)

The Pavement Condition Index (PCI) is a measure of physical pavement cracking, deformations and surface defects collectively referred to as distresses. This provides an excellent indicator of material deficiency, rate of deterioration, structural adequacy, environmental and soil type problems. The PCI is therefore a key indicator of pavement performance, which may be used to monitor the condition of the network, assess future needs, establish ranking and optimize expenditures. It will also provide information to monitor the performance of various design, rehabilitation and maintenance techniques and to provide information for identifying candidate projects for maintenance and improvement programs.

The procedure described herein was developed as a means of converting the flexible pavement surface distress ratings produced by the operators of the survey unit into index values between zero (0) and 100. This includes the production of indicators for individual distress types at each station, the production of one index value for each station (i.e., combining all types of distress into one value) and the production of one index value for an entire pavement segment.

**DISTRESS CODES**

The pavement distress manifestations evaluated by the raters are recorded in the survey unit in a coded form which ranges from 00 (no distress) to 25 (severe throughout). The first digit is the severity and the second digit is the extent as described in **Table B.1**.

**Table B.1: Severity and Extent Codes**

NUMERIC CODE	SEVERITY DEFINITION	EXTENT DEFINITION
0	Slight	None
1	Moderate	Few
2	Severe	Intermittent
3		Frequent
4		Extensive
5		Throughout

For example, if alligator cracking on a flexible pavement is found to be moderate in severity and extensive in occurrence, a value of ‘14’ would be recorded, the ‘1’ indicating moderate severity and the ‘4’ indicating extensive occurrence.

There are 12 types of distresses considered in the formulation of PCI as indicated in **Table B.2**. A code is assigned to each distress type for every station sampled along the length of a pavement segment.

**Table B.2: Distress Types**

CODE	DISTRESS ID	DISTRESS NAME
1	PAT	Patching & Utility Cuts
2	RPL	Rippling & Shoving
3	RAV	Raveling & Weathering
4	FLU	Flushing & Bleeding
5	DST	Deformations & Distortions
6	EDG	Progressive Edge Cracking
7	ALG	Alligator & Fatigue Cracking
8	POT	Potholes
9	MAP	Map & Block Cracking
10	LON	Longitudinal Cracking
11	TRN	Transverse Cracking
12	RUT	Wheel Path Rutting

**DISTRESS SCORES**

To summarize the data for each segment, the distresses are combined into a single index (PCI), which is calculated using the deduct point system. The amount deducted is a function of the extent, type and severity of the distress. Deduct Value (DV) models are set up for each distress type and are comprised of three curves of Slight, Moderate and Severe. The %Area quantity of the reported distress, at the identified severity level, is run through the DV model to determine the DV score of each distress type. The more critical the distress type (e.g., Alligator Cracking), the more severe the deduct modeling.

The DV type, distress density measurement, and the DV model coefficients ‘a’ and ‘b’ for the distresses included in PCI calculation are listed in **Table B.3**.

**Table B.3: Pavement Distress Deduct Value Model Coefficients**

DISTRESS TYPE	QUANTITY MEASUREMENT	SLIGHT		MODERATE		SEVERE	
		Coef A	Coef B	Coef A	Coef B	Coef A	Coef B
Alligator Cr	% Area	0.039	0.4136	0.284	0.3421	0.455	0.2839
Map Cr	% Area	-1.052	0.8114	-0.619	0.7034	-0.209	0.5878
Long. Cr	% Lineal/Area	-0.531	0.6419	-0.075	0.4808	0.187	0.4997
Trans. Cr	% Lineal/Area	-0.531	0.6419	-0.075	0.4808	0.187	0.4997
Edge Cracking	% Area	-0.536	0.5538	-0.055	0.3960	0.171	0.3855
Bleeding	% Area	-1.134	0.6962	-0.563	0.6067	-0.241	0.5655
Distortion	% Area	-0.666	0.6533	-0.076	0.5511	0.295	0.3930
Rutting	% Area	-0.307	0.5507	0.117	0.4016	0.306	0.3711
Rippling	% Area	-0.490	0.7179	-0.007	0.5152	0.292	0.3844
Raveling	% Area	-0.812	0.5202	-0.065	0.3471	0.214	0.3670
Patching/Utility Cuts	% Area	-0.871	0.4383	-0.719	0.4878	-0.338	0.4737
Potholes	% Area	0.664	0.5162	1.024	0.5780	1.102	0.3879

**INDIVIDUAL DISTRESS DEDUCT VALUES**

The equation to calculate the individual distress DV is as follows:

$$DV_i = 10^{(a + b * \text{LOG}(\%Area))}$$

where

**%Area** = percent area of the distress/severity occurrence

The DV for a distress type is the sum of the combined severity-extend deduction for that distress type.

**ADJUSTED DISTRESS SCORES**

The Total Deduct Value (TDV) is then calculated as the sum of the individual distress values:

$$TDV = \text{sum}(DV_i)$$

The Adjusted Deduct Value (ADV) is then calculated from the TDV based on the number of equivalent distresses (NED) present. The NED is calculated as the sum of the ratios of each distress value to the maximum distress value ( $DV_{max}$ ). The  $DV_{max}$  is the largest DV observed for the data. This can be expressed as:

$$NED = \text{sum}(DV_i / DV_{max})$$

where

**$DV_i$**  = distress value for distress/severity level

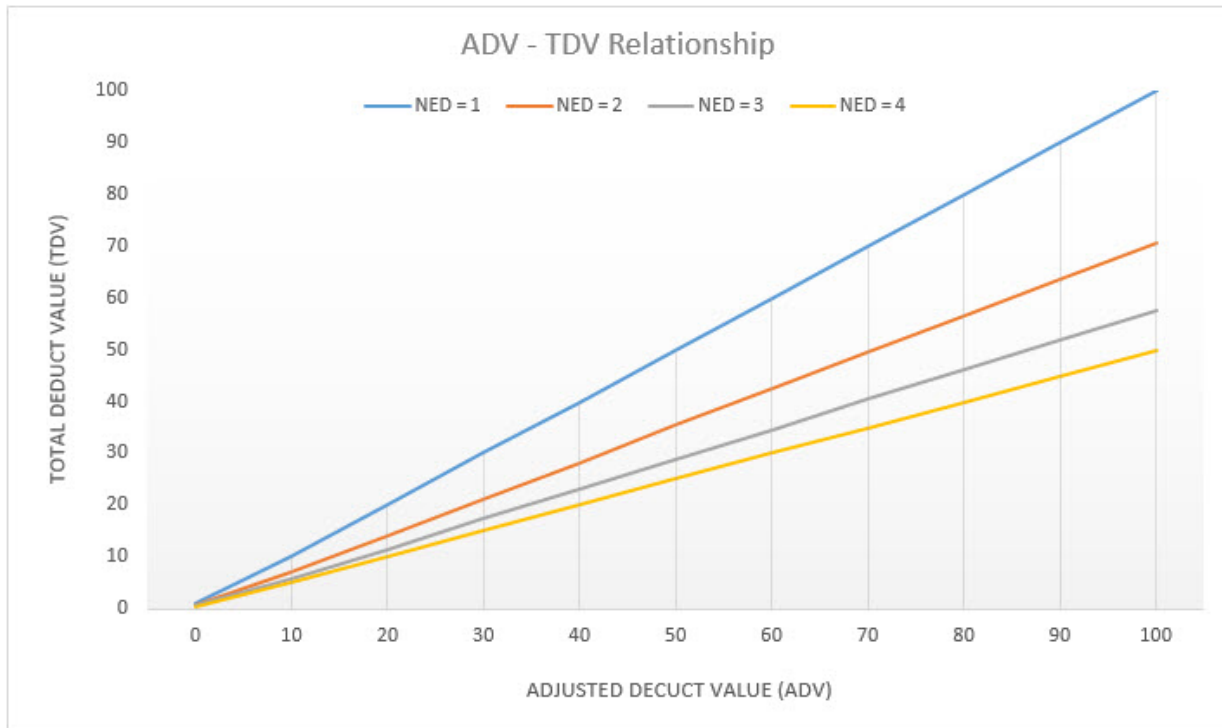
**$DV_{max}$**  = highest distress value observed



The ADV is calculated using the following equation:

$$ADV = 10 \times (-0.5 \times \text{LOG}(\text{NED}) + \text{LOG}(\text{TDV}))$$

The ADV–TDV correlation is graphically presented in **Figure B.1**.



**Figure B.1: ADV and TDV Correlation**

**PAVEMENT CONDITION INDEX (PCI)**

Final PCI scores are calculated as follows:

$$PCI = PCI_M - ADV$$

where

**PCI<sub>M</sub>** is the Maximum PCI score of 100

The PCI for each pavement segment is determined after all stations have been processed. This involves evaluating the contribution of each of the 12 individual distress items to the segment PCI.

PCI values determined at 30-metre intervals were used to calculate segment equivalents. These segment values were then used to generate a summary distribution and mean for the network.

## **APPENDIX C**

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### Determination of Structural Adequacy Index (SAI)

The structural adequacy of a pavement indicates the pavement’s ability to carry expected traffic loads while providing an acceptable level of service. The structural capacity of a pavement is determined by analyzing the measured deflection of the pavement under a controlled loading condition and comparing this response to the maximum allowable deflection associated with anticipated loading conditions.

The deflection measurements are adjusted for temperature and seasonal influences using the following models developed by the Alberta Research Council in conjunction with the Alberta Transportation Benkelman Beam testing programs. Dynaflect deflections are first converted to Benkelman Beam and then temperature corrected using the following models:

For granular based pavements:

$$D_c = D * 10^{(0.0091 * (20 - T))}$$

For full depth pavements:

$$D_c = D * 10^{(0.012 * (20 - T))}$$

Where,  $D_c$  is the corrected BBeam value;  $D$  is the raw measured BBeam value; and  $T$  is the pavement temperature in °C.

There is no temperature correction made for soil cement based pavements.

The following seasonal adjustment factors are applied to the temperature corrected deflection measurements:

For granular base and full-depth pavements:

tests between April 15 and June14:  $D_A = D_c * (1.2 - d/300)$

tests after June14:  $D_A = D_c * 1.2$

Where,  $D_A$  is the adjusted BBeam value;  $D_c$  is the temperature corrected BBeam value; and  $d$  is the number of days prior to June 15.

For soil cement base pavements:

**Table C.1: Seasonal Adjustment Factors for Cement Stabilized Pavements**

MONTH OF TESTING	ADJUSTMENT FACTOR
April	1.00
May	1.06
June	1.24
July	1.33
August	1.30
September-November	1.16

Seasonally adjusted deflection measurements are used along with traffic data to determine SAI values for each section.

The Structural Adequacy of a pavement is determined by comparing the measured deflection of the pavement with a criterion of structural adequacy, including the pavement structure and traffic loading. This appendix summarizes the method used to determine the Structural Adequacy Index (SAI) of the pavements considered in this study.

**TRAFFIC ANALYSIS**

Traffic Analysis predicts traffic loading conditions on the pavement network based on vehicle characteristics and traffic volume. The Design Traffic Number and Total Equivalent Standard Axle Loads for the programming period are important pavement design parameters. Some of these parameters are required for further analyses.

The following steps are performed for each section in the current network subset during Traffic Analysis.

Calculate the traffic level in the first year of the programming period (AADT<sub>1</sub>):

$$AADT_1 = AADT_{Measured} \cdot \left( 1 + \frac{Growth}{100} \right)^{(Year_1 - Year_{Measured})}$$

where

- AADT<sub>Measured</sub>** = Measured or estimated traffic volume
- Year<sub>1</sub>** = First year of the programming period
- Year<sub>Measured</sub>** = Year of traffic measurement or estimation
- Growth** = Traffic growth rate

Determine the lane distribution factor (Distribution):

The concept of a ‘design lane’ is used in the structural design of pavements. The lane (or load) distribution factor represents the proportion of the total traffic volume to use the ‘design lane.’

**Table C.2: Lane Distribution Factors**

NUMBER OF LANES	ADJUSTMENT FACTOR
0.5 (two directions share one lane)	2.00
1	1.00
2	0.80
3	0.70
4	0.55
5+	0.40

Calculate the average growth factor (**GF<sub>Period</sub>**):

$$GF_{Period} = \frac{1 + \left(1 + \frac{Growth}{100}\right)^{Period}}{2}$$

where

- Growth** = % Traffic growth rate
- Period** = Period of calculation (1 year or the length of the programming period)

Calculate the design traffic volume (**DTV<sub>Period</sub>**). The design traffic volume represents the traffic expected to travel in the ‘design lane’ on the average day:

$$DTV_{Period} = AADT_1 \bullet GF_{Period} \bullet \frac{Distribution}{Directions}$$

where

- AADT<sub>1</sub>** = Traffic volume updated to the first year of the programming period
- GF<sub>Period</sub>** = Average growth factor for the period of calculation
- Distribution** = Lane distribution factor
- Directions** = Number of directions of travel (1 or 2)
- Period** = Period of calculation (1 year or the length of the programming period)

Calculate the truck factor (**TF<sub>Period</sub>**). The truck factor converts the load applied to the pavement by a truck to an equivalent number of 18 kip (80 kN) standard axle loads. The standard axle load is the standard used to express the load demand on pavement structures:

$$TF_{Period} = 0.0353 + 0.003 \bullet DTV_{Period}$$

where

- TF<sub>Period</sub>** is range limited (0.75 in. ≤ TF<sub>Period</sub> ≤ 2.00 in.)
- DTV<sub>Period</sub>** = Design traffic volume
- Period** = Period of calculation (1 year or the length of the programming period)

Calculate the design traffic number for the programming period (**DTN<sub>Period</sub>**). The design traffic number represents the number of standard axle loads expected to travel in the ‘design lane’ on the average day:

$$DTN_{Period} = DTV_{Period} \bullet \frac{Commercial}{100} \bullet TF_{Period}$$

where

- DTV<sub>Period</sub>** = Design traffic volume for the programming period
- Commercial** = Commercial traffic content
- TF<sub>Period</sub>** = Truck Factor for the programming period
- Period** = Length of the programming period

Calculate the Total Equivalent Single Axle Loads (**TESALS<sub>Period</sub>**). The Total Equivalent Single Axle Loads represent the number of standard axle loads expected to be applied over the first year and the programming period:

$$TESALS_{Period} = DTV_{Period} \cdot \frac{Commercial}{100} \cdot TF_{Period} \cdot Period \cdot Days$$

where

- DTV<sub>Period</sub>** = Design traffic volume for the period of calculation
- Commercial** = % Commercial traffic content
- TF<sub>Period</sub>** = Truck Factor for the period of calculation
- Period** = Period of calculation (1 year or the length of the programming period)
- Days** = Number of days per year represented in the AADT (normally 360 days)

**SAI ANALYSIS**

Calculate the Equivalent Dynaflect Deflection (*D<sub>F</sub>*) from the FWD Sensor1 values.

$$D_F = 0.1716 \cdot (FWD_1)^{0.6634}$$

where

- FWD<sub>1</sub>** = FWD Sensor 1 value

Calculate the Benkelman Beam rebound (*D<sub>B</sub>*) from the Dynaflect Deflection. Model used for the 2018 analysis was the Soil Cement (BSC).

$$D_B = (-5.9664 + (27.1728 \cdot D_F)) / 1000$$

where

- D<sub>F</sub>** = Dynaflect Sensor 1 equivalent

Calculate the Structural Adequacy Index (*SAI*).

$$SAI = 10 \cdot (10^{(1.26962 + (0.000267 \cdot (EF5 + 7.6)^{2.088}) - (0.00988 \cdot D_B \cdot (EF5 + 7.6)^{2.14}) - (11.885 \cdot D_B)))}$$

where

$D_B$  = Benkelman Beam Rebound (mils)

$EF5$  = TESALS<sub>Period</sub> ( $\times 10^{-5}$ )

The SAI is represented by a value on a scale of zero (0) to 100, where a value of 50 represents a structural strength that just adequately supports the current traffic loads; a value less than 50 represents inadequate structural support; and a value greater than 50 represents more-than-adequate structural support.

## **APPENDIX D**

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### Determination of Overall Condition Index (OCI)



The Overall Condition Index (OCI) is used to provide a single overall assessment of pavement quality. The OCI is calculated as a function of one or more of the key Performance Indicators: the Pavement Condition Index (PCI), the Ride Comfort Index (RCI), and the Structural Adequacy Index (SAI).

The OCI models used in the analysis are as follows:

**Model 1**

$$\text{OCI} = 0.3456 + 0.7988 * \text{RCI} + 0.0454 * \text{PCI}^2$$

This model is applied to segments that do not have SAI scores.

**Model 2**

$$\text{OCI} = 1.8455 + 0.2052 * \text{SAI} + 0.0957 * \text{RCI} * \text{PCI}$$

This model is applied to segments that have SAI scores.

**Model 3**

$$\text{OCI} = \text{PCI}$$

This model is used when only PCI scores are available for a segment.

## **APPENDIX E**

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### Cause-Condition Matrices

**LOAD**

Cause Matrices													
LoadClassification_AC	EnvClassification_AC	MatClassification_AC	ConsClassification_AC	GOOD			ALG			POOR			
				MAP			FAIR			POOR			
				GOOD	FAIR	POOR	GOOD	FAIR	POOR	GOOD	FAIR	POOR	
SAL_RCI	GOOD	RUT	GOOD	1	2	2	2	2	2	3	3	3	
			FAIR	2	2	2	2	2	3	3	3	3	
			POOR	2	2	3	3	3	3	3	3	3	
	FAIR		GOOD	2	2	2	2	2	3	3	3	3	3
			FAIR	2	2	2	2	3	3	3	3	3	3
			POOR	2	2	3	3	3	3	3	3	3	3
	POOR		GOOD	3	3	3	3	3	3	3	3	3	3
			FAIR	3	3	3	3	3	3	3	3	3	3
			POOR	3	3	3	3	3	3	3	3	3	3

**ENVIRONMENT**

Cause Matrices													
LoadClassification_AC	EnvClassification_AC	MatClassification_AC	ConsClassification_AC	GOOD			LT			POOR			
				MAP			FAIR			POOR			
				GOOD	FAIR	POOR	GOOD	FAIR	POOR	GOOD	FAIR	POOR	
POT	GOOD	RAV	GOOD	1	2	2	2	2	2	3	3	3	
			FAIR	1	2	2	2	2	3	3	3	3	
			POOR	2	3	3	3	3	3	3	3	3	
	FAIR		GOOD	2	2	2	2	2	3	3	3	3	3
			FAIR	2	2	2	2	3	3	3	3	3	3
			POOR	2	3	3	3	3	3	3	3	3	3
	POOR		GOOD	3	3	3	3	3	3	3	3	3	3
			FAIR	3	3	3	3	3	3	3	3	3	3
			POOR	3	3	3	3	3	3	3	3	3	3

**CONSTRUCTION**

Cause Matrices													
LoadClassification_AC	EnvClassification_AC	MatClassification_AC	ConsClassification_AC	GOOD			RAV			POOR			
				MAP			FAIR			POOR			
				GOOD	FAIR	POOR	GOOD	FAIR	POOR	GOOD	FAIR	POOR	
DST	GOOD	RUT	GOOD	1	1	2	2	2	2	3	3	3	
			FAIR	1	2	2	2	2	3	3	3	3	
			POOR	2	2	2	2	2	3	3	3	3	
	FAIR		GOOD	2	2	2	2	3	3	3	3	3	3
			FAIR	2	2	2	2	3	3	3	3	3	3
			POOR	2	2	3	3	3	3	3	3	3	3
	POOR		GOOD	3	3	3	3	3	3	3	3	3	3
			FAIR	3	3	3	3	3	3	3	3	3	3
			POOR	3	3	3	3	3	3	3	3	3	3

**MATERIAL**

Cause Matrices													
LoadClassification_AC	EnvClassification_AC	MatClassification_AC	ConsClassification_AC	GOOD			RAV			POOR			
				MAP			FAIR			POOR			
				GOOD	FAIR	POOR	GOOD	FAIR	POOR	GOOD	FAIR	POOR	
LT	GOOD	EDG	GOOD	1	2	2	2	2	3	3	3	3	
			FAIR	1	2	2	2	2	3	3	3	3	
			POOR	2	2	3	3	3	3	3	3	3	
	FAIR		GOOD	1	2	2	2	2	3	3	3	3	3
			FAIR	2	2	3	3	3	3	3	3	3	3
			POOR	2	2	3	3	3	3	3	3	3	3
	POOR		GOOD	3	3	3	3	3	3	3	3	3	3
			FAIR	3	3	3	3	3	3	3	3	3	3
			POOR	3	3	3	3	3	3	3	3	3	3

## **APPENDIX F**

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### Decision Matrices

### COLLECTOR NETWORK

Matrices												
Collector AC		Local AC										
				GOOD			FAIR			POOR		
				LOAD			FAIR			POOR		
				GOOD	FAIR	POOR	GOOD	FAIR	POOR	GOOD	FAIR	POOR
ENV	GOOD	MAT	GOOD	4	4	5	5	5	6	9	9	9
			FAIR	4	5	5	5	6	6	9	9	9
			POOR	5	5	6	6	6	6	9	9	9
	FAIR		GOOD	5	5	6	6	6	7	9	9	9
			FAIR	5	6	6	7	7	7	9	9	9
			POOR	6	6	7	7	7	7	9	9	9
	POOR		GOOD	7	7	7	7	7	7	9	9	9
			FAIR	7	7	7	7	7	9	9	9	9
			POOR	7	7	7	7	9	9	9	9	9

### LOCAL NETWORK

Matrices												
Collector AC		Local AC										
				GOOD			FAIR			POOR		
				LOAD			FAIR			POOR		
				GOOD	FAIR	POOR	GOOD	FAIR	POOR	GOOD	FAIR	POOR
ENV	GOOD	MAT	GOOD	4	4	4	4	4	5	5	7	7
			FAIR	4	4	4	4	4	5	5	7	7
			POOR	4	4	4	4	5	5	7	7	7
	FAIR		GOOD	4	5	5	5	5	5	5	7	7
			FAIR	5	5	5	5	5	5	7	7	7
			POOR	5	5	5	5	5	7	7	8	8
	POOR		GOOD	5	5	5	5	5	5	8	8	8
			FAIR	5	5	5	5	5	7	8	8	8
			POOR	5	5	5	5	7	8	8	8	8

### REHABILITATION ALTERNATIVES

Rehab Alternatives				
ID	Workclass	Description	Cost	Gain
1	rehab	Micro Surface	\$83,250.00	25
2	rehab	Overlay 50mm	\$128,250.00	50
3	rehab	Overlay 75mm	\$157,500.00	60
4	rehab	Edge Mill/Repair and Overlay 50mm	\$146,250.00	55
5	rehab	Full Mill and Overlay 50mm	\$171,000.00	60
6	rehab	Full Mill and Overlay 75mm	\$207,000.00	70
7	rehab	Full Mill and Overlay + LBR	\$261,000.00	80
8	rehab	Local Reconstruction	\$675,000.00	100
9	rehab	Collector Reconstruction	\$855,000.00	100
10	rehab	Arterial Reconstruction	\$1,012,500.00	100

## **APPENDIX G**

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2019 Pavement Condition and 10-Year Rehabilitation Needs

Segment Listing

TOWN OF WESTLOCK  
PAVEMENT CONDITION AND 10-YEAR REHABILITATION LISTING

SORT: OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	Sneff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
670	96 Street	Cul de Sac	99 Avenue	Local Residential	2	0.122	2019	19.9	0.1	51.0	6.9	4.99	24994	55	POOR	POOR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$82,104
2540	110A Avenue	Cul de Sac	103 Street	Local Residential	2	0.212	2019	20.9	29.0	5.0	5.2	13.27	11664	61	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$55,258
1370	107 Street	97 Avenue	98 Avenue	Residential Collector	2	0.405	2019	21.9	0.1	19.7	16.6	8.03	22994	98	POOR	FAIR	POOR	POOR	2019	Med	Thick	Weak	Collector Reconstruction	\$346,680
2410	101 Street	107 Avenue	108 Avenue	Local Residential	2	0.437	2019	22.1	0.1	42.6	17.7	3.99	29992	68	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$294,874
760	95 Street	99A Avenue	100 Avenue	Local Residential	2	0.184	2019	22.1	0.1	39.0	17.8	4.44	29493	70	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$124,251
690	99 Avenue	End	95 Street	Local Residential	2	0.235	2019	22.2	0.1	31.4	18.2	5.70	21328	74	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$158,612
1430	107 Street	103 Avenue S	103 Avenue N	Residential Collector	2	0.143	2019	22.4	0.1	30.0	18.9	5.82	30492	98	POOR	FAIR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$122,279
2200	107A Avenue	107A Avenue	104 Street	Local Residential	2	0.418	2019	23.2	18.7	19.0	6.6	8.21	18329	59	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$109,113
3150	103 Avenue	104 Street	105 Street	Local Residential	2	0.207	2019	23.2	0.1	16.2	23.2	8.93	21661	82	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$54,153
1290	108 Street	97 Avenue	98 Avenue	Residential Collector	2	0.453	2019	23.5	7.7	23.4	16.4	7.40	26175	101	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Weak	Collector Reconstruction	\$387,369
1470	106 Street	98 Avenue	99 Avenue	Local Residential	2	0.407	2019	23.8	0.9	32.2	24.9	5.59	29659	78	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$274,389
2520	103 Street	103 Street	111 Avenue	Local Residential	2	0.214	2019	23.9	37.7	12.1	5.3	10.06	20995	52	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$55,884
960	98 Avenue	End	106 Street	Local Residential	2	0.163	2019	24.0	2.4	45.1	21.8	3.73	24494	77	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$110,256
1460	106 Street	100 Street	98 Avenue	Local Residential	2	0.299	2019	24.0	8.1	27.0	17.1	9.46	24660	69	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$201,625
3110	115 Avenue	Service	100 Street	Local Residential	2	0.092	2019	24.2	5.4	40.0	17.9	4.25	24994	69	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$24,131
700	99 Avenue	95 Street	96 Street	Local Residential	2	0.199	2019	24.6	0.1	30.7	29.8	5.74	23994	87	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$134,229
770	98 Street	98A Avenue	Cul de Sac	Local Residential	2	0.106	2019	24.7	13.9	32.0	9.4	4.08	24994	58	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$27,759
1260	110 Street	99 Avenue	100A Avenue	Local Residential	2	0.173	2019	24.7	8.4	30.6	18.4	5.73	29993	68	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$45,132
930	99 Avenue	105 Street	106 Street	Local Residential	2	0.213	2019	24.7	1.4	34.5	28.3	5.55	30992	78	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$143,563
750	99A Avenue	97 Street	95 Street	Local Residential	2	0.386	2019	25.1	13.1	26.7	16.2	6.58	23661	70	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$100,874
2130	104 Street	107A Avenue	106 Street	Residential Collector	2	0.195	2019	25.3	0.1	12.0	33.1	10.42	30493	117	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$166,721
2400	107 Avenue	102 Street	103 Street	Local Residential	2	0.281	2019	25.4	6.0	39.1	23.1	4.62	26326	100	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$189,596
1390	107 Street	99 Avenue	100 Avenue	Residential Collector	2	0.407	2019	25.5	3.2	32.2	29.4	5.79	35657	112	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$348,231
710	99 Avenue	96 Street	97 Street	Local Residential	2	0.187	2019	25.7	4.4	34.4	28.1	5.10	25994	83	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$125,888
2170	103 Street	107 Avenue	107A Avenue	Local Residential	2	0.155	2019	25.8	14.3	27.7	17.6	6.25	28493	74	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$40,461
1310	108 Street	99 Avenue	100 Avenue	Residential Collector	2	0.433	2019	26.3	9.3	25.2	27.5	7.22	25175	119	POOR	GOOD	FAIR	FAIR	2019	Med	Thick	Weak	Collector Reconstruction	\$369,828
20	90 Avenue	100 Street	Service	Residential Collector	2	0.059	2019	26.4	0.1	51.8	38.6	3.73	30992	122	POOR	POOR	POOR	POOR	2019	Low	Thick	Strong	Collector Reconstruction	\$50,619
1230	109 Street	98 Avenue	99 Avenue	Local Residential	2	0.346	2019	27.1	14.1	36.9	18.1	4.75	27659	81	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$90,356
1250	110 Street	98 Avenue	99 Avenue	Local Residential	2	0.347	2019	27.4	18.0	34.2	15.0	5.18	24327	67	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$90,687
2120	104 Street	106 Avenue	107A Avenue	Residential Collector	2	0.367	2019	28.0	10.0	25.2	34.7	6.80	30659	119	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$314,025
1690	102 Avenue	105 Street	106 Street	Residential Collector	2	0.212	2019	28.2	2.5	55.0	41.2	6.33	33325	125	FAIR	POOR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$181,334
1300	108 Street	98 Avenue	99 Avenue	Residential Collector	2	0.346	2019	28.3	15.0	37.3	21.8	4.71	24994	110	POOR	FAIR	GOOD	FAIR	2019	Med	Thick	Weak	Collector Reconstruction	\$296,170
310	98A Avenue	99 Street	98 Street	Local Residential	2	0.189	2019	28.5	5.9	44.2	36.6	3.82	29993	101	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$49,350
3090	113 Avenue	End	100 Street	Residential Collector	2	0.520	2019	28.5	23.9	32.4	12.7	5.63	19328	97	POOR	GOOD	GOOD	FAIR	2019	Low	Thick	Weak	Collector Reconstruction	\$444,251
2460	108 Avenue	100 Street	Service	Residential Collector	2	0.056	2019	28.9	27.0	32.0	10.3	16.09	26993	84	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$48,020
80	Service	90 Avenue	93 Avenue	Local Residential	2	0.574	2019	29.1	12.1	41.4	28.3	4.32	22661	93	POOR	FAIR	FAIR	FAIR	2019	Med	Med	Weak	Collector Reconstruction	\$490,553
1730	101 Avenue	104 Street	105 Street	Local Residential	2	0.212	2019	29.1	1.7	38.8	49.1	4.48	27660	119	FAIR	POOR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$143,352
1080	111 Street	98 Avenue	99 Avenue	Local Residential	2	0.340	2019	29.2	1.3	28.2	50.6	6.21	18995	137	FAIR	POOR	POOR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$88,653
1700	102 Avenue	106 Street	107 Street	Residential Collector	2	0.212	2019	29.2	10.1	50.0	28.7	6.98	26993	113	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$180,848
370	97 Street	100 Avenue N	101 Avenue	Residential Collector	2	0.189	2019	29.3	11.8	43.5	28.8	3.87	33491	108	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$161,449
2290	103A Street	106 Avenue	103A Street	Residential Collector	2	0.112	2019	29.4	0.1	41.0	53.2	5.73	23994	152	FAIR	FAIR	POOR	POOR	2019	Med	Thick	Weak	Collector Reconstruction	\$96,099
2530	103 Street	111 Avenue	End	Local Residential	2	0.234	2019	29.4	64.3	15.9	5.8	9.10	16329	58	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$61,084
1320	108 Street	100 Avenue	103 Avenue	Residential Collector	2	1.368	2019	29.5	9.9	39.7	35.6	4.63	27890	145	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$1,169,614
1670	102 Avenue	102 Street	104 Street	Residential Collector	2	0.261	2019	29.7	10.3	28.5	40.9	6.31	33325	125	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$68,204
3160	103 Avenue	105 Street	106 Street	Local Residential	2	0.214	2019	29.7	0.1	44.2	54.8	3.82	26660	123	POOR	POOR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$144,179
840	100 Avenue	99 Street	Service	Residential Collector	2	0.165	2019	29.9	10.8	41.8	34.6	4.15	33992	115	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$141,239
3170	103 Avenue	106 Street	107 Street	Local Residential	2	0.209	2019	30.2	0.9	32.4	55.8	5.71	28659	120	POOR	POOR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$140,952
1380	107 Street	98 Avenue	99 Avenue	Residential Collector	2	0.406	2019	30.2	13.1	33.1	37.2	5.39	27659	126	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$346,870
940	99 Avenue	106 Street	107 Street	Local Residential	2	0.212	2019	30.6	14.0	24.2	43.3	7.39	29992	100	FAIR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$36,315
720	94 Street	99 Avenue	100 Avenue	Local Residential	2	0.352	2019	30.6	28.5	34.3	13.7	5.13	25660	65	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$91,918
2090	104 Street	104 Avenue	Service	Residential Collector	2	0.042	2019	30.6	0.1	49.4	59.1	3.23	31992	150	FAIR	POOR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$35,897
2190	107A Avenue	103A Street	107A Avenue	Local Residential	2	0.352	2019	30.8	43.2	27.1	5.6	6.42	22328	61	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$60,166
1440	107 Street	103 Avenue N	End of Off Ramp	Residential Collector	2	0.134	2019	31.4	21.5	32.2	30.7	5.58	25994	116	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$114,858
1100	111 Street	100A Avenue	110 Street	Local Residential	2	0.197	2019	31.4	19.2	33.1	33.6	5.32	21495	97	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$51,535
1530	105 Street	99 Avenue	100 Street	Local Residential	2	0.382	2019	31.4	4.3	31.3	56.9	5.91	31325	115	FAIR	FAIR	POOR	POOR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$99,585
360	97 Street	100 Avenue S	100 Avenue N	Local Residential	2	0.175	2019	31.5	19.0	40.6	27.8	4.23	32492	76	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$45,774
740	100 Avenue	95 Street	97 Street	Local Residential	2	0.385	2019	31.7	25.5	43.6	12.9	3.91	26993	63	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$100,500
2700	105 Street	106 Avenue	106 Street	Local Residential	2	0.357	2019	31.7																

TOWN OF WESTLOCK  
PAVEMENT CONDITION AND 10-YEAR REHABILITATION LISTING

SORT: OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	Sneff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
1240	110 Street	97 Avenue	98 Avenue	Local Residential	2	0.439	2019	33.2	32.6	34.5	19.2	5.22	27993	70	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$114,525
2030	105 Avenue	102 Street	103 Street	Local Residential	2	0.280	2019	33.3	0.1	40.2	72.0	4.28	33991	146	FAIR	FAIR	POOR	POOR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$73,092
1000	97 Avenue	107 Street	108 Street	Residential Collector	2	0.223	2019	33.4	4.2	17.1	69.3	8.77	44655	153	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$58,196
100	Service	94A Avenue	End	Local Residential	2	0.189	2019	33.5	28.7	32.3	30.1	5.65	26494	92	POOR	GOOD	GOOD	GOOD	2019	Med	Med	Weak	Collector Reconstruction	\$161,605
270	99 Street	97 Avenue	98 Avenue	Residential Collector	2	0.403	2019	33.5	28.1	34.8	27.9	5.25	35324	108	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$344,872
2930	105 Avenue	110 Street	End	Local Residential	2	0.369	2019	33.6	48.3	26.6	14.1	6.50	25660	68	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$63,055
1420	107 Street	102 Avenue	103 Avenue	Residential Collector	2	0.412	2019	34.0	35.5	28.9	27.9	6.09	27993	111	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$351,923
1570	105 Street	102 Avenue	103 Avenue	Local Residential	2	0.410	2019	34.3	30.0	39.0	22.6	4.49	27993	76	POOR	GOOD	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$106,942
2380	107 Avenue	Service	101 Street	Local Residential	2	0.224	2019	34.3	15.7	30.0	55.4	9.86	30992	137	FAIR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$38,358
1210	99 Avenue	110 Street	111 Street	Local Residential	2	0.205	2019	34.5	13.4	30.0	59.6	6.22	25993	131	FAIR	POOR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$138,146
1090	111 Street	99 Avenue	100A Avenue	Local Residential	2	0.189	2019	34.6	17.9	35.4	49.1	5.01	21495	134	FAIR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Edge Mill/Repair and Overlay 50m	\$27,570
290	99 Street	98A Avenue	99A Avenue	Residential Collector	2	0.181	2019	34.7	34.2	34.0	24.8	5.16	24494	108	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$154,883
1070	98 Avenue	110 Street	111 Street	Local Residential	2	0.198	2019	35.1	21.5	30.0	51.2	5.94	22494	129	FAIR	GOOD	GOOD	FAIR	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$33,923
1540	105 Street	99 Avenue	100 Avenue	Local Residential	2	0.406	2019	35.1	19.5	34.6	49.8	5.24	31658	106	FAIR	FAIR	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$69,385
1950	Service	Corner	101 Street	Local Residential	2	0.208	2019	35.2	8.5	53.9	60.3	2.87	36990	147	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$54,374
1360	107 Street	100 Street	97 Avenue	Residential Collector	2	0.217	2019	35.4	25.4	40.2	34.7	4.36	34324	118	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$185,252
1520	106 Street	103 Avenue	104 Avenue	Local Residential	2	0.436	2019	35.4	20.4	44.0	40.7	3.91	27326	107	FAIR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$74,549
2390	107 Avenue	101 Street	102 Street	Local Residential	2	0.203	2019	35.4	15.6	30.2	60.7	5.82	20662	153	FAIR	FAIR	POOR	POOR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$52,899
850	100 Avenue	Service	100 Street	Residential Collector	2	0.052	2019	35.5	31.1	40.0	25.1		27993	107	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$44,598
2300	103A Street	106 Avenue	103A Street	Residential Collector	2	0.156	2019	35.8	14.8	30.6	63.2	5.71	33492	159	GOOD	FAIR	POOR	POOR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$40,764
920	99 Avenue	100 Street	105 Street	Local Residential	2	0.259	2019	36.3	33.5	36.8	29.4	4.96	25327	91	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$44,299
1720	101 Avenue	End	104 Street	Local Residential	2	0.037	2019	36.4	32.9	39.0	27.7	3.72	27993	79	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$6,317
2510	103 Street	110 Avenue	103 Street	Local Residential	2	0.271	2019	36.5	64.0	23.6	17.5	7.25	22661	78	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$46,422
990	97 Avenue	100 Street	107 Street	Residential Collector	2	0.141	2019	36.7	18.1	43.1	52.2	4.54	33991	139	FAIR	POOR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$120,931
1960	Service	101 Street	102 Street	Local Residential	2	0.205	2019	37.2	11.8	54.6	61.1	2.77	34991	151	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$53,512
1030	97 Avenue	110 Street	110A Street	Residential Collector	2	0.141	2019	37.3	10.1	35.0	75.3	5	35991	177	GOOD	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$29,130
1870	110 Avenue	103 Street	103A Street	Local Residential	2	0.190	2019	37.5	62.8	21.6	29.7	7.71	24994	93	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$32,540
2100	104 Street	Service	105 Avenue	Residential Collector	2	0.313	2019	37.5	32.4	38.0	35.6	4.74	33991	122	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$267,437
1110	111 Street	110 Street	100 Avenue	Local Residential	2	0.273	2019	37.6	47.6	24.3	39.6	7.00	23660	105	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$71,300
2560	111 Avenue	103 Street	103A Street	Local Residential	2	0.402	2019	37.7	72.1	23.9	13.3	7.21	18995	80	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$68,714
120	93 Avenue	Service	100A Street	Residential Collector	2	0.283	2019	37.7	39.9	29.8	38.5	5.92	29325	124	POOR	GOOD	GOOD	GOOD	2019	Low	Thick	Strong	Collector Reconstruction	\$242,007
1010	97 Avenue	108 Street	109 Street	Residential Collector	2	0.171	2019	37.8	13.3	29.5	75.7	6.06	40990	168	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$35,365
780	97 Avenue	99 Street	100 Street	Residential Collector	2	0.215	2019	38.0	28.6	42.5	38.5	4.23	24660	137	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Weak	Collector Reconstruction	\$184,143
1780	102 Street	102 Avenue	104 Avenue	Local Residential	2	0.412	2019	38.0	35.0	36.3	35.9	4.95	35657	85	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$70,369
2260	106 Avenue	103A Street	103A Street	Residential Collector	2	0.167	2019	38.2	9.6	20.8	86.9	7.81	29992	207	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$34,655
1920	Service	Service	106 Avenue	Local Residential	2	0.454	2019	38.3	5.7	64.2	79.4	2.32	43655	173	GOOD	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$93,940
1660	102 Avenue	101 Street	102 Street	Residential Collector	2	0.190	2019	38.3	28.4	37.8	46.8	4.59	35491	130	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$49,699
1750	101 Avenue	106 Street	107 Street	Local Residential	2	0.212	2019	38.5	44.7	24.2	47.2	6.95	35657	108	FAIR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$36,194
1790	102 Street	Service	104 Avenue	Residential Collector	2	0.039	2019	38.7	0.1	42.0	98.6	2.91	37990	218	FAIR	GOOD	POOR	POOR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$10,288
3200	Service	100 Street	Service	Local Residential	2	0.041	2019	38.7	34.0	40.0	35.5	1.62	38990	114	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$35,147
1860	110 Avenue	102 Street	103 Street	Local Residential	2	0.304	2019	38.9	61.4	28.2	18.9	6.21	19662	76	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$79,408
300	99 Street	99A Avenue	100 Avenue	Residential Collector	2	0.504	2019	39.0	45.1	35.5	25.3	5.17	26660	109	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$430,632
730	100 Avenue	94 Street	95 Street	Local Residential	2	0.198	2019	39.4	33.7	48.0	26.7	3.37	33491	75	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$51,628
330	97 Street	98A Avenue	99 Avenue	Local Residential	2	0.183	2019	39.6	41.3	39.4	27.5	4.40	28493	79	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$31,257
2220	106 Avenue	Service	101 Street	Residential Collector	2	0.221	2019	40.0	39.1	32.0	46.4	7.43	25660	141	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Full Mill and Overlay 50mm	\$37,851
2690	105 Street	105 Avenue	106 Avenue	Local Residential	2	0.352	2019	40.0	45.6	43.7	12.1	3.89	26993	61	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$60,125
3080	Service	113 Avenue	115 Avenue	Local Residential	2	0.537	2019	40.0	42.4	42.0	22.0	4.12	22328	107	POOR	GOOD	GOOD	GOOD	2019	Low	Thick	Weak	Collector Reconstruction	\$458,936
2310	103A Street	103A Street	107A Avenue	Residential Collector	2	0.433	2019	40.0	39.2	43.8	25.0	4.16	29326	109	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$370,436
2160	103 Street	106 Avenue	107 Avenue	Local Residential	2	0.360	2019	40.2	23.3	39.5	62.9	4.37	27660	133	GOOD	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$61,613
2080	106 Street	Service	105 Avenue	Local Residential	2	0.311	2019	40.5	20.5	42.1	67.4	4.50	26660	151	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50m	\$45,477
2450	108 Avenue	108 Avenue	101 Street	Local Residential	2	0.105	2019	41.1	100.0	19.5	19.5	7.99	23994	71	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$17,915
2180	107A Avenue	103 Street	103A Street	Local Residential	2	0.221	2019	41.3	46.6	45.1	13.3	3.71	21328	70	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$57,615
2230	106 Avenue	101 Street	102 Street	Residential Collector	2	0.214	2019	41.3	34.0	37.0	52.9	4.85	21661	165	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Weak	Full Mill and Overlay + LBR	\$55,761
1410	107 Street	101 Avenue	102 Avenue	Residential Collector	2	0.419	2019	41.5	43.5	39.8	31.6	4.50	30325	114	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$358,188
2070	106 Street	Service	104 Avenue	Local Residential	2	0.041	2019	41.5	47.7	39.0	25.8	11.57	34991	74	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$7,087
1990	Service	106 Street	110 Street	Local Residential	2	1.049	2019	41.6	53.0	35.9	24.2	5.27	25394	108	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$896,891
900	100 Avenue	107 Street	End	Local Residential	1	0.053	2019	42.0	36.1	30.0	64.0	5.43	47988	107	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50m	\$7,768



TOWN OF WESTLOCK  
PAVEMENT CONDITION AND 10-YEAR REHABILITATION LISTING

SORT: OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	Sneff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
540	96 Street	102 Avenue	End	Local Residential	2	0.106	2019	44.5	48.6	52.0	9.0	2.53	19995	61	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$27,765
1740	101 Avenue	105 Street	106 Street	Local Residential	2	0.211	2019	44.7	25.3	36.1	85.4	5.33	29326	179	GOOD	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$30,833
1930	Service	106 Avenue	107 Avenue	Local Residential	2	0.361	2019	44.8	27.9	45.8	68.9	3.83	38323	162	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$74,802
1510	106 Street	102 Avenue	103 Avenue	Local Residential	2	0.409	2019	44.8	50.0	42.5	29.6	4.12	26993	86	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$69,988
1910	Service	Corner	Service	Local Residential	2	0.382	2019	45.7	19.8	58.1	79.1	2.50	41989	173	GOOD	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$65,250
90	Service	93 Avenue	94A Avenue	Local Residential	2	0.426	2019	45.7	61.5	39.2	20.3	4.63	20328	83	POOR	FAIR	FAIR	GOOD	2019	Med	Med	Weak	Collector Reconstruction	\$364,573
3070	Service	108 Avenue	113 Avenue	Local Residential	2	1.077	2019	46.4	59.5	40.2	24.5	4.53	23394	117	POOR	GOOD	GOOD	GOOD	2019	Low	Thick	Weak	Collector Reconstruction	\$921,129
860	100 Avenue	100 Street	104 Street	Residential Collector	2	0.325	2019	46.5	50.1	47.6	25.5	3.91	27659	107	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$278,143
1180	100A Avenue	111 Street	Cul de Sac	Local Residential	2	0.191	2020	46.5	32.0	46.4	67.5	3.92	27993	139	GOOD	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$27,153
1400	107 Street	100 Avenue	101 Avenue	Residential Collector	2	0.407	2019	46.5	64.1	32.5	39.5	5.68	31658	124	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$347,662
380	97 Street	101 Avenue	102 Avenue	Residential Collector	2	0.187	2019	47.3	71.5	33.8	28.1	5.22	28493	112	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$160,220
890	100 Avenue	106 Street	107 Street	Residential Collector	2	0.211	2019	47.5	51.1	30.0	70.3	4.24	46655	153	GOOD	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$36,001
2140	103 Street	End	105 Avenue	Local Residential	2	0.169	2021	47.6	58.0	33.2	52.1	5.57	39990	102	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$23,270
1160	100 Avenue	111 Street	End	Local Residential	2	0.111	2020	48.2	55.8	36.0	51.5	5.17	23994	119	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill/Repair and Overlay 50mm	\$15,720
2270	106 Avenue	103A Street	104 Street	Residential Collector	2	0.073	2019	48.6	42.2	36.3	75.5	5.03	27993	185	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$15,076
390	97 Street	102 Avenue	104 Avenue	Residential Collector	2	0.498	2019	49.0	50.5	34.0	68.9	5.25	33991	166	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$85,076
680	95 Street	Cul de Sac	99 Avenue	Local Residential	2	0.188	2022	49.1	62.8	42.0	26.2	4.19	28993	78	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$29,439
1270	110 Street	100A Avenue	111 Street	Local Residential	2	0.364	2021	49.2	64.4	40.8	27.1	4.39	22994	106	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$89,620
1350	107 Street	Start of Ramp	End of Ramp	Residential Collector	1	0.083	2019	49.6	51.1	42.4	50.7	3.99	31992	140	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$17,197
2790	109 Street	108 Avenue	106A Avenue	Local Residential	2	0.431	2021	50.6	56.5	41.3	48.0	4.30	24327	118	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill/Repair and Overlay 50mm	\$59,503
1500	106 Street	101 Avenue	102 Avenue	Local Residential	2	0.418	2023	51.8	64.0	44.9	28.3	3.91	27326	84	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$63,732
1150	100 Avenue	109 Street	111 Street	Local Residential	2	0.393	2022	51.9	75.7	37.6	30.2	4.89	24994	89	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$61,681
2820	108 Street	106A Avenue	106A Avenue	Local Residential	2	0.109	2022	52.0	66.9	35.7	52.2	4.92	24994	119	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill/Repair and Overlay 50mm	\$14,586
1170	111 Street	111 Street	Cul de Sac	Local Residential	2	0.053	2022	52.2	54.1	40.0	63.3	5.44	25993	135	GOOD	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill/Repair and Overlay 50mm	\$7,072
2910	106 Avenue	109 Street	110 Street	Local Residential	2	0.187	2022	52.3	81.2	37.9	21.6	4.68	24494	76	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$29,372
3060	108 Avenue	100 Street	Service	Residential Collector	2	0.056	2021	52.5	59.9	50.0	26.5	17.85	29992	107	POOR	GOOD	GOOD	GOOD	2019	Low	Thick	Strong	Collector Reconstruction	\$45,036
2210	106 Avenue	100 Street	Service	Residential Collector	2	0.050	2021	52.6	56.0	34.0	77.7	5.32	39990	170	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$8,031
110	93 Avenue	100 Street	Service	Residential Collector	2	0.059	2020	53.0	85.8	32.0	40.2	13.48	24994	130	FAIR	GOOD	GOOD	GOOD	2019	Low	Thick	Weak	Full Mill and Overlay 50mm	\$9,866
160	94A Avenue	100 Street	Service	Residential Collector	2	0.059	2021	53.2	71.5	35.0	52.4	5.67	40989	107	FAIR	GOOD	GOOD	GOOD	2019	Med	Med	Strong	Full Mill and Overlay 50mm	\$9,577
1610	104 Street	101 Avenue	102 Avenue	Local Residential	2	0.419	2024	53.6	67.6	30.6	74.9	6.01	37990	135	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$53,134
1060	98 Avenue	110 Street	110 Street	Local Residential	2	0.211	2024	53.7	54.7	56.3	28.3	2.64	31325	79	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$31,225
1190	99 Avenue	108 Street	109 Street	Local Residential	2	0.113	2024	53.7	65.6	35.8	62.3	4.96	30992	124	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$14,279
1880	110 Avenue	103A Street	104 Street	Local Residential	2	0.198	2025	54.6	79.6	32.0	57.7	5.51	32492	117	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$24,366
3030	108A Avenue	110 Street	End	Local Residential	2	0.104	2023	54.8	71.1	50.0	11.1	2.94	16996	66	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$15,829
2360	103A Street	111 Avenue	End	Residential Collector	2	0.101	2022	54.8	72.6	34.2	61.0	5.14	30992	155	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill/Repair and Overlay 50mm	\$13,583
2350	103A Street	110 Avenue	111 Avenue	Residential Collector	2	0.469	2023	55.1	61.3	41.2	60.8	4.15	33658	152	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill/Repair and Overlay 50mm	\$61,157
1850	102 Street	109 Avenue	110 Avenue	Local Residential	2	0.197	2025	55.2	76.0	36.0	51.6	5.04	31492	116	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$24,297
2980	110 Street	106 Avenue	106A Avenue	Residential Collector	2	0.211	2023	55.8	77.7	36.8	48.7	4.74	28659	143	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$32,101
2800	108 Street	106A Avenue	106A Avenue	Local Residential	2	0.195	2026	56.4	61.0	48.9	45.9	3.29	30492	104	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$23,349
1340	103 Avenue	107 Street Ramp	107 Street	Residential Collector	2	0.075	2023	56.7	100.0	30.3	44.8	5.76	38990	124	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$11,463
440	Service	96 Street	97 Street	Local Residential	2	0.188	2026	57.1	67.8	49.3	32.1	3.56	33991	80	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$26,252
1220	109 Street	97 Avenue	98 Avenue	Local Residential	2	0.443	2026	57.3	57.4	46.5	64.7	3.55	35324	121	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$52,944
630	98 Street	102 Avenue	End	Local Residential	2	0.095	2026	57.3	87.1	24.1	91.4	6.96	31992	180	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$11,363
3190	Service	104 Avenue	Service	Local Residential	2	0.043	2024	57.3	69.8	42.0	52.6		31992	140	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$6,304
640	Service	100 Avenue	101 Avenue	Local Residential	2	0.261	2026	57.3	95.7	32.0	46.6	5.79	29326	109	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$31,196
1450	107 Street	End of Off Ramp	104 Avenue	Residential Collector	2	0.258	2024	57.5	57.4	44.3	71.9	3.80	38657	180	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill/Repair and Overlay 50mm	\$32,628
2000	Service	110 Street	104 Avenue	Local Residential	2	0.620	2024	57.6	73.9	40.1	52.4	4.56	36657	140	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$91,897
2850	106A Avenue	106 Street	107 Street	Residential Collector	2	0.186	2024	58.6	74.0	44.8	40.7	3.73	27493	129	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$27,549
430	Service	93 Street	96 Street	Local Residential	2	0.510	2027	58.8	73.9	38.8	62.9	4.72	33658	123	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$59,335
2660	107 Street	109 Avenue	108A Avenue	Local Residential	2	0.154	2025	59.3	86.6	40.1	37.1	4.31	23994	97	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$22,214
970	98 Avenue	107 Street	107 Street	Local Residential	2	0.210	2027	59.4	94.4	39.8	24.5	5.06	26993	79	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$28,596
1800	102 Street	Service	105 Avenue	Residential Collector	2	0.313	2025	59.8	49.6	53.9	76.7	2.86	34991	185	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill/Repair and Overlay 50mm	\$38,492
2880	106A Avenue	106A Avenue	109 Street	Residential Collector	2	0.209	2025	60.0	71.2	47.8	43.9	3.43	27326	134	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$30,078
2970	110 Street	105 Avenue	106 Avenue	Residential Collector	2	0.547	2025	60.3	73.1	41.6	62.3	4.21	38990	148	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill/Repair and Overlay 50mm	\$67,320
340	97 Street	99 Avenue	99A Avenue	Local Residential	2	0.183	2028	60.4	62.9	53.1	48.7	2.96	26993	111	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$20,654
2770	108 Avenue	106 Street	107 Street	Local Residential	2	0.187	2028	60.6	67.9	49.4	49.2	3.24	28493	107	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill/Repair and Overlay 50mm	\$21,073
2890	106A Avenue	109 Street	110 Street	Residential Collector	2	0.201	2026	60.6	73.4	46.7	45.8	3.52	27659	136	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick</			

TOWN OF WESTLOCK  
PAVEMENT CONDITION AND 10-YEAR REHABILITATION LISTING

SORT: OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	Sneff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
2480	108 Avenue	101 Street	102 Street	Residential Collector	2	0.211	2024	62.3	74.5	54.3	25.5	2.82	24660	110	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$156,306
2620	109 Avenue	103A Street	106 Street	Residential Collector	2	0.650	2027	62.6	75.3	42.1	67.7	4.26	31992	165	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$75,523
420	93 Street	End	104 Avenue	Local Residential	2	0.512	2026	62.8	64.3	60.6	34.3	2.39	24994	91	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$71,669
1940	Service	107 Avenue	108 Avenue	Local Residential	2	0.441	2027	62.9	54.0	58.0	70.5	2.64	37657	164	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$51,304
2870	106A Avenue	108 Street	106A Avenue	Residential Collector	2	0.195	2027	63.2	70.4	49.6	54.9	3.41	31992	145	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$26,528
1330	103 Avenue	108 Street	107 Street Ramp	Residential Collector	2	0.203	2027	63.2	69.8	39.4	89.7	4.48	33848	220	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$23,594
2780	108 Avenue	107 Street	109 Street	Local Residential	2	0.411	2026	64.1	76.7	53.3	32.1	2.92	24993	90	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$57,487
810	99A Avenue	99 Street	100 Street	Local Residential	2	0.215	2026	64.6	82.0	50.4	32.3	3.20	25993	87	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$30,058
2630	109 Avenue	106 Street	107 Street	Residential Collector	2	0.170	2028	64.7	81.4	41.6	67.7	4.31	27993	173	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$19,210
1980	Service	104 Street	106 Street	Local Residential	2	0.604	2024	65.0	85.5	50.6	25.0	3.53	22661	111	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$447,598
2830	106A Avenue	106A Avenue	Cul de Sac	Local Residential	2	0.065	2030	65.2	70.2	50.0	64.0	4.21	30992	127	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$6,978
550	102 Avenue	96 Street	97 Street	Local Residential	2	0.180	2027	65.2	83.0	53.1	22.5	2.90	24994	79	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$24,439
820	100 Avenue	97 Street	98 Street	Residential Collector	2	0.267	2028	65.3	73.7	56.1	35.5	2.66	29992	119	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$176,239
3010	110 Street	108A Avenue	109 Avenue	Residential Collector	2	0.258	2025	65.3	85.6	49.0	32.6	3.34	26326	120	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$185,951
2760	106 Street	109 Avenue	110 Avenue	Local Residential	2	0.200	2030	65.3	74.4	50.1	54.6	3.25	30326	114	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$21,279
2060	105 Avenue	105 Street	106 Street	Local Residential	2	0.389	2030	65.5	70.3	52.2	58.2	3.00	28993	124	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$41,500
1710	102 Avenue	107 Street	End	Local Residential	2	0.057	2030	65.5	89.3	50.0	21.2	4.29	30992	69	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$7,127
30	90 Avenue	Service	Start of Gravel	Residential Collector	2	0.026	2028	65.6	71.8	51.8	56.4	3.73	33991	145	FAIR	GOOD	GOOD	GOOD	2019	Low	Thick	Strong	Full Mill and Overlay 50mm	\$3,479
1140	100 Avenue	108 Street	109 Street	Local Residential	2	0.114	2031	66.2	75.8	50.4	54.6	3.14	35991	107	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$11,863
2750	106 Street	108 Avenue S	109 Avenue	Residential Collector	2	0.218	2025	66.5	87.0	46.3	46.3	3.83	24327	141	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Full Mill and Overlay 50mm	\$31,348
650	Service	101 Avenue	102 Avenue	Local Residential	2	0.188	2031	66.7	96.3	42.0	46.2	6.21	28993	111	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$19,533
2590	105 Street	111 Avenue	110 Avenue	Local Residential	2	0.385	2031	66.8	83.3	44.3	63.4	3.84	31992	124	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$39,919
2950	110 Street	Service	104 Avenue	Residential Collector	2	0.063	2029	67.6	96.5	35.0	81.9	10.35	42989	175	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$6,894
1890	110 Avenue	104 Street	105 Street	Local Residential	2	0.342	2031	67.7	84.6	46.8	55.2	3.51	31325	113	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$35,439
1970	Service	102 Street	104 Street	Local Residential	2	0.546	2025	67.8	90.0	51.8	22.7	3.24	23328	107	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$392,784
1120	100A Avenue	110 Street	109 Street	Local Residential	2	0.220	2031	67.8	82.0	46.5	62.7	3.62	34991	118	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$22,768
410	96 Street	End	Service	Local Residential	2	0.123	2031	68.0	75.7	59.8	29.9	2.37	28992	81	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$14,937
2500	108 Avenue	103A Street	106 Street	Residential Collector	2	0.647	2030	68.2	73.9	58.3	41.3	2.59	30325	127	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$80,724
3000	110 Street	108 Avenue	108A Avenue	Residential Collector	2	0.201	2030	68.3	83.0	54.9	30.4	2.76	29659	116	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$125,257
2570	111 Avenue	103A Street	104 Street	Local Residential	2	0.198	2031	68.6	84.7	45.9	63.2	3.63	33992	121	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$20,546
2640	109 Avenue	107 Street	109 Street	Residential Collector	2	0.350	2030	68.8	74.4	50.6	69.9	3.18	33991	167	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$37,349
660	Service	102 Avenue	End	Local Residential	2	0.151	2031	68.9	89.6	42.9	66.4	3.95	33491	128	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$15,628
350	97 Street	99A Avenue	100 Avenue	Local Residential	2	0.202	2031	68.9	93.1	46.7	42.9	3.55	28993	99	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$20,921
1600	104 Street	100 Avenue	101 Avenue	Local Residential	2	0.407	2032	69.4	86.6	46.4	61.2	3.88	33991	119	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$40,951
2650	109 Avenue	109 Street	110 Street	Residential Collector	2	0.199	2030	69.4	73.7	52.5	68.0	3.00	34658	162	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$21,252
1820	102 Street	106 Avenue	107 Avenue	Residential Collector	2	0.361	2026	69.5	66.6	51.8	88.0	3.19	25993	225	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Edge Mill/Repair and Overlay 50mm	\$43,163
1050	98 Avenue	108 Street	109 Street	Local Residential	2	0.114	2032	69.9	79.2	56.2	43.0	2.63	34991	91	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$11,519
1840	102 Street	108 Avenue	109 Avenue	Residential Collector	2	0.220	2030	70.0	91.2	40.5	78.7	4.71	34658	181	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$23,450
2320	103A Street	107A Avenue	108 Avenue	Residential Collector	2	0.224	2026	70.9	88.0	54.0	33.7	2.94	24327	125	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$156,704
1810	102 Street	105 Avenue	106 Avenue	Residential Collector	2	0.532	2031	70.9	63.4	56.6	88.2	2.72	28992	215	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$55,181
620	98 Street	101 Avenue	102 Avenue	Local Residential	2	0.187	2033	71.1	84.7	44.3	81.4	3.91	28993	168	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$18,284
3050	108 Avenue	End of Gravel	Service	Local Residential	2	0.058	2033	71.2	91.8	50.0	42.8		29992	97	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$5,670
2840	107 Street	106A Avenue	108 Avenue	Local Residential	2	0.406	2033	71.4	81.5	53.2	55.9	2.90	30992	114	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$39,702
2920	105 Avenue	109 Street	110 Street	Local Residential	2	0.192	2033	71.9	86.5	47.3	69.7	3.68	39490	125	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$18,746
2610	109 Avenue	102 Street	103A Street	Residential Collector	2	0.503	2031	72.3	87.5	48.1	66.1	3.56	32325	161	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$52,077
2490	108 Avenue	102 Street	103A Street	Residential Collector	2	0.503	2031	72.4	78.7	55.4	59.4	2.85	36991	150	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$60,987
2860	106A Avenue	107 Street	108 Street	Residential Collector	2	0.183	2032	72.6	81.1	53.5	61.5	2.85	33492	153	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$18,443
1200	99 Avenue	109 Street	110 Street	Local Residential	2	0.211	2033	73.4	69.3	61.2	70.0	2.32	34658	131	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$20,606
1830	102 Street	107 Avenue	108 Avenue	Residential Collector	2	0.384	2032	74.3	81.1	57.4	55.0	2.88	31325	147	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$45,212
600	101 Avenue	Service	100 Street	Local Residential	2	0.052	2034	74.3	100.0	48.2	47.4	3.35	33991	99	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$4,909
450	Service	97 Street	104 Avenue	Local Residential	2	0.325	2034	74.4	100.0	47.2	52.7	3.62	29992	112	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$30,898
2330	103A Street	108 Avenue	109 Avenue	Residential Collector	2	0.219	2032	74.5	87.8	53.7	53.2	2.87	29992	147	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$25,793
2670	108A Avenue	107 Street	109 Street	Local Residential	2	0.344	2030	75.0	89.3	58.0	34.1	2.51	25327	90	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$42,878
2680	109 Street	108A Avenue	109 Avenue	Local Residential	2	0.227	2030	75.3	91.0	56.1	39.1	2.68	26326	97	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$28,296
580	101 Avenue	97 Street	98 Street	Local Residential	2	0.269	2034	75.4	95.5	48.1	63.1	3.40	32991	124	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$25,594
1550	105 Street	100 Avenue	101 Avenue	Local Residential	2	0.407	2035	76.2	91.6	56.1	41.9	2.83	28993	102	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$37,580
570	102 Avenue	98 Street	Service	Local Residential	2	0.276	2035	76.4	93.0	49.6	67.1	3.25	36657	124	GOOD	GOOD	GOOD</							

## **APPENDIX H**

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2019 Sidewalk Condition and Maintenance Levels

Priority Segment Listing

TOWN OF WESTLOCK  
**SIDEWALK CONDITION AND MAINTENANCE LEVEL LISTING**

SORT: Priority Ranking

SEGMENT ID	ON STREET	FROM	TO	BLOCK FACE	MATERIAL	SW TYPE	LENGTH	DATA DATE	TOTAL EQUIV. PANELS	SWCI	PRIORITY RANKING	HAZARD LEVEL	ZONE LEVEL	PED. LEVEL	TOTAL COST	PATCH2	CRACK SEAL	GRINDING	MUD-JACK/ LEVEL	MG-KRETE	RECON PANEL	RECON SEGMENT	TOTAL PANELS	
1270N	110 Street	100A Avenue	111 Street	N	PCC	M-SW	169.0	25/05/2019	130	42.0	1	High	Medium	Medium	\$87,880	\$0	\$0	\$0	\$0	\$0	\$0	\$87,880	130	
1210E	99 Avenue	110 Street	111 Street	E	PCC	<N/A>	88.7	25/05/2019	68	54.3	2	High	Medium	Medium	\$1,244	\$0	\$663	\$74	\$0	\$507	\$0	\$0	38	
1010E	97 Avenue	108 Street	109 Street	E	PCC	SFM	71.4	25/05/2019	55	61.3	3	High	Medium	Low	\$365	\$0	\$254	\$112	\$0	\$0	\$0	\$0	16	
1070E	98 Avenue	110 Street	111 Street	E	PCC	M-SW	87.4	25/05/2019	67	34.7	4	High	Medium	Medium	\$45,292	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,292	67
1570S	105 Street	102 Avenue	103 Avenue	S	PCC	M-SW	190.9	25/05/2019	147	40.5	5	High	Medium	Medium	\$43,555	\$0	\$761	\$37	\$0	\$0	\$42,757	\$0	86	
2540E	110A Avenue	Cul de Sac	103 Street	E	PCC	M-SW	100.7	25/05/2019	77	76.4	6	High	Medium	Medium	\$438	\$34	\$39	\$112	\$0	\$254	\$0	\$0	7	
1400N	107 Street	100 Avenue	101 Avenue	N	PCC	SF	194.8	25/05/2019	115	54.5	7	High	Medium	Medium	\$5,396	\$143	\$434	\$0	\$0	\$4,820	\$0	\$0	28	
1900E	110 Avenue	105 Street	106 Street	E	PCC	M-SW	53.4	25/05/2019	41	85.6	8	High	Medium	Medium	\$112	\$0	\$0	\$112	\$0	\$0	\$0	\$0	3	
1400S	107 Street	100 Avenue	101 Avenue	S	PCC	<N/A>	192.5	25/05/2019	113	50.6	9	High	High	High	\$1,805	\$71	\$1,199	\$0	\$0	\$536	\$0	\$0	49	
1260S	110 Street	99 Avenue	100A Avenue	S	PCC	SF	73.2	25/05/2019	56	64.3	10	High	Medium	Medium	\$681	\$0	\$390	\$37	\$0	\$254	\$0	\$0	22	
1080S	111 Street	98 Avenue	99 Avenue	S	PCC	M-SW	155.8	25/05/2019	120	23.5	11	High	Medium	Medium	\$81,120	\$0	\$0	\$0	\$0	\$0	\$0	\$81,120	120	
1260N	110 Street	99 Avenue	100A Avenue	N	PCC	SF	81.5	25/05/2019	63	41.4	12	High	Medium	Medium	\$42,588	\$0	\$0	\$0	\$0	\$0	\$0	\$42,588	63	
930E	99 Avenue	105 Street	106 Street	E	PCC	SFM	90.1	25/05/2019	69	61.3	13	Moderate	Medium	Medium	\$449	\$0	\$195	\$0	\$0	\$254	\$0	\$0	11	
920BE	99 Avenue	100 Street	105 Street	E	PCC	SF	92.2	25/05/2019	71	56.9	14	Moderate	Medium	Medium	\$369	\$0	\$332	\$37	\$0	\$0	\$0	\$0	18	
1110S	111 Street	110 Street	100 Avenue	S	PCC	M-SW	111.7	25/05/2019	86	55.9	15	Moderate	Medium	Medium	\$989	\$34	\$702	\$0	\$0	\$254	\$0	\$0	38	
2510S	103 Street	110 Avenue	103 Street	S	PCC	M-SSW	111.7	25/05/2019	86	73.1	16	Moderate	Medium	Medium	\$271	\$0	\$234	\$37	\$0	\$0	\$0	\$0	13	
2600N	104 Street	110 Avenue	111 Avenue	N	PCC	M-SW	214.6	25/05/2019	165	43.9	17	Moderate	Medium	Medium	\$2,137	\$0	\$1,326	\$558	\$0	\$254	\$0	\$0	84	
1980E	Service	104 Street	106 Street	E	PCC	SF	288.0	27/05/2019	222	63.2	18	Moderate	Medium	Medium	\$3,416	\$68	\$702	\$112	\$0	\$2,535	\$0	\$0	51	
1230S	109 Street	98 Avenue	99 Avenue	S	PCC	SF	158.5	25/05/2019	122	51.2	19	Moderate	Medium	Medium	\$1,399	\$34	\$858	\$0	\$0	\$507	\$0	\$0	47	
720N	94 Street	99 Avenue	100 Avenue	N	PCC	SF	171.7	27/05/2019	132	60.9	20	Moderate	Medium	Medium	\$716	\$34	\$429	\$0	\$0	\$254	\$0	\$0	24	
1780S	102 Street	102 Avenue	104 Avenue	S	PCC	SF	184.0	25/05/2019	142	60.8	21	Moderate	Medium	Medium	\$1,124	\$34	\$800	\$37	\$0	\$254	\$0	\$0	44	
1510S	106 Street	102 Avenue	103 Avenue	S	PCC	SF	186.4	25/05/2019	143	52.5	22	Moderate	Medium	Medium	\$1,478	\$0	\$1,151	\$74	\$0	\$254	\$0	\$0	62	
1780N	102 Street	102 Avenue	104 Avenue	N	PCC	<N/A>	187.2	25/05/2019	144	38.0	23	Moderate	Medium	Medium	\$1,477	\$34	\$683	\$0	\$0	\$761	\$0	\$0	39	
2600S	104 Street	110 Avenue	111 Avenue	S	PCC	M-SW	214.8	25/05/2019	165	57.9	24	Moderate	Medium	Medium	\$1,076	\$0	\$741	\$335	\$0	\$0	\$0	\$0	47	
430W	Service	93 Street	96 Street	W	PCC	SF	241.4	25/05/2019	186	47.2	25	Moderate	High	Medium	\$48,144	\$0	\$702	\$37	\$0	\$0	\$47,405	\$0	88	
2150N	103 Street	105 Avenue	106 Avenue	N	PCC	SF	251.6	27/05/2019	194	74.0	26	Moderate	High	Medium	\$564	\$0	\$527	\$37	\$0	\$0	\$0	\$0	28	
1990E	Service	106 Street	110 Street	E	PCC	SF	506.9	26/05/2019	390	74.7	27	Moderate	Medium	Medium	\$772	\$169	\$312	\$37	\$0	\$254	\$0	\$0	23	
1120W	100A Avenue	110 Street	109 Street	W	PCC	SF	114.9	25/05/2019	88	68.2	28	Low	Medium	Medium	\$722	\$0	\$468	\$0	\$0	\$254	\$0	\$0	25	
1270S	110 Street	100A Avenue	111 Street	S	PCC	SF	137.3	25/05/2019	106	48.6	29	Low	Medium	Medium	\$1,301	\$34	\$1,014	\$0	\$0	\$254	\$0	\$0	54	
1390S	107 Street	99 Avenue	100 Avenue	S	PCC	SF	187.8	25/05/2019	125	55.5	30	Low	High	High	\$1,283	\$45	\$563	\$0	\$0	\$675	\$0	\$0	28	
890E	100 Avenue	106 Street	107 Street	E	PCC	SF	87.4	25/05/2019	58	81.2	31	Low	High	High	\$158	\$0	\$158	\$0	\$0	\$0	\$0	\$0	7	
2700E	105 Street	106 Avenue	106 Street	E	PCC	SF	178.8	27/05/2019	138	64.0	32	Low	Medium	Medium	\$1,188	\$0	\$897	\$37	\$0	\$254	\$0	\$0	48	
2310S	103A Street	103A Street	107A Avenue	S	PCC	SF	230.6	27/05/2019	177	72.9	33	Low	Medium	Medium	\$521	\$34	\$488	\$0	\$0	\$0	\$0	\$0	26	
550E	102 Avenue	96 Street	97 Street	E	PCC	SF	82.8	27/05/2019	64	49.4	34	Low	High	High	\$1,385	\$0	\$624	\$0	\$0	\$761	\$0	\$0	35	
420AN	93 Street	End	104 Avenue	N	PCC	SF	51.6	25/05/2019	40	40.4	35	Low	High	Low	\$741	\$0	\$234	\$0	\$0	\$507	\$0	\$0	14	
920AE	99 Avenue	100 Street	105 Street	E	PCC	SF	18.1	25/05/2019	14	28.2	36	Low	Medium	Medium	\$9,464	\$0	\$0	\$0	\$0	\$0	\$0	\$9,464	14	
1090S	111 Street	99 Avenue	100A Avenue	S	PCC	M-SW	85.9	25/05/2019	66	31.3	37	Low	Medium	Medium	\$44,616	\$0	\$0	\$0	\$0	\$0	\$0	\$44,616	66	
1490S	106 Street	100 Avenue	101 Avenue	S	PCC	SF	185.4	25/05/2019	109	54.3	38	Low	High	High	\$995	\$0	\$995	\$0	\$0	\$0	\$0	\$0	39	
1520S	106 Street	103 Avenue	104 Avenue	S	PCC	SF	157.4	25/05/2019	121	35.1	39	Low	Medium	Medium	\$37,838	\$34	\$624	\$0	\$0	\$37,180	\$0	\$0	73	
830W	100 Avenue	98 Street	99 Street	W	PCC	SF	59.1	27/05/2019	45	57.9	40	Low	High	High	\$293	\$0	\$39	\$0	\$0	\$254	\$0	\$0	3	
2930W	105 Avenue	110 Street	End	N	PCC	M-SW	171.8	26/05/2019	132	37.0	41	Low	Medium	Medium	\$89,232	\$0	\$0	\$0	\$0	\$0	\$0	\$89,232	132	
810E	99A Avenue	99 Street	100 Street	E	PCC	SF	90.9	25/05/2019	70	39.8	42	Low	Medium	Medium	\$1,886	\$34	\$332	\$0	\$0	\$1,521	\$0	\$0	24	
2060W	105 Avenue	105 Street	106 Street	W	PCC	SF	67.8	27/05/2019	52	60.1	43	Low	High	High	\$541	\$34	\$507	\$0	\$0	\$0	\$0	\$0	27	
680S	95 Street	Cul de Sac	99 Avenue	S	PCC	M-SW	106.3	27/05/2019	82	40.5	44	Low	Medium	Medium	\$23,331	\$68	\$449	\$0	\$0	\$507	\$22,308	\$0	51	
2160N	103 Street	106 Avenue	107 Avenue	N	PCC	SF	172.9	27/05/2019	133	41.0	45	Low	Medium	Medium	\$1,277	\$68	\$1,209	\$0	\$0	\$0	\$0	\$0	64	
920W	99 Avenue	100 Street	105 Street	W	PCC	SFM	42.2	25/05/2019	32	41.5	46	Low	Medium	Medium	\$486	\$0	\$449	\$37	\$0	\$0	\$0	\$0	24	
2040E	105 Avenue	103 Street	104 Street	E	PCC	SF	118.7	27/05/2019	91	53.3	47	Low	High	Medium	\$1,151	\$0	\$1,151	\$0	\$0	\$0	\$0	\$0	59	
2930E	105 Avenue	110 Street	End	E	PCC	M-SW	168.0	26/05/2019	129	42.8	48	Low	Medium	Medium	\$1,519	\$0	\$722	\$37	\$0	\$761	\$0	\$0	41	
3030W	108A Avenue	110 Street	End	W	PCC	M-SW	41.7	26/05/2019	32	43.7	49	Low	Medium	Medium	\$293	\$0	\$293	\$0	\$0	\$0	\$0	\$0	15	
2060E	105 Avenue	105 Street	106 Street	E	PCC	SF	228.5	27/05/2019	176	62.6	50	Low	High	High	\$1,461	\$135	\$566	\$0	\$0	\$761	\$0	\$0	36	
860E	100 Avenue	100 Street	104 Street	E	PCC	SF	151.9	25/05/2019	117	63.3	51	Low	High	High	\$1,282	\$34	\$234	\$0	\$0	\$1,014	\$0	\$0	17	
1750E	101 Avenue	106 Street	107 Street	E	PCC	SFM	87.9	25/05/2019	68	45.2	52	Low	Medium	Medium	\$243	\$68	\$176	\$0	\$0	\$0	\$0	\$0	11	
1110N	111 Street	110 Street	100 Avenue	N	PCC	<N/A>	130.5	25/05/2019	100	46.1	53	Low	Medium	Medium	\$1,751	\$0	\$1,424	\$74	\$0	\$254	\$0	\$0	76	
1180W	100A Avenue	111 Street	Cul de Sac	W	PCC	M-SW	105.7	25/05/2019	81	46.5	54	Low	Medium	Medium	\$1,599	\$0	\$1,092	\$0	\$0	\$507	\$0	\$0	58	
820W	100 Avenue	97 Street	98 Street	W	PCC	SF	128.4	27/05/2019	99	57.3	55	Low	High	Medium	\$1,775	\$0	\$761	\$0	\$0	\$1,014	\$0	\$0	43	
1100S	111 Street	100A Avenue	110 Street	S	PCC	M-SW	88.5	25/05/2019	68	46.9	56	Low	Medium	Medium	\$1,151	\$0	\$897	\$0	\$0	\$254	\$0	\$0	47	
2300E	103A Street	106 Avenue	103A Street	E	PCC	SF	96.7	27/05/2019	74	47.0	57	Low	Medium	Medium	\$989	\$34	\$956	\$0	\$0	\$0	\$0	\$0	50	

TOWN OF WESTLOCK  
**SIDEWALK CONDITION AND MAINTENANCE LEVEL LISTING**

SORT: Priority Ranking

SEGMENT ID	ON STREET	FROM	TO	BLOCK FACE	MATERIAL	SW TYPE	LENGTH	DATA DATE	TOTAL EQUIV. PANELS	SWCI	PRIORITY RANKING	HAZARD LEVEL	ZONE LEVEL	PED. LEVEL	TOTAL COST	PATCH2	CRACK SEAL	GRINDING	MUD-JACK/ LEVEL	MG-KRETE	RECON PANEL	RECON SEGMENT	TOTAL PANELS
1390N	107 Street	99 Avenue	100 Avenue	N	PCC	SF	195.0	25/05/2019	130	47.4	58	Low	Medium	Medium	\$1,305	\$225	\$405	\$0	\$0	\$675	\$0	\$0	25
1190W	99 Avenue	108 Street	109 Street	W	PCC	<N/A>	39.2	25/05/2019	30	47.5	59	Low	Medium	Medium	\$9,373	\$0	\$78	\$0	\$0	\$0	\$9,295	\$0	14
2120E	104 Street	106 Avenue	107A Avenue	E	PCC	SF	174.5	27/05/2019	134	47.7	60	Low	Medium	Medium	\$2,140	\$34	\$1,346	\$0	\$0	\$761	\$0	\$0	73
2130E	104 Street	107A Avenue	106 Street	E	PCC	M-SW	87.2	27/05/2019	67	47.7	61	Low	Medium	Medium	\$700	\$0	\$663	\$37	\$0	\$0	\$0	\$0	35
680N	95 Street	Cul de Sac	99 Avenue	N	PCC	M-SW	95.4	27/05/2019	73	48.3	62	Low	Medium	Medium	\$2,179	\$34	\$878	\$0	\$0	\$1,268	\$0	\$0	51
1410S	107 Street	101 Avenue	102 Avenue	S	PCC	SF	192.8	25/05/2019	148	49.2	63	Low	Medium	Medium	\$709	\$68	\$605	\$37	\$0	\$0	\$0	\$0	34
300BN	99 Street	99A Avenue	100 Avenue	N	PCC	SF	78.9	25/05/2019	61	66.3	64	Low	High	High	\$560	\$34	\$273	\$0	\$0	\$254	\$0	\$0	16
2280E	106 Avenue	104 Street	105 Street	E	PCC	SF	91.6	27/05/2019	70	49.9	65	Low	Medium	Medium	\$644	\$0	\$644	\$0	\$0	\$0	\$0	\$0	33
2170S	103 Street	107 Avenue	107A Avenue	S	PCC	SF	78.7	26/05/2019	61	50.3	66	Low	Medium	Medium	\$1,131	\$0	\$624	\$0	\$0	\$507	\$0	\$0	34
1650E	102 Avenue	100 Street	101 Street	E	PCC	SF	133.8	27/05/2019	103	50.3	67	Low	Medium	Medium	\$1,480	\$0	\$1,190	\$37	\$0	\$254	\$0	\$0	63
2120W	104 Street	106 Avenue	107A Avenue	W	PCC	SF	173.5	27/05/2019	133	50.8	68	Low	Medium	Medium	\$1,619	\$0	\$1,619	\$0	\$0	\$0	\$0	\$0	83
360N	97 Street	100 Avenue S	100 Avenue N	N	PCC	SF	81.6	27/05/2019	63	61.0	69	Low	High	Medium	\$819	\$0	\$566	\$0	\$0	\$254	\$0	\$0	30
390N	97 Street	102 Avenue	104 Avenue	N	PCC	M-SW	238.0	27/05/2019	183	51.5	70	Low	Medium	Medium	\$1,170	\$0	\$917	\$0	\$0	\$254	\$0	\$0	48
870E	100 Avenue	104 Street	105 Street	E	PCC	SF	92.3	25/05/2019	54	67.9	71	Low	High	High	\$2,978	\$71	\$230	\$0	\$0	\$2,678	\$0	\$0	15
1670E	102 Avenue	102 Street	104 Street	E	PCC	SF	121.9	25/05/2019	94	52.0	72	Low	Medium	Medium	\$1,014	\$0	\$761	\$0	\$0	\$254	\$0	\$0	40
1790E	102 Street	104 Avenue	Service	E	PCC	SF	258.2	27/05/2019	199	52.1	73	Low	Medium	Medium	\$1,633	\$34	\$1,346	\$0	\$0	\$254	\$0	\$0	71
1180E	100A Avenue	111 Street	Cul de Sac	E	PCC	<N/A>	86.2	25/05/2019	66	52.5	74	Low	Medium	Medium	\$1,184	\$34	\$897	\$0	\$0	\$254	\$0	\$0	48
1620AS	104 Street	102 Avenue	103 Avenue	S	PCC	SFM	139.0	25/05/2019	107	52.7	75	Low	Medium	Medium	\$809	\$68	\$488	\$0	\$0	\$254	\$0	\$0	28
2170N	103 Street	107 Avenue	107A Avenue	N	PCC	SF	67.9	27/05/2019	52	53.0	76	Low	Medium	Medium	\$605	\$0	\$605	\$0	\$0	\$0	\$0	\$0	31
420BN	93 Street	End	104 Avenue	N	PCC	SF	29.1	25/05/2019	22	62.5	77	Low	High	Medium	\$117	\$0	\$117	\$0	\$0	\$0	\$0	\$0	6
300AN	99 Street	99A Avenue	100 Avenue	S	PCC	SF	143.5	25/05/2019	110	53.3	78	Low	Medium	Medium	\$2,165	\$0	\$897	\$0	\$0	\$1,268	\$0	\$0	51
2690S	105 Street	105 Avenue	106 Avenue	S	PCC	SF	162.4	27/05/2019	125	53.4	79	Low	Medium	Medium	\$5,616	\$0	\$800	\$0	\$0	\$4,817	\$0	\$0	60
1190E	99 Avenue	108 Street	109 Street	E	PCC	SF	47.1	25/05/2019	36	53.6	80	Low	Medium	Medium	\$326	\$34	\$293	\$0	\$0	\$0	\$0	\$0	16
730W	100 Avenue	94 Street	95 Street	W	PCC	<N/A>	79.1	27/05/2019	61	54.3	81	Low	Medium	Medium	\$697	\$34	\$410	\$0	\$0	\$254	\$0	\$0	23
1660E	102 Avenue	101 Street	102 Street	E	PCC	SF	81.5	25/05/2019	63	55.1	82	Low	Medium	Medium	\$683	\$0	\$429	\$0	\$0	\$254	\$0	\$0	23
2100N	104 Street	Service	105 Avenue	N	PCC	SFM	144.5	27/05/2019	111	55.3	83	Low	Medium	Medium	\$488	\$0	\$234	\$0	\$0	\$254	\$0	\$0	13
2710N	106 Street	105 Street	104 Street	N	PCC	SFM	269.4	26/05/2019	207	64.4	84	Low	High	Medium	\$1,707	\$34	\$332	\$74	\$0	\$1,268	\$0	\$0	25
1060E	98 Avenue	109 Street	110 Street	E	PCC	<N/A>	92.6	25/05/2019	71	55.6	85	Low	Medium	Medium	\$410	\$0	\$410	\$0	\$0	\$0	\$0	\$0	21
870W	100 Avenue	104 Street	105 Street	W	PCC	SFM	90.7	25/05/2019	53	70.4	86	Low	High	High	\$352	\$71	\$281	\$0	\$0	\$0	\$0	\$0	12
910W	100 Avenue	End	107 Street	W	PCC	SF	37.5	25/05/2019	25	56.0	87	Low	Medium	Medium	\$308	\$60	\$248	\$0	\$0	\$0	\$0	\$0	12
1570N	105 Street	102 Avenue	103 Avenue	N	PCC	SF	190.3	25/05/2019	146	56.3	88	Low	Medium	Medium	\$1,502	\$0	\$1,248	\$0	\$0	\$254	\$0	\$0	65
2200S	107A Avenue	107A Avenue	104 Street	S	PCC	SF	194.6	27/05/2019	150	56.3	89	Low	Medium	Medium	\$995	\$0	\$995	\$0	\$0	\$0	\$0	\$0	51
2960S	110 Street	Service	105 Avenue	S	PCC	M-SW	126.4	26/05/2019	97	56.3	90	Low	Medium	Medium	\$26,157	\$34	\$98	\$0	\$0	\$0	\$26,026	\$0	34
1020E	97 Avenue	109 Street	110 Street	E	PCC	SF	90.7	25/05/2019	70	42.8	91	Low	Medium	Low	\$15,847	\$0	\$215	\$0	\$0	\$761	\$14,872	\$0	30
1460N	106 Street	100 Street	98 Avenue	N	PCC	SFM	147.1	25/05/2019	113	58.3	92	Low	Medium	Medium	\$1,048	\$34	\$254	\$0	\$0	\$761	\$0	\$0	17
2200N	107A Avenue	107A Avenue	104 Street	N	PCC	SF	208.8	27/05/2019	161	58.3	93	Low	Medium	Medium	\$1,468	\$34	\$995	\$186	\$0	\$254	\$0	\$0	58
1480S	106 Street	99 Avenue	100 Avenue	S	PCC	<N/A>	188.7	25/05/2019	111	72.3	94	Low	High	High	\$867	\$0	\$332	\$0	\$0	\$536	\$0	\$0	14
420DN	93 Street	End	104 Avenue	N	PCC	SF	140.3	25/05/2019	108	66.9	95	Low	High	Medium	\$739	\$0	\$449	\$37	\$0	\$254	\$0	\$0	25
2080N	106 Street	Service	105 Avenue	N	PCC	SF	169.0	26/05/2019	130	66.9	96	Low	High	Medium	\$2,046	\$0	\$234	\$37	\$0	\$1,775	\$0	\$0	20
1420N	107 Street	102 Avenue	103 Avenue	N	PCC	SF	203.0	25/05/2019	156	58.6	97	Low	Medium	Medium	\$1,525	\$101	\$917	\$0	\$0	\$507	\$0	\$0	52
840E	100 Avenue	99 Street	Service	E	PCC	SF	73.2	27/05/2019	56	67.1	98	Low	High	Medium	\$702	\$0	\$195	\$0	\$0	\$507	\$0	\$0	12
1230N	109 Street	98 Avenue	99 Avenue	N	PCC	<N/A>	158.5	25/05/2019	122	59.3	99	Low	Medium	Medium	\$1,190	\$0	\$936	\$0	\$0	\$254	\$0	\$0	49
1250N	110 Street	98 Avenue	99 Avenue	N	PCC	SF	163.9	25/05/2019	126	59.4	100	Low	Medium	Medium	\$1,129	\$0	\$839	\$37	\$0	\$254	\$0	\$0	45
2190E	96 Avenue	110A Street	Town Limit	E	PCC	M-SW	167.6	27/05/2019	129	60.0	101	Low	Medium	Medium	\$1,048	\$34	\$761	\$0	\$0	\$254	\$0	\$0	41
2030E	105 Avenue	102 Street	103 Street	E	PCC	SF	124.2	27/05/2019	96	60.2	102	Low	Medium	Medium	\$936	\$0	\$936	\$0	\$0	\$0	\$0	\$0	48
810W	99A Avenue	99 Street	100 Street	W	PCC	SF	88.8	25/05/2019	68	60.3	103	Low	Medium	Medium	\$408	\$0	\$371	\$37	\$0	\$0	\$0	\$0	20
880E	100 Avenue	105 Street	106 Street	E	PCC	SF	88.8	25/05/2019	48	74.0	104	Low	High	High	\$805	\$0	\$222	\$0	\$0	\$583	\$0	\$0	9
2250E	106 Avenue	103 Street	103A Street	E	PCC	SF	98.0	27/05/2019	75	61.4	105	Low	Medium	Medium	\$1,073	\$0	\$566	\$0	\$0	\$507	\$0	\$0	31
1220N	109 Street	97 Avenue	98 Avenue	N	PCC	SF	204.3	25/05/2019	157	61.7	106	Low	Medium	Medium	\$626	\$101	\$488	\$37	\$0	\$0	\$0	\$0	29
1600S	104 Street	100 Avenue	101 Avenue	S	PCC	M-SW	107.2	25/05/2019	82	74.6	107	Low	High	High	\$152	\$0	\$78	\$74	\$0	\$0	\$0	\$0	6
290N	99 Street	98A Avenue	99A Avenue	N	PCC	SF	84.3	25/05/2019	65	62.1	108	Low	Medium	Medium	\$312	\$0	\$312	\$0	\$0	\$0	\$0	\$0	16
340N	97 Street	99 Avenue	99A Avenue	N	PCC	SFM	67.2	27/05/2019	52	69.9	109	Low	High	Medium	\$404	\$34	\$117	\$0	\$0	\$254	\$0	\$0	8
1490N	106 Street	100 Avenue	101 Avenue	N	PCC	SF	188.9	25/05/2019	90	75.0	110	Low	High	High	\$3,137	\$176	\$315	\$0	\$0	\$2,646	\$0	\$0	16
370S	97 Street	100 Avenue N	101 Avenue	S	PCC	SF	93.3	27/05/2019	72	62.6	111	Low	Medium	Medium	\$273	\$0	\$273	\$0	\$0	\$0	\$0	\$0	14
2110N	104 Street	105 Avenue	106 Avenue	N	PCC	SF	222.5	27/05/2019	171	62.7	112	Low	Medium	Medium	\$1,498	\$0	\$917	\$74	\$0	\$507	\$0	\$0	51
1240S	110 Street	97 Avenue	98 Avenue	S	PCC	SF	208.7	25/05/2019	161	62.8	113	Low	Medium	Medium	\$1,014	\$0	\$507	\$0	\$0	\$507	\$0	\$0	28
1250S	110 Street	98 Avenue	99 Avenue	S	PCC	SF	157.5	25/05/2019	121	63.0	114	Low	Medium	Medium	\$697	\$34	\$663	\$0	\$0	\$0	\$0	\$0	35

TOWN OF WESTLOCK  
**SIDEWALK CONDITION AND MAINTENANCE LEVEL LISTING**

SORT: Priority Ranking

SEGMENT ID	ON STREET	FROM	TO	BLOCK FACE	MATERIAL	SW TYPE	LENGTH	DATA DATE	TOTAL EQUIV. PANELS	SWCI	PRIORITY RANKING	HAZARD LEVEL	ZONE LEVEL	PED. LEVEL	TOTAL COST	PATCH2	CRACK SEAL	GRINDING	MUD-JACK/ LEVEL	MG-KRETE	RECON PANEL	RECON SEGMENT	TOTAL PANELS
1370N	107 Street	97 Avenue	98 Avenue	N	PCC	SFM	186.8	25/05/2019	144	63.1	115	Low	Medium	Medium	\$761	\$0	\$507	\$0	\$0	\$254	\$0	\$0	27
3170W	103 Avenue	106 Street	107 Street	W	PCC	SF	83.6	25/05/2019	64	63.3	116	Low	Medium	Medium	\$59	\$0	\$59	\$0	\$0	\$0	\$0	\$0	3
1460S	106 Street	100 Street	98 Avenue	S	PCC	SFM	86.3	25/05/2019	66	63.3	117	Low	Medium	Medium	\$507	\$0	\$507	\$0	\$0	\$0	\$0	\$0	26
1000E	97 Avenue	107 Street	108 Street	E	PCC	SFM	95.1	25/05/2019	73	51.5	118	Low	Medium	Low	\$215	\$0	\$215	\$0	\$0	\$0	\$0	\$0	11
340S	97 Street	99 Avenue	99A Avenue	S	PCC	SF	75.7	27/05/2019	58	63.9	119	Low	Medium	Medium	\$644	\$0	\$390	\$0	\$0	\$254	\$0	\$0	21
1380S	107 Street	98 Avenue	99 Avenue	S	PCC	SF	187.0	25/05/2019	144	63.9	120	Low	Medium	Medium	\$987	\$34	\$663	\$37	\$0	\$254	\$0	\$0	37
420CN	93 Street	End	104 Avenue	N	PCC	SF	43.7	25/05/2019	34	71.3	121	Low	High	Medium	\$215	\$0	\$215	\$0	\$0	\$0	\$0	\$0	11
260N	99 Street	Start of Curbs	97 Avenue	N	PCC	<N/A>	158.9	25/05/2019	122	52.6	122	Low	Medium	Low	\$619	\$34	\$332	\$0	\$0	\$254	\$0	\$0	19
1510N	106 Street	102 Avenue	103 Avenue	N	PCC	SF	190.1	25/05/2019	146	64.5	123	Low	Medium	Medium	\$2,340	\$0	\$566	\$0	\$0	\$1,775	\$0	\$0	36
1240N	110 Street	97 Avenue	98 Avenue	N	PCC	SF	205.6	25/05/2019	158	64.5	124	Low	Medium	Medium	\$1,305	\$0	\$761	\$37	\$0	\$507	\$0	\$0	42
3160W	103 Avenue	105 Street	106 Street	W	PCC	SF	88.5	25/05/2019	68	65.1	125	Low	Medium	Medium	\$702	\$0	\$195	\$0	\$0	\$507	\$0	\$0	12
360S	97 Street	100 Avenue S	100 Avenue N	S	PCC	SF	86.1	27/05/2019	66	65.2	126	Low	Medium	Medium	\$809	\$68	\$234	\$0	\$0	\$507	\$0	\$0	16
830E	100 Avenue	98 Street	99 Street	E	PCC	SF	57.4	27/05/2019	44	72.3	127	Low	High	Medium	\$424	\$34	\$137	\$0	\$0	\$254	\$0	\$0	9
690AE	99 Avenue	End	95 Street	E	PCC	M-SW	20.0	27/05/2019	15	65.4	128	Low	Medium	Medium	\$59	\$0	\$59	\$0	\$0	\$0	\$0	\$0	3
440W	Service	96 Street	97 Street	W	PCC	SF	83.6	25/05/2019	64	72.3	129	Low	High	Medium	\$371	\$0	\$371	\$0	\$0	\$0	\$0	\$0	19
1120E	100A Avenue	110 Street	109 Street	E	PCC	SF	75.1	25/05/2019	58	66.0	130	Low	Medium	Medium	\$507	\$0	\$254	\$0	\$0	\$254	\$0	\$0	14
410N	96 Street	End	Service	N	PCC	<N/A>	58.6	25/05/2019	45	77.4	131	Low	High	High	\$371	\$0	\$117	\$0	\$0	\$254	\$0	\$0	7
1200E	99 Avenue	109 Street	110 Street	E	PCC	SF	96.9	25/05/2019	75	66.2	132	Low	Medium	Medium	\$488	\$0	\$234	\$0	\$0	\$254	\$0	\$0	13
1730E	101 Avenue	104 Street	105 Street	E	PCC	SFM	92.8	25/05/2019	71	66.4	133	Low	Medium	Medium	\$273	\$0	\$20	\$0	\$0	\$254	\$0	\$0	2
760N	95 Street	99A Avenue	100 Avenue	N	PCC	SF	78.8	27/05/2019	61	66.4	134	Low	Medium	Medium	\$137	\$0	\$137	\$0	\$0	\$0	\$0	\$0	7
1630S	104 Street	103 Avenue	104 Avenue	S	PCC	SFM	75.4	25/05/2019	58	66.6	135	Low	Medium	Medium	\$273	\$0	\$273	\$0	\$0	\$0	\$0	\$0	14
1380N	107 Street	98 Avenue	99 Avenue	N	PCC	SF	195.9	25/05/2019	151	66.7	136	Low	Medium	Medium	\$271	\$0	\$234	\$37	\$0	\$0	\$0	\$0	13
2050E	105 Avenue	104 Street	105 Street	E	PCC	SF	91.5	27/05/2019	70	66.7	137	Low	Medium	Medium	\$410	\$0	\$410	\$0	\$0	\$0	\$0	\$0	21
720S	94 Street	99 Avenue	100 Avenue	S	PCC	M-SW	186.9	27/05/2019	144	67.3	138	Low	Medium	Medium	\$1,534	\$169	\$351	\$0	\$0	\$1,014	\$0	\$0	27
1200W	99 Avenue	109 Street	110 Street	W	PCC	SF	90.5	25/05/2019	70	67.6	139	Low	Medium	Medium	\$564	\$0	\$273	\$37	\$0	\$254	\$0	\$0	16
1480N	106 Street	99 Avenue	100 Avenue	N	PCC	SF	188.0	25/05/2019	111	79.0	140	Low	High	High	\$307	\$116	\$128	\$64	\$0	\$0	\$0	\$0	8
1870E	110 Avenue	103 Street	103A Street	E	PCC	M-SW	79.4	25/05/2019	61	68.9	141	Low	Medium	Medium	\$215	\$0	\$215	\$0	\$0	\$0	\$0	\$0	11
860W	100 Avenue	100 Street	104 Street	W	PCC	SFM	139.6	25/05/2019	107	75.2	142	Low	High	Medium	\$408	\$0	\$371	\$37	\$0	\$0	\$0	\$0	20
350S	97 Street	99A Avenue	100 Avenue	S	PCC	SF	88.0	27/05/2019	68	69.0	143	Low	Medium	Medium	\$168	\$34	\$98	\$37	\$0	\$0	\$0	\$0	7
1410N	107 Street	101 Avenue	102 Avenue	N	PCC	<N/A>	192.5	25/05/2019	148	69.1	144	Low	Medium	Medium	\$1,945	\$34	\$390	\$0	\$0	\$1,521	\$0	\$0	27
750W	99A Avenue	97 Street	95 Street	W	PCC	SF	193.3	27/05/2019	149	69.4	145	Low	Medium	Medium	\$1,154	\$101	\$546	\$0	\$0	\$507	\$0	\$0	33
760S	95 Street	99A Avenue	100 Avenue	S	PCC	SF	91.2	27/05/2019	70	69.9	146	Low	Medium	Medium	\$507	\$0	\$254	\$0	\$0	\$254	\$0	\$0	14
380S	97 Street	100 Avenue N	101 Avenue	S	PCC	SFM	85.9	27/05/2019	66	70.1	147	Low	Medium	Medium	\$468	\$0	\$215	\$0	\$0	\$254	\$0	\$0	12
280N	99 Street	98 Avenue	98A Avenue	N	PCC	SF	152.4	25/05/2019	117	70.3	148	Low	Medium	Medium	\$619	\$34	\$585	\$0	\$0	\$0	\$0	\$0	31
2130W	104 Street	107A Avenue	106 Street	W	PCC	SF	88.2	27/05/2019	68	70.5	149	Low	Medium	Medium	\$663	\$0	\$410	\$0	\$0	\$254	\$0	\$0	22
2190W	96 Avenue	110A Street	Town Limit	W	PCC	SF	167.7	27/05/2019	129	71.0	150	Low	Medium	Medium	\$775	\$34	\$488	\$0	\$0	\$254	\$0	\$0	27
1500N	106 Street	101 Avenue	102 Avenue	N	PCC	SF	190.3	25/05/2019	146	71.0	151	Low	Medium	Medium	\$711	\$68	\$390	\$0	\$0	\$254	\$0	\$0	23
740W	100 Avenue	95 Street	97 Street	W	PCC	SF	174.8	27/05/2019	134	71.1	152	Low	Medium	Medium	\$1,424	\$0	\$410	\$0	\$0	\$1,014	\$0	\$0	25
1860E	110 Avenue	102 Street	103 Street	E	PCC	M-SSW	139.9	25/05/2019	108	71.2	153	Low	Medium	Medium	\$488	\$0	\$488	\$0	\$0	\$0	\$0	\$0	25
910E	100 Avenue	End	107 Street	E	PCC	SF	39.7	25/05/2019	26	71.6	154	Low	Medium	Medium	\$158	\$0	\$158	\$0	\$0	\$0	\$0	\$0	7
2180W	107A Avenue	103 Street	103A Street	W	PCC	M-SW	98.0	27/05/2019	75	71.7	155	Low	Medium	Medium	\$115	\$0	\$78	\$37	\$0	\$0	\$0	\$0	5
1370S	107 Street	97 Avenue	98 Avenue	S	PCC	SF	183.8	25/05/2019	141	71.8	156	Low	Medium	Medium	\$773	\$34	\$449	\$37	\$0	\$254	\$0	\$0	26
1220S	109 Street	97 Avenue	98 Avenue	S	PCC	SF	205.0	24/05/2019	158	71.8	157	Low	Medium	Medium	\$2,040	\$34	\$702	\$37	\$0	\$1,268	\$0	\$0	43
350N	97 Street	99A Avenue	100 Avenue	N	PCC	SF	91.0	27/05/2019	70	77.5	158	Low	High	Medium	\$1,073	\$0	\$59	\$0	\$0	\$1,014	\$0	\$0	7
750E	99A Avenue	97 Street	95 Street	E	PCC	SF	179.5	27/05/2019	138	72.2	159	Low	Medium	Medium	\$449	\$0	\$449	\$0	\$0	\$0	\$0	\$0	23
2100S	104 Street	Service	105 Avenue	S	PCC	SF	142.3	27/05/2019	109	72.3	160	Low	Medium	Medium	\$449	\$0	\$449	\$0	\$0	\$0	\$0	\$0	23
690W	99 Avenue	End	95 Street	W	PCC	M-SW	109.7	27/05/2019	84	72.6	161	Low	Medium	Medium	\$722	\$0	\$215	\$0	\$0	\$507	\$0	\$0	13
880W	100 Avenue	105 Street	106 Street	W	PCC	SF	91.4	25/05/2019	49	81.8	162	Low	High	High	\$139	\$0	\$139	\$0	\$0	\$0	\$0	\$0	5
3150W	103 Avenue	104 Street	105 Street	W	PCC	SF	87.5	25/05/2019	67	73.1	163	Low	Medium	Medium	\$351	\$0	\$98	\$0	\$0	\$254	\$0	\$0	6
690BE	99 Avenue	End	95 Street	E	PCC	SF	86.8	27/05/2019	67	73.2	164	Low	Medium	Medium	\$268	\$34	\$234	\$0	\$0	\$0	\$0	\$0	13
700E	99 Avenue	95 Street	96 Street	S	PCC	SF	99.9	27/05/2019	77	73.4	165	Low	Medium	Medium	\$463	\$34	\$176	\$0	\$0	\$254	\$0	\$0	11
2110S	104 Street	105 Avenue	106 Avenue	S	PCC	SF	230.4	27/05/2019	177	73.4	166	Low	Medium	Medium	\$700	\$0	\$663	\$37	\$0	\$0	\$0	\$0	35
2960N	110 Street	Service	106 Avenue	N	PCC	M-SW	133.3	26/05/2019	103	73.7	167	Low	Medium	Medium	\$351	\$0	\$351	\$0	\$0	\$0	\$0	\$0	18
2790S	109 Street	108 Avenue	106 Avenue	S	PCC	M-SW	195.9	26/05/2019	151	73.9	168	Low	Medium	Medium	\$677	\$34	\$390	\$0	\$0	\$254	\$0	\$0	22
2180E	107A Avenue	103 Street	103A Street	E	PCC	M-SW	112.4	26/05/2019	86	74.5	169	Low	Medium	Medium	\$468	\$0	\$468	\$0	\$0	\$0	\$0	\$0	24
540N	96 Street	102 Avenue	End	N	PCC	SF	53.3	27/05/2019	41	83.1	170	Low	High	High	\$312	\$0	\$59	\$0	\$0	\$254	\$0	\$0	4
1620BS	104 Street	102 Avenue	103 Avenue	S	PCC	SFM	36.5	25/05/2019	28	75.1	171	Low	Medium	Medium	\$174	\$0	\$137	\$37	\$0	\$0	\$0	\$0	8

TOWN OF WESTLOCK  
**SIDEWALK CONDITION AND MAINTENANCE LEVEL LISTING**

SORT: Priority Ranking

SEGMENT ID	ON STREET	FROM	TO	BLOCK FACE	MATERIAL	SW TYPE	LENGTH	DATA DATE	TOTAL EQUIV. PANELS	SWCI	PRIORITY RANKING	HAZARD LEVEL	ZONE LEVEL	PED. LEVEL	TOTAL COST	PATCH2	CRACK SEAL	GRINDING	MUD-JACK/ LEVEL	MG-KRETE	RECON PANEL	RECON SEGMENT	TOTAL PANELS
2240E	106 Avenue	102 Street	103 Street	E	PCC	SFM	124.1	27/05/2019	95	75.1	172	Low	Medium	Medium	\$307	\$34	\$273	\$0	\$0	\$0	\$0	\$0	15
2410N	101 Street	107 Avenue	108 Avenue	N	PCC	<N/A>	176.3	26/05/2019	136	67.6	173	Low	Medium	Low	\$622	\$0	\$332	\$37	\$0	\$254	\$0	\$0	19
1500S	106 Street	101 Avenue	102 Avenue	S	PCC	SF	190.2	25/05/2019	146	76.1	174	Low	Medium	Medium	\$892	\$34	\$351	\$0	\$0	\$507	\$0	\$0	21
1470N	106 Street	98 Avenue	99 Avenue	N	PCC	SFM	188.8	25/05/2019	145	76.2	175	Low	Medium	Medium	\$541	\$34	\$254	\$0	\$0	\$254	\$0	\$0	15
2530S	103 Street	111 Avenue	End	S	PCC	M-SSW	121.2	25/05/2019	93	76.7	176	Low	Medium	Medium	\$152	\$0	\$78	\$74	\$0	\$0	\$0	\$0	6
270N	99 Street	97 Avenue	98 Avenue	N	PCC	SF	191.8	25/05/2019	148	77.5	177	Low	Medium	Medium	\$770	\$68	\$195	\$0	\$0	\$507	\$0	\$0	14
940E	99 Avenue	106 Street	107 Street	E	PCC	SFM	38.4	25/05/2019	30	77.6	178	Low	Medium	Medium	\$326	\$34	\$39	\$0	\$0	\$254	\$0	\$0	4
2970S	110 Street	105 Avenue	106 Avenue	S	PCC	<N/A>	254.6	26/05/2019	196	78.0	179	Low	Medium	Medium	\$499	\$169	\$293	\$37	\$0	\$0	\$0	\$0	21
280S	99 Street	98 Avenue	98A Avenue	S	PCC	SF	150.8	25/05/2019	116	78.4	180	Low	Medium	Medium	\$970	\$34	\$176	\$0	\$0	\$761	\$0	\$0	13
2150S	103 Street	105 Avenue	106 Avenue	S	PCC	SF	249.2	27/05/2019	192	79.0	181	Low	Medium	Medium	\$307	\$34	\$273	\$0	\$0	\$0	\$0	\$0	15
2870W	106A Avenue	108 Street	106A Avenue	W	PCC	M-SW	98.0	26/05/2019	75	79.0	182	Low	Medium	Medium	\$534	\$68	\$176	\$37	\$0	\$254	\$0	\$0	13
330S	97 Street	98A Avenue	99 Avenue	S	PCC	SF	86.8	27/05/2019	67	79.8	183	Low	Medium	Medium	\$663	\$0	\$156	\$0	\$0	\$507	\$0	\$0	10
2340N	103A Street	109 Avenue	110 Avenue	N	PCC	M-SW	86.2	25/05/2019	66	79.8	184	Low	Medium	Medium	\$546	\$0	\$39	\$0	\$0	\$507	\$0	\$0	4
100BS	100 Street	97 Avenue	98 Avenue	S	PCC	SFM	185.6	25/05/2019	143	79.9	185	Low	Medium	Medium	\$195	\$0	\$195	\$0	\$0	\$0	\$0	\$0	10
2140N	103 Street	End	105 Avenue	N	PCC	<N/A>	72.1	27/05/2019	55	79.9	186	Low	Medium	Medium	\$332	\$0	\$78	\$0	\$0	\$254	\$0	\$0	5
2540W	110A Avenue	Cul de Sac	103 Street	W	PCC	M-SW	113.7	25/05/2019	87	80.3	187	Low	Medium	Medium	\$654	\$34	\$39	\$74	\$0	\$507	\$0	\$0	7
1470S	106 Street	98 Avenue	99 Avenue	S	PCC	SFM	189.9	25/05/2019	146	80.4	188	Low	Medium	Medium	\$293	\$0	\$293	\$0	\$0	\$0	\$0	\$0	15
2880E	106A Avenue	106A Avenue	109 Street	E	PCC	M-SW	80.7	26/05/2019	62	80.5	189	Low	Medium	Medium	\$566	\$0	\$59	\$0	\$0	\$507	\$0	\$0	5
2770E	108 Avenue	106 Street	107 Street	E	PCC	M-SW	84.6	26/05/2019	65	80.7	190	Low	Medium	Medium	\$96	\$0	\$59	\$37	\$0	\$0	\$0	\$0	4
1550N	105 Street	100 Avenue	101 Avenue	N	PCC	M-SW	185.9	25/05/2019	143	80.8	191	Low	Medium	Medium	\$443	\$34	\$156	\$0	\$0	\$254	\$0	\$0	10
1740E	101 Avenue	105 Street	106 Street	E	PCC	SFM	91.6	25/05/2019	70	81.1	192	Low	Medium	Medium	\$98	\$0	\$98	\$0	\$0	\$0	\$0	\$0	5
9999W	School	106 Street	106 Street	W	PCC	M-SW	243.4	26/05/2019	187	87.4	193	Low	High	High	\$59	\$0	\$59	\$0	\$0	\$0	\$0	\$0	3
2580E	111 Avenue	104 Street	105 Street	E	PCC	M-SW	180.4	25/05/2019	139	81.4	194	Low	Medium	Medium	\$566	\$0	\$59	\$0	\$0	\$507	\$0	\$0	5
710E	99 Avenue	96 Street	97 Street	E	PCC	SF	84.9	27/05/2019	65	81.5	195	Low	Medium	Medium	\$404	\$34	\$117	\$0	\$0	\$254	\$0	\$0	8
2610E	109 Avenue	102 Street	103A Street	E	PCC	M-SW	234.8	25/05/2019	181	81.7	196	Low	Medium	Medium	\$53	\$34	\$20	\$0	\$0	\$0	\$0	\$0	2
800E	98 Avenue	99 Street	100 Street	E	PCC	SF	90.5	25/05/2019	70	81.9	197	Low	Medium	Medium	\$131	\$34	\$98	\$0	\$0	\$0	\$0	\$0	6
2520S	103 Street	103 Street	111 Avenue	S	PCC	M-SSW	98.8	25/05/2019	76	82.1	198	Low	Medium	Medium	\$369	\$0	\$78	\$37	\$0	\$254	\$0	\$0	6
2970N	110 Street	105 Avenue	106 Avenue	N	PCC	M-SW	268.6	26/05/2019	207	82.2	199	Low	Medium	Medium	\$1,052	\$135	\$156	\$0	\$0	\$761	\$0	\$0	15
2810E	108 Street	106A Avenue	106A Avenue	E	PCC	M-SSW	82.2	26/05/2019	63	82.2	200	Low	Medium	Medium	\$507	\$0	\$0	\$0	\$0	\$507	\$0	\$0	2
820E	100 Avenue	97 Street	98 Street	E	PCC	SF	122.0	27/05/2019	94	82.5	201	Low	Medium	Medium	\$399	\$68	\$78	\$0	\$0	\$254	\$0	\$0	7
2080S	106 Street	Service	105 Avenue	S	PCC	SF	141.3	27/05/2019	109	86.1	202	Low	High	Medium	\$73	\$34	\$39	\$0	\$0	\$0	\$0	\$0	3
270S	99 Street	97 Avenue	98 Avenue	S	PCC	SF	212.8	25/05/2019	164	82.6	203	Low	Medium	Medium	\$408	\$0	\$117	\$37	\$0	\$254	\$0	\$0	8
2980N	110 Street	106 Avenue	106A Avenue	N	PCC	M-SW	105.8	26/05/2019	81	83.0	204	Low	Medium	Medium	\$112	\$34	\$78	\$0	\$0	\$0	\$0	\$0	5
2870E	106A Avenue	108 Street	106A Avenue	E	PCC	M-SW	70.9	26/05/2019	55	83.8	205	Low	Medium	Medium	\$163	\$68	\$59	\$37	\$0	\$0	\$0	\$0	6
1450N	107 Street	End of Off Ramp	104 Avenue	N	PCC	SFM	189.4	27/05/2019	146	84.0	206	Low	Medium	Medium	\$449	\$0	\$195	\$0	\$0	\$254	\$0	\$0	11
1360N	107 Street	100 Street	97 Avenue	N	PCC	SFM	73.7	25/05/2019	57	79.0	207	Low	Medium	Low	\$78	\$0	\$78	\$0	\$0	\$0	\$0	\$0	4
1130S	109 Street	100A Avenue	100 Avenue	S	PCC	M-SW	97.2	25/05/2019	75	84.2	208	Low	Medium	Medium	\$154	\$0	\$117	\$37	\$0	\$0	\$0	\$0	7
1810N	102 Street	105 Avenue	106 Avenue	N	PCC	SFM	251.8	27/05/2019	194	84.3	209	Low	Medium	Medium	\$491	\$101	\$137	\$0	\$0	\$254	\$0	\$0	11
2780W	108 Avenue	107 Street	109 Street	W	PCC	M-SW	192.3	26/05/2019	148	84.6	210	Low	Medium	Medium	\$702	\$0	\$195	\$0	\$0	\$507	\$0	\$0	12
2630E	109 Avenue	106 Street	107 Street	E	PCC	M-SW	78.5	26/05/2019	60	84.9	211	Low	Medium	Medium	\$53	\$34	\$20	\$0	\$0	\$0	\$0	\$0	2
2840S	107 Street	106A Avenue	108 Avenue	S	PCC	M-SW	189.8	26/05/2019	146	85.1	212	Low	Medium	Medium	\$566	\$0	\$59	\$0	\$0	\$507	\$0	\$0	5
2850E	106A Avenue	106 Street	107 Street	E	PCC	M-SW	77.5	26/05/2019	60	85.2	213	Low	Medium	Medium	\$90	\$34	\$20	\$37	\$0	\$0	\$0	\$0	3
2890E	106A Avenue	109 Street	110 Street	E	PCC	M-SW	79.3	26/05/2019	61	85.9	214	Low	Medium	Medium	\$273	\$0	\$20	\$0	\$0	\$254	\$0	\$0	2
2560E	111 Avenue	103 Street	103A Street	E	PCC	M-SW	192.3	25/05/2019	148	86.0	215	Low	Medium	Medium	\$156	\$0	\$156	\$0	\$0	\$0	\$0	\$0	8
2800S	108 Street	106A Avenue	106A Avenue	S	PCC	M-SW	89.3	26/05/2019	69	86.3	216	Low	Medium	Medium	\$312	\$0	\$59	\$0	\$0	\$254	\$0	\$0	4
2920E	105 Avenue	109 Street	110 Street	E	PCC	M-SW	78.7	26/05/2019	61	86.4	217	Low	Medium	Medium	\$126	\$68	\$59	\$0	\$0	\$0	\$0	\$0	5
1850N	102 Street	109 Avenue	110 Avenue	N	PCC	M-SW	87.2	25/05/2019	67	86.4	218	Low	Medium	Medium	\$158	\$101	\$20	\$37	\$0	\$0	\$0	\$0	5
1900W	110 Avenue	105 Street	106 Street		<N/A>	<N/A>	43.4	25/05/2019	33	86.5	219	Low	Medium	Medium	\$254	\$0	\$0	\$0	\$0	\$254	\$0	\$0	1
1890W	110 Avenue	104 Street	105 Street	W	PCC	M-SW	171.9	25/05/2019	132	86.6	220	Low	Medium	Medium	\$293	\$0	\$39	\$0	\$0	\$254	\$0	\$0	3
1600N	104 Street	100 Avenue	101 Avenue	N	PCC	M-SW	190.2	25/05/2019	146	86.7	221	Low	Medium	Medium	\$98	\$0	\$98	\$0	\$0	\$0	\$0	\$0	5
2820W	106A Avenue	106A Avenue	Cul de Sac	W	PCC	M-SW	57.2	26/05/2019	44	86.8	222	Low	Medium	Medium	\$273	\$0	\$20	\$0	\$0	\$254	\$0	\$0	2
2590N	105 Street	111 Avenue	110 Avenue	N	PCC	M-SW	190.8	25/05/2019	147	86.8	223	Low	Medium	Medium	\$326	\$34	\$39	\$0	\$0	\$254	\$0	\$0	4
2850W	106A Avenue	106 Street	107 Street	W	PCC	M-SW	82.9	26/05/2019	64	87.0	224	Low	Medium	Medium	\$293	\$0	\$39	\$0	\$0	\$254	\$0	\$0	3
570E	102 Avenue	98 Street	Service	E	PCC	SFM	121.7	27/05/2019	94	87.6	225	Low	Medium	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
1820N	102 Street	106 Avenue	107 Avenue	N	PCC	SFM	162.5	27/05/2019	125	87.7	226	Low	Medium	Medium	\$199	\$101	\$98	\$0	\$0	\$0	\$0	\$0	8
890W	100 Avenue	106 Street	107 Street	W	PCC	SF	87.5	25/05/2019	58	92.0	227	Low	High	High	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
1800N	102 Street	Service	105 Avenue	N	PCC	SFM	142.6	27/05/2019	110	88.3	228	Low	Medium	Medium	\$112	\$34	\$78	\$0	\$0	\$0	\$0	\$0	5

TOWN OF WESTLOCK  
**SIDEWALK CONDITION AND MAINTENANCE LEVEL LISTING**

SORT: Priority Ranking

SEGMENT ID	ON STREET	FROM	TO	BLOCK FACE	MATERIAL	SW TYPE	LENGTH	DATA DATE	TOTAL EQUIV. PANELS	SWCI	PRIORITY RANKING	HAZARD LEVEL	ZONE LEVEL	PED. LEVEL	TOTAL COST	PATCH2	CRACK SEAL	GRINDING	MUD-JACK/ LEVEL	MG-KRETE	RECON PANEL	RECON SEGMENT	TOTAL PANELS
2730N	106 Street	106A Avenue	108 Avenue	N	PCC	M-SW	191.3	26/05/2019	147	88.7	229	Low	Medium	Medium	\$165	\$68	\$98	\$0	\$0	\$0	\$0	\$0	7
2390E	107 Avenue	101 Street	102 Street	E	PCC	M-SW	86.5	26/05/2019	67	85.0	230	Low	Medium	Low	\$98	\$0	\$98	\$0	\$0	\$0	\$0	\$0	5
1540N	105 Street	99 Avenue	100 Avenue	N	PCC	M-SW	184.0	25/05/2019	142	88.9	231	Low	Medium	Medium	\$156	\$0	\$156	\$0	\$0	\$0	\$0	\$0	8
2570E	111 Avenue	103A Street	104 Street	E	PCC	M-SW	96.3	25/05/2019	74	88.9	232	Low	Medium	Medium	\$287	\$34	\$0	\$0	\$0	\$254	\$0	\$0	2
2320S	103A Street	107A Avenue	108 Avenue	S	PCC	M-SW	96.2	26/05/2019	74	88.9	233	Low	Medium	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
2830S	106A Avenue	106A Avenue	Cul de Sac	S	PCC	M-SW	36.9	26/05/2019	28	89.0	234	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
1880E	110 Avenue	103A Street	104 Street	E	PCC	M-SW	83.9	25/05/2019	65	89.0	235	Low	Medium	Medium	\$94	\$0	\$20	\$74	\$0	\$0	\$0	\$0	3
1530N	105 Street	100 Street	99 Avenue	N	PCC	M-SW	189.3	25/05/2019	146	89.1	236	Low	Medium	Medium	\$78	\$0	\$78	\$0	\$0	\$0	\$0	\$0	4
2790N	109 Street	108 Avenue	106A Avenue	N	PCC	M-SW	215.2	26/05/2019	166	89.3	237	Low	Medium	Medium	\$351	\$0	\$98	\$0	\$0	\$254	\$0	\$0	6
2840N	107 Street	106A Avenue	108 Avenue	N	PCC	M-SW	191.9	26/05/2019	148	89.4	238	Low	Medium	Medium	\$92	\$34	\$59	\$0	\$0	\$0	\$0	\$0	4
2860E	106A Avenue	107 Street	108 Street	E	PCC	M-SW	78.2	26/05/2019	60	89.5	239	Low	Medium	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
2780E	108 Avenue	107 Street	109 Street	E	PCC	M-SW	212.2	26/05/2019	163	89.7	240	Low	Medium	Medium	\$137	\$0	\$137	\$0	\$0	\$0	\$0	\$0	7
590E	101 Avenue	98 Street	Service	E	PCC	SFM	124.4	27/05/2019	96	89.8	241	Low	Medium	Medium	\$53	\$34	\$20	\$0	\$0	\$0	\$0	\$0	2
2920W	105 Avenue	109 Street	110 Street	W	PCC	M-SW	90.6	26/05/2019	70	89.9	242	Low	Medium	Medium	\$117	\$0	\$117	\$0	\$0	\$0	\$0	\$0	6
2490W	108 Avenue	102 Street	103A Street	W	PCC	M-SW	235.3	26/05/2019	181	90.0	243	Low	Medium	Medium	\$73	\$34	\$39	\$0	\$0	\$0	\$0	\$0	3
2330N	103A Street	108 Avenue	109 Avenue	N	PCC	M-SW	97.2	25/05/2019	75	90.0	244	Low	Medium	Medium	\$34	\$34	\$0	\$0	\$0	\$0	\$0	\$0	1
2350N	103A Street	110 Avenue	111 Avenue	N	PCC	M-SW	224.0	25/05/2019	172	90.1	245	Low	Medium	Medium	\$98	\$0	\$98	\$0	\$0	\$0	\$0	\$0	5
2770W	108 Avenue	106 Street	107 Street	W	PCC	M-SW	76.6	26/05/2019	59	90.1	246	Low	Medium	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
3010N	110 Street	108A Avenue	109 Avenue	N	PCC	M-SW	120.4	26/05/2019	93	90.2	247	Low	Medium	Medium	\$124	\$68	\$20	\$37	\$0	\$0	\$0	\$0	4
2830N	106A Avenue	106A Avenue	Cul de Sac	N	PCC	M-SW	35.3	26/05/2019	27	90.2	248	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2980S	110 Street	106 Avenue	106A Avenue	S	PCC	M-SW	85.4	26/05/2019	66	90.2	249	Low	Medium	Medium	\$92	\$34	\$59	\$0	\$0	\$0	\$0	\$0	4
2910E	106 Avenue	109 Street	110 Street	E	PCC	M-SW	86.7	26/05/2019	67	90.3	250	Low	Medium	Medium	\$92	\$34	\$59	\$0	\$0	\$0	\$0	\$0	4
2660S	107 Street	109 Avenue	108A Avenue	W	PCC	M-SW	79.4	26/05/2019	61	90.3	251	Low	Medium	Medium	\$74	\$0	\$0	\$74	\$0	\$0	\$0	\$0	2
2880W	106A Avenue	106A Avenue	109 Street	W	PCC	M-SW	107.3	26/05/2019	83	90.3	252	Low	Medium	Medium	\$273	\$0	\$20	\$0	\$0	\$254	\$0	\$0	2
2670W	108A Avenue	107 Street	109 Street	W	PCC	M-SW	183.1	26/05/2019	141	90.7	253	Low	Medium	Medium	\$137	\$0	\$137	\$0	\$0	\$0	\$0	\$0	7
2320N	103A Street	107A Avenue	108 Avenue	N	PCC	M-SW	98.1	27/05/2019	75	90.8	254	Low	Medium	Medium	\$59	\$0	\$59	\$0	\$0	\$0	\$0	\$0	3
1880W	110 Avenue	103A Street	104 Street	W	PCC	M-SW	90.9	25/05/2019	70	91.4	255	Low	Medium	Medium	\$37	\$0	\$0	\$37	\$0	\$0	\$0	\$0	1
2990N	110 Street	106A Avenue	108 Avenue	N	PCC	M-SW	164.3	26/05/2019	126	91.4	256	Low	Medium	Medium	\$98	\$0	\$98	\$0	\$0	\$0	\$0	\$0	5
780E	97 Avenue	99 Street	100 Street	E	PCC	<N/A>	91.5	25/05/2019	70	91.9	257	Low	Medium	Medium	\$78	\$0	\$78	\$0	\$0	\$0	\$0	\$0	4
1560S	105 Street	101 Avenue	102 Avenue	S	PCC	M-SW	193.2	25/05/2019	149	91.9	258	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
640S	Service	100 Avenue	101 Avenue	S	PCC	SF	68.3	27/05/2019	53	93.5	259	Low	High	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
2640E	109 Avenue	107 Street	109 Street	E	PCC	M-SW	175.7	26/05/2019	135	92.0	260	Low	Medium	Medium	\$254	\$0	\$0	\$0	\$0	\$254	\$0	\$0	1
1620N	104 Street	102 Avenue	103 Avenue	N	PCC	M-SW	193.9	25/05/2019	149	92.0	261	Low	Medium	Medium	\$78	\$0	\$78	\$0	\$0	\$0	\$0	\$0	4
590W	101 Avenue	98 Street	Service	W	PCC	SFM	121.0	27/05/2019	93	92.1	262	Low	Medium	Medium	\$254	\$0	\$0	\$0	\$0	\$254	\$0	\$0	1
2760N	106 Street	109 Avenue	110 Avenue	N	PCC	M-SW	97.1	25/05/2019	75	92.3	263	Low	Medium	Medium	\$254	\$0	\$0	\$0	\$0	\$254	\$0	\$0	1
2650E	109 Avenue	109 Street	110 Street	E	PCC	M-SW	90.5	26/05/2019	70	92.5	264	Low	Medium	Medium	\$68	\$68	\$0	\$0	\$0	\$0	\$0	\$0	2
1420S	107 Street	102 Avenue	103 Avenue	S	PCC	SF	44.1	27/05/2019	34	92.6	265	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
1550S	105 Street	100 Avenue	101 Avenue	S	PCC	SF	186.6	25/05/2019	144	92.9	266	Low	Medium	Medium	\$78	\$0	\$78	\$0	\$0	\$0	\$0	\$0	4
2050W	105 Avenue	104 Street	105 Street	W	PCC	M-SW	319.8	25/05/2019	246	92.9	267	Low	Medium	Medium	\$98	\$0	\$98	\$0	\$0	\$0	\$0	\$0	5
2620E	109 Avenue	103A Street	106 Street	E	PCC	M-SW	308.0	25/05/2019	237	93.0	268	Low	Medium	Medium	\$53	\$34	\$20	\$0	\$0	\$0	\$0	\$0	2
1610N	104 Street	101 Avenue	102 Avenue	N	PCC	M-SW	192.1	25/05/2019	148	93.1	269	Low	Medium	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
570W	102 Avenue	98 Street	Service	W	PCC	SFM	124.5	27/05/2019	96	93.1	270	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
1830N	102 Street	107 Avenue	108 Avenue	N	PCC	M-SSW	176.1	27/05/2019	135	93.2	271	Low	Medium	Medium	\$59	\$0	\$59	\$0	\$0	\$0	\$0	\$0	3
560W	102 Avenue	97 Street	98 Street	W	PCC	SFM	121.0	27/05/2019	93	93.2	272	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
2800N	108 Street	106A Avenue	106A Avenue	N	PCC	M-SW	80.0	26/05/2019	62	93.4	273	Low	Medium	Medium	\$34	\$34	\$0	\$0	\$0	\$0	\$0	\$0	1
610N	98 Street	100 Avenue	101 Avenue	N	PCC	SF	82.2	27/05/2019	63	93.5	274	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2910W	106 Avenue	109 Street	110 Street	W	PCC	M-SW	81.6	26/05/2019	63	93.5	275	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
3040W	108 Avenue	110 Street	End	W	PCC	M-SW	46.8	26/05/2019	36	93.5	276	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2750N	106 Street	108 Avenue S	109 Avenue	N	PCC	M-SW	100.3	25/05/2019	77	93.7	277	Low	Medium	Medium	\$53	\$34	\$20	\$0	\$0	\$0	\$0	\$0	2
2900S	109 Street	105 Avenue	106 Avenue	S	PCC	M-SW	256.0	26/05/2019	197	93.9	278	Low	Medium	Medium	\$254	\$0	\$0	\$0	\$0	\$254	\$0	\$0	1
1830S	102 Street	107 Avenue	108 Avenue	N	PCC	M-SW	177.3	26/05/2019	136	94.0	279	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
1870W	110 Avenue	103 Street	103A Street	W	PCC	M-SW	40.7	25/05/2019	31	94.0	280	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
450W	Service	97 Street	104 Avenue	W	PCC	SF	137.3	27/05/2019	106	94.6	281	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
640N	Service	100 Avenue	101 Avenue	N	PCC	SF	48.8	27/05/2019	38	94.7	282	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
3000S	110 Street	108 Avenue	108A Avenue	S	PCC	M-SW	103.1	26/05/2019	79	94.8	283	Low	Medium	Medium	\$39	\$0	\$39	\$0	\$0	\$0	\$0	\$0	2
2990S	110 Street	106A Avenue	108 Avenue	S	PCC	M-SW	164.4	26/05/2019	126	95.4	284	Low	Medium	Medium	\$37	\$0	\$0	\$37	\$0	\$0	\$0	\$0	1
2720N	106 Street	104 Street	106A Avenue	N	PCC	M-SW	36.3	26/05/2019	28	95.5	285	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0



TOWN OF WESTLOCK  
**SIDEWALK CONDITION AND MAINTENANCE LEVEL LISTING**

SORT: Priority Ranking

SEGMENT ID	ON STREET	FROM	TO	BLOCK FACE	MATERIAL	SW TYPE	LENGTH	DATA DATE	TOTAL EQUIV. PANELS	SWCI	PRIORITY RANKING	HAZARD LEVEL	ZONE LEVEL	PED. LEVEL	TOTAL COST	PATCH2	CRACK SEAL	GRINDING	MUD-JACK/ LEVEL	MG-KRETE	RECON PANEL	RECON SEGMENT	TOTAL PANELS
1330E	103 Avenue	108 Street	107 Street Ramp	E	PCC	SFM	42.1	27/05/2019	32	95.7	286	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
840W	100 Avenue	99 Street	Service	W	PCC	SF	68.8	25/05/2019	53	97.2	287	Low	High	High	\$34	\$34	\$0	\$0	\$0	\$0	\$0	\$0	1
3000N	110 Street	108 Avenue	108A Avenue	N	PCC	M-SW	83.9	26/05/2019	65	96.0	288	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
2740N	106 Street	108 Avenue N	108 Avenue S	N	PCC	M-SW	40.7	25/05/2019	31	96.2	289	Low	Medium	Medium	\$34	\$34	\$0	\$0	\$0	\$0	\$0	\$0	1
100DS	100 Street	99A Avenue	100 Avenue	S	PCC	SFM	218.4	25/05/2019	168	97.6	290	Low	High	High	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
1590N	104 Street	99 Avenue	100 Avenue	N	PCC	M-SW	187.8	25/05/2019	144	96.5	291	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
3020N	108A Avenue	110 Street	End	N	PCC	M-SW	50.6	26/05/2019	39	96.6	292	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
3040E	108 Avenue	110 Street	End	E	PCC	M-SW	60.1	26/05/2019	46	96.9	293	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
560E	102 Avenue	97 Street	98 Street	E	PCC	SFM	122.3	27/05/2019	94	97.0	294	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2480E	108 Avenue	101 Street	102 Street	E	PCC	SFM	88.7	26/05/2019	68	96.1	295	Low	Medium	Low	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
1590S	104 Street	99 Avenue	100 Avenue	S	PCC	M-SW	186.2	25/05/2019	143	97.4	296	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
650N	Service	101 Avenue	102 Avenue	N	PCC	SF	85.2	27/05/2019	66	97.5	297	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
1840N	102 Street	108 Avenue	109 Avenue	N	PCC	M-SW	94.0	26/05/2019	72	97.6	298	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2900N	109 Street	105 Avenue	106 Avenue	N	PCC	M-SW	224.5	26/05/2019	173	97.6	299	Low	Medium	Medium	\$20	\$0	\$20	\$0	\$0	\$0	\$0	\$0	1
2680N	109 Street	108A Avenue	109 Avenue	N	PCC	M-SW	114.7	26/05/2019	88	97.9	300	Low	Medium	Medium	\$34	\$34	\$0	\$0	\$0	\$0	\$0	\$0	1
3010S	110 Street	108A Avenue	109 Avenue	S	PCC	M-SW	114.8	26/05/2019	88	97.9	301	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
580E	101 Avenue	97 Street	98 Street	E	PCC	SFM	122.0	27/05/2019	94	98.0	302	Low	Medium	Medium	\$37	\$0	\$0	\$37	\$0	\$0	\$0	\$0	1
580W	101 Avenue	97 Street	98 Street	W	PCC	SFM	121.3	27/05/2019	93	100.0	303	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
660N	Service	102 Avenue	End	N	PCC	SF	85.8	27/05/2019	66	100.0	304	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
1540S	105 Street	99 Avenue	100 Avenue	S	PCC	M-SW	41.9	25/05/2019	32	100.0	305	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
1560N	105 Street	101 Avenue	102 Avenue	N	PCC	M-SW	195.3	25/05/2019	150	100.0	306	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2310N	103A Street	103A Street	107A Avenue	N	PCC	M-SW	52.6	27/05/2019	40	100.0	307	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2470E	108 Avenue	Service	101 Street	E	PCC	SFM	95.9	26/05/2019	74	100.0	308	Low	Low	Low	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2860W	106A Avenue	107 Street	108 Street	W	PCC	M-SW	91.7	26/05/2019	71	100.0	309	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
2890W	106A Avenue	109 Street	110 Street	W	PCC	M-SW	90.5	26/05/2019	70	100.0	310	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
3020S	110 Street	109 Avenue	End	S	PCC	M-SW	43.6	26/05/2019	34	100.0	311	Low	Medium	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0

 Not Town owned

## **APPENDIX I**

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2019 Trail Condition

Priority Segment Listing

**TOWN OF WESTLOCK**  
**TRAIL CONDITION LISTING**

SORT: Priority Ranking

ASTM CONDITION	SEGMENT ID2	NETWORK	MATERIAL	LENGTH	WIDTH	AREA	DATA DATE	TRAIL PCI	PRIORITY RANKING
Failed	trl0021	Trail	ACC	1580.1	2.0	3160	21/09/2019	<b>0.0</b>	<b>1</b>
Failed	trl0046	Trail	ACC	152.8	1.6	244	18/09/2019	<b>0.0</b>	<b>2</b>
Failed	trl0070	Trail	ACC	634.0	1.8	1141	18/09/2019	<b>0.0</b>	<b>3</b>
Failed	trl0042	Trail	ACC	881.9	1.6	1411	18/09/2019	<b>0.2</b>	<b>4</b>
Failed	trls002	Sidewalk	ACC	90.0	1.4	126	22/09/2019	<b>0.0</b>	<b>5</b>
Failed	trls003	Sidewalk	ACC	235.1	1.0	235	22/09/2019	<b>0.0</b>	<b>6</b>
Failed	trls004	Sidewalk	ACC	88.4	1.2	106	22/09/2019	<b>0.0</b>	<b>7</b>
Failed	trls001	Sidewalk	ACC	154.5	1.4	216	22/09/2019	<b>8.6</b>	<b>8</b>
Poor	trl0085	Trail	ACC	1431.8	2.2	3150	21/09/2019	<b>27.1</b>	<b>9</b>
Poor	trl0026	Trail	ACC	51.9	2.0	104	22/09/2019	<b>37.4</b>	<b>10</b>
Poor	trl0081	Sidewalk	ACC	203.0	2.0	406	22/09/2019	<b>37.6</b>	<b>11</b>
Fair	trl0051	Trail	ACC	496.2	2.0	992	22/09/2019	<b>44.3</b>	<b>12</b>
Fair	trl0032	Trail	ACC	48.3	1.8	87	22/09/2019	<b>48.5</b>	<b>13</b>
Fair	trl0025	Trail	ACC	7.8	2.0	16	22/09/2019	<b>48.8</b>	<b>14</b>
Good	trl0103	Sidewalk	ACC	13.3	2.0	27	22/09/2019	<b>59.4</b>	<b>15</b>
Good	trl0104	Sidewalk	ACC	16.1	2.0	32	22/09/2019	<b>67.3</b>	<b>16</b>
Good	trl0050	Trail	ACC	144.4	2.0	289	22/09/2019	<b>68.4</b>	<b>17</b>
Very Good	trl0067	Trail	ACC	141.1	2.0	282	22/09/2019	<b>70.5</b>	<b>18</b>
Excellent	trl0068	Trail	RUBBERIZED	63.8	2.0	128	22/09/2019	<b>85.0</b>	<b>19</b>
Excellent	trl0073	Trail	RUBBERIZED	37.8	2.0	76	22/09/2019	<b>85.0</b>	<b>20</b>
Excellent	trl0040	Trail	ACC-R	156.9	1.6	251	18/09/2019	<b>99.6</b>	<b>21</b>

## **APPENDIX J**

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Budget \$1.0M/Year

Rehabilitation Priority Listing

BUDGET \$1.0M/YEAR - REHABILITATION PRIORITY LISTING

SORT: Program Year and OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	PRIORITY RANKING	PROGRAM YEAR	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	SNeff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
1680	102 Avenue	104 Street	105 Street	Residential Collector	2	0.214	1	1	2019	33.1	15.1	37.0	45.0	7.40	35324	128	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$55,742
1650	102 Avenue	100 Street	101 Street	Residential Collector	2	0.287	2	1	2019	33.1	8.2	38.5	56.5	4.67	37657	142	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$74,793
1000	97 Avenue	107 Street	108 Street	Residential Collector	2	0.223	3	1	2019	33.4	4.2	17.1	69.3	8.77	44655	153	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$58,196
1950	Service	Corner	101 Street	Residential Collector	2	0.208	4	1	2019	35.2	8.5	53.9	60.3	2.87	36990	147	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$54,374
1960	Service	101 Street	102 Street	Residential Collector	2	0.205	5	1	2019	37.2	11.8	54.6	61.1	2.77	34991	151	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$53,512
1010	97 Avenue	108 Street	109 Street	Residential Collector	2	0.171	6	1	2019	37.8	13.3	29.5	75.7	6.06	40990	168	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$35,365
2260	106 Avenue	103A Street	103A Street	Residential Collector	2	0.167	7	1	2019	38.2	9.6	20.8	86.9	7.81	29992	207	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$34,655
1920	Service	Service	106 Avenue	Residential Collector	2	0.454	8	1	2019	38.3	5.7	64.2	79.4	2.32	43655	173	GOOD	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$93,940
1660	102 Avenue	101 Street	102 Street	Residential Collector	2	0.190	9	1	2019	38.3	28.4	37.8	46.8	4.59	35491	130	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$49,699
2220	106 Avenue	Service	101 Street	Residential Collector	2	0.221	10	1	2019	40.0	39.1	32.0	46.4	7.43	25660	141	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Full Mill and Overlay 50mm	\$37,851
2150	103 Street	105 Avenue	106 Avenue	Local Residential	2	0.533	11	1	2019	42.1	36.9	38.8	48.3	4.52	34325	99	FAIR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$77,939
2960	110 Street	Service	105 Avenue	Residential Collector	2	0.283	12	1	2019	42.3	41.4	31.0	56.3	5.84	32658	159	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$48,347
880	100 Avenue	105 Street	106 Street	Residential Collector	2	0.212	13	1	2019	42.8	52.2	27.9	50.8	6.41	30659	140	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$43,796
1930	Service	106 Avenue	107 Avenue	Residential Collector	2	0.361	14	1	2019	44.8	27.9	45.8	68.9	3.83	38323	162	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$74,802
1910	Service	Corner	Service	Residential Collector	2	0.382	15	1	2019	45.7	19.8	58.1	79.1	2.50	41989	173	GOOD	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$65,250
890	100 Avenue	106 Street	107 Street	Residential Collector	2	0.211	16	1	2019	47.5	51.1	30.0	70.3	4.24	46655	153	GOOD	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$36,001
390	97 Street	102 Avenue	104 Avenue	Residential Collector	2	0.498	17	1	2019	49.0	50.5	34.0	68.9	5.25	33991	166	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$85,076
1350	107 Street	Start of Ramp	End of Ramp	Residential Collector	1	0.083	18	1	2019	49.6	51.1	42.4	50.7	3.99	31992	140	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$17,197
1670	102 Avenue	102 Street	104 Street	Residential Collector	2	0.261	19	2	2019	29.7	10.3	28.5	40.9	6.31	33325	125	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$66,273
1020	97 Avenue	109 Street	110 Street	Residential Collector	2	0.211	20	2	2019	33.1	4.9	39.5	62.4	4.46	41323	152	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$53,418
1990	Service	106 Street	110 Street	Residential Collector	2	1.049	21	2	2019	41.6	53.0	35.9	24.2	5.27	25394	108	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$871,508
900	100 Avenue	107 Street	End	Local Residential	1	0.053	22	2	2019	42.0	36.1	30.0	64.0	5.43	47988	107	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$7,548
1540	105 Street	99 Avenue	100 Avenue	Local Residential	2	0.406	23	3	2019	35.1	19.5	34.6	49.8	5.24	31658	106	FAIR	FAIR	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$65,513
1520	106 Street	103 Avenue	104 Avenue	Local Residential	2	0.436	24	3	2019	35.4	20.4	44.0	40.7	3.91	27326	107	FAIR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$70,388
2300	103A Street	106 Avenue	103A Street	Residential Collector	2	0.156	25	3	2019	35.8	14.8	30.6	63.2	5.71	33492	159	GOOD	FAIR	POOR	POOR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$38,489
1030	97 Avenue	110 Street	110A Street	Residential Collector	2	0.141	26	3	2019	37.3	10.1	35.0	75.3	5	35991	177	GOOD	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$27,505
1780	102 Street	102 Avenue	104 Avenue	Local Residential	2	0.412	27	3	2019	38.0	35.0	36.3	35.9	4.95	35657	85	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$66,442
300	99 Street	99A Avenue	100 Avenue	Residential Collector	2	0.504	28	3	2019	39.0	45.1	35.5	25.3	5.17	26660	109	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$406,601
2230	106 Avenue	101 Street	102 Street	Residential Collector	2	0.214	29	3	2019	41.3	34.0	37.0	52.9	4.85	21661	165	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Weak	Full Mill and Overlay + LBR	\$52,649
830	100 Avenue	98 Street	99 Street	Residential Collector	2	0.130	30	3	2019	42.0	33.6	45.7	43.3	3.65	31992	128	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$25,400
1480	106 Street	99 Avenue	100 Avenue	Local Residential	2	0.405	31	3	2019	43.6	55.0	34.1	34.9	5.23	35658	85	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$65,471
1620	104 Street	102 Avenue	103 Avenue	Local Residential	2	0.409	32	3	2019	43.7	30.5	31.7	77.9	5.58	35657	143	FAIR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$65,971
260	99 Street	Start of Curbs	97 Avenue	Local Residential	2	0.322	33	3	2019	44.1	55.4	28.3	51.9	6.18	43322	101	FAIR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$44,397
1510	106 Street	102 Avenue	103 Avenue	Local Residential	2	0.409	34	3	2019	44.8	50.0	42.5	29.6	4.12	26993	86	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$66,082
1240	110 Street	97 Avenue	98 Avenue	Local Residential	2	0.439	35	4	2019	33.2	32.6	34.5	19.2	5.22	27993	70	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$105,074
1790	102 Street	104 Avenue	Service	Residential Collector	2	0.039	36	4	2019	38.7	0.1	42.0	98.6	2.91	37990	218	FAIR	GOOD	POOR	POOR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$9,439
2690	105 Street	105 Avenue	106 Avenue	Local Residential	2	0.352	37	4	2019	40.0	45.6	43.7	12.1	3.89	26993	61	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$55,163
2310	103A Street	103A Street	107A Avenue	Residential Collector	2	0.433	38	4	2019	40.0	39.2	43.8	25.0	4.16	29326	109	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$339,866
2160	103 Street	106 Avenue	107 Avenue	Local Residential	2	0.360	39	4	2019	40.2	23.3	39.5	62.9	4.37	27660	133	GOOD	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$56,528
2080	106 Street	Service	105 Avenue	Local Residential	2	0.311	40	4	2019	40.5	20.5	42.1	67.4	4.50	26660	151	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$41,724
2050	105 Avenue	104 Street	105 Street	Local Residential	2	0.209	41	4	2019	43.2	33.6	40.8	56.5	4.26	32991	134	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$28,004
1740	101 Avenue	105 Street	106 Street	Local Residential	2	0.211	42	4	2019	44.7	25.3	36.1	85.4	5.33	29326	179	GOOD	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$28,289
1400	107 Street	100 Avenue	101 Avenue	Residential Collector	2	0.407	43	4	2019	46.5	64.1	32.5	39.5	5.68	31658	124	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$318,971
2270	106 Avenue	103A Street	104 Street	Residential Collector	2	0.073	44	4	2019	48.6	42.2	36.3	75.5	5.03	27993	185	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$13,832
2110	104 Street	105 Avenue	106 Avenue	Residential Collector	2	0.482	45	5	2019	33.0	22.8	32.7	36.0	5.55	33658	118	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$367,213
2560	111 Avenue	103 Street	103A Street	Local Residential	2	0.402	46	5	2019	37.7	72.1	23.9	13.3	7.21	18995	80	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$61,259
1410	107 Street	101 Avenue	102 Avenue	Residential Collector	2	0.419	47	5	2019	41.5	43.5	39.8	31.6	4.50	30325	114	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$319,327
860	100 Avenue	100 Street	104 Street	Residential Collector	2	0.325	48	5	2019	46.5	50.1	47.6	25.5	3.91	27659	107	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$247,967
270	99 Street	97 Avenue	98 Avenue	Residential Collector	2	0.403	49	6	2019	33.5	28.1	34.8	27.9	5.25	35324	108	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$298,755
1420	107 Street	102 Avenue	103 Avenue	Residential Collector	2	0.412	50	6	2019	34.0	35.5	28.9	27.9	6.09	27993	111	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$304,863
1570	105 Street	102 Avenue	103 Avenue	Local Residential	2	0.410	51	6	2019	34.3	30.0	39.0	22.6	4.49	27993	76	POOR	GOOD	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$92,642
1750	101 Avenue	106 Street	107 Street	Local Residential	2	0.212	52	6	2019	38.5	44.7	24.2	47.2	6.95	35657	108	FAIR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$31,354
280	99 Street	98 Avenue	98A Avenue	Residential Collector	2	0.319	53	6	2019	42.7	43.7	38.5	39.8	4.74	35324	122	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$236,111
800	98 Avenue	99 Street	100 Street	Local Residential	2	0.215	54	6	20																	

BUDGET \$1.0M/YEAR - REHABILITATION PRIORITY LISTING  
 SORT: Program Year and OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	PRIORITY RANKING	PROGRAM YEAR	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	S <sub>Neff</sub> (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
1110	111 Street	110 Street	100 Avenue	Local Residential	2	0.273	84	10	2019	37.6	47.6	24.3	39.6	7.00	23660	105	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$55,064
1860	110 Avenue	102 Street	103 Street	Local Residential	2	0.304	85	10	2019	38.9	61.4	28.2	18.9	6.21	19662	76	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$61,326
730	100 Avenue	94 Street	95 Street	Local Residential	2	0.198	86	10	2019	39.4	33.7	48.0	26.7	3.37	33491	75	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$39,872
2180	107A Avenue	103 Street	103A Street	Local Residential	2	0.221	87	10	2019	41.3	46.6	45.1	13.3	3.71	21328	70	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$44,496
2070	106 Street	104 Avenue	Service	Local Residential	2	0.041	88	10	2019	41.5	47.7	39.0	25.8	11.57	34991	74	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$5,473
90	Service	93 Avenue	94A Avenue	Residential Collector	2	0.426	89	10	2019	45.7	61.5	39.2	20.3	4.63	20328	83	POOR	FAIR	FAIR	GOOD	2019	Med	Med	Weak	Collector Reconstruction	\$281,557
2210	106 Avenue	100 Street	Service	Residential Collector	2	0.050	90	10	2021	52.6	56.0	34.0	77.7	5.32	39990	170	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$6,569

## **APPENDIX K**

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Budget \$1.75M/Year

Rehabilitation Priority Listing

BUDGET \$1.75M/YEAR - REHABILITATION PRIORITY LISTING

SORT: Program Year and OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	PRIORITY RANKING	PROGRAM YEAR	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	SNeff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
1320	108 Street	100 Avenue	103 Avenue	Residential Collector	2	1.368	1	1	2019	29.5	9.9	39.7	35.6	4.63	27890	145	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$1,169,614
1650	102 Avenue	100 Street	101 Street	Residential Collector	2	0.287	2	1	2019	33.1	8.2	38.5	56.5	4.67	37657	142	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$74,793
1920	Service	Service	106 Avenue	Local Residential	2	0.454	3	1	2019	38.3	5.7	64.2	79.4	2.32	43655	173	GOOD	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$93,940
2220	106 Avenue	Service	101 Street	Residential Collector	2	0.221	4	1	2019	40.0	39.1	32.0	46.4	7.43	25660	141	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Full Mill and Overlay 50mm	\$37,851
2960	110 Street	Service	105 Avenue	Residential Collector	2	0.283	5	1	2019	42.3	41.4	31.0	56.1	5.84	32658	159	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$48,347
880	100 Avenue	105 Street	106 Street	Residential Collector	2	0.212	6	1	2019	42.8	52.2	27.9	50.8	6.41	30659	140	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$43,796
1930	Service	106 Avenue	107 Avenue	Local Residential	2	0.361	7	1	2019	44.8	27.9	45.8	68.9	3.83	38323	162	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$74,802
1910	Service	Corner	Service	Local Residential	2	0.382	8	1	2019	45.7	19.8	58.1	79.1	2.50	41989	173	GOOD	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$65,250
890	100 Avenue	106 Street	107 Street	Residential Collector	2	0.211	9	1	2019	47.5	51.1	30.0	70.3	4.24	46655	153	GOOD	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$36,001
390	97 Street	102 Avenue	104 Avenue	Residential Collector	2	0.498	10	1	2019	49.0	50.5	34.0	68.9	5.25	33991	166	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 50mm	\$85,076
1350	107 Street	Start of Ramp	End of Ramp	Residential Collector	1	0.083	11	1	2019	49.6	51.1	42.4	50.7	3.99	31992	140	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$17,197
1670	102 Avenue	102 Street	104 Street	Residential Collector	2	0.261	12	2	2019	29.7	10.3	28.5	40.9	6.31	33325	125	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$66,273
1680	102 Avenue	104 Street	105 Street	Residential Collector	2	0.214	13	2	2019	33.1	15.1	37.0	45.0	7.40	35324	128	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$54,164
1020	97 Avenue	109 Street	110 Street	Residential Collector	2	0.211	14	2	2019	33.1	4.9	39.5	62.4	4.46	41323	152	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$53,418
1000	97 Avenue	107 Street	108 Street	Residential Collector	2	0.223	15	2	2019	33.4	4.2	17.1	69.3	8.77	44655	153	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$56,549
1950	Service	Corner	101 Street	Local Residential	2	0.208	16	2	2019	35.2	8.5	53.9	60.3	2.87	36990	147	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$52,835
1520	106 Street	103 Avenue	104 Avenue	Local Residential	2	0.436	17	2	2019	35.4	20.4	44.0	40.7	3.91	27326	107	FAIR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$72,439
1720	101 Avenue	End	104 Street	Local Residential	2	0.037	18	2	2019	36.4	32.9	39.0	27.7	3.72	27993	79	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$6,138
1960	Service	101 Street	102 Street	Local Residential	2	0.205	19	2	2019	37.2	11.8	54.6	61.1	2.77	34991	151	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$51,997
1030	97 Avenue	110 Street	110A Street	Residential Collector	2	0.141	20	2	2019	37.3	10.1	35.0	75.3	5	35991	177	GOOD	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$28,306
1010	97 Avenue	108 Street	109 Street	Residential Collector	2	0.171	21	2	2019	37.8	13.3	29.5	75.7	6.06	40990	168	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$34,364
2260	106 Avenue	103A Street	103A Street	Residential Collector	2	0.167	22	2	2019	38.2	9.6	20.8	86.9	7.81	29992	207	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$33,674
1660	102 Avenue	101 Street	102 Street	Residential Collector	2	0.190	23	2	2019	38.3	28.4	37.8	46.8	4.59	35491	130	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$48,292
1990	Service	106 Street	110 Street	Local Residential	2	1.049	24	2	2019	41.6	53.0	35.9	24.2	5.27	25394	108	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$871,508
830	100 Avenue	98 Street	99 Street	Residential Collector	2	0.130	25	2	2019	42.0	33.6	45.7	43.3	3.65	31992	128	FAIR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$26,140
2150	103 Street	105 Avenue	106 Avenue	Local Residential	2	0.533	26	2	2019	42.1	36.9	38.8	48.3	4.52	34325	99	FAIR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$75,733
1480	106 Street	99 Avenue	100 Avenue	Local Residential	2	0.405	27	2	2019	43.6	55.0	34.1	34.9	5.23	35658	85	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$67,378
1620	104 Street	102 Avenue	103 Avenue	Local Residential	2	0.409	28	2	2019	43.7	30.5	31.7	77.9	5.58	35657	143	FAIR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$67,892
1510	106 Street	102 Avenue	103 Avenue	Local Residential	2	0.409	29	2	2019	44.8	50.0	42.5	29.6	4.12	26993	86	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$68,007
2270	106 Avenue	103A Street	104 Street	Residential Collector	2	0.073	30	2	2019	48.6	42.2	36.3	75.5	5.03	27993	185	FAIR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Full Mill and Overlay 75mm	\$14,649
1540	105 Street	99 Avenue	100 Avenue	Local Residential	2	0.406	31	3	2019	35.1	19.5	34.6	49.8	5.24	31658	106	FAIR	FAIR	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$65,513
2300	103A Street	106 Avenue	103A Street	Residential Collector	2	0.156	32	3	2019	35.8	14.8	30.6	63.2	5.71	33492	159	GOOD	FAIR	POOR	POOR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$38,489
1780	102 Street	102 Avenue	104 Avenue	Local Residential	2	0.412	33	3	2019	38.0	35.0	36.3	35.9	4.95	35657	85	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$66,442
300	99 Street	99A Avenue	100 Avenue	Residential Collector	2	0.504	34	3	2019	39.0	45.1	35.5	25.3	5.17	26660	109	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$406,601
2310	103A Street	103A Street	107A Avenue	Residential Collector	2	0.433	35	3	2019	40.0	39.2	43.8	25.0	4.16	29326	109	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$349,765
2080	106 Street	Service	105 Avenue	Local Residential	2	0.311	36	3	2019	40.5	20.5	42.1	67.4	4.50	26660	151	FAIR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$42,939
2230	106 Avenue	101 Street	102 Street	Residential Collector	2	0.214	37	3	2019	41.3	34.0	37.0	52.9	4.85	21661	165	FAIR	FAIR	FAIR	FAIR	2019	Med	Thick	Weak	Full Mill and Overlay + LBR	\$52,649
1410	107 Street	101 Avenue	102 Avenue	Residential Collector	2	0.419	38	3	2019	41.5	43.5	39.8	31.6	4.50	30325	114	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$338,200
2070	106 Street	104 Avenue	Service	Local Residential	2	0.041	39	3	2019	41.5	47.7	39.0	25.8	11.57	34991	74	POOR	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Full Mill and Overlay 50mm	\$6,691
900	100 Avenue	107 Street	End	Local Residential	1	0.053	40	3	2019	42.0	36.1	30.0	64.0	5.43	47988	107	GOOD	GOOD	GOOD	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$7,334
260	99 Street	Start of Curbs	97 Avenue	Local Residential	2	0.322	41	3	2019	44.1	55.4	28.3	51.9	6.18	43322	101	FAIR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Edge Mill/Repair and Overlay 50mm	\$44,397
1400	107 Street	100 Avenue	101 Avenue	Residential Collector	2	0.407	42	3	2019	46.5	64.1	32.5	39.5	5.68	31658	124	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$328,261
2110	104 Street	105 Avenue	106 Avenue	Residential Collector	2	0.482	43	4	2019	33.0	22.8	32.7	36.0	5.55	33658	118	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$377,908
1240	110 Street	97 Avenue	98 Avenue	Local Residential	2	0.439	44	4	2019	33.2	32.6	34.5	19.2	5.22	27993	70	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$105,074
270	99 Street	97 Avenue	98 Avenue	Residential Collector	2	0.403	45	4	2019	33.5	28.1	34.8	27.9	5.25	35324	108	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$316,411
1420	107 Street	102 Avenue	103 Avenue	Residential Collector	2	0.412	46	4	2019	34.0	35.5	28.9	27.9	6.09	27993	111	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$322,880
1790	102 Street	104 Avenue	Service	Residential Collector	2	0.039	47	4	2019	38.7	0.1	42.0	98.6	2.91	37990	218	FAIR	GOOD	POOR	POOR	2019	Med	Thick	Strong	Full Mill and Overlay + LBR	\$9,439
2690	105 Street	105 Avenue	106 Avenue	Local Residential	2	0.352	48</																			



BUDGET \$1.75M/YEAR - REHABILITATION PRIORITY LISTING

SORT: Program Year and OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	PRIORITY RANKING	PROGRAM YEAR	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	SNeff (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
380	97 Street	101 Avenue	102 Avenue	Residential Collector	2	0.187	84	6	2019	47.3	71.5	33.8	28.1	5.22	28493	112	POOR	GOOD	GOOD	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$138,795
1250	110 Street	98 Avenue	99 Avenue	Local Residential	2	0.347	85	7	2019	27.4	18.0	34.2	15.0	5.18	24327	67	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$76,337
310	98A Avenue	99 Street	98 Street	Local Residential	2	0.189	86	7	2019	28.5	5.9	44.2	36.6	3.82	29993	101	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$41,541
1080	111 Street	98 Avenue	99 Avenue	Local Residential	2	0.340	87	7	2019	29.2	1.3	28.2	50.6	6.21	18995	137	FAIR	POOR	POOR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$74,625
1700	102 Avenue	106 Street	107 Street	Residential Collector	2	0.212	88	7	2019	29.2	10.1	50.0	28.7	6.98	26993	113	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$152,231
370	97 Street	100 Avenue N	101 Avenue	Residential Collector	2	0.189	89	7	2019	29.3	11.8	43.5	28.8	3.87	33491	108	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$135,901
840	100 Avenue	99 Street	Service	Residential Collector	2	0.165	90	7	2019	29.9	10.8	41.8	34.6	4.15	33992	115	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$118,889
720	94 Street	99 Avenue	100 Avenue	Local Residential	2	0.352	91	7	2019	30.6	28.5	34.3	13.7	5.13	25660	65	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$77,373
360	97 Street	100 Avenue S	100 Avenue N	Local Residential	2	0.175	92	7	2019	31.5	19.0	40.6	27.8	4.23	32492	76	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$38,531
2250	106 Avenue	103 Street	103A Street	Residential Collector	2	0.160	93	7	2019	32.0	33.0	24.8	27.8	6.84	32992	125	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Strong	Collector Reconstruction	\$115,483
1630	104 Street	103 Avenue	104 Avenue	Local Residential	2	0.160	94	7	2019	32.2	5.0	33.9	59.2	5.40	28992	122	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$35,138
320	98A Avenue	98 Street	97 Street	Local Residential	2	0.181	95	7	2019	32.7	19.4	47.7	26.4	3.47	26993	78	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$39,822
2390	107 Avenue	101 Street	102 Street	Local Residential	2	0.203	96	7	2019	35.4	15.6	30.2	60.7	5.82	20662	153	FAIR	FAIR	POOR	POOR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$44,528
990	97 Avenue	100 Street	107 Street	Residential Collector	2	0.141	97	7	2019	36.7	18.1	43.1	52.2	4.54	33991	139	FAIR	POOR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$101,795
1110	111 Street	110 Street	100 Avenue	Local Residential	2	0.273	98	7	2019	37.6	47.6	24.3	39.6	7.00	23660	105	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$60,017
780	97 Avenue	99 Street	100 Street	Residential Collector	2	0.215	99	7	2019	38.0	28.6	42.5	38.5	4.23	24660	137	POOR	FAIR	FAIR	FAIR	2019	Med	Thick	Weak	Collector Reconstruction	\$155,004
3080	Service	113 Avenue	115 Avenue	Local Residential	2	0.537	100	7	2019	40.0	42.4	42.0	22.0	4.12	22328	107	POOR	GOOD	GOOD	GOOD	2019	Low	Thick	Weak	Collector Reconstruction	\$386,314
2180	107A Avenue	103 Street	103A Street	Local Residential	2	0.221	101	7	2019	41.3	46.6	45.1	13.3	3.71	21328	70	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$48,498
2810	108 Street	106A Avenue	106A Avenue	Local Residential	2	0.132	102	7	2019	42.1	46.2	43.2	22.2	3.90	25494	75	POOR	GOOD	GOOD	FAIR	2019	Low	Med	Weak	Full Mill and Overlay 50mm	\$18,942
540	96 Street	102 Avenue	End	Local Residential	2	0.106	103	7	2019	44.5	48.6	52.0	9.0	2.53	19995	61	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$23,371
1470	106 Street	98 Avenue	99 Avenue	Local Residential	2	0.407	104	8	2019	23.8	0.9	32.2	24.9	5.59	29659	78	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$224,432
2520	103 Street	103 Street	111 Avenue	Local Residential	2	0.214	105	8	2019	23.9	37.7	12.1	5.3	10.06	20995	52	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$45,709
1260	110 Street	99 Avenue	100A Avenue	Local Residential	2	0.173	106	8	2019	24.7	8.4	30.6	18.4	5.73	29993	68	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$36,915
750	99A Avenue	97 Street	95 Street	Local Residential	2	0.386	107	8	2019	25.1	13.1	26.7	16.2	6.58	23661	70	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$82,509
2170	103 Street	107 Avenue	107A Avenue	Local Residential	2	0.155	108	8	2019	25.8	14.3	27.7	17.6	6.25	28493	74	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Strong	Full Mill and Overlay + LBR	\$33,095
1690	102 Avenue	105 Street	106 Street	Residential Collector	2	0.212	109	8	2019	28.2	2.5	55.0	41.2	6.33	33325	125	FAIR	POOR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$148,320
1730	101 Avenue	104 Street	105 Street	Local Residential	2	0.212	110	8	2019	29.1	1.7	38.8	49.1	4.48	27660	119	FAIR	POOR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$117,253
2530	103 Street	111 Avenue	End	Local Residential	2	0.234	111	8	2019	29.4	64.3	15.9	5.8	9.10	16329	58	POOR	FAIR	GOOD	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$49,963
3160	103 Avenue	105 Street	106 Street	Local Residential	2	0.214	112	8	2019	29.7	0.1	44.2	54.8	3.82	26660	123	POOR	POOR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$117,929
3170	103 Avenue	106 Street	107 Street	Local Residential	2	0.209	113	8	2019	30.2	0.9	32.4	55.8	5.71	28659	120	POOR	POOR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$115,290
1100	111 Street	100A Avenue	110 Street	Local Residential	2	0.197	114	8	2019	31.4	19.2	33.1	33.6	5.32	21495	97	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$42,153
2280	106 Avenue	104 Street	105 Street	Local Residential	2	0.208	115	8	2019	32.0	27.9	39.4	14.8	4.67	25327	66	POOR	FAIR	FAIR	FAIR	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$44,502
130	93 Avenue	100A Street	110A Street	Residential Collector	2	0.415	116	8	2019	32.6	25.1	35.2	27.9	5.02	24660	114	POOR	FAIR	FAIR	FAIR	2019	Low	Thick	Weak	Collector Reconstruction	\$290,324
290	99 Street	98A Avenue	99A Avenue	Residential Collector	2	0.181	117	8	2019	34.7	34.2	34.0	24.8	5.16	24494	108	POOR	FAIR	FAIR	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$126,685
850	100 Avenue	Service	100 Street	Residential Collector	2	0.052	118	8	2019	35.5	31.1	40.0	25.1		27993	107	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$36,478
120	93 Avenue	Service	100A Street	Residential Collector	2	0.283	119	8	2019	37.7	39.9	29.8	38.5	5.92	29325	124	POOR	GOOD	GOOD	GOOD	2019	Low	Thick	Strong	Collector Reconstruction	\$197,946
3200	Service	100 Street	Service	Local Residential	2	0.041	120	8	2019	38.7	34.0	40.0	35.5	1.62	38990	114	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$28,748
110	93 Avenue	100 Street	Service	Residential Collector	2	0.059	121	8	2020	53.0	85.8	32.0	40.2	13.48	24994	130	FAIR	GOOD	GOOD	GOOD	2019	Low	Thick	Weak	Full Mill and Overlay 50mm	\$8,305
2410	101 Street	107 Avenue	108 Avenue	Local Residential	2	0.437	122	9	2019	22.1	0.1	42.6	17.7	3.99	29992	68	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$234,362
3110	115 Avenue	Service	100 Street	Local Residential	2	0.092	123	9	2019	24.2	5.4	40.0	17.9	4.25	24994	69	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$19,179
770	98 Street	98A Avenue	Cul de Sac	Local Residential	2	0.106	124	9	2019	24.7	13.9	32.0	9.4	4.08	24994	58	POOR	FAIR	FAIR	GOOD	2019	Low	Med	Weak	Full Mill and Overlay + LBR	\$22,062
930	99 Avenue	105 Street	106 Street	Local Residential	2	0.213	125	9	2019	24.7	1.4	34.5	28.3	5.55	30992	78	POOR	FAIR	POOR	POOR	2019	Low	Med	Strong	Local Reconstruction	\$114,102
2400	107 Avenue	102 Street	103 Street	Local Residential	2	0.281	126	9	2019	25.4	6.0	39.1	23.1	4.62	26326	100	POOR	FAIR	POOR	POOR	2019	Low	Med	Weak	Local Reconstruction	\$150,688
3090	113 Avenue	End	100 Street	Residential Collector	2	0.520	127	9	2019	28.5	23.9	32.4	12.7	5.63	19328	97	POOR	GOOD	GOOD	FAIR	2019	Low	Thick	Weak	Collector Reconstruction	\$353,085
2460	108 Avenue	100 Street	Service	Residential Collector	2	0.056	128	9	2019	28.9	27.0	32.0	10.3	16.09	26993	84	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Collector Reconstruction	\$38,166
80	Service	90 Avenue	93 Avenue	Local Residential	2	0.574	129	9	2019	29.1	12.1	41.4	28.3	4.32	22661	93	POOR	FAIR	FAIR	FAIR	2019	Med	Med	Weak	Collector Reconstruction	\$389,885
2090	104 Street	104 Avenue	Service	Residential Collector	2	0.042	130	9	2019	30.6	0.1	49.4	59.1	3.23	31992	150	FAIR	POOR	POOR	POOR	2019	Med	Thick	Strong	Collector Reconstruction	\$28,530
1440	107 Street	103 Avenue N	End of Off Ramp	Residential Collector	2	0.134	131	9	2019	31.4	21.5	32.2	30.7	5.58	25994	116</										

BUDGET \$1.75M/YEAR - REHABILITATION PRIORITY LISTING  
 SORT: Program Year and OCI

SEGMENT ID	STREET	FROM	TO	FUNC ID	LANES	LANE-KM	PRIORITY RANKING	PROGRAM YEAR	NEED YEAR	OCI	PCI	RCI	SAI	IRI (M/KM)	Mr (KPa)	S <sub>Neff</sub> (mm)	LOAD COND.	CONST COND.	MATERIAL COND.	ENVIRON COND.	DATA YEAR	TRAF LEVEL	EGT LEVEL	SUBGRD LEVEL	REHAB TREATMENT LEVEL	COST
2970	110 Street	105 Avenue	106 Avenue	Residential Collector	2	0.547	167	10	2025	60.3	73.1	41.6	62.3	4.21	38990	148	GOOD	GOOD	GOOD	GOOD	2019	Med	Thick	Strong	Edge Mill/Repair and Overlay 50mm	\$61,764
2720	106 Street	104 Street	106A Avenue	Residential Collector	2	0.085	168	10	2023	60.9	66.1	48.6	57.1	3.31	25993	155	FAIR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Full Mill and Overlay 50mm	\$11,175
1980	Service	104 Street	106 Street	Local Residential	2	0.604	169	10	2024	65.0	85.5	50.6	25.0	3.53	22661	111	POOR	GOOD	GOOD	GOOD	2019	Med	Thick	Weak	Collector Reconstruction	\$399,038