



REPORT

Roads Need Study

Township of Bonfield

Submitted to:

Township of Bonfield

365 Hwy 531, Bonfield, ON
P0H 1E0

Submitted by:

WSP Canada Inc.

Project No. 22522228

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Distribution List

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EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) is pleased to present the results of Road Needs Study (Study) carried out for The Township of Bonfield. The study aims to update the Township's roads asset database and provide the basis for optimal management of its road network. Visual condition surveys were carried out on all the provided Townships' roadways in accordance with the current Ministry of Transportation Ontario (MTO) practices. Pavement Condition Indices (PCIs) were assigned to each roadway evaluated by WSP, and four 10-year capital plans were estimated by Infrastructure Solutions Inc. (ISI) using Decision Optimization Technology (DOT™) Roads software. The resulting capital plans include forecasted timelines for recommended preventative maintenance and rehabilitation strategies for each road section.

A total of 118 km of gravel, surface treated, and asphalt roads were assessed in 2022. The breakdown of road surface types with the average condition rating is provided in Table 1. The overall average Pavement Condition Index (PCI) of the Township of Bonfield road network is estimated at 62 out of a possible 100, indicating a rating described as "Fair".

Table 1: Summary of Road Network by Surface Type

Surface Type	Length (km)	Percentage (%)	PCI	PCI Description
Hot Mix Asphalt	6.5	5.5	67	Good
Surface Treated	35.4	29.9	65	Good
Gravel	76.4	64.6	62	Fair

The three capital plan scenarios have different optimized outcomes for the overall road network condition over a 10-year analysis period:

- **Scenario 1: Do Nothing**
- **Scenario 2: Target Overall Condition Rating PCI of 65**
- **Scenario 3: Target Overall Condition Rating PCI of 75**

The first scenario, Do Nothing, showed a decrease and drop in the overall performance of the paved roads (down to PCI of 27) and gravel roads (down to PCI of 0), resulting in a “poor” condition over the analysis period. The second scenario, with a target overall condition rating PCI of 65 “Good” condition, utilized an optimized approach with a total capital budget of \$4.3M for the paved roads and \$2.2M for the gravel roads to improve and maintain the target condition of the Townships roads over the analysis period. Finally, the third scenario with a target overall condition rating (PCI of 75) indicated that a total capital budget of \$5.6M for the paved roads and \$2.3M for the gravel roads are required to achieve the target condition over the analysis period of 10 years.

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1.0 INTRODUCTION

The Township of Bonfield (Township) retained WSP Canada Inc. (WSP) to carry out the Road Needs Study (Study). This study aims to update the condition of Townships Road assets and provide the timing and estimates for major and minor rehabilitation strategies for 1- to 10-year horizons (2023-2033). Visual pavement condition surveys were carried out on all the Township's roadways in accordance with the current Ministry of Transportation Ontario (MTO) practices.

A Pavement Condition Index (PCI) was assigned to each roadway segment based on a riding condition rating (RCR) and type, severity, and extent of distresses referred to as the Distress Manifestation Index (DMI). The PCI values along with other road network information such as road type (i.e., asphalt and surface treated), road lengths and widths, annual average daily traffic (AADT), road environment classifications (i.e., urban, rural, semi-urban), MMS Class, and other factors are entered into the Decision Optimization Technology (DOT) Roads software to develop optimized rehabilitation treatments. Two optimization scenarios with resulting 10-year capital plans were developed to include forecasted timelines for appropriate preventative maintenance and rehabilitation treatments for road networks.

This report should be read in conjunction with "*Important Information and Limitations of This Report*" included in **Appendix A**. The reader's attention is specifically drawn to this information, as it is essential for the proper use and interpretation of this report.

1.1 Background Review

The Township of Bonfield provided WSP with the following database to support the completion of the Study:

- Road Network Shapefile; and
- Treatments and rehabilitation conducted during 2023.

WSP communicated with the Township's project team upon reviewing the database to revise and update attributes, e.g., names and IDs of road segments, widths, road class, and AADT (where applicable). A complete revised copy of the road inventory used in this study is included in **Appendix B**.

2.0 PAVEMENT CONDITION ASSESSMENT

2.1 Methodology

The pavement condition assessment, which identified the extent and severity of each specific distress type, was carried out based on MTO methods for the appropriate surface type, as listed in the following references:

- Inventory Manual for Municipal Transportation Networks (Inventory Manual for Municipal Roads, 1991).
- For surface-treated pavements – Chong, G.J., Phang, W.A., and Wrong, G.A. 1989. Manual for Condition Rating of Surface-Treated Pavements, Distress Manifestations, SP-021, Downsview, Ontario: Research and Development Branch, Ministry of Transportation of Ontario.
- For municipal asphalt pavements – Chong, G.J., Phang, W.A., and Wrong, G.A. 1989. Flexible Pavement Condition Rating, Guidelines for Municipalities, SP-022, Downsview, Ontario: Research and Development Branch, Ministry of Transportation of Ontario.

- For gravel surface roads – Chong, G.J., Phang, W.A., and Wrong, G.A. 1989. Manual for Condition Rating of Gravel Surface Roads, SP-025, Downsview, Ontario: Research and Development Branch, Ministry of Transportation.

2.2 Visual Condition Survey

The density and severity of distresses (cracks, potholes, ravelling, wheel path deformation, including other distresses) were identified and recorded for each roadway segment in the network. WSP field crew collected the data using digital MTO forms built-in computer tablet. The Distress Manifestation Index (DMI) was recorded for asphalt, surface treated, and gravel roadways according to the MTO Manuals listed in Section 2.1.

2.3 Riding Condition Rating (RCR)

The RCR value was assigned to all road segments based on the perceived comfort and safety of the ride, while driving at the posted speed limit. RCR is rated on a scale from 0 to 10, 0 being very poor and 10 being excellent; a breakdown is shown in Table 2, in accordance with MTO guidelines.

Table 2: Riding Condition Rating Scale

RCR	Description of Pavement Section
0-2	Very Poor – Uncomfortable ride with constant bumps and depressions. Cannot maintain posted speed and must steer clear constantly to avoid bumps and depressions
2-5	Poor – Uncomfortable ride with frequent bumps and depressions
5-7	Fair – Still comfortable ride with intermittent bumps and depressions
7-9	Good – Smooth ride with just a few bumps and depressions
9-10	Excellent – Very smooth ride

2.4 Pavement Condition Index (PCI)

A Pavement Condition Index (PCI) was calculated based on the Riding Condition Rating (RCR) and the Distress Manifestation Index (DMI). The PCI is rated on a scale from 0 to 100, 0 being poor and 100 being Excellent. Table 3 shows a breakdown of PCI values and associated typical pavement descriptions.

Table 3: PCI Descriptions

PCI	Description of Condition Rating
80 to < 100	Excellent
65 to < 80	Good
50 to < 65	Fair
0 to < 50	Poor

3.0 PAVEMENT CONDITION

The overall average condition of the Township’s Road network at the time of survey were estimated at PCI of 62, representing an overall “Fair” condition. The average PCI are weighted on linear kilometer of road network. The Township’s Road Inventory with Pavement Condition Indices is provided in **Appendix B**. Schematic Road network maps presenting 2023 condition ratings of all road segments assessed in this study are included in **Appendix C**.

A breakdown of the conditions and corresponding lengths are presented in Table 4 and Table 5. The overall average condition rating based on surface type is presented in Figure 1.

Table 4: Summary of PCI based on Road Network Length

Condition	Length (Km)	Percentage
Poor	12.8	10.8%
Fair	61.4	51.9%
Good	36.2	30.6%
Excellent	7.9	6.7%

Table 5: Average PCI by Surface Type and KM Lengths

Surface Type	Excellent	Good	Fair	Poor
Hot Mix Asphalt	4.2 km	0.2 km	0.0 km	2.1 km
Surface Treated	2.1 km	15.1 km	18.1 km	0.0 km
Gravel	1.6 km	20.8 km	43.3 km	10.7 km

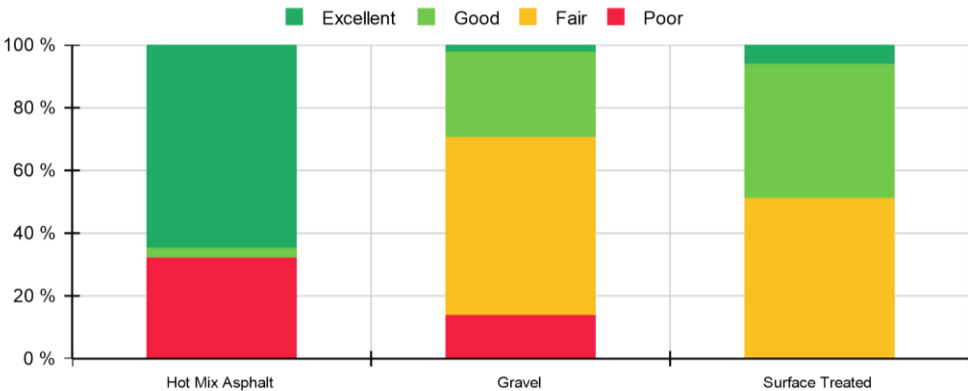


Figure 1: Surface Type Condition Status.

Additional details on the road network overview included in the report provided by Infrastructure Solutions Inc. (ISI) using Decision Optimization Technology (DOT™) Roads software are provided in **Appendix D**.

4.0 DATA ANALYSIS AND CAPITAL PLAN

The Decision Optimization Technology (DOT) Roads software was used to facilitate preventative maintenance and rehabilitation budgeting needs by predicting the deterioration of pavement segments based on a wide range of pavement deterioration curves. Additionally, extensive decision trees, performance models, cost models, life cycle gain, and condition improvement matrices covering a wide spectrum of road classifications were used. The DOT Roads software is capable of including various road aspects, such as traffic, surface type, environment class, functional class, and maintenance history, as model parameters.

DOT Roads is a capital planning optimization tool that can maximize the overall performance of a network in terms of physical condition (or any other criteria) over a multi-year analysis horizon and maximize the value achieved for the money invested. It can assist the Township with selecting the best possible course of action in terms of time and selecting an appropriate strategy (maintenance, rehabilitation, or reconstruction treatment) within the Townships' goals and constraints. It should be noted that the DOT software operates at the network level, rather than the project level. As such, the lists of projects programmed for each year in the capital plans are intended for budgeting purposes only and do not eliminate the need for further detailed project-level investigations and subsequent closer budgeting of the projects at the detailed design stage.

Three optimization scenarios were analyzed as follows:

Scenario 1 – Do Nothing

Scenario 2 – Target Overall Condition Rating PCI of 65

Scenario 3 – Target Overall Condition Rating PCI of 75

The unit costs for preventative maintenance and rehabilitation treatments listed in Table 6 were proposed by WSP and revised by the Township, and they were then used in the DOT Roads software for the optimization analysis. This typical unit cost includes labour, material, and equipment for each treatment specified below. A detailed description of each treatment is provided in **Appendix E**.

Table 6: Treatment Options with Unit Costs

Treatment Code	Description	Cost
Hot Mix Asphalt Roads		\$/m²
HMA-Crack Seal	Crack Sealing	1.25*
HMA-Ovly	One Lift Overlay	25.50
HMA-2Ovly	Two Lift Overlay	52.00
HMA-EnhSurf	HMA - Enhanced Thin Surfacing (Micro-surfacing)	5.50
HMA-Recon FDR & 60HMA	HMA - Full Depth Reconstruction (150 Gran A, 60 HMA)	42.96
HMA-Recon FDR & 100HMA	HMA - Full Depth Reconstruction (150 Gran A, 100 HMA)	64.36
Surface Treated Roads		\$/m²
ST-Slurry	Slurry Seal	4.25
ST-SST	ST-Single Surface Treatment (Chip Seal)	4.50
ST-EnhSurf	ST - Enhanced Thin Surfacing (Micro-surfacing)	5.50
ST-DST	ST - Double Surface Treatment (Chip Seal)	9.00

Treatment Code	Description	Cost
ST-DST SAMI	ST - Double Surface Treatment (Chip Seal) & SAMI	11.50
ST-FDR & DST	Full Depth Reclamation + 100 Gran A + Double Surface Treatment	18.86
ST-FDR & DST & SAMI	Full Depth Reclamation + 100 Gran A + Double Surface Treatment + SAMI	21.36
Gravel Roads		\$/km
Re-Gravelling (25 mm)	Re-Gavelling (25 mm or 1 in)	9,547.50
Rehabilitation	Rehabilitation	57,285.00

*\$1.25 per meter.

4.1 Analysis Results

The following sections present the predicted performance of the Township of Bonfield Road network in terms of PCI over the analysis period of 10 years.

4.1.1 Scenario 1 – Do Nothing

The yearly predicated performance results for the Do Nothing Scenario are shown in Figure 2 and Figure 3. A decrease in network performance resulted from this scenario, delivering a PCI of 27 for the paved roads and a PCI of 0 for the gravel roads, indicating a “poor” condition by year 10 of the analysis. Details regarding Scenario 1, presented by Infrastructure Solutions Inc. (ISI) using Decision Optimization Technology (DOT™) Roads software are provided in **Appendix F**.

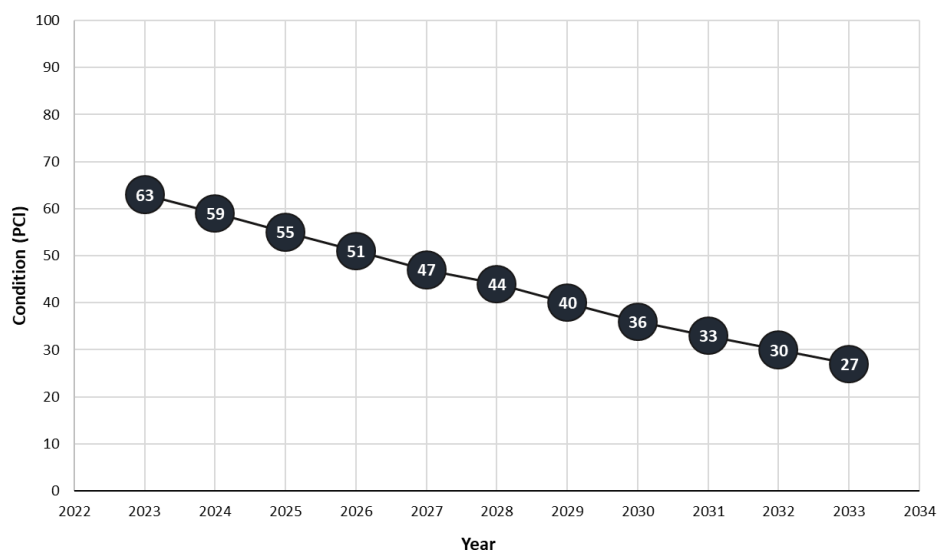


Figure 2: Scenario 1 – Paved Roads Performance (PCI) over 10-Year Analysis Period.

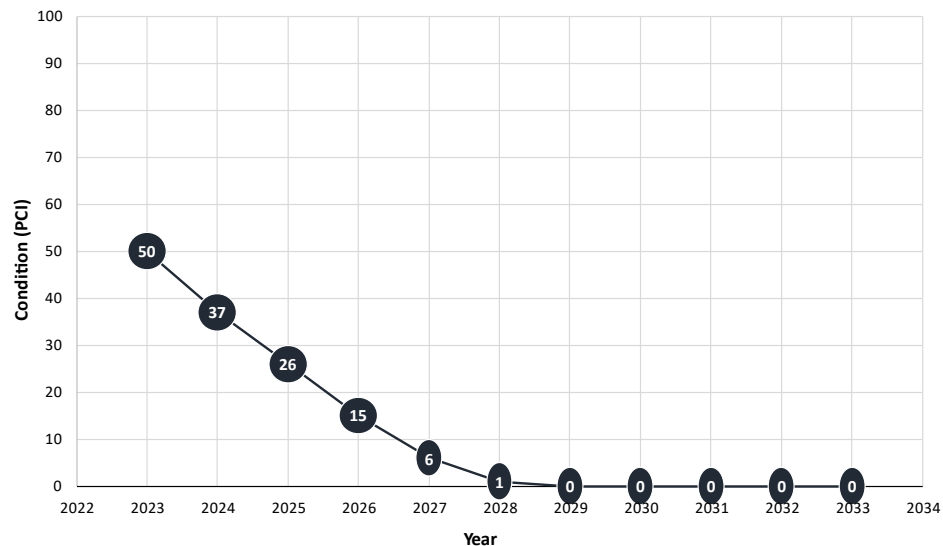


Figure 3: Scenario 1 – Gravel Roads Performance (PCI) over 10-Year Analysis Period.

4.1.2 Scenario 2 – Target Overall Condition Rating PCI of 65

In this scenario, the overall condition of the road network has improved and maintained the target condition with a total capital budget of (\$4.32M) required for the paved roads and (\$2.20M) required for the gravel roads over the analysis period of 10 years, as shown in Figures 4 and 5 and Tables 7 and 8. Details regarding Scenario 2, including the associated capital plans and results of the analysis presented by Infrastructure Solutions Inc. (ISI) using Decision Optimization Technology (DOT™) Roads software are provided in **Appendix G**.

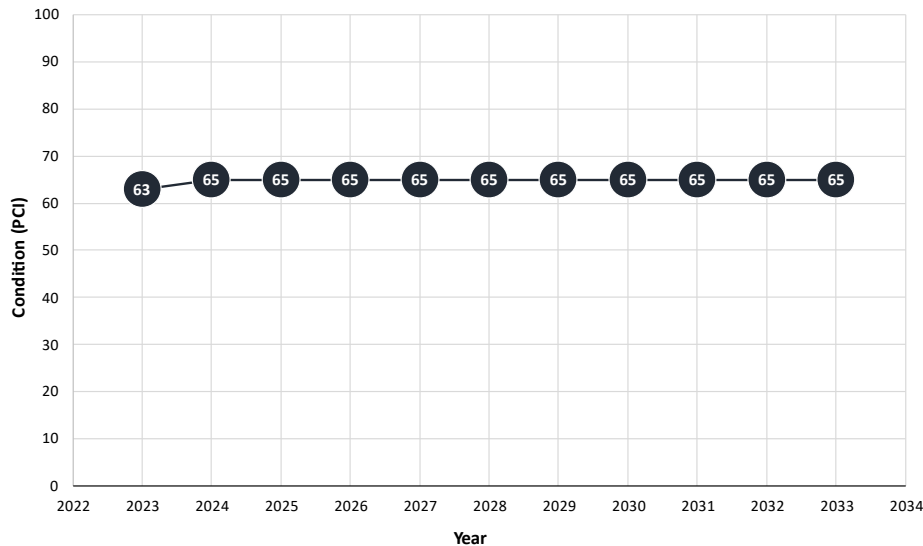


Figure 4: Scenario 2 - Paved Roads Performance (PCI) Over 10-Year Analysis Period.

Table 7: Scenario 2 - Paved Road Performance (PCI) and Capital Budget

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Performance (PCI)	65	65	65	65	65	65	65	65	65	65
Capital Budget (\$K)	565	426	445	367	427	382	413	401	461	440

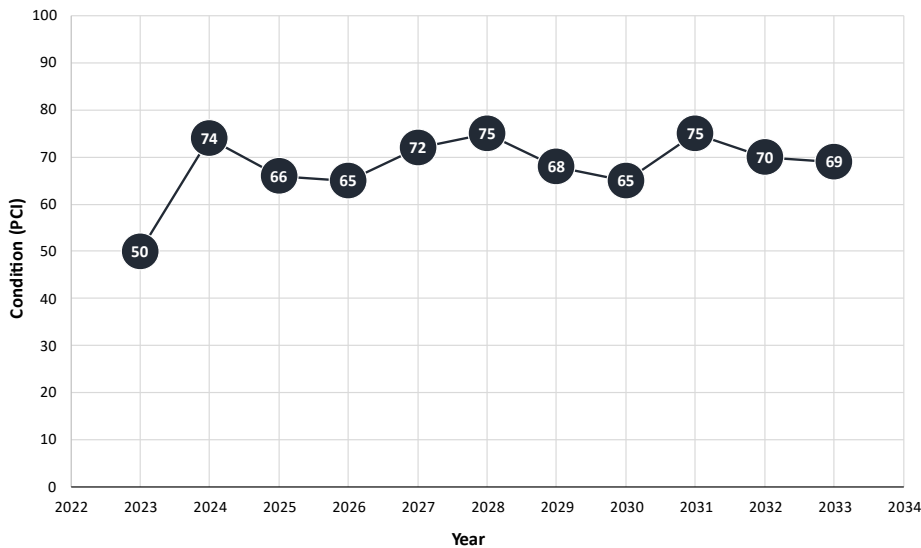


Figure 5: Scenario 2 - Gravel Roads Performance (PCI) Over 10-Year Analysis Period

Table 8: Scenario 2 - Gravel Road Performance (PCI) and Capital Budget

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Performance (PCI)	74	66	65	72	75	68	65	75	70	69
Capital Budget (\$K)	538	46	385	255	201	52	193	304	84	144

4.1.3 Scenario 3 – Target Overall Condition Rating PCI of 75

In this scenario, a target overall condition rating (PCI of 75) indicated that a total capital budget of \$5.6M for the paved roads and \$2.3M for the gravel roads are required to maintain the target condition over the analysis period of 10 years, as shown in Figures 6 and 7 and Tables 9 and 10. Details regarding Scenario 3, including the associated capital plans and results of the analysis presented by Infrastructure Solutions Inc. (ISI) using Decision Optimization Technology (DOT™) Roads software are provided in **Appendix H**.

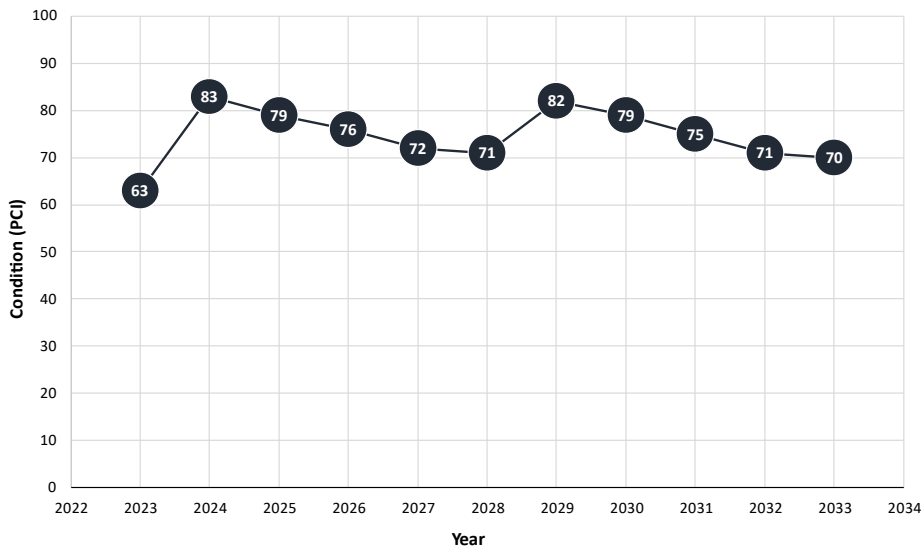


Figure 6: Scenario 3 - Paved Roads Performance (PCI) Over 10-Year Analysis Period.

Table 9: Scenario 3 - Paved Road Performance (PCI) and Capital Budget

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Performance (PCI)	83	79	76	72	71	82	79	75	71	70
Capital Budget (\$K)	2,662	-	120	22	361	1,842	198	63	33	292

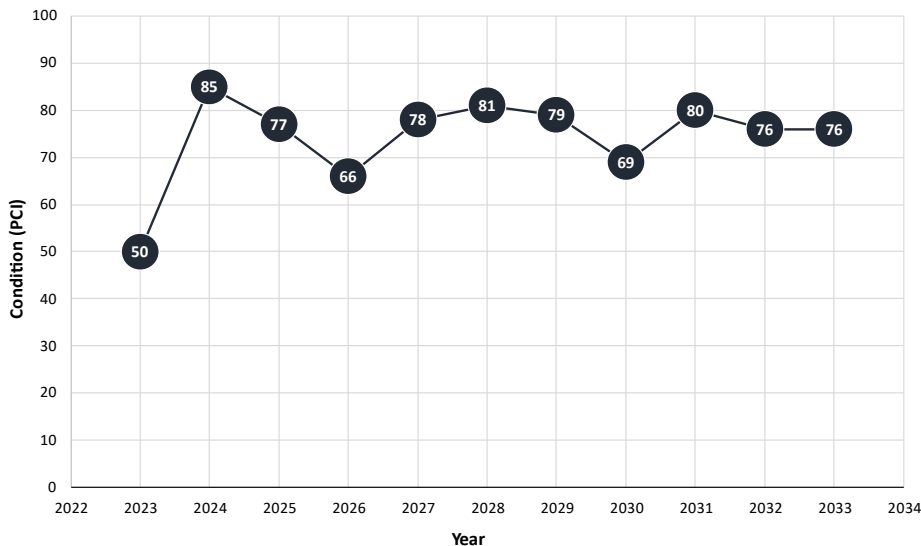


Figure 7: Scenario 3 - Gravel Roads Performance (PCI) Over 10-Year Analysis Period.

Table 10: Scenario 3 - Gravel Performance (PCI) and Capital Budget

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Performance (PCI)	85	77	66	78	81	79	69	80	76	76
Capital Budget (\$K)	995	45	2.1	336	211	125	16	324	96	159

4.2 DOT Software Utilization

The DOT software optimization analysis was provided as part of this Road Needs Study. Ongoing use of the DOT software is available to the Township at additional cost and can be facilitated directly through Infrastructure Solutions Inc. (ISI).

4.3 Maintenance and Rehabilitation Treatments

The recommended road improvement strategies are included in the capital plan scenarios in **Appendices G and H**. The treatment recommendations in the capital plans are listed by road section ID, with start and end location, length of the section, suggested treatment (in short form), and budgeted cost. A brief description and the short forms and corresponding full names of the treatments are provided in **Appendix E**.

The three typical treatment categories that are used to treat roads depending on their PCI values are summarized below;

- Preventative Maintenance – Various maintenance treatments are applied to the pavement surface, typically when the pavements are in good to very good structural condition (PCI values between 60 and 80), to extend the serviceable life and delay the need for more costly rehabilitation or reconstruction.
- Minor Rehabilitation – More extensive reactive maintenance or rehabilitation is applied to pavements that have deteriorated to a point where overlays or localized full-depth repairs are required (PCI values between 40 and 60) to delay the need for more extensive and costly reconstruction.
- Reconstruction – Once the PCI reaches a threshold value (PCI of 40 or less), the pavement structure may require full reconstruction to support traffic over the next 15 or 20 years. Once the pavement is in poor condition, rehabilitation strategies such as resurfacing are no longer cost-effective or appropriate.

5.0 KEY CONSIDERATIONS FOR GRAVEL ROAD MAINTENANCE

This section discusses general guidelines and recommendations for utilizing best maintenance practices and management concepts for gravel roads.

5.1 Building a Proper Cross Section

Building a proper cross section is the primary objective of gravel road maintenance operations. A properly shaped cross section with adequate crown and shoulder cross slope (crossfalls) drains water away from the pavement structure and extends its service life. A typical crossfall for the traveled lanes is between 4% and 5%. The crossfall deteriorates over time and reaches a point at which it no longer sheds water and deteriorates more quickly. Without adequate crossfall, water accumulates on the road surface, softens the crust, and penetrates into the subgrade. A typical gravel road cross fall is shown in Figure 8.

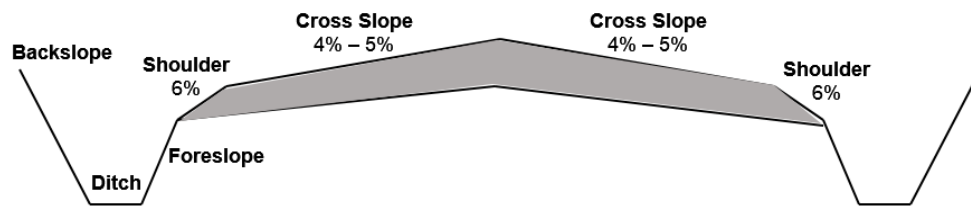


Figure 8: A typical gravel road cross section

Inadequate crowns can quickly result in surface distresses such as potholes, rutting, or deformation, especially under heavy traffic loading. Many studies show that the poor performance of gravel roads can be attributed mostly to a lack of crossfall and inadequate surface drainage, even in semi-arid regions. Excessive crowns (i.e., crossfalls over 6%) are not recommended due to safety issues. Excessive crowns can cause loss of control while driving and encourage road users to drive in the middle of the road regardless of the surface width.

A gravel road cross section should also be adjusted at curves to provide adequate superelevation. By raising the outer edge of a curve on the road above the inner edge, a superelevation reduces the effect of centrifugal force on vehicles and provides better control while turning. Lack of superelevation or improper transition from a crown to a superelevation can become a safety hazard and increase the risk of accident. During maintenance operations, the grader operator should build a gradual transition from a crowned surface to a straight superelevated surface.

Typical lane widths for a gravel road are 3.5 m but can vary from 3.0 m to 3.7 m. Shoulders are graded at around 6% to provide adequate drainage by directing water further from the road surface down the foreslope and into the ditch. Frequently, gravel roads might not have defined shoulders. Road shoulders should be kept at the same level as the edge of the road surface. Sudden drop-offs can lead to safety hazards, while high shoulders prevent water from draining off the road surface into the ditch. High shoulders can result in a secondary ditch along the side of the road that erodes gravel material and subgrade soil, resulting in various defects. High shoulders are usually the result of poor maintenance practices.

Ditches are also important to drain water away from the roadway subgrade. Ditches must extend to below the top of the subgrade and require periodic cleaning to remove debris, vegetation, or excess gravel material migrating from the road surface. Similar to ditches, culverts should be maintained periodically to ensure there is no obstruction to prevent the natural flow of water under the road and to ensure that the culverts are not perforated, crushed, or distorted. Care should be taken during maintenance and installation of culverts to ensure proper inlet/outlet elevations and alignment with the flow line of the ditch are achieved to avoid any washout or erosion around the outlets.

5.2 Materials for Use

Crushed products are preferred for gravel roads. The crushed content of an aggregate improves its structural capacity since the roughly crushed faces provide better granular interlock compared to rounded particles. Construction granulars can be pit run, produced from a quarry source (in which case they will be 100% crushed), or a partially crushed pit source material (partly crushed). Irrespective of the percentage of crushed particles, the

particles themselves must be hard and durable. A good test for this is the MicroDeval test. Road surfacing gravels should have maximum MicroDeval losses on the coarse fraction of less than 25%.

Most granular road base materials allow 15 to 20% of coarse material larger than 19 mm. In general, gravel road surfacing should be 100% finer than 19 mm since it provides a smoother ride quality and is less prone to segregation. It also needs an adequate percentage of sand sizes to fill the voids. Typical granular bases will have 45 to 70% passing the 4.75 mm sieve. The sand sizes should be at the higher end of this range for gravel road surfacing.

Practical experience suggests that surfacing gravels with a higher percentage of fines (material finer than 0.075 mm) perform better. For road base granular materials, the fines are usually restricted to 8 to 10% maximum, so as to not impede drainage. However, many agencies prefer fines content up to 15% for surfacing gravels. They will also allow the materials to have Plasticity Indices of 4 to 12%, while for most road base granular materials, the fines are required to be non-plastic. In a road surfacing application, the higher fines content binds the material and allows a crust to form on the surface, reducing material loss.

Some agencies also allow the addition of Recycled Asphalt Products (RAP) in road surfacing granulars. With the increasing use of cold milling for road maintenance, large volumes of RAP are readily available. In general, the addition of RAP should not be greater than 30%, since, above that, the material may no longer be “unbound” and so maintenance regrading activities become more problematic.

5.3 Proper Grading Operation

Several studies have been published on proper grading techniques. This section does not provide a detailed review of proper grading techniques; however, some of the main issues and considerations are discussed. Operating speed should be slow enough to avoid bouncing and the creation of cut depressions on the road surface. A speed range of 5 to 10 km per hour is typically recommended; however, factors such as the quality of material, moisture, or subgrade strength can affect the proper operating speed. Operators should maintain a proper blade angle, typically between 35 to 45 degrees, during the grading maintenance to recover material and avoid spilling from the toes of the blade. It is also important to use a proper blade pitch to achieve proper mix and avoid material loss. Excessive backward pitch can result in poor mixing action and also high shoulders. Excessive forward pitch, on the other hand, may result in poor mix and lack of enough penetration to remove surface defects and may not create a smooth ride quality. A proper blade pitch and angle result in a good mixing action with enough penetration to fix surface defects with minimum material loss during the grading operation.

5.4 Dust Control

Gravel roads give off dust under traffic action. The amount of dust generation can be affected by factors such as gravel material properties, the percentage of fines, annual precipitation, and the level of daily traffic. Excessive dust from gravel roads can cause health issues, poor air quality for nearby residents, environmental damage, and an increased risk of accidents. The most common dust suppressants are calcium chloride and magnesium chloride. These are typically applied in liquid form from a tanker with a spray bar. Calcium chloride draws moisture from the air resulting in a damped road surface that reduces the amount of dust generation. Proper dust control can also reduce gravel loss and required grading maintenance cycles. For effective dust control operations, gravel roads should have optimum moisture to allow for complete absorption of the dust suppressant.

5.5 Gravel Road Treatments

A practical condition rating scheme for gravel roads was developed by MTO, which is based on evaluating conditions under a set of distress modes in conjunction with an evaluation of the ride quality. This produces an estimate of PCI. A distress manifestation index is calculated from the evaluation of the road condition under eight distress modes, as listed in Table 11. A range of maintenance treatments can then be assigned based on the PCI and major distress types, as shown in Table 12.

A such systematic approach for condition assessment of gravel roads provides consistent and representative condition ratings and identifies the predominant surface defects while performing a network-level analysis. It also allows the identification of any underlying conditions that decrease the effectiveness of routine maintenance.

Table 11: Gravel Roads Distress Manifestation (MTO 1989)

Distress Mode	Distress Type
Surface Defects	Loose Gravel
	Dust
	Potholes
	Break-up
Surface Deformation	Washboarding
	Rutting
	Flat / Reverse Crown
	Distortion

Table 12: Example of Using PCI data to determine proper maintenance treatment actions

PCI Range	Treatment
80-100	Routine maintenance
60-79	Routine maintenance. Dust control may be necessary for residential areas.
40-59	Increased routine maintenance is necessary. Addition of gravel and dust control additives become necessary.
20-39	Maintenance with addition of gravel is necessary. Dust control is a must for residential areas. Some portions may need rehabilitation.
0-19	Rehabilitation necessary.

6.0 PROJECT LEVEL INVESTIGATION

As discussed in Section 4.0, we believe that this network-level survey is sufficient for capital planning purposes but does not absolve the Township from carrying out project-level analysis to refine the rehabilitation recommendations produced herein. Upon approval of the 10-year capital plan, WSP can be available to provide project-level support for annual rehabilitation and capital road works programs. Our experienced pavement and geotechnical engineers have provided rehabilitation recommendations to all tiers of government across Canada with the intention of providing an improved level of service while meeting the needs of the capital plan and annual budget. Further, at the detailed project level, new pavement materials and construction technologies or technologies not considered during the capital planning analysis can be considered to further optimize the rehabilitation strategy.

7.0 CLOSING

We trust the information provided in this report satisfies your needs. We will be pleased to assist you further with developing specific annual maintenance plans based on the results of this study if required. It is recommended that the pavement condition surveys be updated every three years. Please do not hesitate to contact the undersigned if you have further questions.

Signature Page

WSP Canada Inc.



Maxim Ryskin, Ph.D.
Materials Specialist



Ahmed R. Suleiman, Ph.D., P.Eng.
Materials and Pavement Consultant

MR/ARS/aa

APPENDIX A

**Important Information and
Limitations**



IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Standard of Care: WSP Canada Inc. (WSP) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practising under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

Basis and Use of the Report: This report has been prepared for the specific site, design objective, development and purpose described to WSP by the Client. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location. Any change of site conditions, purpose, development plans or if the project is not initiated within eighteen months of the date of the report may alter the validity of the report. WSP cannot be responsible for use of this report, or portions thereof, unless WSP is requested to review and, if necessary, revise the report.

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The report is of a summary nature and is not intended to stand alone without reference to the instructions given to WSP by the Client, communications between WSP and the Client, and to any other reports prepared by WSP for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the whole of the report. WSP can not be responsible for use of portions of the report without reference to the entire report.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project. The extent and detail of investigations, including the number of test holes, necessary to determine all of the relevant conditions which may affect construction costs would normally be greater than has been carried out for design purposes. Contractors bidding on, or undertaking the work, should rely on their own investigations, as well as their own interpretations of the factual data presented in the report, as to how subsurface conditions may affect their work, including but not limited to proposed construction techniques, schedule, safety and equipment capabilities.

Soil, Rock and Ground Water Conditions: Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves

judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, WSP does not warrant or guarantee the exactness of the descriptions.

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that WSP interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report. The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

Sample Disposal: WSP will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

Follow-Up and Construction Services: All details of the design were not known at the time of submission of WSP's report. WSP should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of WSP's report.

During construction, WSP should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of WSP's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in WSP's report. Adequate field review, observation and testing during construction are necessary for WSP to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, WSP's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

Changed Conditions and Drainage: Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that WSP be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires

experience and it is recommended that WSP be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. WSP takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.

APPENDIX B

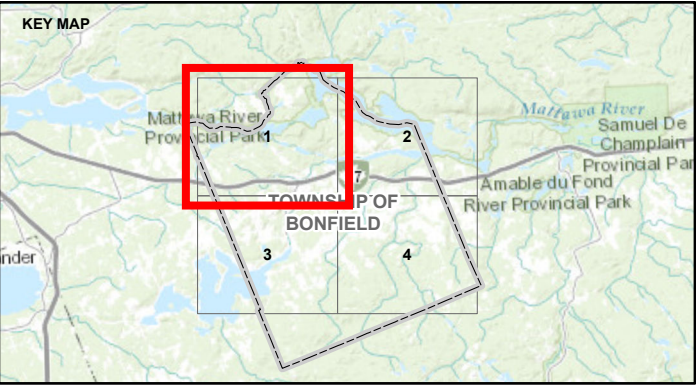
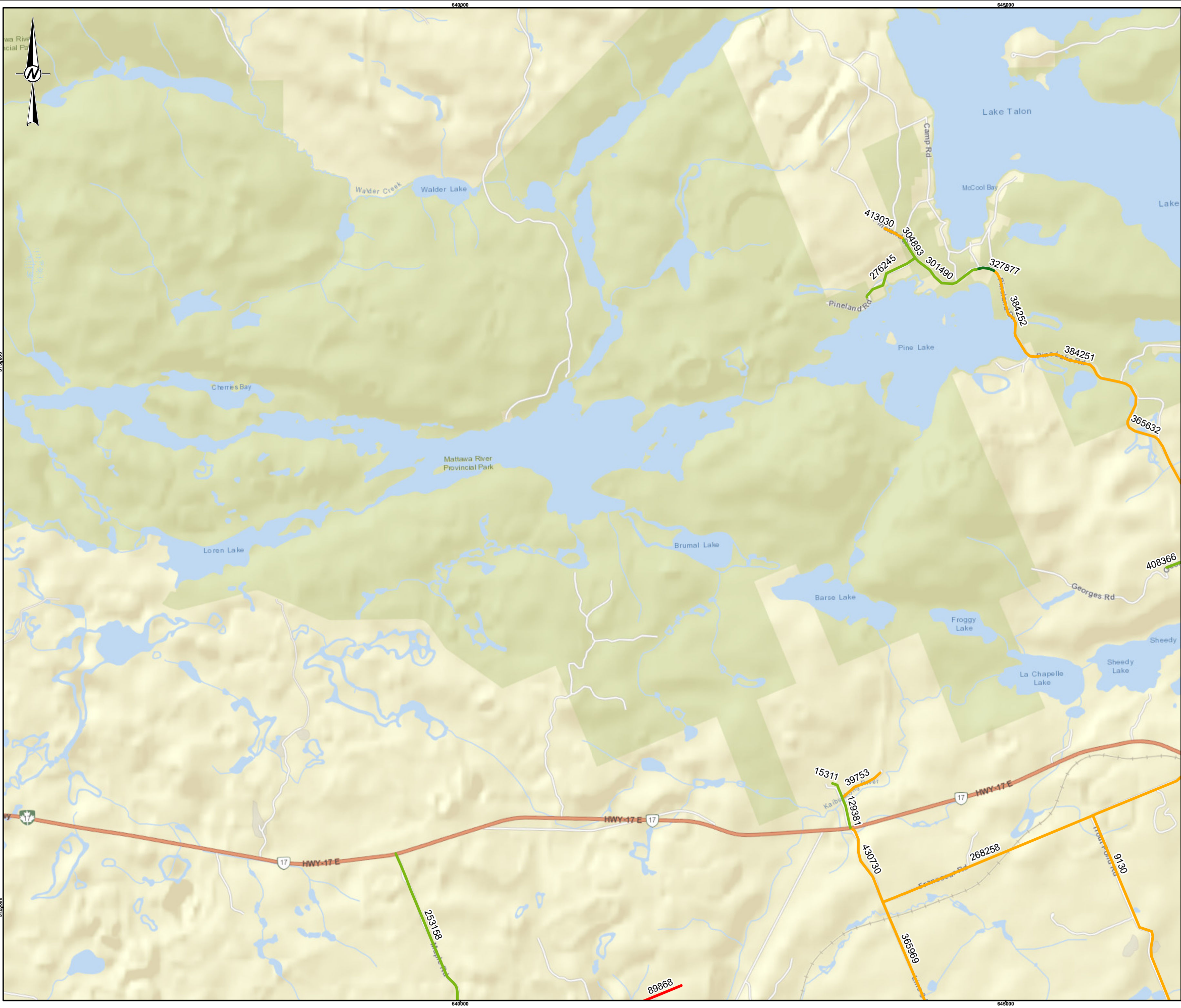
Road Inventory

Asset ID	Name	Start Position	End Position	Length	Functional Class	Roadside Environment	Minimum Maintenance Standard	Service Type	Surface Type	AADT	AADT Assessment Year	Condition Index (CI)	PCI Assessment Year
153410	PINE LAKE ROAD	Highway 17	Shields Point	1620.2	Local	Rural	4	Residential	Surface Treated	350	2014	67	2022
177132	PINE LAKE ROAD	Shields Point	Georges Road	707.8	Local	Rural	5	Residential	Gravel	150	2014	67	2022
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	2027.6	Local	Rural	4	Residential	Hot Mix Asphalt	350	2014	89	2022
241548	BOXWELL ROAD	Farmer's Line	Grand Desert Road	5278.1	Local	Rural	5	Residential	Gravel	30	2014	41	2022
302923	LAPLANTE ROAD	Guay Road	Mount Pleasant	2176.2	Local	Rural	5	Residential	Gravel	30	2014	56	2022
103075	CHURCH STREET	Labreques Street	Benoit Street	171.3	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1250	2014	26	2022
476795	DEVELOPMENT ROAD	Lake Nosbonsing	North Star Drive	35	Local	Rural	5	Residential	Surface Treated	10	2014	61	2022
89511	SHIELDS POINT ROAD	Rockridge Lane	Turn Around	1880.6	Local	Rural	4	Residential	Gravel	350	2014	57	2022
145804	RIVERSIDE DRIVE	Maple Road	Hillside Avenue	301.8	Local	Rural	5	Residential	Gravel	20	2014	69	2022
129381	LINE 3 ROAD NORTH	Highway 17	Berry Road	264	Local	Rural	5	Residential	Gravel	10	2014	71	2022
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	1068	Local	Rural	5	Residential	Gravel	10	2014	60	2022
476794	DEVELOPMENT ROAD	Southshore Road	Blue Sea Road	2005	Local	Rural	5	Residential	Surface Treated	150	2014	61	2022
445150	SUNNYSIDE ROAD	Lima Lodge Road	Greenwood Drive	1327	Local	Rural	4	Residential	Surface Treated	500	2014	72	2022
262922	SUNNYSIDE ROAD	Cedar Lane	Lima Lodge Road	1617.1	Local	Rural	4	Residential	Surface Treated	500	2014	62	2022
173227	MARK STREET	James Street	Church Street	73	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1500	2014	27	2022
14313	DEVELOPMENT ROAD	North Star Drive	Southshore Road	470	Local	Rural	5	Residential	Surface Treated	150	2014	61	2022
133834	VONDOELER ROAD	Talon Lake Road	East end of the raod	670.7	Local	Rural	5	Residential	Gravel	10	2014	60	2022
373427	YONGE STREET	Boisvert Street	James Street	577	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	525	2014	82	2022
89868	WEBBS ROAD	Maple Road	East end of the raod	2078.6	Local	Rural	5	Residential	Gravel	10	2014	29	2022
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	370.6	Local	Rural	5	Residential	Gravel	10	2014	63	2022
240113	WUNDERS ROAD	Private Lane (north side)	Canoe Bay Road(turn around)	1045.8	Local	Rural	5	Residential	Gravel	10	2014	63	2022
360778	YONGE STREET	Trunk Road	Boisvert Street	326.6	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	525	2014	86	2022
465712	BENOIT STREET	Church Street	Levesques St	101.2	Local	Semi-Urban	5	Residential	Gravel	10	2014	81	2022
39753	BERRY ROAD	Line 3 North Road	East end of the raod	560.4	Local	Rural	5	Residential	Gravel	10	2014	55	2022
362162	BOISVERT STREET	Railway Street	Yonge Street	226.8	Local	Semi-Urban	5	Residential	Hot Mix Asphalt	30	2014	80	2022
320938	BOUNDARY ROAD	Grand Desert Road	South end	2096.2	Local	Rural	5	Residential	Gravel	30	2014	61	2022
112460	CHURCH STREET	Benoit Street	Township Dock	136.3	Local	Semi-Urban	4	Residential	Gravel	1250	2014	83	2022
330336	CHURCH STREET	Yonge Street	Landon Street	74.6	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1250	2014	69	2022
325543	CHURCH STREET	Landon Street	Labreques Street	142	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1250	2014	69	2022
152911	DEVELOPMENT ROAD	McNutt Road	Rutherglen Line	1193.7	Local	Rural	4	Residential	Surface Treated	650	2014	56	2022
184412	DEVELOPMENT ROAD	Rutherglen Line	Mount Pleasant	1527	Local	Rural	5	Residential	Surface Treated	150	2014	53	2022
138259	DEVELOPMENT ROAD	Fichault Road	McNutt Road	2403	Local	Rural	4	Residential	Surface Treated	650	2014	51	2022
427972	DEVELOPMENT ROAD	Blue Sea Road	Line 3 South	2507.3	Local	Rural	4	Residential	Surface Treated	650	2014	61	2022
48259	DEVELOPMENT ROAD	Trout Pond South	Fichault Road	2511	Local	Rural	4	Residential	Surface Treated	650	2014	64	2022
176330	DEVELOPMENT ROAD	Line 3 South	Trout Pond Road	2604.6	Local	Rural	4	Residential	Surface Treated	650	2014	71	2022
343423	ERIC STREET	Gagnon Street	End	105.2	Local	Semi-Urban	5	Residential	Gravel	30	2014	63	2022
397491	FARMERS LINE	Development Road	Laplante Road	2006	Local	Rural	4	Residential	Gravel	80	2014	72	2022
194298	FICHAULT ROAD	Trunk Road	Development Rd	1949.1	Local	Rural	5	Residential	Gravel	30	2014	61	2022
251965	GAGNE ROAD	Park Street	Hwy 17	104.7	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1250	2014	83	2022
28856	GAGNON STREET	Upper Laurier St	Levesques St	56.5	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	350	2014	80	2022
492316	GAGNON STREET	Levesques St	Church Street	112.8	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	350	2014	49	2022
139054	GAGNON STREET	Eric Street	Upper Laurier St	205.1	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	350	2014	31	2022
230866	GAGNON STREET	Development Road	Eric Street	593.8	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	350	2014	31	2022
170091	GAGNON STREET	James Street	Church Street	78.6	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	350	2014	93	2022
408366	GEORGES ROAD	Pine Lake Road	Turn Around	652.5	Local	Rural	5	Residential	Gravel	30	2014	72	2022
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	502.7	Local	Rural	5	Residential	Gravel	100	2014	68	2022
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	5207.7	Local	Rural	5	Residential	Gravel	100	2014	61	2022
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	7096.9	Local	Rural	5	Residential	Gravel	100	2014	59	2022
297195	GREENWOOD DRIVE	Hillside Avenue	Lakeview Court	170.1	Local	Semi-Urban	5	Residential	Surface Treated	100	2014	52	2022
253167	GREENWOOD DRIVE	Lakeview Crescent	Sunnyside Road	251.6	Local	Semi-Urban	5	Residential	Surface Treated	100	2014	56	2022
446466	GREENWOOD DRIVE	Maple Road	Hillside Avenue	340.6	Local	Semi-Urban	5	Residential	Surface Treated	100	2014	69	2022
473302	GUAY ROAD	Laplante Road	Grand Desert Rd	1977.4	Local	Rural	5	Residential	Gravel	100	2014	71	2022
107422	HILLSIDE AVENUE	Riverside Rd	End	92.4	Local	Semi-Urban	5	Residential	Gravel	20	2014	81	2022
291789	HILLSIDE AVENUE	Greenwood Ave.	Riverside Rd	217	Local	Semi-Urban	5	Residential	Gravel	20	2014	77	2022
68780	JAMES STREET	Schayer Street	mark Street	151.7	Local	Semi-Urban	5	Residential	Gravel	100	2014	49	2022
245789	JAMES STREET	Yonge Street	Schayer Street	228.8	Local	Semi-Urban	5	Residential	Gravel	100	2014	81	2022
11581	LABRECQUE STREET	Levesques St	Laurier Street	69.3	Local	Semi-Urban	5	Residential	Gravel	20	2014	81	2022
459177	LABRECQUE STREET	Church Street	Levesque Street	107.4	Local	Semi-Urban	5	Residential	Gravel	20	2014	70	2022
463875	LAKESHORE ROAD	Development Road	South end	639.4	Local	Rural	5	Residential	Gravel	30	2014	57	2022
363317	LAKEVIEW COURT	Greenwood Drive	End of Cul De Sac	156.9	Local	Semi-Urban	5	Residential	Gravel	10	2014	72	2022
279916	LANDON STREET	Church Street	Levesques St	110.2	Local	Semi-Urban	5	Residential	Gravel	20	2014	60	2022
161925	LAPLANTE ROAD	Farmers Line	Guay Road	516.3	Local	Rural	5	Residential	Gravel	30	2014	63	2022
11580	LAURIER STREET	Lebreques Street	End	135.5	Local	Semi-Urban	5	Residential	Gravel	30	2014	70	2022
384699	LAURIER STREET	Gagnon Street	End (turn around)	274.8	Local	Semi-Urban	5	Residential	Gravel	30	2014	74	2022

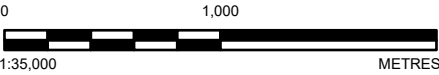
Asset ID	Name	Start Position	End Position	Length	Functional Class	Roadside Environment	Minimum Maintenance Standard	Service Type	Surface Type	AADT	AADT Assessment Year	Condition Index (CI)	PCI Assessment Year
453389	LEVESQUE STREET	Landon Street	Gagnon Street	69.4	Local	Semi-Urban	5	Residential	Gravel	30	2014	86	2022
142136	LEVESQUE STREET	Lebreques Street	Landon Street	152.7	Local	Semi-Urban	5	Residential	Gravel	30	2014	81	2022
465711	LEVESQUE STREET	Benoit Street	Lebreques Street	166.3	Local	Semi-Urban	5	Residential	Gravel	30	2014	69	2022
15311	LINE 3 ROAD NORTH	Berry Road	North end	176.6	Local	Rural	5	Residential	Gravel	10	2014	71	2022
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	744	Local	Rural	5	Residential	Gravel	150	2014	59	2022
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	1929	Local	Rural	5	Residential	Gravel	150	2014	59	2022
217795	LINE 3 ROAD SOUTH	Development Road	Trunk Road	1953.6	Local	Rural	5	Residential	Gravel	150	2014	76	2022
485056	MAPLE ROAD	Webbs Road	Palangio Road	129.5	Local	Rural	5	Residential	Gravel	100	2014	68	2022
404440	MAPLE ROAD	Riverside Rd	Greenwood Drive	177.9	Local	Rural	5	Residential	Gravel	100	2014	59	2022
247683	MAPLE ROAD	Hwy 531	Riverside Rd	365.3	Local	Rural	5	Residential	Gravel	100	2014	68	2022
20756	MAPLE ROAD	Rainville Drive	Webbs Road	986.1	Local	Rural	5	Residential	Gravel	100	2014	68	2022
253158	MAPLE ROAD	Palangio Road	Highway 17	1972.1	Local	Rural	5	Residential	Gravel	100	2014	68	2022
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	2254.5	Local	Rural	5	Residential	Gravel	100	2014	59	2022
294648	MARK STREET	Sunnyside Road	James Street	104.7	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1500	2014	27	2022
28629	MARK STREET	Schayer Street	Sunnyside Road	230.4	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1500	2014	27	2022
123366	MCNUTT ROAD	Development Road	Trunk Road	2012.2	Local	Rural	5	Residential	Gravel	150	2014	68	2022
428961	PALANGIO ROAD	Maple Road	West end	2706.8	Local	Rural	5	Residential	Gravel	10	2014	63	2022
323576	PARK STREET	Gagne Road	Rutherglen Line	199.8	Local	Semi-Urban	5	Residential	Hot Mix Asphalt	250	2014	83	2022
41177	PARK STREET	Rutherglen Line	Highway 17	253.6	Local	Semi-Urban	5	Residential	Hot Mix Asphalt	250	2014	83	2022
38557	PARK STREET	Railway Tracks	Gagne Road	329.3	Local	Semi-Urban	5	Residential	Hot Mix Asphalt	250	2014	83	2022
324473	PINE LAKE ROAD	Timber Haven Lane	Turn Around (Gate)	95.8	Local	Rural	4	Residential	Gravel	100	2014	65	2022
327877	PINE LAKE ROAD	Talpine Road	Portage View Road	213.5	Local	Rural	5	Residential	Gravel	20	2014	81	2022
304893	PINE LAKE ROAD	Pine Land	Timber Haven Lane	219	Local	Rural	5	Residential	Gravel	100	2014	74	2022
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	266.9	Local	Rural	5	Residential	Gravel	100	2014	80	2022
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	446.6	Local	Rural	5	Residential	Gravel	100	2014	65	2022
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	551.7	Local	Rural	5	Residential	Gravel	100	2014	76	2022
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	853.8	Local	Rural	5	Residential	Gravel	100	2014	64	2022
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	1140	Local	Rural	5	Residential	Gravel	100	2014	62	2022
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	1936.2	Local	Rural	5	Residential	Gravel	100	2014	61	2022
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	124.7	Local	Rural	5	Residential	Gravel	30	2014	55	2022
276245	PINELAND DRIVE	Pine Lake Road	Turn Around	687.6	Local	Rural	5	Residential	Gravel	30	2014	76	2022
491234	RAILWAY STREET	Trunk Rd	Boisvert Street	289.6	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1500	2014	30	2022
99734	RAILWAY STREET	Boisvert Street	Schayer Street	329.9	Local	Semi-Urban	4	Residential	Hot Mix Asphalt	1500	2014	27	2022
242633	RAINVILLE ROAD	Maple Road	turn around	708.1	Local	Rural	5	Residential	Gravel	10	2014	52	2022
447507	RUTHERGLEN LINE	Talon Crescent	Park Street	320.1	Local	Semi-Urban	4	Residential	Surface Treated	250	2014	80	2022
149553	RUTHERGLEN LINE	Development Road	Talon Cresecent	1624.8	Local	Rural	4	Residential	Surface Treated	250	2014	90	2022
328526	SCHAYER STREET	James Street	Railway Street	293	Local	Semi-Urban	4	Residential	Gravel	350	2014	81	2022
286477	SHIELDS POINT ROAD	Pine Lake Road	Rockridge Lane	1906.5	Local	Rural	4	Residential	Gravel	350	2014	55	2022
195582	SOUTH SHORE ROAD	Development Road	Daytona Camp (Turn around)	3210.4	Local	Rural	5	Residential	Gravel	150	2014	41	2022
262732	SUNNYSIDE ROAD	Border (3 Sunnyside)	Quae Road	410.6	Local	Rural	4	Residential	Surface Treated	600	2014	78	2022
101708	SUNNYSIDE ROAD	Mark Street	Greenwood Drive	474.3	Local	Rural	4	Residential	Surface Treated	600	2014	75	2022
262731	SUNNYSIDE ROAD	Rockhaven Drive	Border (3 Sunnyside)	620.9	Local	Rural	4	Residential	Surface Treated	600	2014	74	2022
303468	TALON CRESECENT	Talon Cresecent	North End	126.4	Local	Semi-Urban	5	Residential	Gravel	10	2014	69	2022
178929	TALON CRESECENT	Rutherglen Line	Talon Cresecent	175.9	Local	Semi-Urban	5	Residential	Gravel	10	2014	69	2022
488834	TALON CRESECENT	Talon Cresecent	South end	86.4	Local	Semi-Urban	5	Residential	Surface Treated	10	2014	69	2022
437815	TALON LAKE ROAD	Highway 17	Vondoeleer Road	420.5	Local	Rural	4	Residential	Gravel	100	2014	69	2022
100592	TALON LAKE ROAD	TALON LAKE ROAD	North end	1023.9	Local	Rural	4	Residential	Gravel	100	2014	72	2022
201966	TROUT POND ROAD	Development Road	Trunk Road	1993.3	Local	Rural	5	Residential	Gravel	60	2014	66	2022
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	3290.1	Local	Rural	5	Residential	Gravel	60	2014	60	2022
271607	TRUNK ROAD	Highway 531	Railway Street	128.8	Local	Semi-Urban	4	Residential	Surface Treated	250	2014	91	2022
198052	TRUNK ROAD	Railway Street	Yonge Street	254	Local	Semi-Urban	4	Residential	Surface Treated	250	2014	57	2022
68860	TRUNK ROAD	Mcnutt Road	Park Street	627.5	Local	Rural	4	Residential	Surface Treated	250	2014	60	2022
305084	TRUNK ROAD	Private lane (south side)	Fichault Road	1028.8	Local	Rural	4	Residential	Surface Treated	250	2014	65	2022
467621	TRUNK ROAD	Trout Pond South	Private lane (south side)	1519.1	Local	Rural	4	Residential	Surface Treated	250	2014	67	2022
459367	TRUNK ROAD	Fichault Road	McNutt Road	2482.4	Local	Rural	4	Residential	Surface Treated	250	2014	60	2022
3194	TRUNK ROAD	Yonge Street	Line 3 South	2515.4	Local	Rural	4	Residential	Surface Treated	250	2014	67	2022
72427	TRUNK ROAD	Line 3 South	Trout Pond Road	2596.9	Local	Rural	4	Residential	Surface Treated	250	2014	71	2022

APPENDIX C

**Road Network Maps with
Condition Rating**



- LEGEND**
- PAVEMENT CONDITION INDEX (PCI)
- EXCELLENT (81-100)
 - GOOD (66-80)
 - FAIR (51-65)
 - POOR (0-50)



NOTE(S)

- REFERENCE(S)**
1. BASE IMAGERY: WORLD STREET MAP: ESRI, HERE, GARMIN, NGA, USGS, NPS, NRCAN
WORLD TOPOGRAPHIC MAP: ONTARIO BASE MAP, PROVINCE OF ONTARIO, MTQ, ONTARIO MNR, ESRI CANADA, ESRI, © OPENSTREETMAP CONTRIBUTORS, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN
 2. PROJECTION: TRANSVERSE MERCATOR; DATUM: NAD83; COORDINATE SYSTEM: UTM ZONE 17.

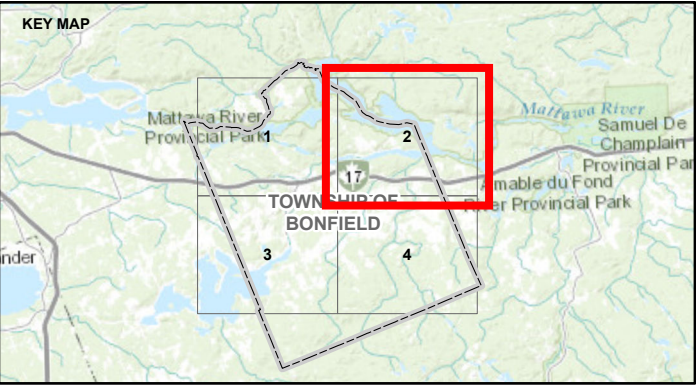
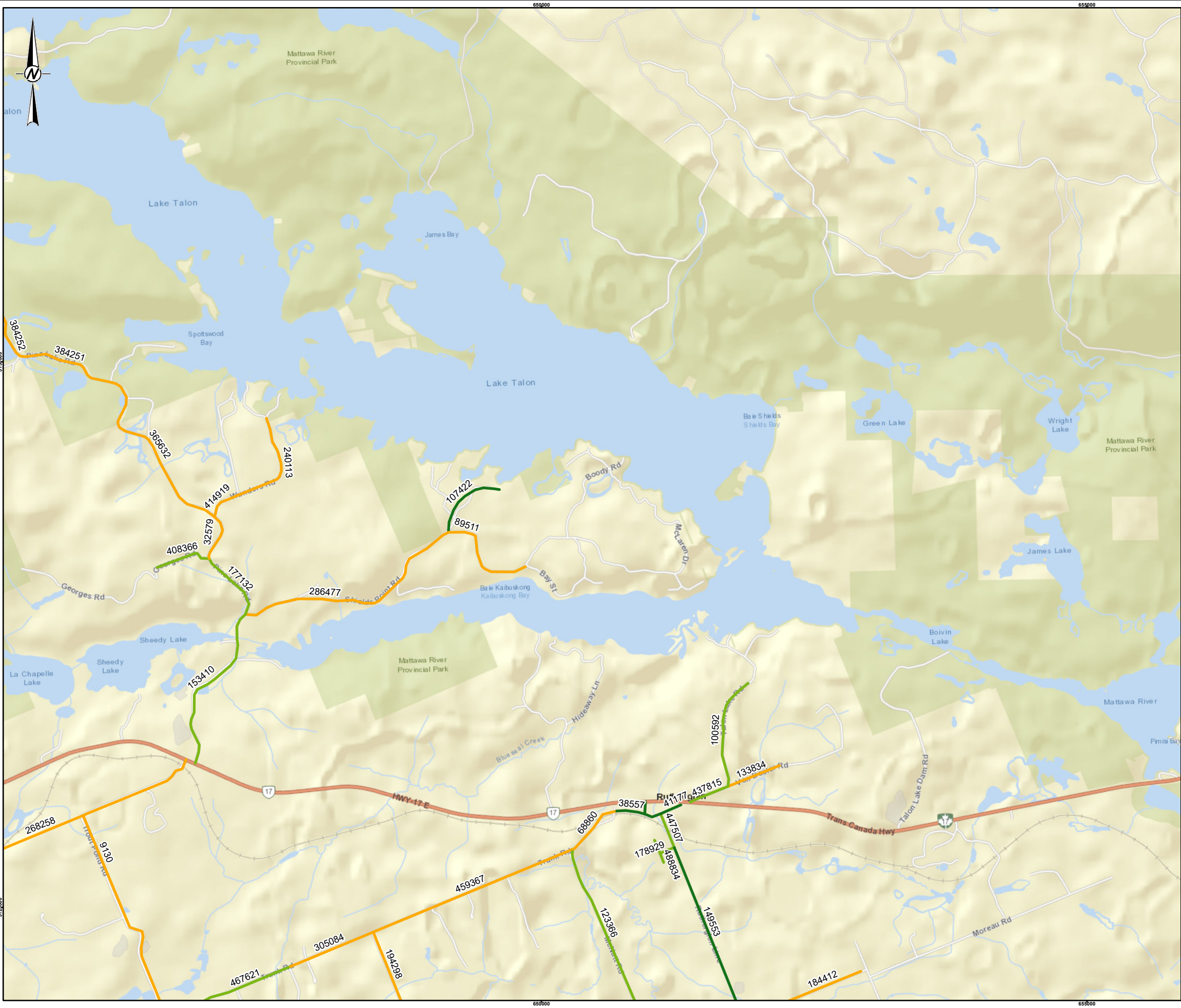
CLIENT
TOWNSHIP OF BONFIELD

PROJECT
2022 ROADS NEEDS STUDY

TITLE
2022 PAVEMENT CONDITION

	CONSULTANT	YYYY-MM-DD	2023-11-01
	DESIGNED	DB	
	PREPARED	DB	
	REVIEWED		
	APPROVED		

PROJECT NO. CA-GLD-22522228	CONTROL 0002	REV. A	FIGURE 1-1
--------------------------------	-----------------	-----------	---------------



LEGEND

PAVEMENT CONDITION INDEX (PCI)

- EXCELLENT (81-100)
- GOOD (66-80)
- FAIR (51-65)

0 1,000 2,000
1:35,000 METRES

NOTE(S)


REFERENCE(S)

1. BASE IMAGERY: WORLD STREET MAP: ESRI, HERE, GARMIN, INCREMENT P, NGA, USGS, NRCAN
WORLD TOPOGRAPHIC MAP: ONTARIO BASE MAP, PROVINCE OF ONTARIO, MTQ, ONTARIO MNR, ESRI CANADA, ESRI, © OPENSTREETMAP CONTRIBUTORS, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN
2. PROJECTION: TRANSVERSE MERCATOR; DATUM: NAD83; COORDINATE SYSTEM: UTM ZONE 17.

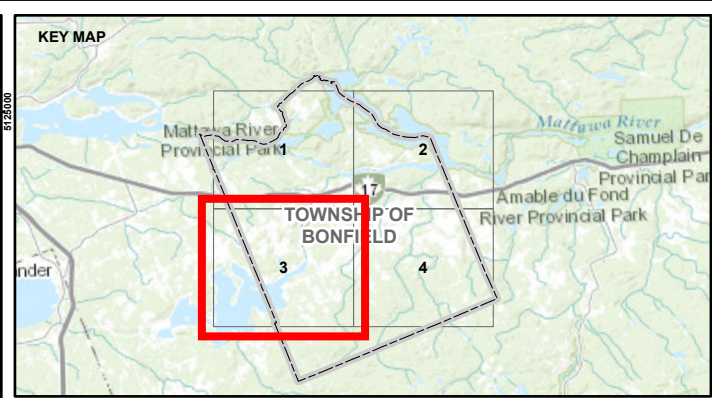
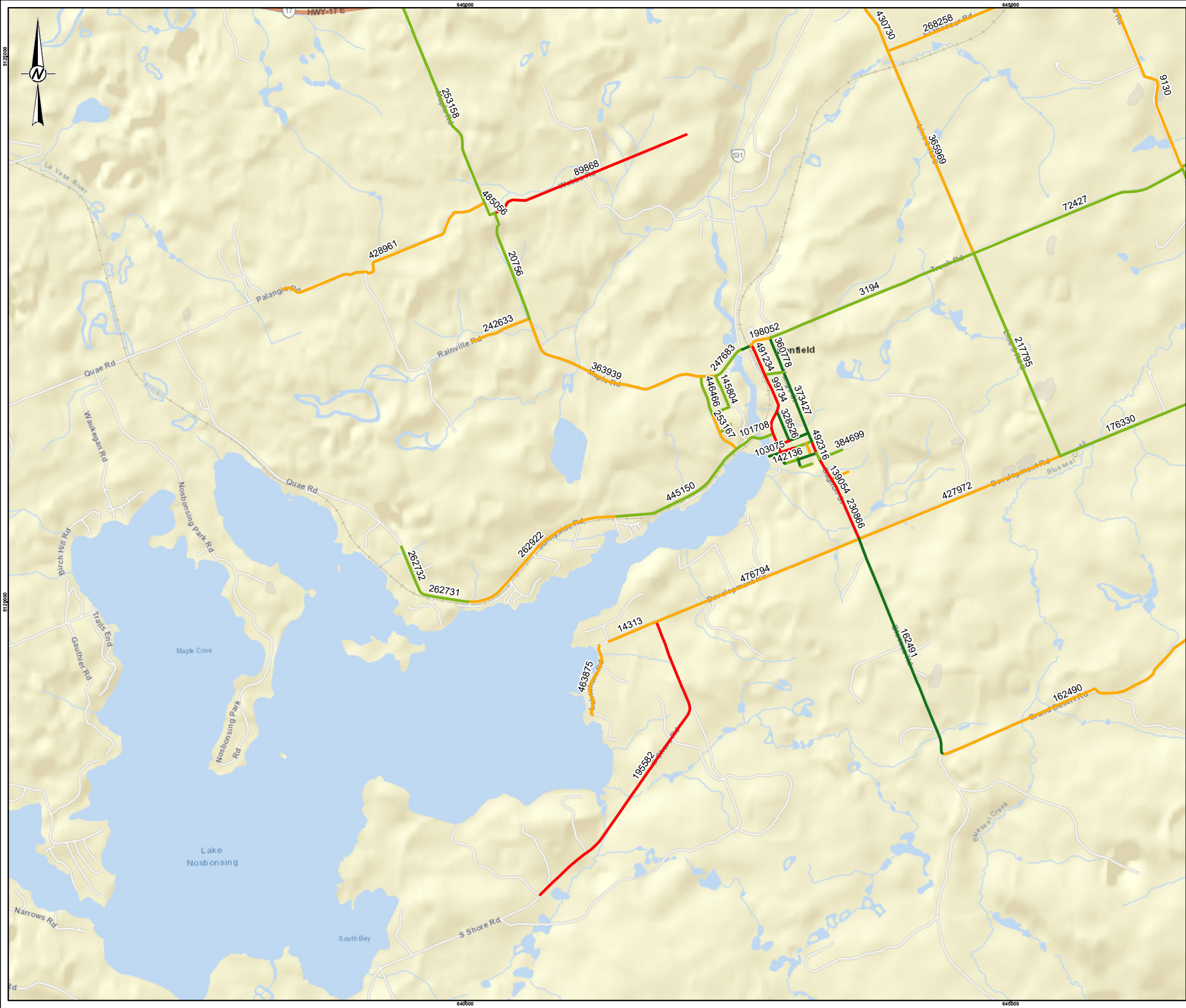
CLIENT
TOWNSHIP OF BONFIELD

PROJECT
2022 ROADS NEEDS STUDY

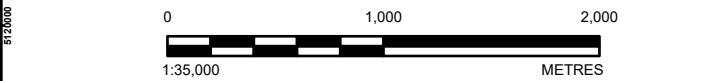
TITLE
2022 PAVEMENT CONDITION

CONSULTANT	YYYY-MM-DD	2023-11-01
	DESIGNED	DB
	PREPARED	DB
	REVIEWED	
	APPROVED	

PROJECT NO. CA-GLD-22522228	CONTROL 0002	REV. A	FIGURE 1-2
---------------------------------------	------------------------	------------------	----------------------



- LEGEND**
- PAVEMENT CONDITION INDEX (PCI)
- EXCELLENT (81-100)
 - GOOD (66-80)
 - FAIR (51-65)
 - POOR (0-50)



NOTE(S)


REFERENCE(S)

1. BASE IMAGERY: WORLD TOPOGRAPHIC MAP: ESRI, © OPENSTREETMAP CONTRIBUTORS, HERE, GARMIN, FAO, USGS, NGA, EPA, NPS, AAFC, NRCAN
WORLD STREET MAP: ESRI, HERE, GARMIN, NGA, USGS, NPS, NRCAN
2. PROJECTION: TRANSVERSE MERCATOR; DATUM: NAD83; COORDINATE SYSTEM: UTM ZONE 17.

CLIENT
TOWNSHIP OF BONFIELD

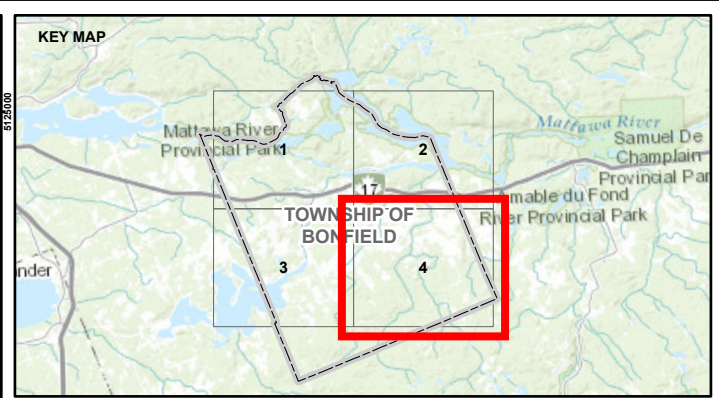
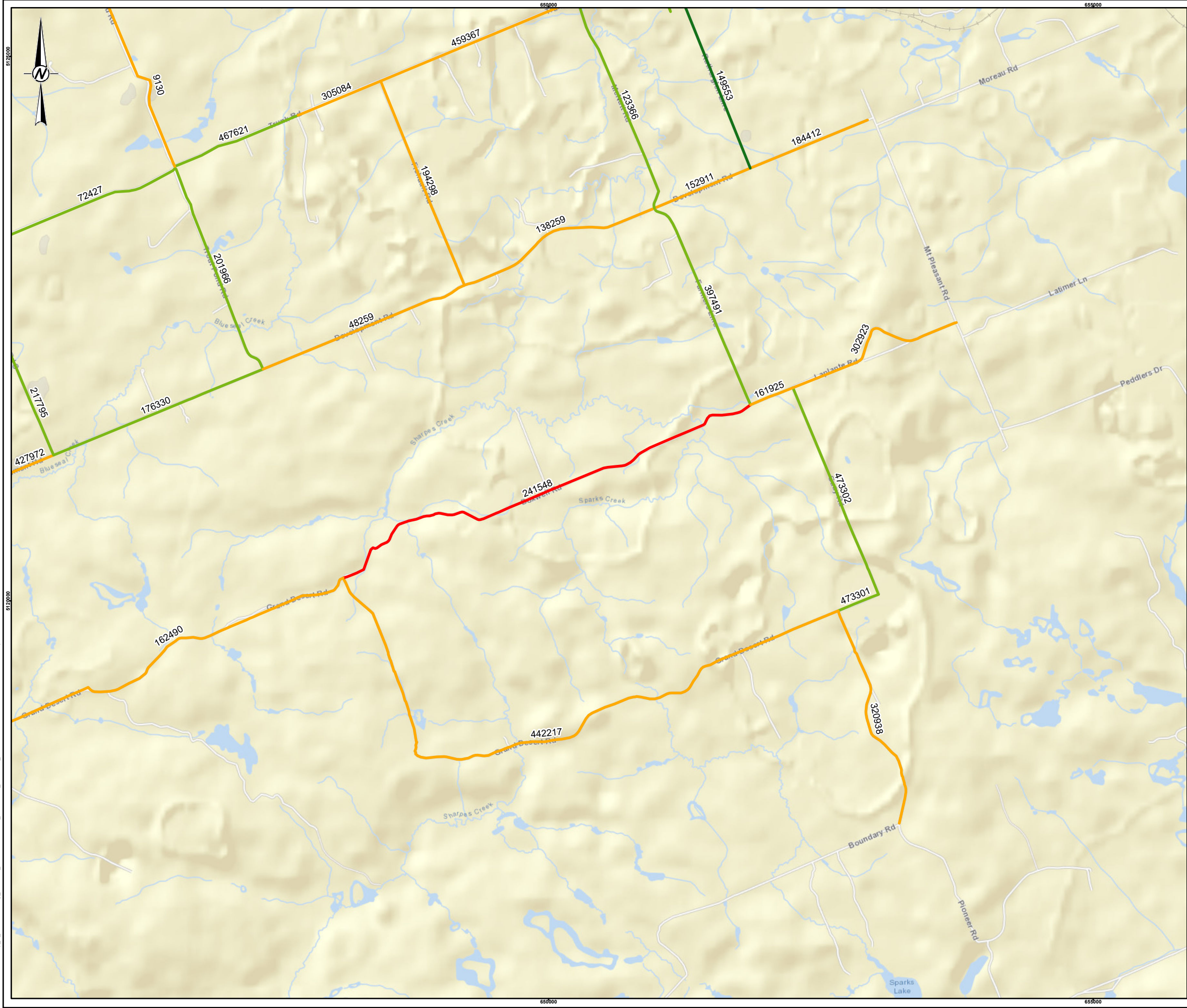
PROJECT
2022 ROADS NEEDS STUDY

TITLE
2022 PAVEMENT CONDITION

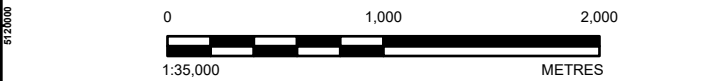
	CONSULTANT	YYYY-MM-DD	2023-11-01
	DESIGNED	DB	
	PREPARED	DB	
	REVIEWED		
	APPROVED		

PROJECT NO.	CONTROL	REV.	FIGURE
CA-GLD-22522228	0002	A	1-3

PATH: S:\Client\Township of Bonfield\County Roads\99_PROJ\22522228\40_PROD\0002_Pavement_Condition\CA-GLD-22522228-0001-CN-0000.aprx PRINTED ON: AT 2:51:31 PM



- LEGEND**
- PAVEMENT CONDITION INDEX (PCI)
- EXCELLENT (81-100)
 - GOOD (66-80)
 - FAIR (51-65)
 - POOR (0-50)




NOTE(S)

- REFERENCE(S)**
- BASE IMAGERY: WORLD TOPOGRAPHIC MAP: ESRI, © OPENSTREETMAP CONTRIBUTORS, HERE, GARMIN, FAO, USGS, NGA, EPA, NPS, AAFC, NRCAN
WORLD STREET MAP: ESRI, HERE, GARMIN, NGA, USGS, NPS, NRCAN
 - PROJECTION: TRANSVERSE MERCATOR; DATUM: NAD83; COORDINATE SYSTEM: UTM ZONE 17.

CLIENT
TOWNSHIP OF BONFIELD

PROJECT
2022 ROADS NEEDS STUDY

TITLE
2022 PAVEMENT CONDITION

	CONSULTANT	YYYY-MM-DD	2023-11-01
	DESIGNED	DB	
	PREPARED	DB	
	REVIEWED		
	APPROVED		

PROJECT NO.	CONTROL	REV.	FIGURE
CA-GLD-22522228	0002	A	1-4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B 25mm

APPENDIX D

Road Network Overview



Infrastructure Solutions

February 6, 2024

Township of Bonfield



Report Type: NetworkOverview

Report Generated by: Amanda Zhang

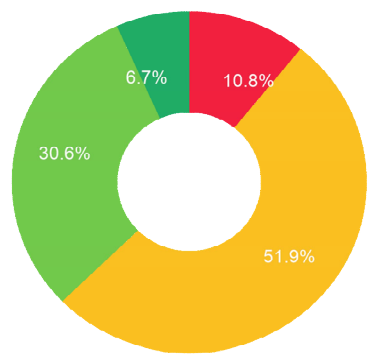
Network Overview

The Township of Bonfield has a total of 118 Km of Roads. The network overall condition based on the latest condition assessment data is estimated at 62, representing an overall "Fair" condition. The details of network overview information are as follows.

Title	Condition	Condition State
Network Overall Condition	62	Fair
Gravel Condition	62	Fair
Surface Treated Condition	65	Good
Asphalt Condition	67	Good

Network Condition Status

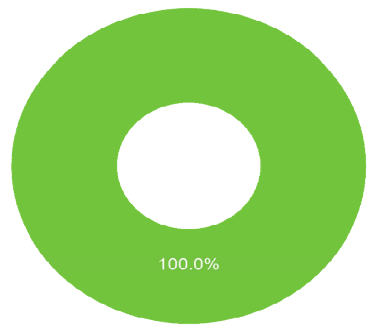
Poor Fair Good Excellent



Condition	Length (Km)	Percentage
Poor	12.8	10.8%
Fair	61.4	51.9%
Good	36.2	30.6%
Excellent	7.9	6.7%

Functional Class Breakdown

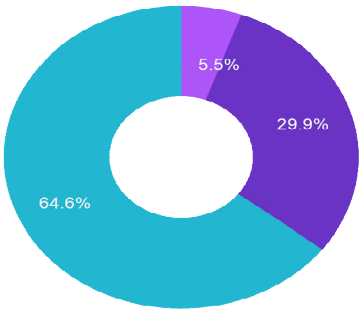
Local



Functional Class	Length (Km)	Percentage
Local	118.3	100.0%

Surface Type Breakdown

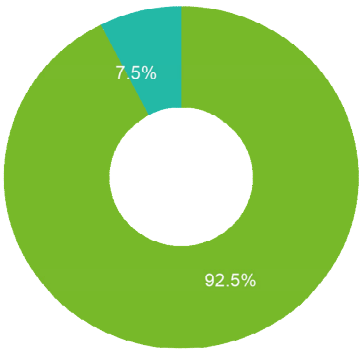
Hot Mix Asphalt Surface Treated Gravel



Surface Type	Length (Km)	Percentage
Hot Mix Asphalt	6.5	5.5%
Surface Treated	35.4	29.9%
Gravel	76.4	64.6%

Roadside Environment Breakdown

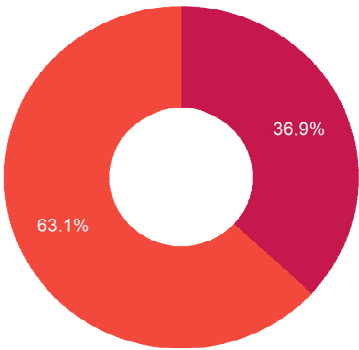
Rural Semi-Urban



Roadside Environment	Length (Km)	Percentage
Rural	109.4	92.5%
Semi-Urban	8.9	7.5%

MMS Breakdown

■ 4 ■ 5



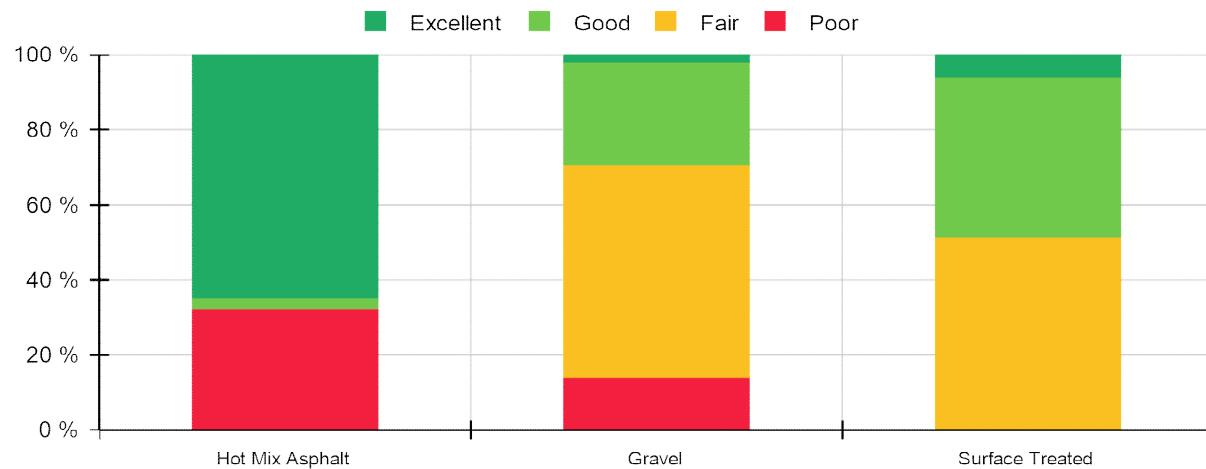
MMS	Length (Km)	Percentage
4	43.6	36.9%
5	74.6	63.1%

Condition Status by Functional Class



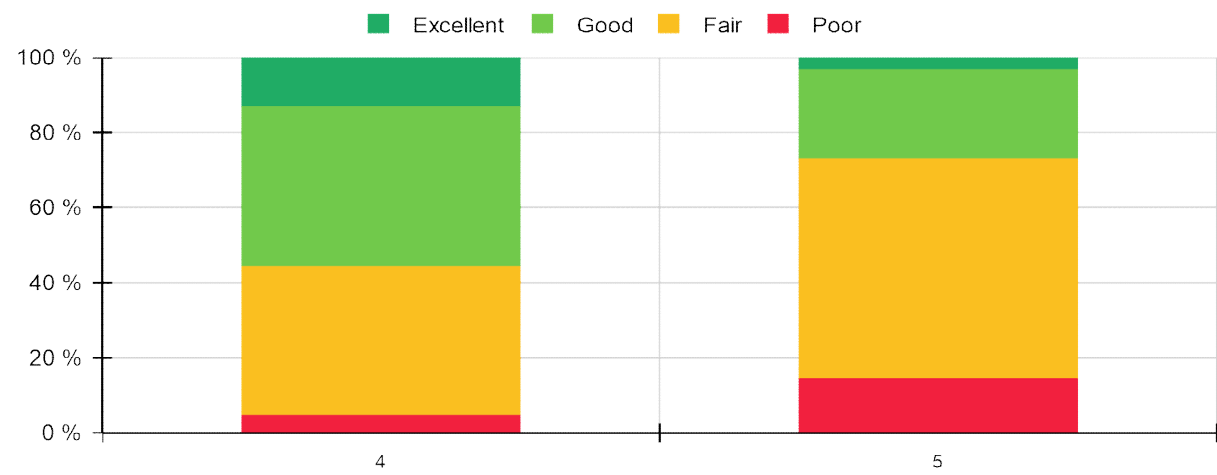
Functional Class	Excellent	Good	Fair	Poor
Local	7.9	36.2	61.4	12.8

Condition Status by Surface Type



Surface Type	Excellent	Good	Fair	Poor
Hot Mix Asphalt	4.2	0.2	0.0	2.1
Gravel	1.6	20.8	43.3	10.7
Surface Treated	2.1	15.1	18.1	0.0

Condition Status by MMS



MMS	Excellent	Good	Fair	Poor
4	5.7	18.5	17.4	2.1
5	2.2	17.7	44.0	10.7

APPENDIX E

Treatment List

HMA (Paved Roads)

HMA-Crack Seal

Crack Sealing

Crack Sealing is the process of placing specialized materials into cracks in unique configurations to keep water and other matter out of the crack and the underlying pavement layers.



Crack Sealing

HMA-Slurry

Slurry Seal

Slurry Seal is mixture of slow setting emulsified asphalt, well graded fine aggregate, mineral filler and water. This treatment is used to fill cracks and seal areas of old pavement, to restore a uniform surface texture, to seal the surface to prevent moisture and air intrusion into the pavement, and to improve skid resistance.



Slurry Seal

HMA-ST

Single Surface Treatment (Chip Seal)

Single Surface Treatment (Chip Seal) is a common type of pavement surfacing construction which involves an application of asphalt binder material (bitumen emulsion) and mineral aggregate (gravel). The emulsion is applied by a pressure distributor, followed immediately by an application of mineral aggregate, and finished by rolling.



Surface Treatment (Chip Seal)

HMA-DST

Double Surface Treatment (Chip Seal)

The process for Single Surface Treatment (Chip Seal) is repeated for the second application of emulsion and mineral aggregate (gravel). The first application of aggregate is coarser than the aggregate used in the second application and usually determines the pavement thickness.

HMA-DST SAMI

Double Surface Treatment (Chip Seal) + SAMI

In addition to the Double Surface Treatment, the Stress Absorbing Membrane Interlayer (SAMI) is a geo textile mat that is laid between the surface treatments to strengthen the structure of the road.



SAMI

HMA-EnhSurf

Enhanced Thin Surfacing (Microsurfacing, Thin HMA Overlay)

Microsurfacing is an application of a mixture of polymer-modified asphalt emulsion, mineral aggregate, mineral filler, water, and other additives, properly proportioned, mixed, and spread on a paved surface. Unlike slurry seal, Microsurfacing can be used on high volume roadways to correct wheel path rutting and provide a skid resistant pavement surface.

Thin HMA Overlay is a Hot Mix Asphalt (HMA) overlay of 40 millimeters or less, and is sometimes used when Microsurfacing is not available.



Micro-surfacing

HMA-Enh2Surf

Enhanced Double Thin Surfacing (Double Microsurfacing, Cape Seal)

Double Microsurfacing is an application where the process of Microsurfacing is repeated for a second application.

Cape Seal is an application of a Chip Seal followed by the application of Slurry Seal or Microsurfacing at a later date.

HMA-Ovly

Mill and One Lift Overlay

50mm HMA Overlay with or without milling

HMA-2Ovly

Mill and Two Lift Overlay

2 lift of 50mm HMA Overlay with or without milling

HMA-FDR & 2Ovly

Full Depth Reclamation (FDR) + Two Lift Overlay

Full Depth Reclamation (FDR) is a process where the full pavement section and a pre-determined portion of the underlying materials are uniformly crushed or pulverized. In this treatment this recycled material is then stabilized by mixing it with a recycling agent and other chemical additives. The recycling agent is commonly asphalt-based emulsion or cold-foamed asphalt, or an emulsified engineered recycling agent. The mixture is then spread and compacted to produce a base layer. Two lifts (typically 50mm each) of Hot Mix Asphalt are applied as a surface material, where the second lift is usually a finer grade of Hot Mix.

HMA-FDR & EAS & DST

FDR with Emulsion/Expanded Asphalt Stabilization + Double Surface Treatment

Full Depth Reclamation (FDR) plus a recycle agent and other additives plus a second application of emulsion and mineral aggregate (gravel)

HMA-FDR & EAS & Ovly

FDR with Emulsion/Expanded Asphalt Stabilization + One Lift Overlay

Full Depth Reclamation (FDR) is a process where the full pavement section and a pre-determined portion of the underlying materials are uniformly crushed or pulverized. In this treatment this recycled material is then stabilized by mixing it with a recycling agent and other chemical additives. The recycling agent is commonly asphalt-based emulsion or cold-foamed asphalt, or an emulsified engineered recycling agent. The mixture is then spread and compacted to produce a base layer. A single lift (typically 50mm) of Hot Mix Asphalt is applied as a surface material.

HMA-FDR & EAS & 2Ovly

FDR with Emulsion/Expanded Asphalt Stabilization + Two Lift Overlay

Full Depth Reclamation (FDR) is a process where the full pavement section and a pre-determined portion of the underlying materials are uniformly crushed or pulverized. In this treatment this recycled material is then stabilized by mixing it with a recycling agent and other chemical additives. The recycling agent is commonly asphalt-based emulsion or cold-foamed asphalt, or an emulsified engineered recycling agent. The mixture is then spread and compacted to produce a base layer. Two lifts (typically 50mm each) of Hot Mix Asphalt are applied as a surface material, where the second lift is usually a finer grade of Hot Mix.



Expanded Asphalt Stabilization

HMA-FDARR & 2Ovly

Full depth asphalt removal and replacement (Two Lifts HMA)

This treatment is the complete milling and removal of all asphalt material without recycling, and replacing it with two lifts (typically 50mm each) of Hot Mix Asphalt, where the second lift is usually a finer grade of Hot Mix.

HMA-FDARR & 3Ovly

Full depth asphalt removal and replacement (Three Lifts HMA)

This treatment is the complete milling and removal of all asphalt material without recycling, and replacing it with three lifts (typically 50mm each) of Hot Mix Asphalt, where the final lift is usually a finer grade of Hot Mix.

HMA-Recon 90HMA**Full Depth Reconstruction (350 Gran B, 150 Gran A, 90 HMA)**

Full Depth Reconstruction is the excavation and removal of all road materials down to the sub-base or soil, and then reconstructing it with new materials including 350mm of Granular B, 150mm of Granular A and 90mm of Hot Mix Asphalt, typically made up of 2 lifts where the second lift is a finer grade of Hot Mix. This expensive treatment is used as a last resort where a pavement has completely failed and none of the other treatments are determined to provide an adequate solution.

HMA-Recon 140HMA**Full Depth Reconstruction (350 Gran B, 150 Gran A, 140 HMA)**

Full Depth Reconstruction is the excavation and removal of all road materials down to the sub-base or soil, and then reconstructing it with new materials including 350mm of Granular B, 150mm of Granular A and 140mm of Hot Mix Asphalt, typically made up of 2 or 3 lifts where the final lift is a finer grade of Hot Mix. This expensive treatment is used as a last resort where a pavement has completely failed and none of the other treatments are determined to provide an adequate solution.

ST (Surface Treated Roads)

ST-Slurry

Slurry Seal

Slurry Seal is mixture of slow setting emulsified asphalt, well graded fine aggregate, mineral filler and water. This treatment is used to fill cracks and seal areas of old pavement, to restore a uniform surface texture, to seal the surface to prevent moisture and air intrusion into the pavement, and to improve skid resistance.

ST-SST

Single Surface Treatment (Chip Seal)

Single Surface Treatment (Chip Seal) is a common type of pavement surfacing construction which involves an application of asphalt binder material (bitumen emulsion) and mineral aggregate (gravel). The emulsion is applied by a pressure distributor, followed immediately by an application of mineral aggregate, and finished by rolling.

ST-DST

Double Surface Treatment (Chip Seal)

The process for Single Surface Treatment (Chip Seal) is repeated for the second application of emulsion and mineral aggregate (gravel). The first application of aggregate is coarser than the aggregate used in the second application and usually determines the pavement thickness.

ST-DST SAMI

Double Surface Treatment (Chip Seal) & SAMI

In addition to the Double Surface Treatment, the Stress Absorbing Membrane Interlayer (SAMI) is a geo textile mat that is laid between the surface treatments to strengthen the structure of the road.

ST-EnhSurf

Enhanced Thin Surfacing (Microsurfacing, Thin HMA Overlay)

Microsurfacing is an application of a mixture of polymer-modified asphalt emulsion, mineral aggregate, mineral filler, water, and other additives, properly proportioned, mixed, and spread on a paved surface. Unlike slurry seal, Microsurfacing can be used on high volume roadways to correct wheel path rutting and provide a skid resistant pavement surface.

ST-Enh2Surf

Enhanced Double Thin Surfacing (Double Microsurfacing, Cape Seal)

Double Microsurfacing is an application where the process of Microsurfacing is repeated for a second application.

Cape Seal is an application of a Chip Seal followed by the application of Slurry Seal or Microsurfacing at a later date.

ST-Ovly

Mill and One Lift Overlay

50mm HMA Overlay with or without milling

ST-FDR & DST

Full Depth Reclamation (FDR) + Double Surface Treatment

Full Depth Reclamation (FDR) plus a recycle agent and other additives plus a second application of emulsion and mineral aggregate (gravel)

ST-FDR & DST & SAMI

Full Depth Reclamation (FDR) + Double Surface Treatment + SAMI

Full Depth Reclamation (FDR) plus a recycle agent and other additives plus a second application of emulsion and mineral aggregate (gravel), and SAMI

ST-FDR & Ovly**Full Depth Reclamation (FDR) + One lift Overlay**

Full Depth Reclamation (FDR) is a process where the full pavement section and a pre-determined portion of the underlying materials are uniformly crushed or pulverized. In this treatment this recycled material is then stabilized by mixing it with a recycling agent and other chemical additives. The recycling agent is commonly asphalt-based emulsion or cold-foamed asphalt, or an emulsified engineered recycling agent. The mixture is then spread and compacted to produce a base layer. A single lift (typically 50mm) of Hot Mix Asphalt is applied as a surface material.

ST-FDR & 2Ovly**Full Depth Reclamation (FDR) + Two Lift Overlay**

Full Depth Reclamation (FDR) is a process where the full pavement section and a pre-determined portion of the underlying materials are uniformly crushed or pulverized. In this treatment this recycled material is then stabilized by mixing it with a recycling agent and other chemical additives. The recycling agent is commonly asphalt-based emulsion or cold-foamed asphalt, or an emulsified engineered recycling agent. The mixture is then spread and compacted to produce a base layer. Two lifts (typically 50mm each) of Hot Mix Asphalt are applied as a surface material, where the second lift is usually a finer grade of Hot Mix.

ST-FDR & EAS & DST**FDR with Emulsion/Expanded Asphalt Stabilization + Double Surface Treatment**

Full Depth Reclamation (FDR) plus a recycle agent and other additives plus a second application of emulsion and mineral aggregate (gravel)

ST-Recon & Ovly**Full Depth Reconstruction (350 Gran B, 150 Gran A, 90 HMA)**

Full Depth Reconstruction is the excavation and removal of all road materials down to the sub-base or soil, and then reconstructing it with new materials including 350mm of Granular B, 150mm of Granular A and 90mm of Hot Mix Asphalt, typically made up of 2 lifts where the second lift is a finer grade of Hot Mix. This expensive treatment is used as a last resort where a pavement has completely failed and none of the other treatments are determined to provide an adequate solution.

ST-Recon & 2 Ovly**Full Depth Reconstruction (350 Gran B, 150 Gran A, 140 HMA)**

Full Depth Reconstruction is the excavation and removal of all road materials down to the sub-base or soil, and then reconstructing it with new materials including 350mm of Granular B, 150mm of Granular A and 140mm of Hot Mix Asphalt, typically made up of 2 or 3 lifts where the final lift is a finer grade of Hot Mix. This expensive treatment is used as a last resort where a pavement has completely failed and none of the other treatments are determined to provide an adequate solution.

APPENDIX F

Scenario 1- Do Nothing

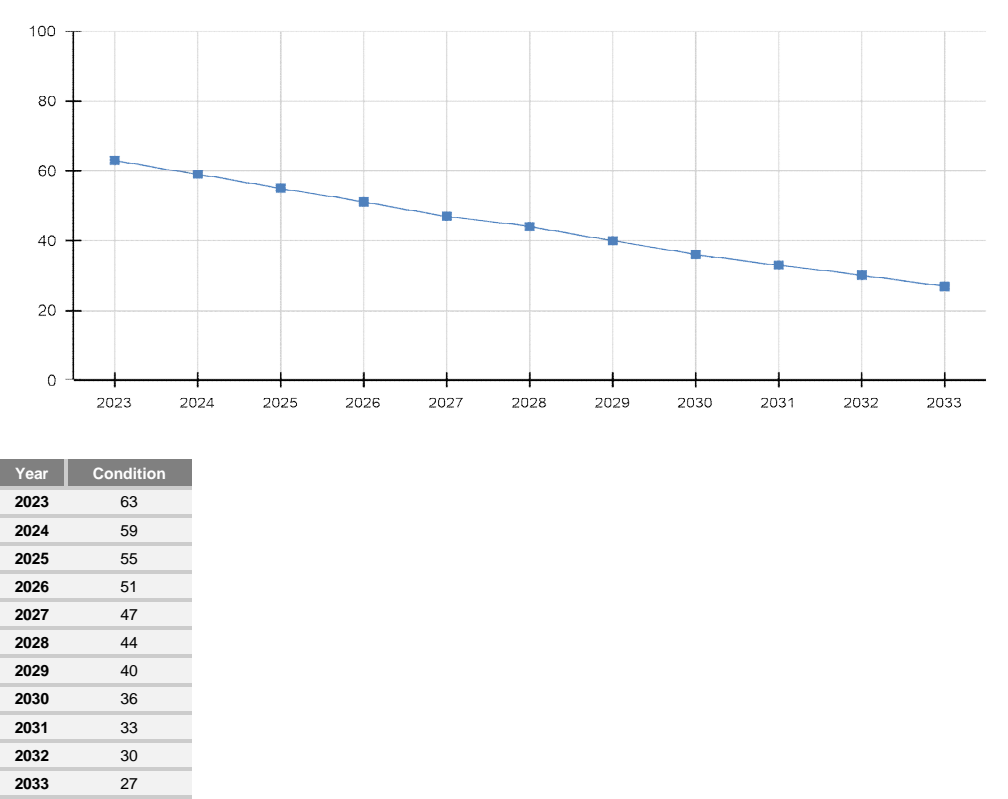
Optimization Result

Scenario Summary

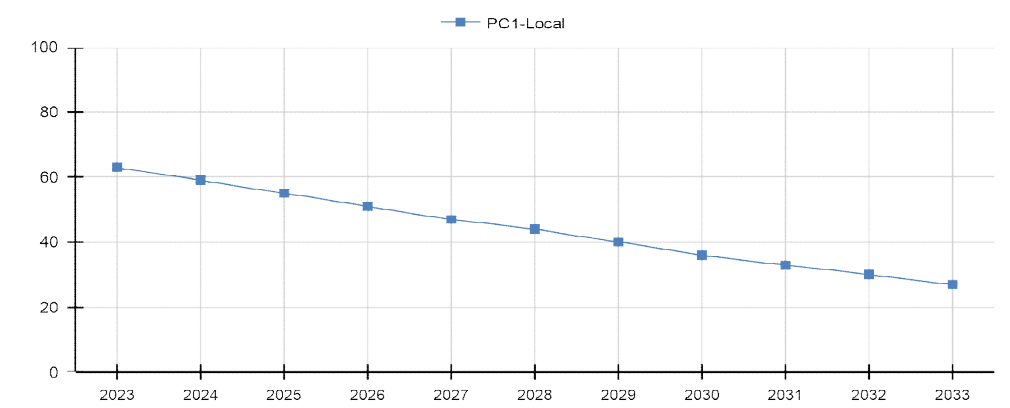
Scenario	
Name:	SC1 Do Nothing Paved
Description:	
Year:	2024

Optimization Settings	
Optimization Mode	Standard
Planning Horizon (Years)	10
Include Priorities	Yes
Asset Replacement Value	No
Estimate Current Condition	True
Operational Efficiency	No

Network Condition

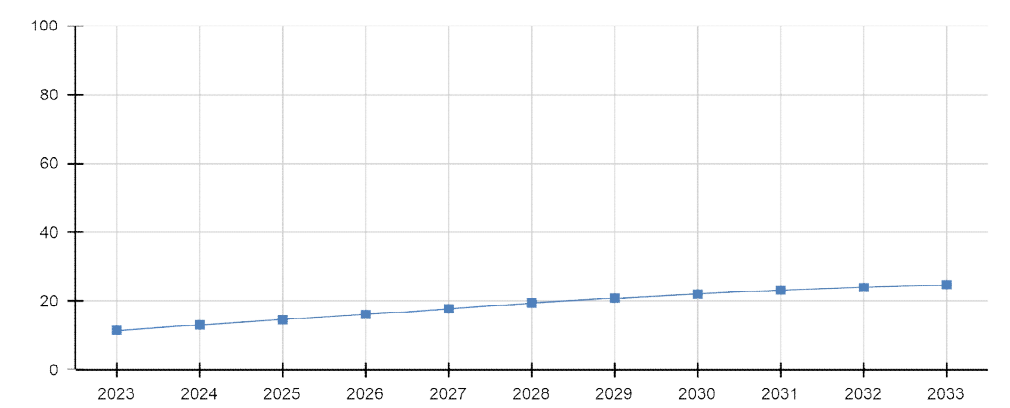


Network Condition by Performance Class



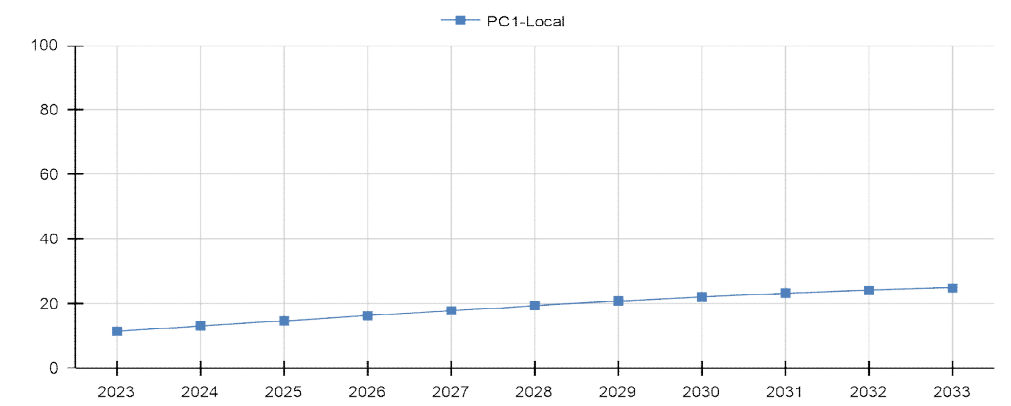
Year	PC1-Local
2023	63
2024	59
2025	55
2026	51
2027	47
2028	44
2029	40
2030	36
2031	33
2032	30
2033	27

Network Risk Index



Year	Value
2023	12
2024	13
2025	15
2026	16
2027	18
2028	19
2029	21
2030	22
2031	23
2032	24
2033	25

Network Risk Index by Performance Class



Year	PC1-Local
2023	12
2024	13
2025	15
2026	16
2027	18
2028	19
2029	21
2030	22
2031	23
2032	24
2033	25

Optimization Result

Scenario Summary

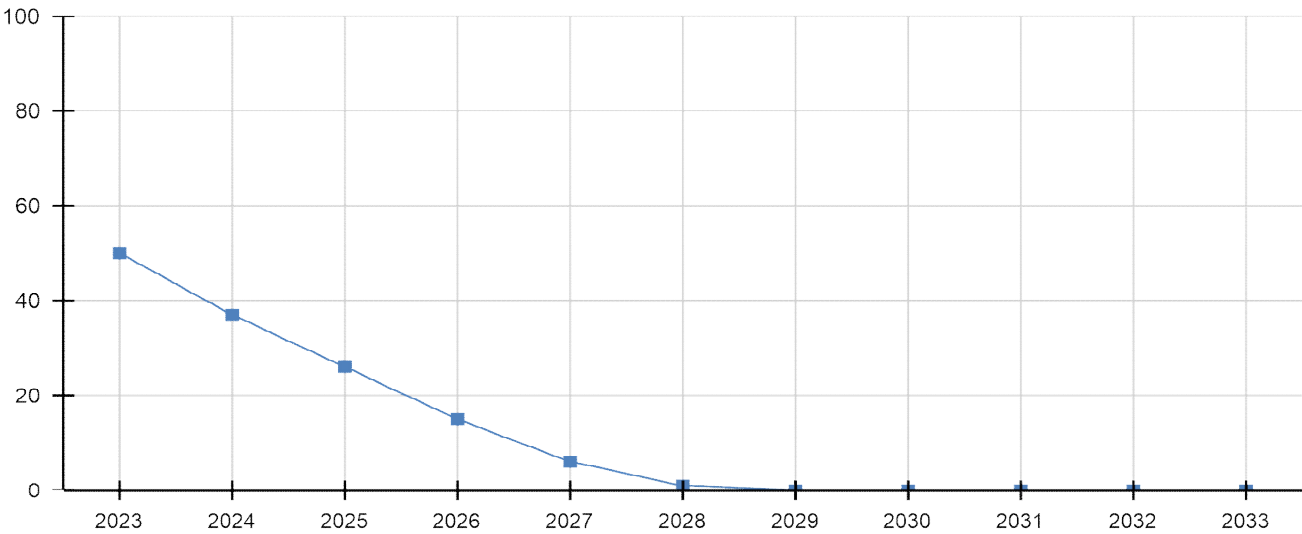
Scenario

Name:	SC1 Do Nothing Gravel
Description:	
Year:	2024

Optimization Settings

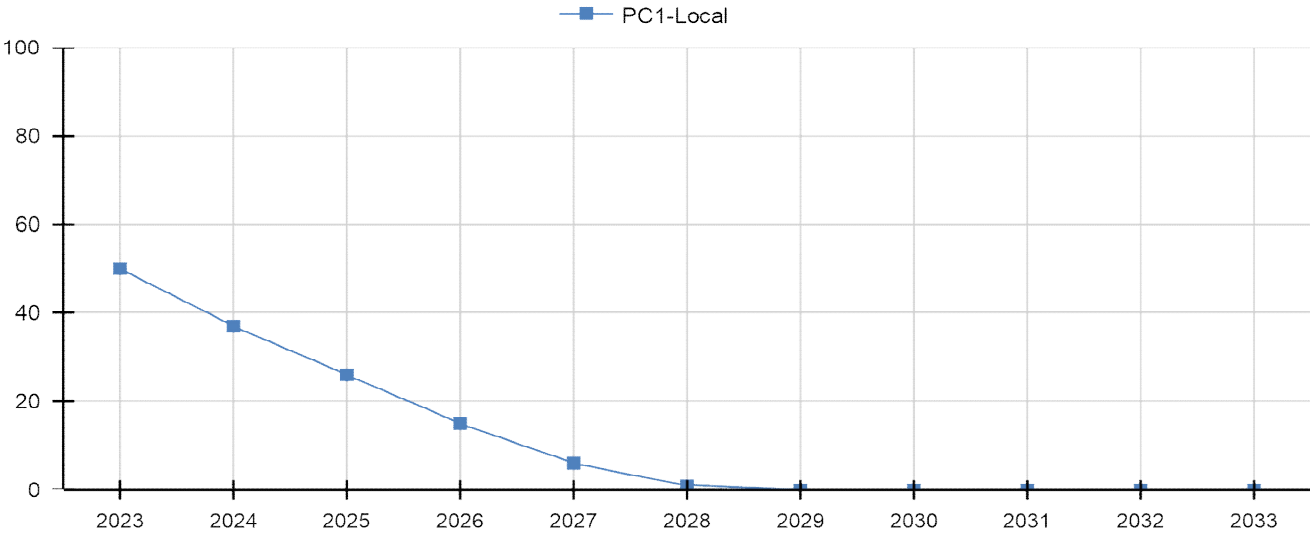
Optimization Mode	Standard
Planning Horizon (Years)	10
Include Priorities	Yes
Asset Replacement Value	No
Estimate Current Condition	True
Operational Efficiency	No

Network Condition



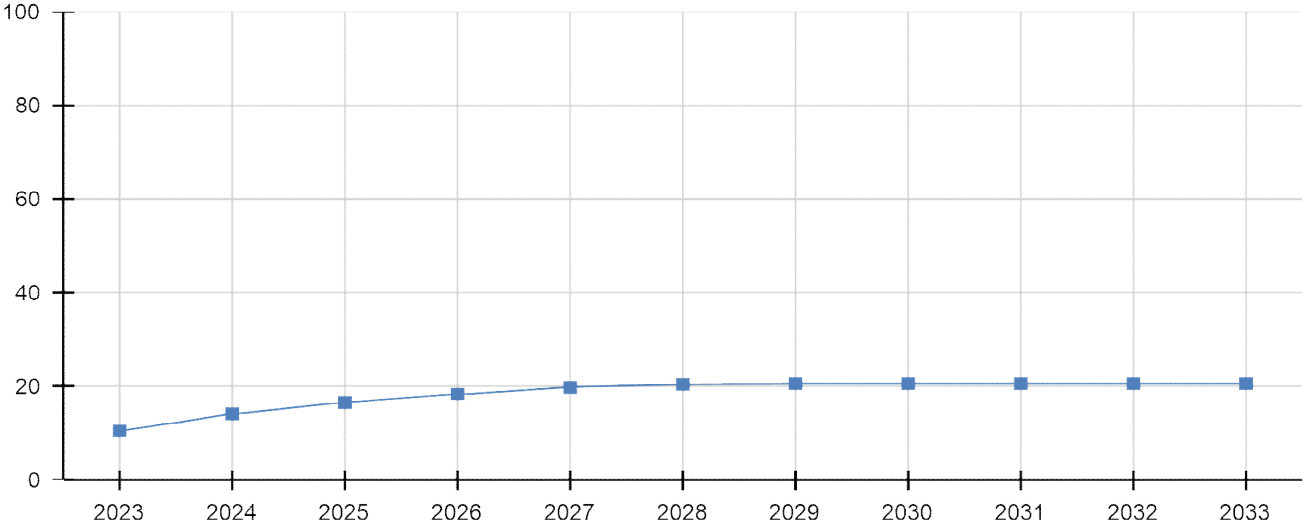
Year	Condition
2023	50
2024	37
2025	26
2026	15
2027	6
2028	1
2029	0
2030	0
2031	0
2032	0
2033	0

Network Condition by Performance Class



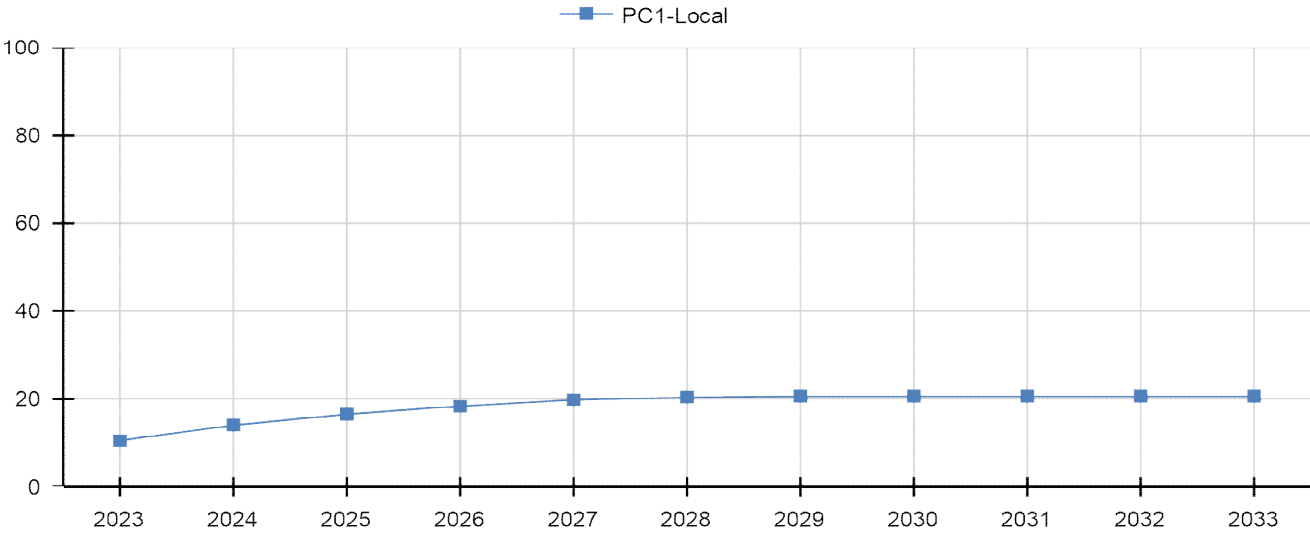
Year	PC1-Local
2023	50
2024	37
2025	26
2026	15
2027	6
2028	1
2029	0
2030	0
2031	0
2032	0
2033	0

Network Risk Index



Year	Value
2023	10
2024	14
2025	16
2026	18
2027	20
2028	20
2029	21
2030	21
2031	21
2032	21
2033	21

Network Risk Index by Performance Class



Year	PC1-Local
2023	11
2024	14
2025	17
2026	18
2027	20
2028	20
2029	21
2030	21
2031	21
2032	21
2033	21

APPENDIX G

**Scenario 2 - Target Overall
Condition Rating PCI of 65**

Optimization Result

Scenario Summary

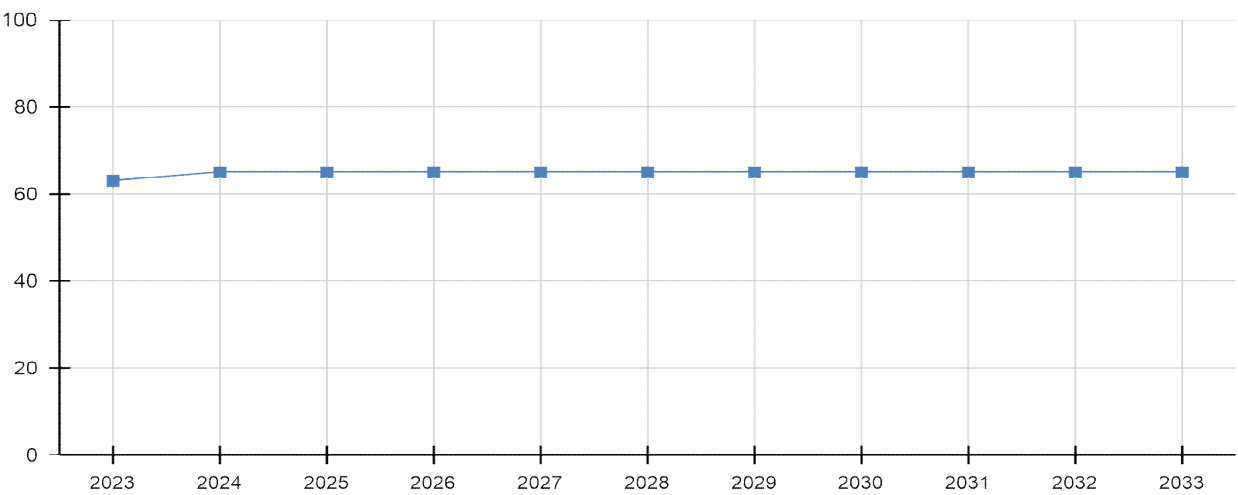
Scenario

Name:	SC2.4 Target PCI 65 by 2024 Keep Poor% Paved
Description:	
Year:	2024

Optimization Settings

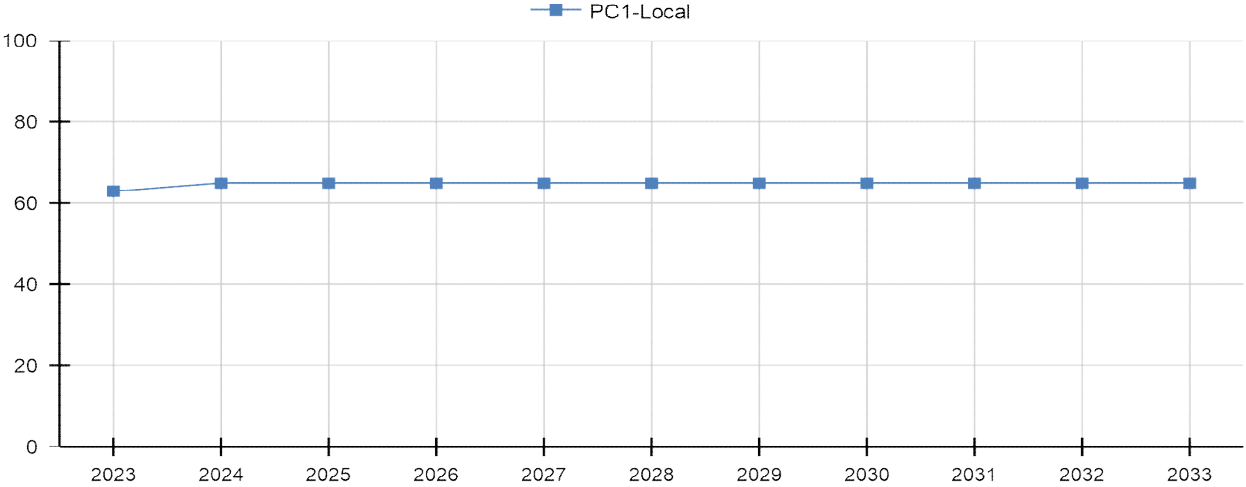
Optimization Mode	Target Optimization
Planning Horizon (Years)	10
Include Priorities	Yes
Asset Replacement Value	No
Estimate Current Condition	True
Operational Efficiency	No

Network Condition



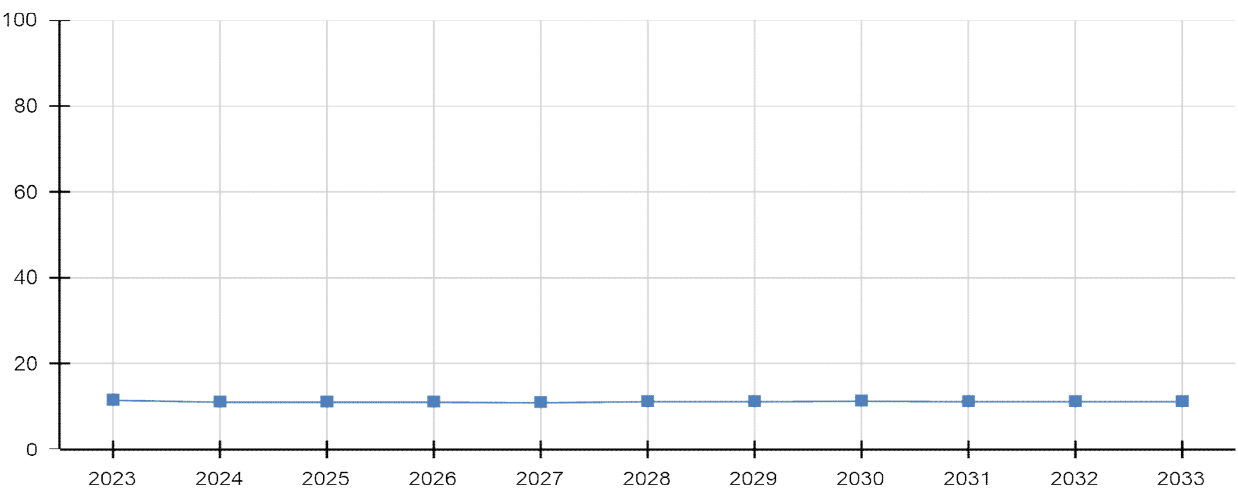
Year	Condition
2023	63
2024	65
2025	65
2026	65
2027	65
2028	65
2029	65
2030	65
2031	65
2032	65
2033	65

Network Condition by Performance Class



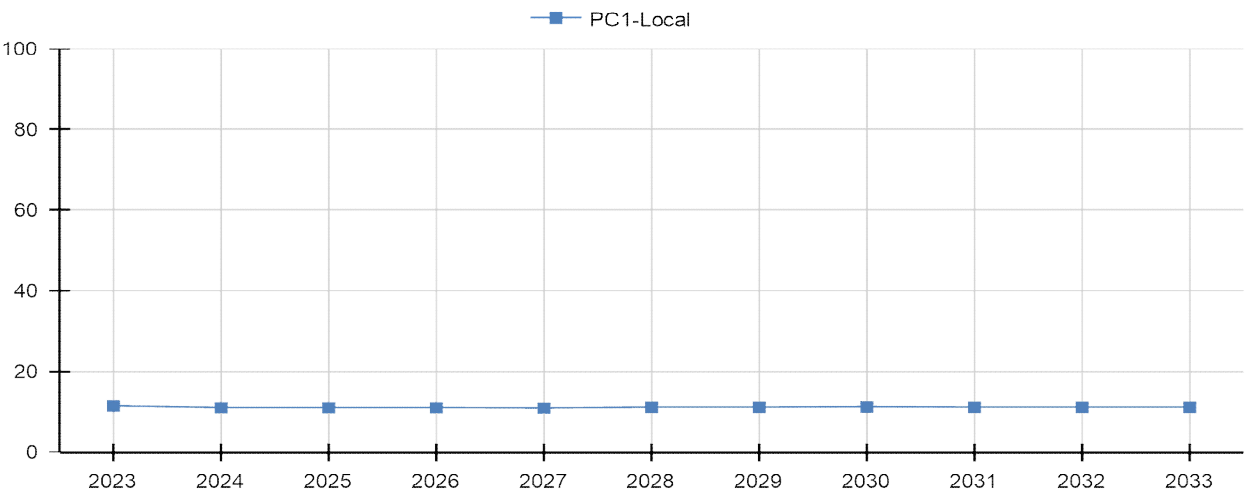
Year	PC1-Local
2023	63
2024	65
2025	65
2026	65
2027	65
2028	65
2029	65
2030	65
2031	65
2032	65
2033	65

Network Risk Index



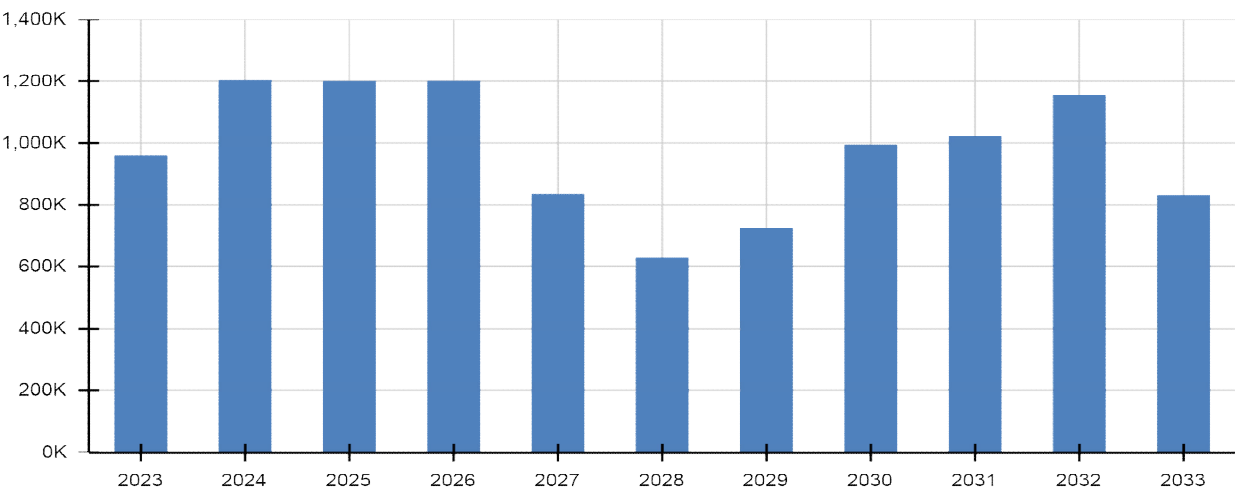
Year	Value
2023	12
2024	11
2025	11
2026	11
2027	11
2028	11
2029	11
2030	11
2031	11
2032	11
2033	11

Network Risk Index by Performance Class



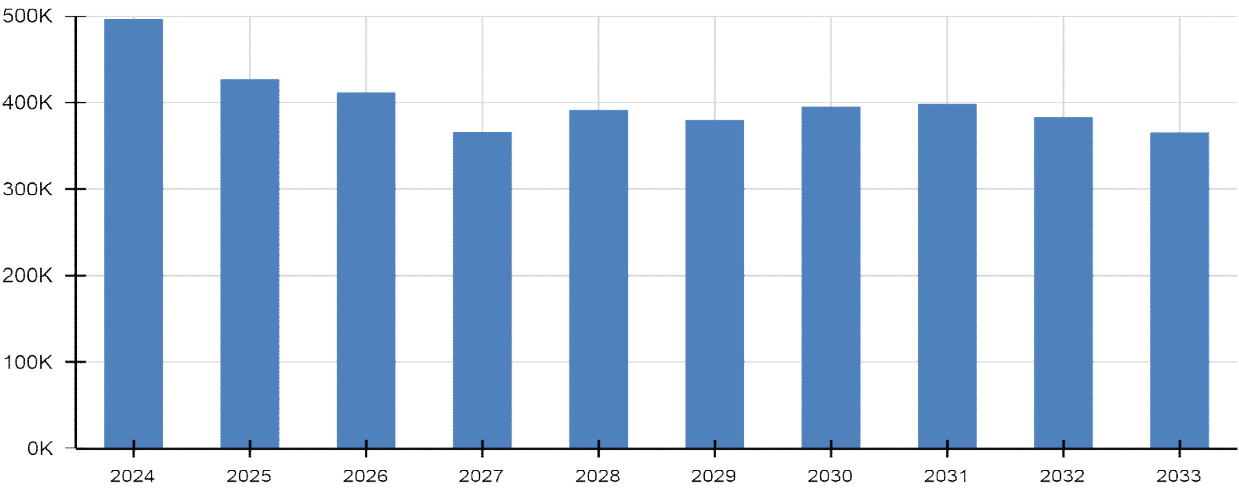
Year	PC1-Local
2023	12
2024	11
2025	11
2026	11
2027	11
2028	11
2029	11
2030	11
2031	11
2032	11
2033	11

Deficit Projection



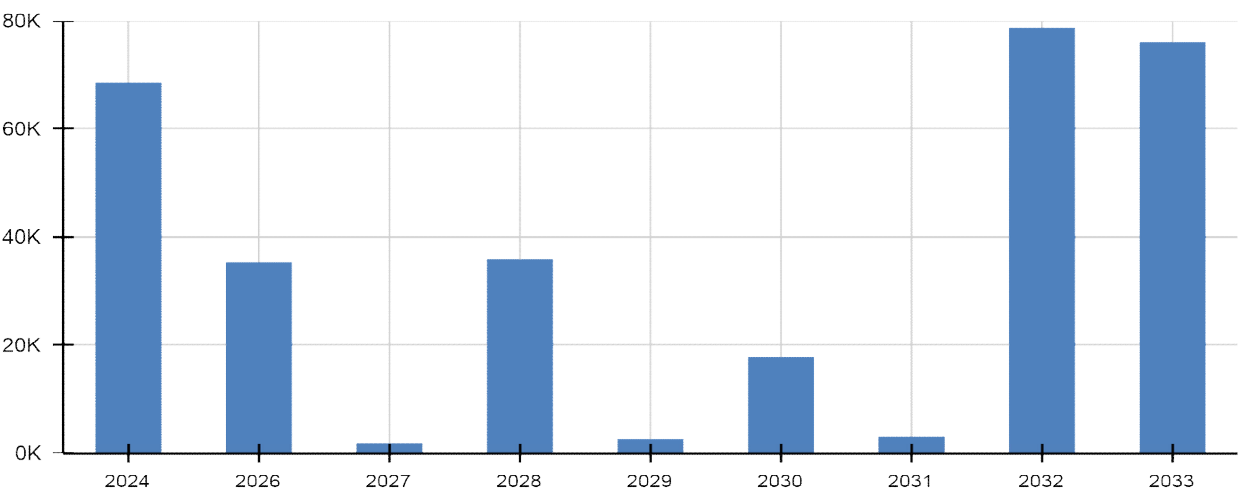
Year	Value
2023	\$960,052
2024	\$1,202,385
2025	\$1,199,551
2026	\$1,199,828
2027	\$835,038
2028	\$628,868
2029	\$721,650
2030	\$994,466
2031	\$1,019,602
2032	\$1,151,871
2033	\$831,521

Capital Expenditure



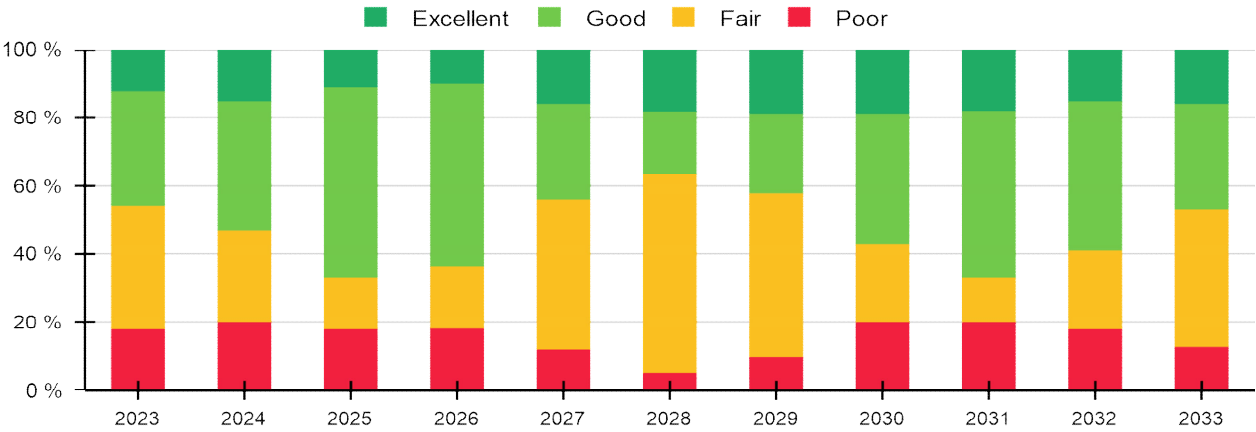
Year	Value
2024	\$496,466
2025	\$426,475
2026	\$410,176
2027	\$364,790
2028	\$391,167
2029	\$379,510
2030	\$394,978
2031	\$397,832
2032	\$382,441
2033	\$364,113

Maintenance Expenditure



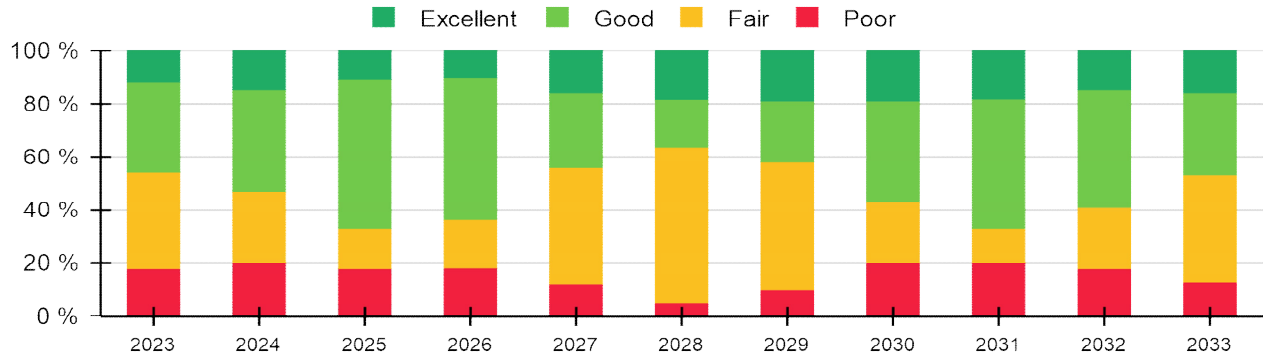
Year	Value
2024	\$68,515
2026	\$35,176
2027	\$1,748
2028	\$35,864
2029	\$2,478
2030	\$17,698
2031	\$2,902
2032	\$78,646
2033	\$75,987

Network Condition Distribution



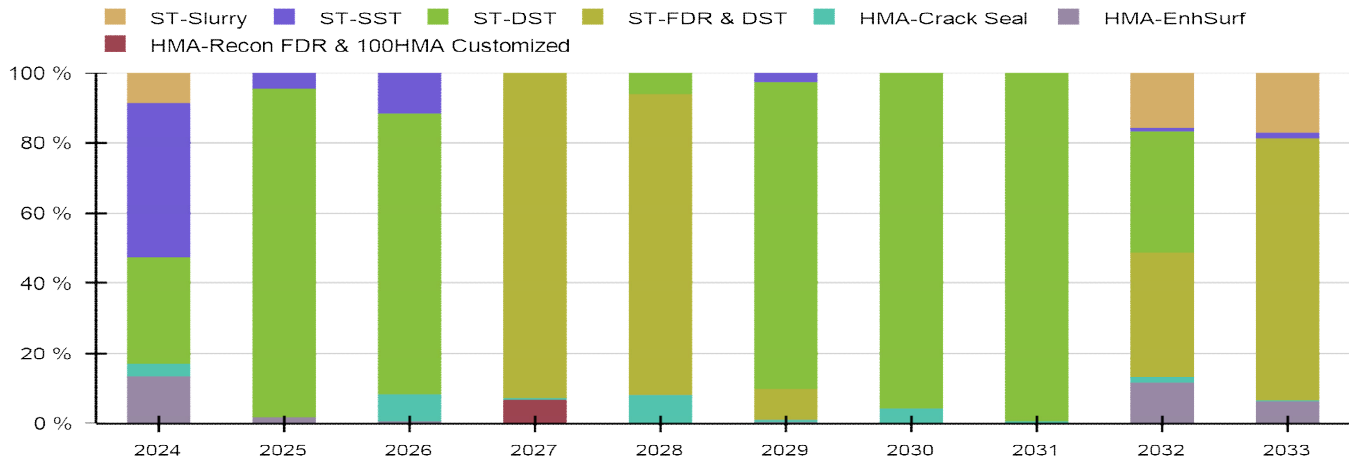
Year	Excellent	Good	Fair	Poor
2023	12%	34%	36%	18%
2024	15%	38%	27%	20%
2025	11%	56%	15%	18%
2026	10%	53%	18%	18%
2027	16%	28%	44%	12%
2028	18%	18%	58%	5%
2029	19%	23%	48%	10%
2030	19%	38%	23%	20%
2031	18%	49%	13%	20%
2032	15%	44%	23%	18%
2033	16%	31%	40%	13%

PC1-Local Condition Distribution



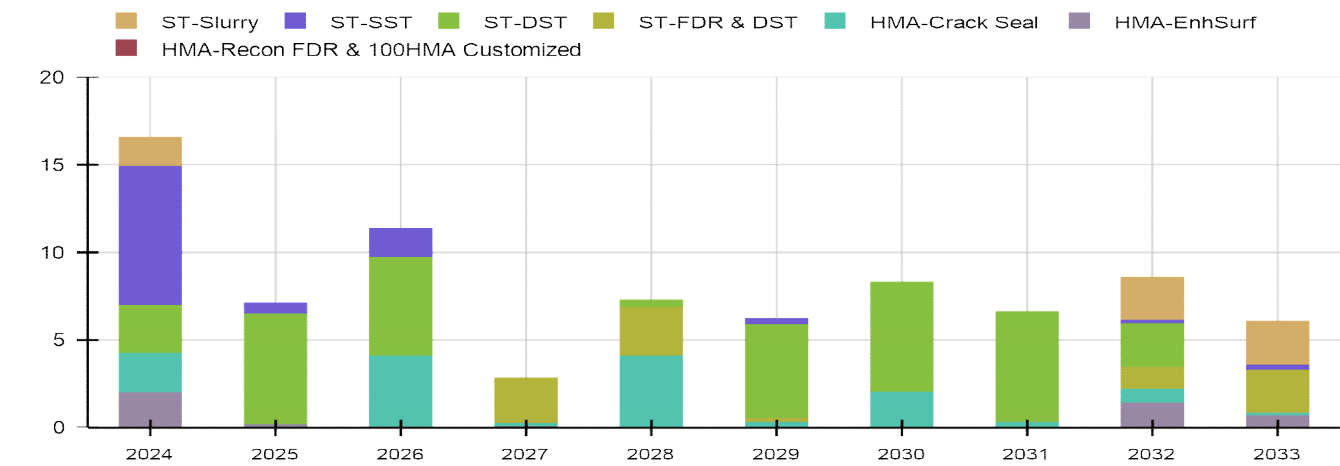
Year	Excellent	Good	Fair	Poor
2023	12%	34%	36%	18%
2024	15%	38%	27%	20%
2025	11%	56%	15%	18%
2026	10%	53%	18%	18%
2027	16%	28%	44%	12%
2028	18%	18%	58%	5%
2029	19%	23%	48%	10%
2030	19%	38%	23%	20%
2031	18%	49%	13%	20%
2032	15%	44%	23%	18%
2033	16%	31%	40%	13%

Capital Expenditure by Treatment Method



Treatment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
ST-Slurry	\$48,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$71,489	\$74,833	\$194,660
ST-SST	\$248,351	\$18,998	\$51,181	\$0	\$0	\$10,083	\$0	\$0	\$5,358	\$7,925	\$341,896
ST-DST	\$171,404	\$399,785	\$355,969	\$0	\$25,868	\$334,030	\$394,978	\$397,832	\$158,193	\$0	\$2,238,059
ST-FDR & DST	\$0	\$0	\$0	\$339,701	\$365,299	\$33,533	\$0	\$0	\$164,814	\$327,726	\$1,231,073
HMA-Crack Seal	\$20,178	\$0	\$35,176	\$1,748	\$35,864	\$2,478	\$17,698	\$2,902	\$7,156	\$1,154	\$124,354
HMA-EnhSurf	\$76,711	\$7,692	\$3,026	\$0	\$0	\$1,864	\$0	\$0	\$54,076	\$28,462	\$171,831
HMA-Recon FDR & 100HMA Customized	\$0	\$0	\$0	\$25,089	\$0	\$0	\$0	\$0	\$0	\$0	\$25,089
Total	\$564,982	\$426,475	\$445,352	\$366,538	\$427,031	\$381,988	\$412,676	\$400,734	\$461,086	\$440,100	\$4,326,962

Project Size by Treatment Method (Km)



Treatment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
ST-Slurry	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	2.52	6.54
ST-SST	7.90	0.60	1.63	0.00	0.00	0.32	0.00	0.00	0.17	0.25	10.87
ST-DST	2.72	6.35	5.65	0.00	0.41	5.31	6.27	6.32	2.51	0.00	35.54
ST-FDR & DST	0.00	0.00	0.00	2.57	2.77	0.25	0.00	0.00	1.25	2.48	9.32
HMA-Crack Seal	2.31	0.00	4.04	0.20	4.12	0.27	2.04	0.33	0.80	0.13	14.24
HMA-EnhSurf	2.02	0.20	0.08	0.00	0.00	0.06	0.00	0.00	1.44	0.72	4.51
HMA-Recon FDR & 100HMA Customized	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Total	16.56	7.15	11.40	2.85	7.30	6.22	8.31	6.64	8.57	6.10	81.10

Scenario 2 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	83	46	7	Roads	HMA-Crack Seal	2024	\$17,742
445150	SUNNYSIDE ROAD	Lima Lodge Road	Greenwood Drive	63	37	10	Roads	ST-SST	2024	\$41,801
373427	YONGE STREET	Boisvert Street	James Street	78	51	10	Roads	HMA-EnhSurf	2024	\$22,215
360778	YONGE STREET	Trunk Road	Boisvert Street	81	51	9	Roads	HMA-EnhSurf	2024	\$12,574
362162	BOISVERT STREET	Railway Street	Yonge Street	77	46	10	Roads	HMA-EnhSurf	2024	\$8,732
325543	CHURCH STREET	Landon Street	Labreques Street	65	51	17	Roads	HMA-EnhSurf	2024	\$6,248
152911	DEVELOPMENT ROAD	McNutt Road	Rutherglen Line	45	37	17	Roads	ST-DST	2024	\$75,203
184412	DEVELOPMENT ROAD	Rutherglen Line	Mount Pleasant	45	32	13	Roads	ST-DST	2024	\$96,201
176330	DEVELOPMENT ROAD	Line 3 South	Trout Pond Road	63	37	10	Roads	ST-SST	2024	\$82,045
251965	GAGNE ROAD	Park Street	Hwy 17	80	51	9	Roads	HMA-EnhSurf	2024	\$4,031
28856	GAGNON STREET	Upper Laurier St	Levesques St	77	51	11	Roads	HMA-EnhSurf	2024	\$1,865
170091	GAGNON STREET	James Street	Church Street	87	51	6	Roads	HMA-Crack Seal	2024	\$688
446466	GREENWOOD DRIVE	Maple Road	Hillside Avenue	60	37	11	Roads	ST-SST	2024	\$10,729
323576	PARK STREET	Gagne Road	Rutherglen Line	80	46	9	Roads	HMA-Crack Seal	2024	\$1,748
41177	PARK STREET	Rutherglen Line	Highway 17	80	46	9	Roads	HMA-EnhSurf	2024	\$8,369
38557	PARK STREET	Railway Tracks	Gagne Road	80	46	9	Roads	HMA-EnhSurf	2024	\$12,678
447507	RUTHERGLEN LINE	Talon Crescent	Park Street	70	42	10	Roads	ST-SST	2024	\$10,083
149553	RUTHERGLEN LINE	Development Road	Talon Cresecent	82	37	5	Roads	ST-Slurry	2024	\$48,338
262731	SUNNYSIDE ROAD	Rockhaven Drive	Border (3 Sunnyside)	63	37	10	Roads	ST-SST	2024	\$19,558
488834	TALON CRESECENT	Talon Cresecent	South end	60	37	11	Roads	ST-SST	2024	\$2,333
72427	TRUNK ROAD	Line 3 South	Trout Pond Road	63	37	10	Roads	ST-SST	2024	\$81,802
Total									2024	\$564,981
476795	DEVELOPMENT ROAD	Lake Nosbonsing	North Star Drive	50	32	12	Roads	ST-DST	2025	\$7,560
262922	SUNNYSIDE ROAD	Cedar Lane	Lima Lodge Road	50	37	15	Roads	ST-DST	2025	\$101,877
14313	DEVELOPMENT ROAD	North Star Drive	Southshore Road	50	32	12	Roads	ST-DST	2025	\$29,610
323576	PARK STREET	Gagne Road	Rutherglen Line	78	46	9	Roads	HMA-EnhSurf	2025	\$7,692
101708	SUNNYSIDE ROAD	Mark Street	Greenwood Drive	63	37	10	Roads	ST-SST	2025	\$14,940
271607	TRUNK ROAD	Highway 531	Railway Street	75	42	9	Roads	ST-SST	2025	\$4,057
68860	TRUNK ROAD	McNutt Road	Park Street	45	37	17	Roads	ST-DST	2025	\$39,533
305084	TRUNK ROAD	Private lane (south side)	Fichault Road	50	37	15	Roads	ST-DST	2025	\$64,814
459367	TRUNK ROAD	Fichault Road	McNutt Road	45	37	17	Roads	ST-DST	2025	\$156,391
Total									2025	\$426,475
153410	PINE LAKE ROAD	Highway 17	Shields Point	50	37	15	Roads	ST-DST	2026	\$102,073
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	79	46	9	Roads	HMA-Crack Seal	2026	\$17,742
373427	YONGE STREET	Boisvert Street	James Street	93	51	3	Roads	HMA-Crack Seal	2026	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	93	51	3	Roads	HMA-Crack Seal	2026	\$2,858
362162	BOISVERT STREET	Railway Street	Yonge Street	90	46	4	Roads	HMA-Crack Seal	2026	\$1,985
325543	CHURCH STREET	Landon Street	Labreques Street	90	51	5	Roads	HMA-Crack Seal	2026	\$1,420
48259	DEVELOPMENT ROAD	Trout Pond South	Fichault Road	45	37	17	Roads	ST-DST	2026	\$158,193
251965	GAGNE ROAD	Park Street	Hwy 17	93	51	3	Roads	HMA-Crack Seal	2026	\$916
28856	GAGNON STREET	Upper Laurier St	Levesques St	90	51	5	Roads	HMA-Crack Seal	2026	\$424

Scenario 2 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
170091	GAGNON STREET	James Street	Church Street	83	51	8	Roads	HMA-EnhSurf	2026	\$3,026
41177	PARK STREET	Rutherglen Line	Highway 17	93	46	3	Roads	HMA-Crack Seal	2026	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	93	46	3	Roads	HMA-Crack Seal	2026	\$2,881
149553	RUTHERGLEN LINE	Development Road	Talon Crescecent	72	37	7	Roads	ST-SST	2026	\$51,181
467621	TRUNK ROAD	Trout Pond South	Private lane (south side)	50	37	15	Roads	ST-DST	2026	\$95,703
Total									2026	\$445,352
173227	MARK STREET	James Street	Church Street	11	51	51	Roads	econ FDR & 100HMA Cus	2027	\$25,089
138259	DEVELOPMENT ROAD	Fichault Road	McNutt Road	30	37	23	Roads	ST-FDR & DST	2027	\$317,244
297195	GREENWOOD DRIVE	Hillside Avenue	Lakeview Court	31	37	22	Roads	ST-FDR & DST	2027	\$22,457
323576	PARK STREET	Gagne Road	Rutherglen Line	93	46	3	Roads	HMA-Crack Seal	2027	\$1,748
Total									2027	\$366,538
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	76	46	10	Roads	HMA-Crack Seal	2028	\$17,742
373427	YONGE STREET	Boisvert Street	James Street	87	51	6	Roads	HMA-Crack Seal	2028	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	87	51	6	Roads	HMA-Crack Seal	2028	\$2,858
362162	BOISVERT STREET	Railway Street	Yonge Street	85	46	6	Roads	HMA-Crack Seal	2028	\$1,985
325543	CHURCH STREET	Landon Street	Labreques Street	85	51	7	Roads	HMA-Crack Seal	2028	\$1,420
251965	GAGNE ROAD	Park Street	Hwy 17	87	51	6	Roads	HMA-Crack Seal	2028	\$916
28856	GAGNON STREET	Upper Laurier St	Levesques St	85	51	7	Roads	HMA-Crack Seal	2028	\$424
170091	GAGNON STREET	James Street	Church Street	93	51	3	Roads	HMA-Crack Seal	2028	\$688

Scenario 2 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
253167	GREENWOOD DRIVE	Lakeview Crescent	Sunnyside Road	31	37	22	Roads	ST-FDR & DST	2028	\$33,216
41177	PARK STREET	Rutherglen Line	Highway 17	87	46	5	Roads	HMA-Crack Seal	2028	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	87	46	5	Roads	HMA-Crack Seal	2028	\$2,881
262732	SUNNYSIDE ROAD	Border (3 Sunnyside)	Quae Road	50	37	15	Roads	ST-DST	2028	\$25,868
3194	TRUNK ROAD	Yonge Street	Line 3 South	41	37	19	Roads	ST-FDR & DST	2028	\$332,083
Total									2028	\$427,031
173227	MARK STREET	James Street	Church Street	93	51	3	Roads	HMA-Crack Seal	2029	\$730
152911	DEVELOPMENT ROAD	McNutt Road	Rutherglen Line	50	37	15	Roads	ST-DST	2029	\$75,203
184412	DEVELOPMENT ROAD	Rutherglen Line	Mount Pleasant	50	32	12	Roads	ST-DST	2029	\$96,201
427972	DEVELOPMENT ROAD	Blue Sea Road	Line 3 South	50	37	15	Roads	ST-DST	2029	\$157,960
28856	GAGNON STREET	Upper Laurier St	Levesques St	83	51	8	Roads	HMA-EnhSurf	2029	\$1,865
323576	PARK STREET	Gagne Road	Rutherglen Line	87	46	5	Roads	HMA-Crack Seal	2029	\$1,748
447507	RUTHERGLEN LINE	Talon Crescent	Park Street	60	42	15	Roads	ST-SST	2029	\$10,083
488834	TALON CRESECENT	Talon Cresecent	South end	51	37	14	Roads	ST-DST	2029	\$4,666
198052	TRUNK ROAD	Railway Street	Yonge Street	28	42	33	Roads	ST-FDR & DST	2029	\$33,533
Total									2029	\$381,989
476794	DEVELOPMENT ROAD	Southshore Road	Blue Sea Road	45	32	13	Roads	ST-DST	2030	\$126,315
445150	SUNNYSIDE ROAD	Lima Lodge Road	Greenwood Drive	50	37	15	Roads	ST-DST	2030	\$83,601
373427	YONGE STREET	Boisvert Street	James Street	83	51	8	Roads	HMA-Crack Seal	2030	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	83	51	8	Roads	HMA-Crack Seal	2030	\$2,858
362162	BOISVERT STREET	Railway Street	Yonge Street	81	46	8	Roads	HMA-Crack Seal	2030	\$1,985
325543	CHURCH STREET	Landon Street	Labreques Street	81	51	9	Roads	HMA-Crack Seal	2030	\$1,420
251965	GAGNE ROAD	Park Street	Hwy 17	83	51	8	Roads	HMA-Crack Seal	2030	\$916
170091	GAGNON STREET	James Street	Church Street	87	51	6	Roads	HMA-Crack Seal	2030	\$688
446466	GREENWOOD DRIVE	Maple Road	Hillside Avenue	47	37	16	Roads	ST-DST	2030	\$21,458
41177	PARK STREET	Rutherglen Line	Highway 17	83	46	7	Roads	HMA-Crack Seal	2030	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	83	46	7	Roads	HMA-Crack Seal	2030	\$2,881
72427	TRUNK ROAD	Line 3 South	Trout Pond Road	50	37	15	Roads	ST-DST	2030	\$163,605
Total									2030	\$412,677
476795	DEVELOPMENT ROAD	Lake Nosbonsing	North Star Drive	50	32	12	Roads	ST-DST	2031	\$7,560
262922	SUNNYSIDE ROAD	Cedar Lane	Lima Lodge Road	50	37	15	Roads	ST-DST	2031	\$101,877
173227	MARK STREET	James Street	Church Street	87	51	6	Roads	HMA-Crack Seal	2031	\$730
14313	DEVELOPMENT ROAD	North Star Drive	Southshore Road	50	32	12	Roads	ST-DST	2031	\$29,610
176330	DEVELOPMENT ROAD	Line 3 South	Trout Pond Road	45	37	17	Roads	ST-DST	2031	\$164,090
28856	GAGNON STREET	Upper Laurier St	Levesques St	93	51	3	Roads	HMA-Crack Seal	2031	\$424
323576	PARK STREET	Gagne Road	Rutherglen Line	83	46	7	Roads	HMA-Crack Seal	2031	\$1,748
101708	SUNNYSIDE ROAD	Mark Street	Greenwood Drive	50	37	15	Roads	ST-DST	2031	\$29,881
305084	TRUNK ROAD	Private lane (south side)	Fichault Road	50	37	15	Roads	ST-DST	2031	\$64,814
Total									2031	\$400,734
373427	YONGE STREET	Boisvert Street	James Street	80	51	9	Roads	HMA-Crack Seal	2032	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	80	51	9	Roads	HMA-EnhSurf	2032	\$12,574

Scenario 2 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
362162	BOISVERT STREET	Railway Street	Yonge Street	78	46	9	Roads	HMA-EnhSurf	2032	\$8,732
325543	CHURCH STREET	Landon Street	Labreques Street	78	51	10	Roads	HMA-Crack Seal	2032	\$1,420
138259	DEVELOPMENT ROAD	Fichault Road	McNutt Road	77	37	6	Roads	ST-Slurry	2032	\$71,489
48259	DEVELOPMENT ROAD	Trout Pond South	Fichault Road	45	37	17	Roads	ST-DST	2032	\$158,193
251965	GAGNE ROAD	Park Street	Hwy 17	80	51	9	Roads	HMA-EnhSurf	2032	\$4,031
170091	GAGNON STREET	James Street	Church Street	83	51	8	Roads	HMA-Crack Seal	2032	\$688
297195	GREENWOOD DRIVE	Hillside Avenue	Lakeview Court	75	37	6	Roads	ST-SST	2032	\$5,358
323576	PARK STREET	Gagne Road	Rutherglen Line	81	46	8	Roads	HMA-EnhSurf	2032	\$7,692
41177	PARK STREET	Rutherglen Line	Highway 17	80	46	9	Roads	HMA-EnhSurf	2032	\$8,369
38557	PARK STREET	Railway Tracks	Gagne Road	80	46	9	Roads	HMA-EnhSurf	2032	\$12,678
262731	SUNNYSIDE ROAD	Rockhaven Drive	Border (3 Sunnyside)	41	37	19	Roads	ST-FDR & DST	2032	\$81,971
68860	TRUNK ROAD	McNutt Road	Park Street	41	37	19	Roads	ST-FDR & DST	2032	\$82,843
Total									2032	\$461,087
173227	MARK STREET	James Street	Church Street	83	51	8	Roads	HMA-Crack Seal	2033	\$730
373427	YONGE STREET	Boisvert Street	James Street	78	51	10	Roads	HMA-EnhSurf	2033	\$22,215
325543	CHURCH STREET	Landon Street	Labreques Street	77	51	11	Roads	HMA-EnhSurf	2033	\$6,248
28856	GAGNON STREET	Upper Laurier St	Levesques St	87	51	6	Roads	HMA-Crack Seal	2033	\$424
253167	GREENWOOD DRIVE	Lakeview Crescent	Sunnyside Road	75	37	6	Roads	ST-SST	2033	\$7,925
459367	TRUNK ROAD	Fichault Road	McNutt Road	37	37	21	Roads	ST-FDR & DST	2033	\$327,726
3194	TRUNK ROAD	Yonge Street	Line 3 South	77	37	6	Roads	ST-Slurry	2033	\$74,833
Total									2033	\$440,101
Grand Total										\$4,326,964

Optimization Result

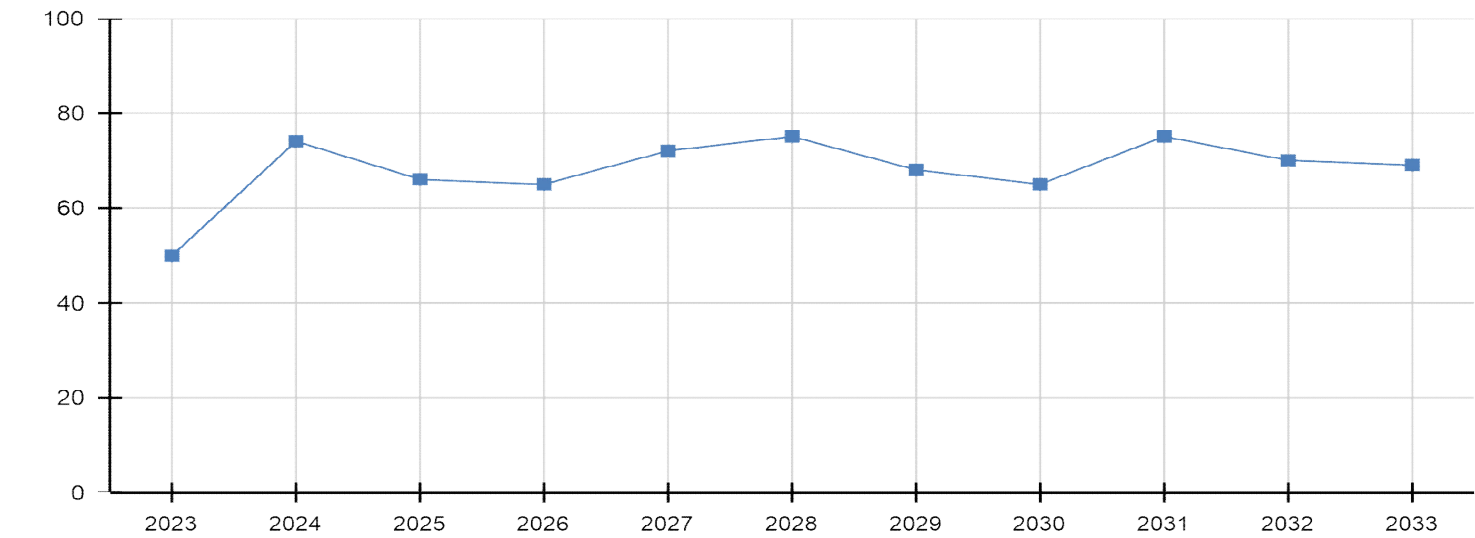
Scenario Summary

Scenario	
Name:	SC2.4 Target PCI 65 by 2024 Keep Poor % Gravel
Description:	
Year:	2024

Optimization Settings

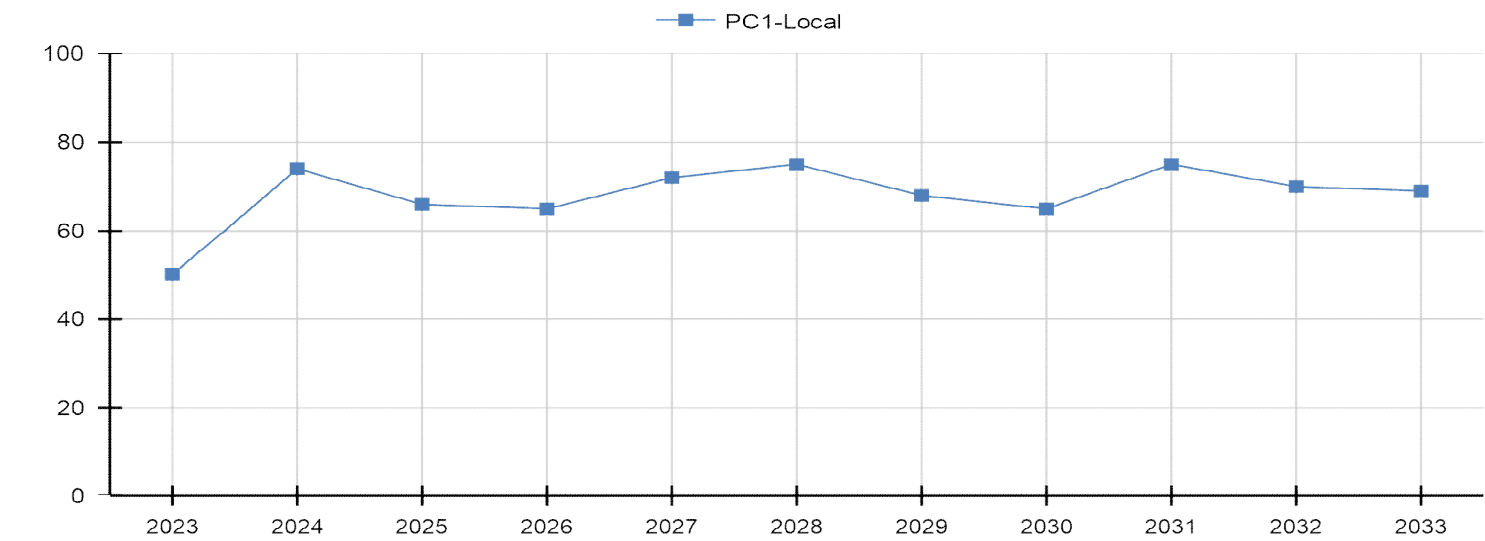
Optimization Mode	Target Optimization
Planning Horizon (Years)	10
Include Priorities	Yes
Asset Replacement Value	No
Estimate Current Condition	True
Operational Efficiency	No

Network Condition



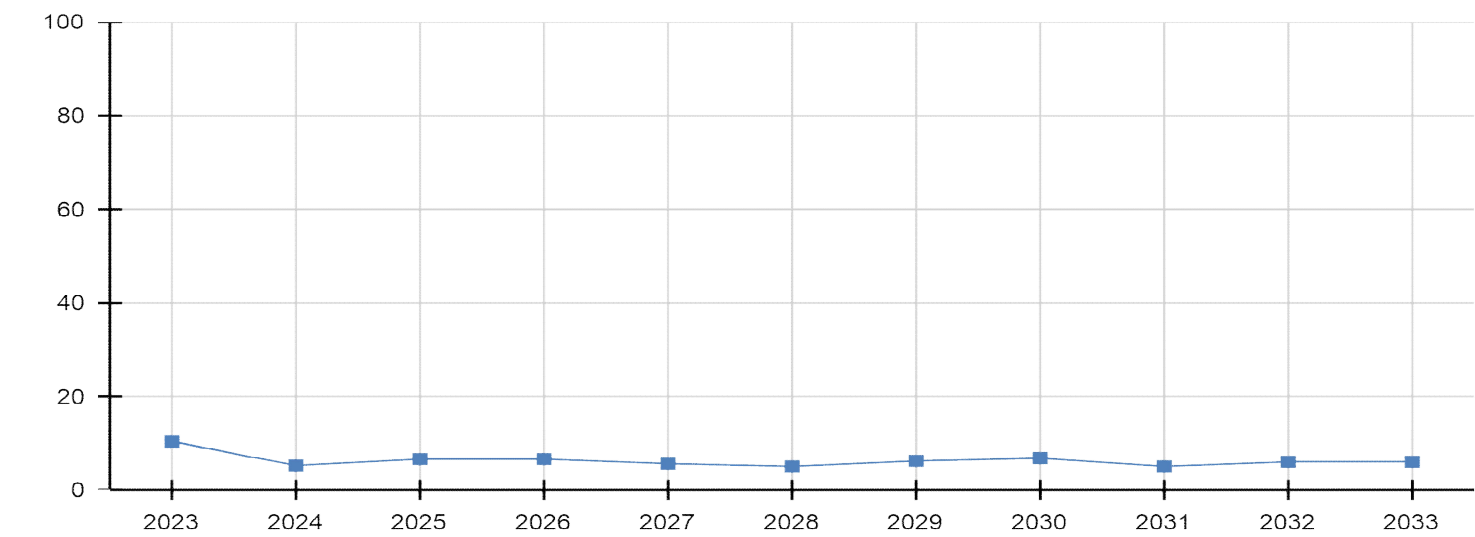
Year	Condition
2023	50
2024	74
2025	66
2026	65
2027	72
2028	75
2029	68
2030	65
2031	75
2032	70
2033	69

Network Condition by Performance Class



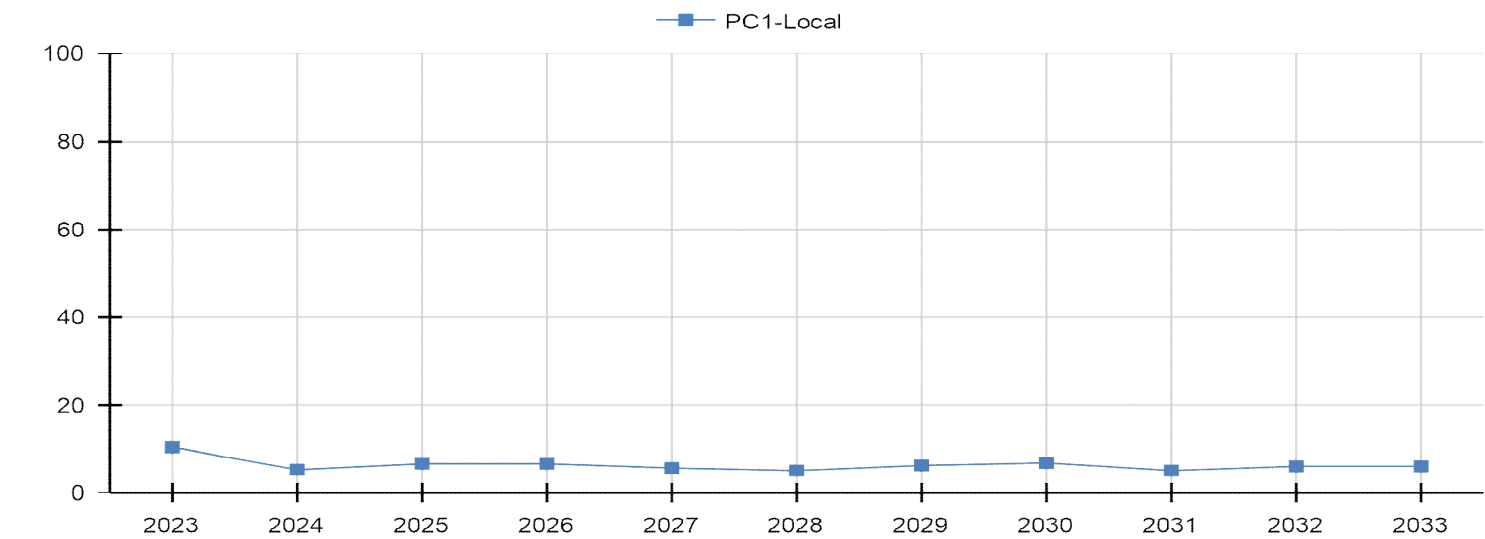
Year	PC1-Local
2023	50
2024	74
2025	66
2026	65
2027	72
2028	75
2029	68
2030	65
2031	75
2032	70
2033	69

Network Risk Index



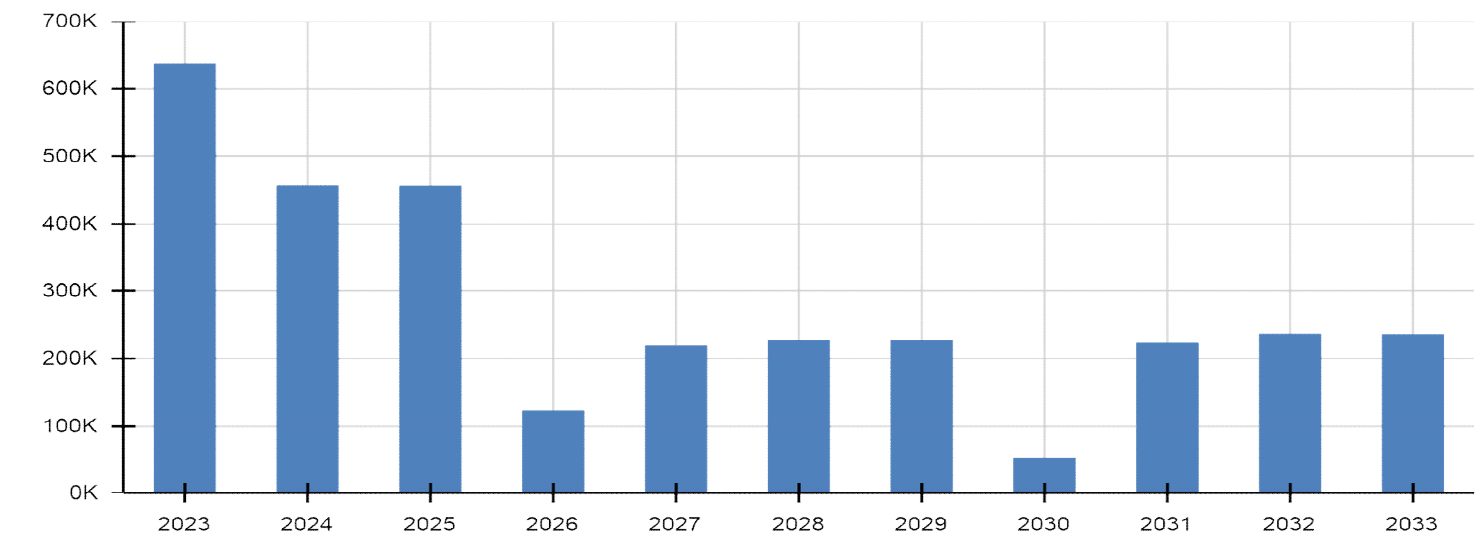
Year	Value
2023	10
2024	5
2025	7
2026	7
2027	6
2028	5
2029	6
2030	7
2031	5
2032	6
2033	6

Network Risk Index by Performance Class



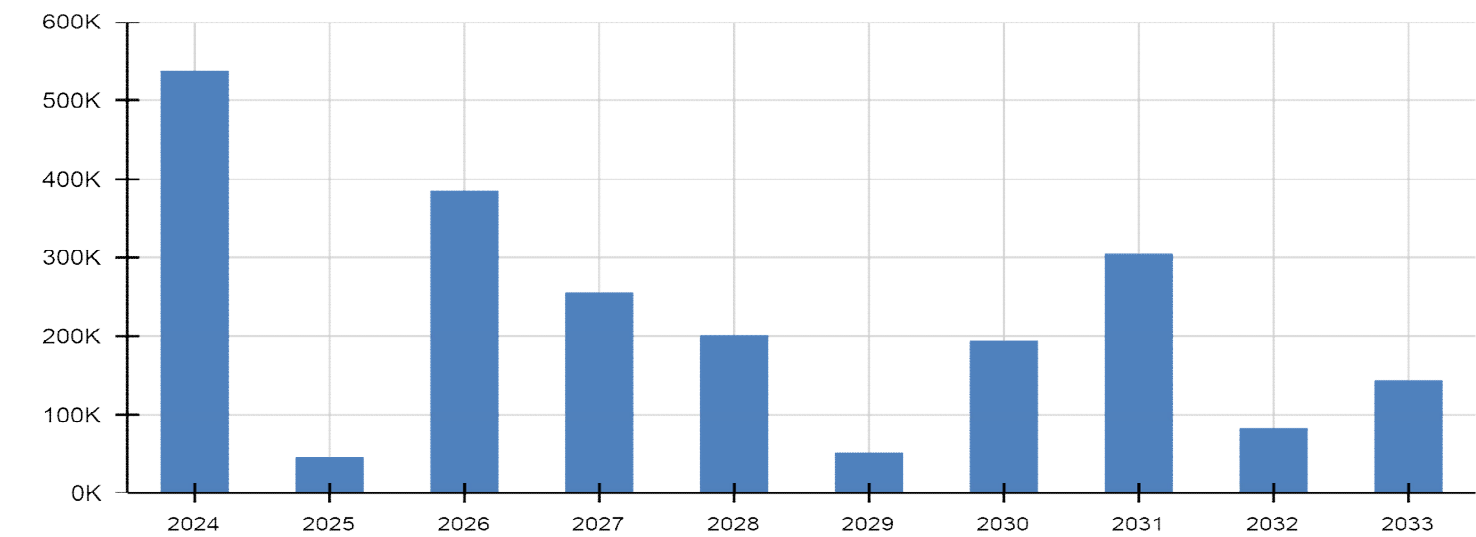
Year	PC1-Local
2023	11
2024	5
2025	7
2026	7
2027	6
2028	5
2029	6
2030	7
2031	5
2032	6
2033	6

Deficit Projection



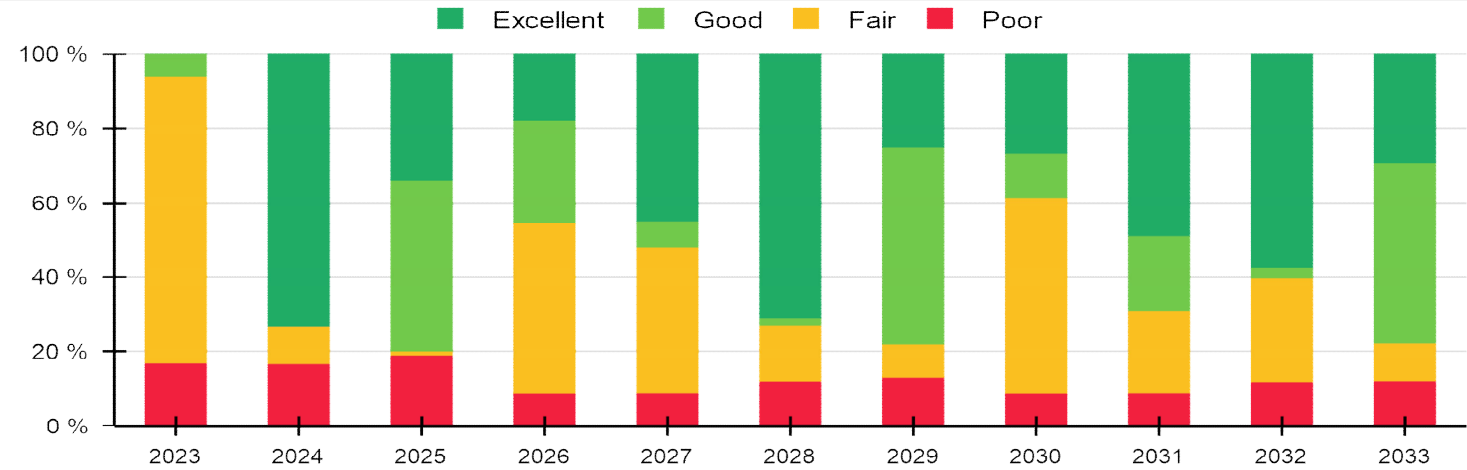
Year	Value
2023	\$635,774
2024	\$456,789
2025	\$456,476
2026	\$123,412
2027	\$219,065
2028	\$226,529
2029	\$226,492
2030	\$52,295
2031	\$222,781
2032	\$235,745
2033	\$234,929

Capital Expenditure



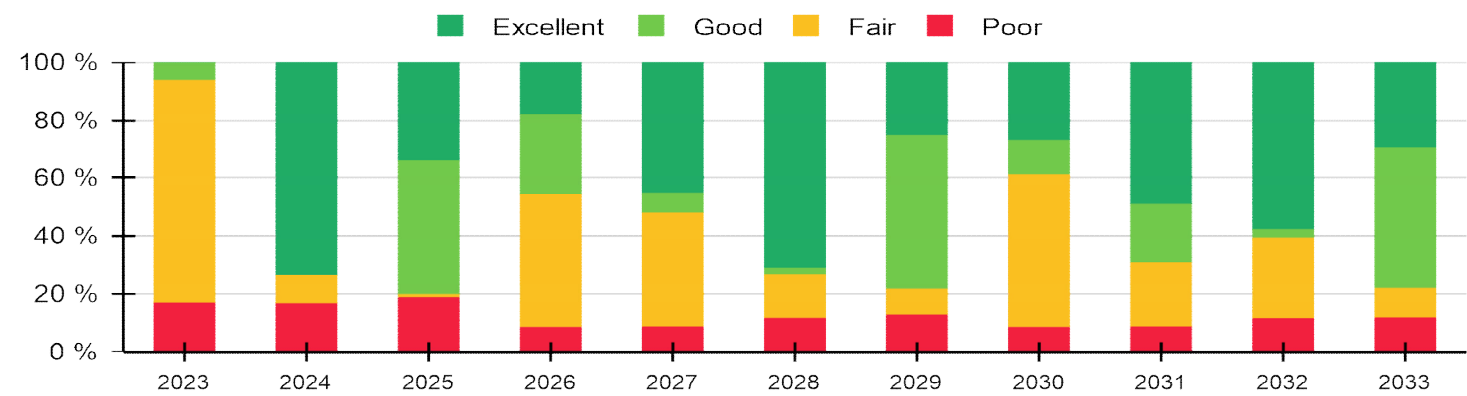
Year	Value
2024	\$537,746
2025	\$45,606
2026	\$385,100
2027	\$255,158
2028	\$200,862
2029	\$52,039
2030	\$193,405
2031	\$304,091
2032	\$83,539
2033	\$143,536

Network Condition Distribution



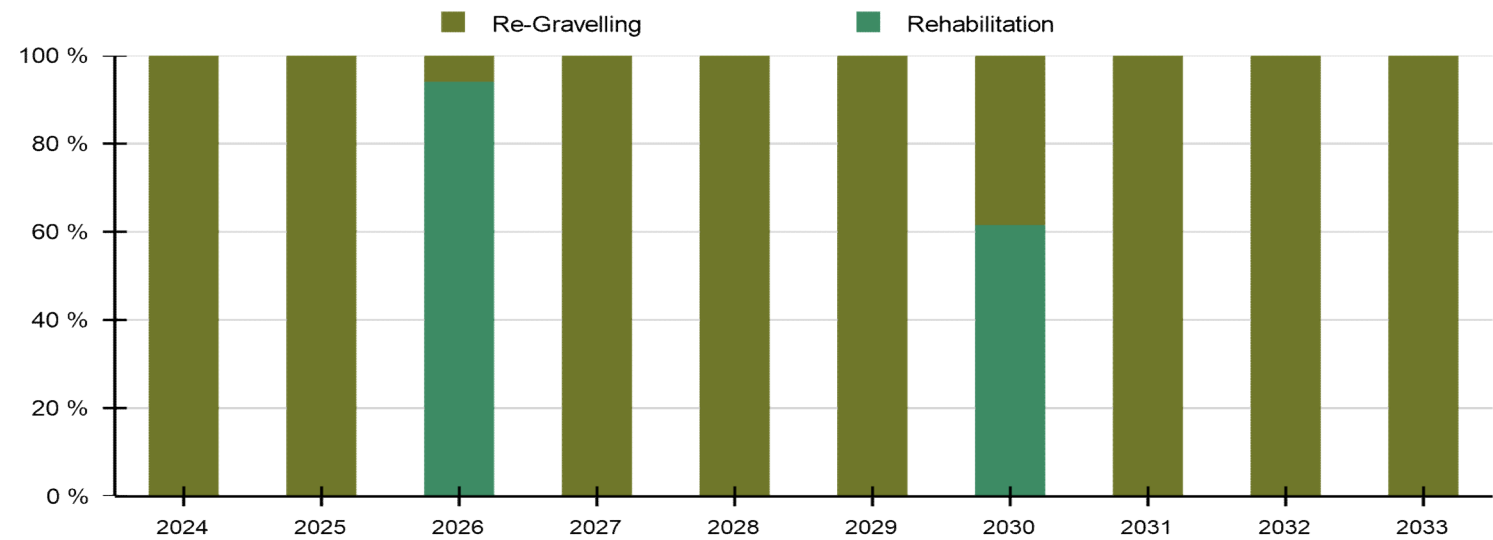
Year	Excellent	Good	Fair	Poor
2023	0%	6%	77%	17%
2024	74%	0%	10%	17%
2025	34%	46%	1%	19%
2026	18%	28%	46%	9%
2027	45%	7%	39%	9%
2028	71%	2%	15%	12%
2029	25%	53%	9%	13%
2030	27%	12%	53%	9%
2031	49%	20%	22%	9%
2032	58%	3%	28%	12%
2033	29%	48%	10%	12%

PC1-Local Condition Distribution



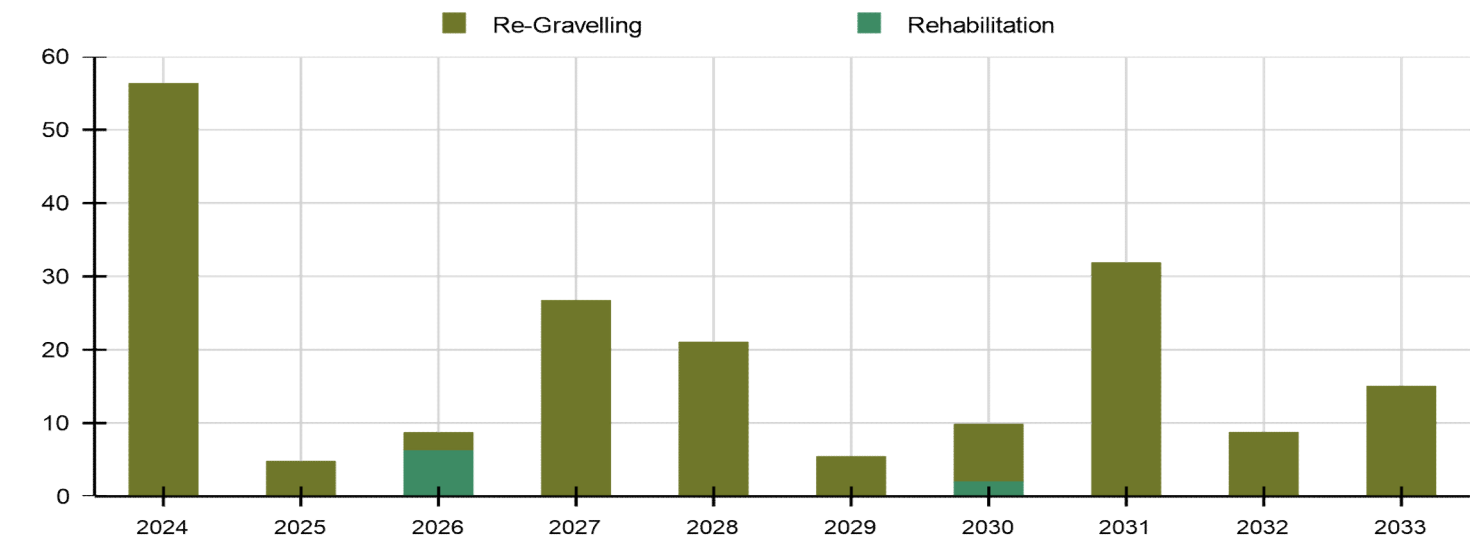
Year	Excellent	Good	Fair	Poor
2023	0%	6%	77%	17%
2024	74%	0%	10%	17%
2025	34%	46%	1%	19%
2026	18%	28%	46%	9%
2027	45%	7%	39%	9%
2028	71%	2%	15%	12%
2029	25%	53%	9%	13%
2030	27%	12%	53%	9%
2031	49%	20%	22%	9%
2032	58%	3%	28%	12%
2033	29%	48%	10%	12%

Capital Expenditure by Treatment Method



Treatment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Re-Gravelling (25 mm or 1 in)	\$537,746	\$45,606	\$22,835	\$255,158	\$200,862	\$52,039	\$74,332	\$304,091	\$83,539	\$143,536	\$1,719,744
Rehabilitation	\$0	\$0	\$362,265	\$0	\$0	\$0	\$119,073	\$0	\$0	\$0	\$481,338
Total	\$537,746	\$45,606	\$385,100	\$255,158	\$200,862	\$52,039	\$193,405	\$304,091	\$83,539	\$143,536	\$2,201,082

Project Size by Treatment Method (Km)



Treatment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Re-Gravelling (25 mm or 1 in)	56.32	4.78	2.39	26.73	21.04	5.45	7.79	31.85	8.75	15.03	180.13
Rehabilitation	0.00	0.00	6.32	0.00	0.00	0.00	2.08	0.00	0.00	0.00	8.40
Total	56.32	4.78	8.72	26.73	21.04	5.45	9.87	31.85	8.75	15.03	188.53

Scenario 2 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
177132	PINE LAKE ROAD	Shields Point	Georges Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,758
302923	LAPLANTE ROAD	Guay Road	Mount Pleasant	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$20,777
129381	LINE 3 ROAD NORTH	Highway 17	Berry Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,521
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$10,197
133834	VONDOELER ROAD	Talon Lake Road	East end of the raod	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,404
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$3,538
39753	BERRY ROAD	Line 3 North Road	East end of the raod	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$5,350
320938	BOUNDARY ROAD	Grand Desert Road	South end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$20,013
343423	ERIC STREET	Gagnon Street	End	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,004
397491	FARMERS LINE	Development Road	Laplanche Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$19,152
194298	FICHAULT ROAD	Trunk Road	Development Rd	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,609
408366	GEORGES ROAD	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,230
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,800
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$49,721
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$67,758
473302	GUAY ROAD	Laplanche Road	Grand Desert Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,879
68780	JAMES STREET	Schayer Street	mark Street	25	33	19	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,448
245789	JAMES STREET	Yonge Street	Schayer Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,184
459177	LABRECQUE STREET	Church Street	Levesque Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,025
463875	LAKESHORE ROAD	Development Road	South end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,105
363317	LAKEVIEW COURT	Greenwood Drive	End of Cul De Sac	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,498
279916	LANDON STREET	Church Street	Levesques St	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,052
161925	LAPLANTE ROAD	Farmers Line	Guay Road	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,929
384699	LAURIER STREET	Gagnon Street	End (turn around)	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,624
465711	LEVESQUE STREET	Benoit Street	Lebreques Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,588
15311	LINE 3 ROAD NORTH	Berry Road	North end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,686
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$7,103
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,417
485056	MAPLE ROAD	Webbs Road	Palangio Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,236
404440	MAPLE ROAD	Riverside Rd	Greenwood Drive	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,699
247683	MAPLE ROAD	Hwy 531	Riverside Rd	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$3,488
20756	MAPLE ROAD	Rainville Drive	Webbs Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$9,415
253158	MAPLE ROAD	Palangio Road	Highway 17	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,829
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$21,525
123366	MCNUTT ROAD	Development Road	Trunk Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$19,211
428961	PALANGIO ROAD	Maple Road	West end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$25,843
324473	PINE LAKE ROAD	Timber Haven Lane	Turn Around (Gate)	38	33	17	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$915
304893	PINE LAKE ROAD	Pine Land	Timber Haven Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,091
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,264
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$5,267
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$8,152

Scenario 2 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$10,884
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,486
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,191
242633	RAINVILLE ROAD	Maple Road	turn around	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,761
303468	TALON CRESECENT	Talon Cresecent	North End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,207
178929	TALON CRESECENT	Rutherglen Line	Talon Cresecent	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,679
437815	TALON LAKE ROAD	Highway 17	Vondoeler Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,015
100592	TALON LAKE ROAD	TALON LAKE ROAD	North end	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$9,776
201966	TROUT POND ROAD	Development Road	Trunk Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$19,031
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$31,412
Total									2024	\$537,746
465712	BENOIT STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$966
107422	HILLSIDE AVENUE	Riverside Rd	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$882
11581	LABRECQUE STREET	Levesques St	Laurier Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$662
11580	LAURIER STREET	Lebreques Street	End	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$1,294
327877	PINE LAKE ROAD	Talpine Road	Portage View Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$2,038
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$2,548
276245	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$6,565
195582	SOUTH SHORE ROAD	Development Road	Daytona Camp (Turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$30,651
Total									2025	\$45,606
241548	BOXWELL ROAD	Farmer's Line	Grand Desert Road	0	28	20	Roads	Rehabilitation	2026	\$302,356
240113	WUNDERS ROAD	Private Lane (north side)	Canoe Bay Road(turn around)	20	28	17	Roads	Rehabilitation	2026	\$59,909
291789	HILLSIDE AVENUE	Greenwood Ave.	Riverside Rd	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2026	\$2,072
68780	JAMES STREET	Schayer Street	mark Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2026	\$1,448
453389	LEVESQUE STREET	Landon Street	Gagnon Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2026	\$663
217795	LINE 3 ROAD SOUTH	Development Road	Trunk Road	25	28	17	Roads	Re-Gravelling (25 mm or 1 in)	2026	\$18,652
Total									2026	\$385,099
177132	PINE LAKE ROAD	Shields Point	Georges Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$6,758
39753	BERRY ROAD	Line 3 North Road	East end of the raod	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$5,350
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$49,721
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$67,758
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$7,103
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$18,417
404440	MAPLE ROAD	Riverside Rd	Greenwood Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$1,699
247683	MAPLE ROAD	Hwy 531	Riverside Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$3,488
253158	MAPLE ROAD	Palangio Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$18,829
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$21,525
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$4,264
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$10,884
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$1,191
242633	RAINVILLE ROAD	Maple Road	turn around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$6,761

Scenario 2 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$31,412
Total									2027	\$255,158
302923	LAPLANTE ROAD	Guay Road	Mount Pleasant	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$20,777
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$10,197
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$3,538
320938	BOUNDARY ROAD	Grand Desert Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$20,013
343423	ERIC STREET	Gagnon Street	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$1,004
397491	FARMERS LINE	Development Road	Laplanche Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$19,152
194298	FICHAULT ROAD	Trunk Road	Development Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,609
473302	GUAY ROAD	Laplanche Road	Grand Desert Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,879
463875	LAKE SHORE ROAD	Development Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$6,105
279916	LANDON STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$1,052
217795	LINE 3 ROAD SOUTH	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,652
485056	MAPLE ROAD	Webbs Road	Palangio Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$1,236
20756	MAPLE ROAD	Rainville Drive	Webbs Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$9,415
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$2,548
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$8,152
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,486
437815	TALON LAKE ROAD	Highway 17	Vondoeleer Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$4,015
201966	TROUT POND ROAD	Development Road	Trunk Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$19,031
Total									2028	\$200,862
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	25	28	17	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$4,800
245789	JAMES STREET	Yonge Street	Schayer Street	38	33	17	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$2,184
123366	MCNUTT ROAD	Development Road	Trunk Road	25	28	17	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$19,211
428961	PALANGIO ROAD	Maple Road	West end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$25,843
Total									2029	\$52,039
129381	LINE 3 ROAD NORTH	Highway 17	Berry Road	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$2,521
89868	WEBBS ROAD	Maple Road	East end of the road	0	28	20	Roads	Rehabilitation	2030	\$119,073
465712	BENOIT STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$966
408366	GEORGES ROAD	Pine Lake Road	Turn Around	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$6,230
107422	HILLSIDE AVENUE	Riverside Rd	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$882
291789	HILLSIDE AVENUE	Greenwood Ave.	Riverside Rd	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$2,072
68780	JAMES STREET	Schayer Street	mark Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,448
11581	LABRECQUE STREET	Levesques St	Laurier Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$662
459177	LABRECQUE STREET	Church Street	Levesque Street	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,025
363317	LAKEVIEW COURT	Greenwood Drive	End of Cul De Sac	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,498
161925	LAPLANTE ROAD	Farmers Line	Guay Road	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$4,929
384699	LAURIER STREET	Gagnon Street	End (turn around)	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$2,624
465711	LEVESQUE STREET	Benoit Street	Lebreques Street	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,588
15311	LINE 3 ROAD NORTH	Berry Road	North end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,686
327877	PINE LAKE ROAD	Talpine Road	Portage View Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$2,038

Scenario 2 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	25	28	17	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$5,267
276245	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$6,565
195582	SOUTH SHORE ROAD	Development Road	Daytona Camp (Turn around)	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$30,651
178929	TALON CRESECENT	Rutherglen Line	Talon Cresecent	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,679
Total									2030	\$193,405
241548	BOXWELL ROAD	Farmer's Line	Grand Desert Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$50,393
240113	WUNDERS ROAD	Private Lane (north side)	Canoe Bay Road(turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$9,985
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$49,721
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$67,758
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$18,417
20756	MAPLE ROAD	Rainville Drive	Webbs Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$9,415
253158	MAPLE ROAD	Palangio Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$18,829
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$21,525
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$8,152
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$18,486
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$31,412
Total									2031	\$304,091
177132	PINE LAKE ROAD	Shields Point	Georges Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$6,758
39753	BERRY ROAD	Line 3 North Road	East end of the raod	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$5,350
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$4,800
453389	LEVESQUE STREET	Landon Street	Gagnon Street	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$663
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$7,103
485056	MAPLE ROAD	Webbs Road	Palangio Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$1,236
247683	MAPLE ROAD	Hwy 531	Riverside Rd	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$3,488
123366	MCNUTT ROAD	Development Road	Trunk Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$19,211
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$2,548
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$4,264
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$5,267
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$10,884
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$1,191
242633	RAINVILLE ROAD	Maple Road	turn around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$6,761
437815	TALON LAKE ROAD	Highway 17	Vondoeler Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$4,015
Total									2032	\$83,539
302923	LAPLANTE ROAD	Guay Road	Mount Pleasant	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$20,777
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$10,197
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$3,538
320938	BOUNDARY ROAD	Grand Desert Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$20,013
397491	FARMERS LINE	Development Road	Laplane Road	38	33	17	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$19,152
473302	GUAY ROAD	Laplane Road	Grand Desert Rd	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$18,879
463875	LAKE SHORE ROAD	Development Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$6,105
428961	PALANGIO ROAD	Maple Road	West end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$25,843

Scenario 2 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
201966	TROUT POND ROAD	Development Road	Trunk Road	25	28	17	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$19,031
Total									2033	\$143,536
Grand Total										\$2,201,081

APPENDIX H

**Scenario 3 - Target Overall
Condition Rating PCI of 75**

Optimization Result

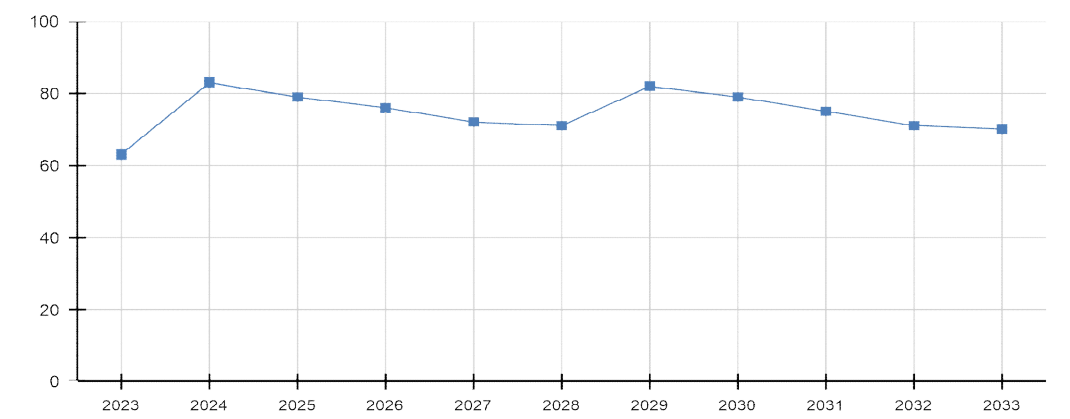
Scenario Summary

Scenario	
Name:	SC3 PCI 75 by 2024 Paved
Description:	
Year:	2024

Optimization Settings

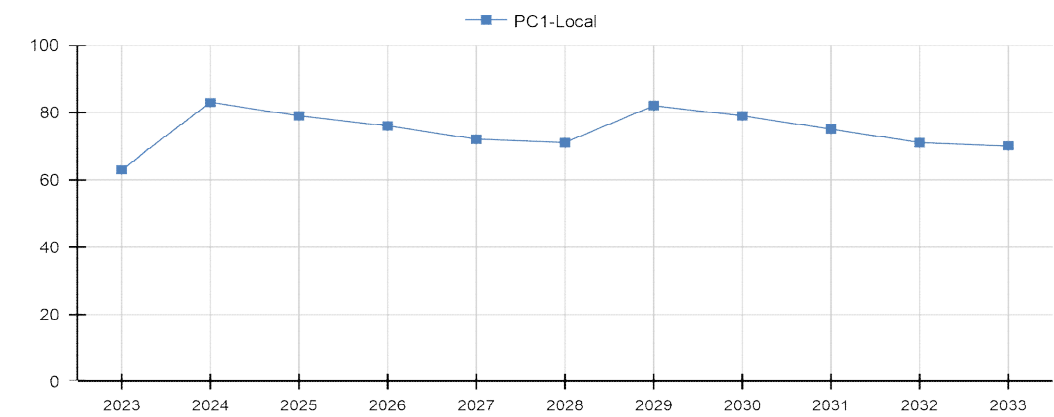
Optimization Mode	Target Optimization
Planning Horizon (Years)	10
Include Priorities	Yes
Asset Replacement Value	No
Estimate Current Condition	True
Operational Efficiency	No

Network Condition



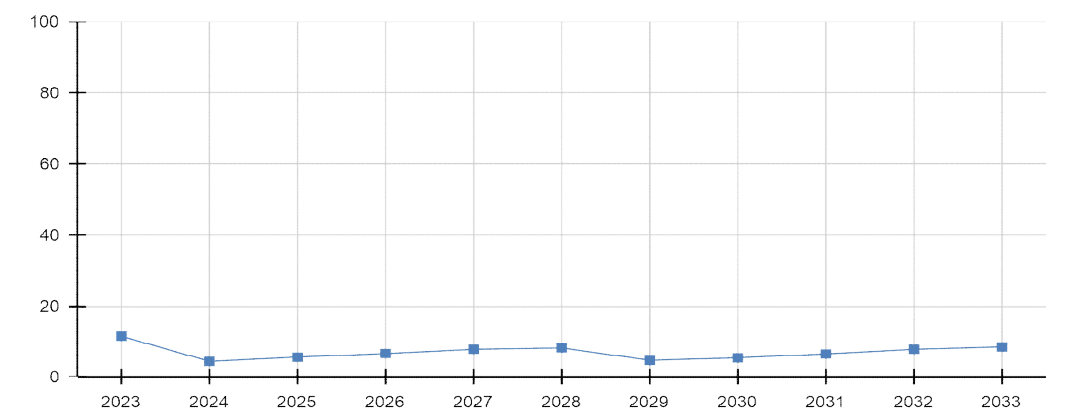
Year	Condition
2023	63
2024	83
2025	79
2026	76
2027	72
2028	71
2029	82
2030	79
2031	75
2032	71
2033	70

Network Condition by Performance Class



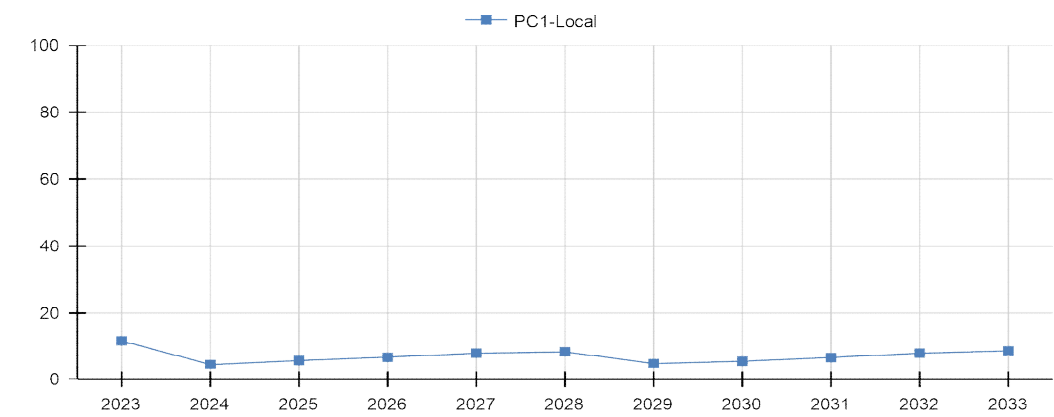
Year	PC1-Local
2023	63
2024	83
2025	79
2026	76
2027	72
2028	71
2029	82
2030	79
2031	75
2032	71
2033	70

Network Risk Index



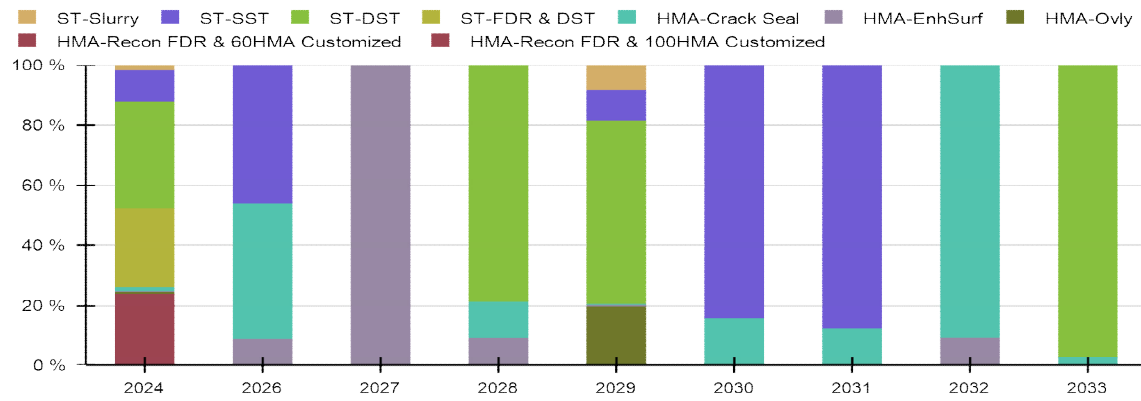
Year	Value
2023	12
2024	4
2025	6
2026	7
2027	8
2028	8
2029	5
2030	5
2031	6
2032	8
2033	8

Network Risk Index by Performance Class



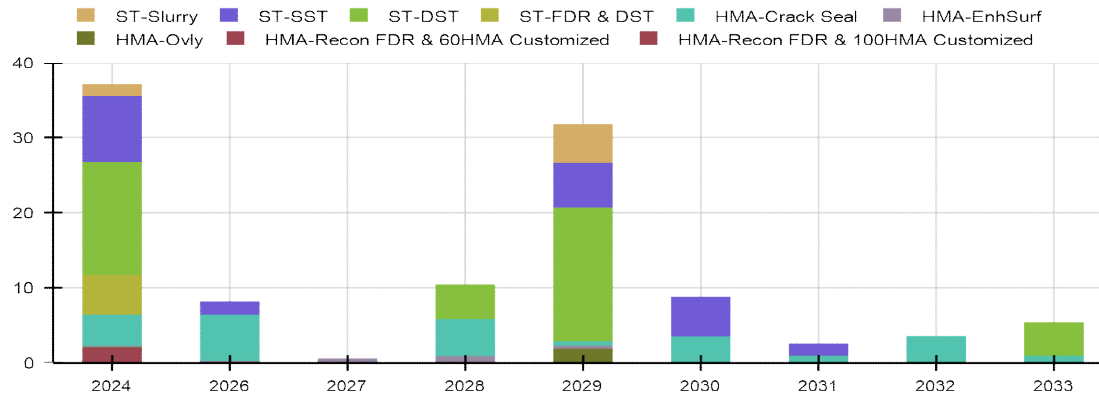
Year	PC1-Local
2023	12
2024	4
2025	6
2026	7
2027	8
2028	8
2029	5
2030	5
2031	7
2032	8
2033	9

Capital Expenditure by Treatment Method



Treatment	2024	2026	2027	2028	2029	2030	2031	2032	2033	Total
ST-Slurry	\$48,338	\$0	\$0	\$0	\$152,430	\$0	\$0	\$0	\$0	\$200,768
ST-SST	\$276,225	\$55,238	\$0	\$0	\$188,206	\$166,755	\$55,238	\$0	\$0	\$741,662
ST-DST	\$946,077	\$0	\$0	\$284,275	\$1,122,116	\$0	\$0	\$0	\$284,275	\$2,636,743
ST-FDR & DST	\$698,887	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$698,887
HMA-Crack Seal	\$36,192	\$54,002	\$0	\$43,914	\$5,049	\$30,762	\$7,906	\$30,074	\$7,906	\$215,805
HMA-EnhSurf	\$6,248	\$10,596	\$22,214	\$32,770	\$12,574	\$0	\$0	\$3,026	\$0	\$87,428
HMA-Ovly	\$15,218	\$0	\$0	\$0	\$361,927	\$0	\$0	\$0	\$0	\$377,145
HMA-Recon FDR & 100HMA Customized	\$591,349	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$591,349
HMA-Recon FDR & 60HMA Customized	\$43,559	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,559
Total	\$2,662,093	\$119,836	\$22,214	\$360,959	\$1,842,302	\$197,517	\$63,144	\$33,100	\$292,181	\$5,593,346

Project Size by Treatment Method (Km)



Treatment	2024	2026	2027	2028	2029	2030	2031	2032	2033	Total
ST-Slurry	1.63	0.00	0.00	0.00	5.12	0.00	0.00	0.00	0.00	6.75
ST-SST	8.78	1.75	0.00	0.00	5.98	5.29	1.75	0.00	0.00	23.56
ST-DST	15.02	0.00	0.00	4.51	17.82	0.00	0.00	0.00	4.51	41.87
ST-FDR & DST	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.29
HMA-Crack Seal	4.18	6.22	0.00	5.04	0.58	3.58	0.90	3.50	0.90	24.91
HMA-EnhSurf	0.14	0.28	0.58	0.89	0.33	0.00	0.00	0.08	0.00	2.30
HMA-Ovly	0.08	0.00	0.00	0.00	2.03	0.00	0.00	0.00	0.00	2.10
HMA-Recon FDR & 100HMA Customized	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
HMA-Recon FDR & 60HMA Customized	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
Total	37.23	8.26	0.58	10.44	31.86	8.87	2.66	3.58	5.42	108.88

Scenario 3 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
153410	PINE LAKE ROAD	Highway 17	Shields Point	58	37	12	Roads	ST-DST	2024	\$102,073
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	83	46	7	Roads	HMA-Crack Seal	2024	\$17,742
103075	CHURCH STREET	Labreques Street	Benoit Street	18	51	49	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$58,872
476795	DEVELOPMENT ROAD	Lake Nosbonsing	North Star Drive	54	32	10	Roads	ST-DST	2024	\$7,560
445150	SUNNYSIDE ROAD	Lima Lodge Road	Greenwood Drive	63	37	10	Roads	ST-SST	2024	\$41,801
262922	SUNNYSIDE ROAD	Cedar Lane	Lima Lodge Road	54	37	13	Roads	ST-DST	2024	\$101,877
173227	MARK STREET	James Street	Church Street	22	51	47	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$25,089
14313	DEVELOPMENT ROAD	North Star Drive	Southshore Road	54	32	10	Roads	ST-DST	2024	\$29,610
373427	YONGE STREET	Boisvert Street	James Street	78	51	10	Roads	HMA-Crack Seal	2024	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	81	51	9	Roads	HMA-Crack Seal	2024	\$2,858
362162	BOISVERT STREET	Railway Street	Yonge Street	77	46	10	Roads	HMA-Crack Seal	2024	\$1,985
330336	CHURCH STREET	Yonge Street	Landon Street	65	51	17	Roads	HMA-Ovly	2024	\$15,218
325543	CHURCH STREET	Landon Street	Labreques Street	65	51	17	Roads	HMA-EnhSurf	2024	\$6,248
152911	DEVELOPMENT ROAD	McNutt Road	Rutherglen Line	45	37	17	Roads	ST-FDR & DST	2024	\$157,592
184412	DEVELOPMENT ROAD	Rutherglen Line	Mount Pleasant	45	32	13	Roads	ST-FDR & DST	2024	\$201,595
138259	DEVELOPMENT ROAD	Fichault Road	McNutt Road	41	37	19	Roads	ST-FDR & DST	2024	\$317,244
48259	DEVELOPMENT ROAD	Trout Pond South	Fichault Road	54	37	13	Roads	ST-DST	2024	\$158,193
176330	DEVELOPMENT ROAD	Line 3 South	Trout Pond Road	63	37	10	Roads	ST-SST	2024	\$82,045
251965	GAGNE ROAD	Park Street	Hwy 17	80	51	9	Roads	HMA-Crack Seal	2024	\$916
28856	GAGNON STREET	Upper Laurier St	Levesques St	77	51	11	Roads	HMA-Crack Seal	2024	\$424
492316	GAGNON STREET	Levesques St	Church Street	42	51	35	Roads	HMA-Recon FDR & 60HMA Customized	2024	\$43,559
139054	GAGNON STREET	Eric Street	Upper Laurier St	25	51	46	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$52,867
230866	GAGNON STREET	Development Road	Eric Street	25	51	46	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$153,058
170091	GAGNON STREET	James Street	Church Street	87	51	6	Roads	HMA-Crack Seal	2024	\$688
297195	GREENWOOD DRIVE	Hillside Avenue	Lakeview Court	43	37	18	Roads	ST-FDR & DST	2024	\$22,457
253167	GREENWOOD DRIVE	Lakeview Crescent	Sunnyside Road	47	37	16	Roads	ST-DST	2024	\$15,851
446466	GREENWOOD DRIVE	Maple Road	Hillside Avenue	60	37	11	Roads	ST-SST	2024	\$10,729
294648	MARK STREET	Sunnyside Road	James Street	22	51	47	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$35,983
28629	MARK STREET	Schayer Street	Sunnyside Road	22	51	47	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$79,184
323576	PARK STREET	Gagne Road	Rutherglen Line	80	46	9	Roads	HMA-Crack Seal	2024	\$1,748
41177	PARK STREET	Rutherglen Line	Highway 17	80	46	9	Roads	HMA-Crack Seal	2024	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	80	46	9	Roads	HMA-Crack Seal	2024	\$2,881
491234	RAILWAY STREET	Trunk Rd	Boisvert Street	22	51	47	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$87,089
99734	RAILWAY STREET	Boisvert Street	Schayer Street	22	51	47	Roads	HMA-Recon FDR & 100HMA Customized	2024	\$99,208
447507	RUTHERGLEN LINE	Talon Crescent	Park Street	70	42	10	Roads	ST-SST	2024	\$10,083
149553	RUTHERGLEN LINE	Development Road	Talon Crescecent	82	37	5	Roads	ST-Slurry	2024	\$48,338
262732	SUNNYSIDE ROAD	Border (3 Sunnyside)	Quae Road	68	37	8	Roads	ST-SST	2024	\$12,934
101708	SUNNYSIDE ROAD	Mark Street	Greenwood Drive	68	37	8	Roads	ST-SST	2024	\$14,940
262731	SUNNYSIDE ROAD	Rockhaven Drive	Border (3 Sunnyside)	63	37	10	Roads	ST-SST	2024	\$19,558
488834	TALON CRESECENT	Talon Cresecent	South end	60	37	11	Roads	ST-SST	2024	\$2,333
198052	TRUNK ROAD	Railway Street	Yonge Street	47	42	23	Roads	ST-DST	2024	\$16,002
68860	TRUNK ROAD	McNutt Road	Park Street	50	37	15	Roads	ST-DST	2024	\$39,533
305084	TRUNK ROAD	Private lane (south side)	Fichault Road	54	37	13	Roads	ST-DST	2024	\$64,814
467621	TRUNK ROAD	Trout Pond South	Private lane (south side)	58	37	12	Roads	ST-DST	2024	\$95,703

Scenario 3 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
459367	TRUNK ROAD	Fichault Road	McNutt Road	50	37	15	Roads	ST-DST	2024	\$156,391
3194	TRUNK ROAD	Yonge Street	Line 3 South	58	37	12	Roads	ST-DST	2024	\$158,470
72427	TRUNK ROAD	Line 3 South	Trout Pond Road	63	37	10	Roads	ST-SST	2024	\$81,802
Total									2024	\$2,662,094
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	79	46	9	Roads	HMA-Crack Seal	2026	\$17,742
103075	CHURCH STREET	Labreques Street	Benoit Street	93	51	3	Roads	HMA-Crack Seal	2026	\$1,713
173227	MARK STREET	James Street	Church Street	93	51	3	Roads	HMA-Crack Seal	2026	\$730
373427	YONGE STREET	Boisvert Street	James Street	76	51	11	Roads	HMA-Crack Seal	2026	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	78	51	10	Roads	HMA-Crack Seal	2026	\$2,858
362162	BOISVERT STREET	Railway Street	Yonge Street	74	46	11	Roads	HMA-EnhSurf	2026	\$8,732
330336	CHURCH STREET	Yonge Street	Landon Street	93	51	3	Roads	HMA-Crack Seal	2026	\$746
325543	CHURCH STREET	Landon Street	Labreques Street	90	51	5	Roads	HMA-Crack Seal	2026	\$1,420
251965	GAGNE ROAD	Park Street	Hwy 17	77	51	11	Roads	HMA-Crack Seal	2026	\$916
28856	GAGNON STREET	Upper Laurier St	Levesques St	74	51	12	Roads	HMA-EnhSurf	2026	\$1,865
492316	GAGNON STREET	Levesques St	Church Street	93	51	3	Roads	HMA-Crack Seal	2026	\$846
139054	GAGNON STREET	Eric Street	Upper Laurier St	93	51	3	Roads	HMA-Crack Seal	2026	\$1,538
230866	GAGNON STREET	Development Road	Eric Street	93	51	3	Roads	HMA-Crack Seal	2026	\$4,454
170091	GAGNON STREET	James Street	Church Street	83	51	8	Roads	HMA-Crack Seal	2026	\$688
294648	MARK STREET	Sunnyside Road	James Street	93	51	3	Roads	HMA-Crack Seal	2026	\$1,047
28629	MARK STREET	Schayer Street	Sunnyside Road	93	51	3	Roads	HMA-Crack Seal	2026	\$2,304
323576	PARK STREET	Gagne Road	Rutherglen Line	77	46	10	Roads	HMA-Crack Seal	2026	\$1,748
41177	PARK STREET	Rutherglen Line	Highway 17	77	46	10	Roads	HMA-Crack Seal	2026	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	77	46	10	Roads	HMA-Crack Seal	2026	\$2,881
491234	RAILWAY STREET	Trunk Rd	Boisvert Street	93	51	3	Roads	HMA-Crack Seal	2026	\$2,534
99734	RAILWAY STREET	Boisvert Street	Schayer Street	93	51	3	Roads	HMA-Crack Seal	2026	\$2,887
149553	RUTHERGLEN LINE	Development Road	Talon Cresecent	72	37	7	Roads	ST-SST	2026	\$51,181
271607	TRUNK ROAD	Highway 531	Railway Street	70	42	10	Roads	ST-SST	2026	\$4,057
Total									2026	\$119,837
373427	YONGE STREET	Boisvert Street	James Street	74	51	12	Roads	HMA-EnhSurf	2027	\$22,215
Total									2027	\$22,215
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	76	46	10	Roads	HMA-Crack Seal	2028	\$17,742
103075	CHURCH STREET	Labreques Street	Benoit Street	87	51	6	Roads	HMA-Crack Seal	2028	\$1,713
476794	DEVELOPMENT ROAD	Southshore Road	Blue Sea Road	54	32	10	Roads	ST-DST	2028	\$126,315
173227	MARK STREET	James Street	Church Street	87	51	6	Roads	HMA-Crack Seal	2028	\$730
360778	YONGE STREET	Trunk Road	Boisvert Street	76	51	11	Roads	HMA-Crack Seal	2028	\$2,858
362162	BOISVERT STREET	Railway Street	Yonge Street	90	46	4	Roads	HMA-Crack Seal	2028	\$1,985
330336	CHURCH STREET	Yonge Street	Landon Street	87	51	6	Roads	HMA-Crack Seal	2028	\$746
325543	CHURCH STREET	Landon Street	Labreques Street	85	51	7	Roads	HMA-Crack Seal	2028	\$1,420
427972	DEVELOPMENT ROAD	Blue Sea Road	Line 3 South	54	37	13	Roads	ST-DST	2028	\$157,960
251965	GAGNE ROAD	Park Street	Hwy 17	74	51	12	Roads	HMA-EnhSurf	2028	\$4,031
28856	GAGNON STREET	Upper Laurier St	Levesques St	90	51	5	Roads	HMA-Crack Seal	2028	\$424
492316	GAGNON STREET	Levesques St	Church Street	87	51	6	Roads	HMA-Crack Seal	2028	\$846
139054	GAGNON STREET	Eric Street	Upper Laurier St	87	51	6	Roads	HMA-Crack Seal	2028	\$1,538
230866	GAGNON STREET	Development Road	Eric Street	87	51	6	Roads	HMA-Crack Seal	2028	\$4,454
170091	GAGNON STREET	James Street	Church Street	80	51	9	Roads	HMA-Crack Seal	2028	\$688

Scenario 3 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
294648	MARK STREET	Sunnyside Road	James Street	87	51	6	Roads	HMA-Crack Seal	2028	\$1,047
28629	MARK STREET	Schayer Street	Sunnyside Road	87	51	6	Roads	HMA-Crack Seal	2028	\$2,304
323576	PARK STREET	Gagne Road	Rutherglen Line	74	46	11	Roads	HMA-EnhSurf	2028	\$7,692
41177	PARK STREET	Rutherglen Line	Highway 17	74	46	11	Roads	HMA-EnhSurf	2028	\$8,369
38557	PARK STREET	Railway Tracks	Gagne Road	74	46	11	Roads	HMA-EnhSurf	2028	\$12,678
491234	RAILWAY STREET	Trunk Rd	Boisvert Street	87	51	6	Roads	HMA-Crack Seal	2028	\$2,534
99734	RAILWAY STREET	Boisvert Street	Schayer Street	87	51	6	Roads	HMA-Crack Seal	2028	\$2,887
Total									2028	\$360,959
153410	PINE LAKE ROAD	Highway 17	Shields Point	63	37	10	Roads	ST-SST	2029	\$51,036
162491	BLUESEA ROAD	Development Road	Grand Desert Rd	75	46	11	Roads	HMA-Ovly	2029	\$361,927
476795	DEVELOPMENT ROAD	Lake Nosbonsing	North Star Drive	58	32	9	Roads	ST-DST	2029	\$7,560
445150	SUNNYSIDE ROAD	Lima Lodge Road	Greenwood Drive	54	37	13	Roads	ST-DST	2029	\$83,601
262922	SUNNYSIDE ROAD	Cedar Lane	Lima Lodge Road	58	37	12	Roads	ST-DST	2029	\$101,877
14313	DEVELOPMENT ROAD	North Star Drive	Southshore Road	58	32	9	Roads	ST-DST	2029	\$29,610
373427	YONGE STREET	Boisvert Street	James Street	90	51	5	Roads	HMA-Crack Seal	2029	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	74	51	12	Roads	HMA-EnhSurf	2029	\$12,574
152911	DEVELOPMENT ROAD	McNutt Road	Rutherglen Line	77	37	6	Roads	ST-Slurry	2029	\$35,513
184412	DEVELOPMENT ROAD	Rutherglen Line	Mount Pleasant	77	32	4	Roads	ST-Slurry	2029	\$45,428
138259	DEVELOPMENT ROAD	Fichault Road	McNutt Road	77	37	6	Roads	ST-Slurry	2029	\$71,489
48259	DEVELOPMENT ROAD	Trout Pond South	Fichault Road	58	37	12	Roads	ST-DST	2029	\$158,193
176330	DEVELOPMENT ROAD	Line 3 South	Trout Pond Road	54	37	13	Roads	ST-DST	2029	\$164,090
253167	GREENWOOD DRIVE	Lakeview Crescent	Sunnyside Road	51	37	14	Roads	ST-DST	2029	\$15,851
446466	GREENWOOD DRIVE	Maple Road	Hillside Avenue	51	37	14	Roads	ST-DST	2029	\$21,458
447507	RUTHERGLEN LINE	Talon Crescent	Park Street	60	42	15	Roads	ST-SST	2029	\$10,083
262732	SUNNYSIDE ROAD	Border (3 Sunnyside)	Quae Road	58	37	12	Roads	ST-DST	2029	\$25,868
101708	SUNNYSIDE ROAD	Mark Street	Greenwood Drive	58	37	12	Roads	ST-DST	2029	\$29,881
262731	SUNNYSIDE ROAD	Rockhaven Drive	Border (3 Sunnyside)	54	37	13	Roads	ST-DST	2029	\$39,117
488834	TALON CRESECENT	Talon Cresecent	South end	51	37	14	Roads	ST-DST	2029	\$4,666
198052	TRUNK ROAD	Railway Street	Yonge Street	51	42	20	Roads	ST-DST	2029	\$16,002
68860	TRUNK ROAD	McNutt Road	Park Street	54	37	13	Roads	ST-DST	2029	\$39,533
305084	TRUNK ROAD	Private lane (south side)	Fichault Road	58	37	12	Roads	ST-DST	2029	\$64,814
467621	TRUNK ROAD	Trout Pond South	Private lane (south side)	63	37	10	Roads	ST-SST	2029	\$47,852
459367	TRUNK ROAD	Fichault Road	McNutt Road	54	37	13	Roads	ST-DST	2029	\$156,391
3194	TRUNK ROAD	Yonge Street	Line 3 South	63	37	10	Roads	ST-SST	2029	\$79,235
72427	TRUNK ROAD	Line 3 South	Trout Pond Road	54	37	13	Roads	ST-DST	2029	\$163,605
Total									2029	\$1,842,301
103075	CHURCH STREET	Labreques Street	Benoit Street	83	51	8	Roads	HMA-Crack Seal	2030	\$1,713
173227	MARK STREET	James Street	Church Street	83	51	8	Roads	HMA-Crack Seal	2030	\$730
362162	BOISVERT STREET	Railway Street	Yonge Street	85	46	6	Roads	HMA-Crack Seal	2030	\$1,985
330336	CHURCH STREET	Yonge Street	Landon Street	83	51	8	Roads	HMA-Crack Seal	2030	\$746
325543	CHURCH STREET	Landon Street	Labreques Street	81	51	9	Roads	HMA-Crack Seal	2030	\$1,420
152911	DEVELOPMENT ROAD	McNutt Road	Rutherglen Line	72	37	7	Roads	ST-SST	2030	\$37,602
184412	DEVELOPMENT ROAD	Rutherglen Line	Mount Pleasant	72	32	5	Roads	ST-SST	2030	\$48,101
138259	DEVELOPMENT ROAD	Fichault Road	McNutt Road	72	37	7	Roads	ST-SST	2030	\$75,695
251965	GAGNE ROAD	Park Street	Hwy 17	90	51	5	Roads	HMA-Crack Seal	2030	\$916

Scenario 3 - Paved Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
28856	GAGNON STREET	Upper Laurier St	Levesques St	85	51	7	Roads	HMA-Crack Seal	2030	\$424
492316	GAGNON STREET	Levesques St	Church Street	83	51	8	Roads	HMA-Crack Seal	2030	\$846
139054	GAGNON STREET	Eric Street	Upper Laurier St	83	51	8	Roads	HMA-Crack Seal	2030	\$1,538
230866	GAGNON STREET	Development Road	Eric Street	83	51	8	Roads	HMA-Crack Seal	2030	\$4,454
170091	GAGNON STREET	James Street	Church Street	77	51	11	Roads	HMA-Crack Seal	2030	\$688
297195	GREENWOOD DRIVE	Hillside Avenue	Lakeview Court	70	37	7	Roads	ST-SST	2030	\$5,358
294648	MARK STREET	Sunnyside Road	James Street	83	51	8	Roads	HMA-Crack Seal	2030	\$1,047
28629	MARK STREET	Schayer Street	Sunnyside Road	83	51	8	Roads	HMA-Crack Seal	2030	\$2,304
323576	PARK STREET	Gagne Road	Rutherglen Line	90	46	4	Roads	HMA-Crack Seal	2030	\$1,748
41177	PARK STREET	Rutherglen Line	Highway 17	90	46	4	Roads	HMA-Crack Seal	2030	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	90	46	4	Roads	HMA-Crack Seal	2030	\$2,881
491234	RAILWAY STREET	Trunk Rd	Boisvert Street	83	51	8	Roads	HMA-Crack Seal	2030	\$2,534
99734	RAILWAY STREET	Boisvert Street	Schayer Street	83	51	8	Roads	HMA-Crack Seal	2030	\$2,887
Total									2030	\$197,517
373427	YONGE STREET	Boisvert Street	James Street	85	51	7	Roads	HMA-Crack Seal	2031	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	90	51	5	Roads	HMA-Crack Seal	2031	\$2,858
149553	RUTHERGLEN LINE	Development Road	Talon Cresecent	63	37	10	Roads	ST-SST	2031	\$51,181
271607	TRUNK ROAD	Highway 531	Railway Street	60	42	15	Roads	ST-SST	2031	\$4,057
Total									2031	\$63,145
103075	CHURCH STREET	Labreques Street	Benoit Street	80	51	9	Roads	HMA-Crack Seal	2032	\$1,713
173227	MARK STREET	James Street	Church Street	80	51	9	Roads	HMA-Crack Seal	2032	\$730
362162	BOISVERT STREET	Railway Street	Yonge Street	81	46	8	Roads	HMA-Crack Seal	2032	\$1,985
330336	CHURCH STREET	Yonge Street	Landon Street	80	51	9	Roads	HMA-Crack Seal	2032	\$746
325543	CHURCH STREET	Landon Street	Labreques Street	78	51	10	Roads	HMA-Crack Seal	2032	\$1,420
251965	GAGNE ROAD	Park Street	Hwy 17	85	51	7	Roads	HMA-Crack Seal	2032	\$916
28856	GAGNON STREET	Upper Laurier St	Levesques St	81	51	9	Roads	HMA-Crack Seal	2032	\$424
492316	GAGNON STREET	Levesques St	Church Street	80	51	9	Roads	HMA-Crack Seal	2032	\$846
139054	GAGNON STREET	Eric Street	Upper Laurier St	80	51	9	Roads	HMA-Crack Seal	2032	\$1,538
230866	GAGNON STREET	Development Road	Eric Street	80	51	9	Roads	HMA-Crack Seal	2032	\$4,454
170091	GAGNON STREET	James Street	Church Street	74	51	12	Roads	HMA-EnhSurf	2032	\$3,026
294648	MARK STREET	Sunnyside Road	James Street	80	51	9	Roads	HMA-Crack Seal	2032	\$1,047
28629	MARK STREET	Schayer Street	Sunnyside Road	80	51	9	Roads	HMA-Crack Seal	2032	\$2,304
323576	PARK STREET	Gagne Road	Rutherglen Line	85	46	6	Roads	HMA-Crack Seal	2032	\$1,748
41177	PARK STREET	Rutherglen Line	Highway 17	85	46	6	Roads	HMA-Crack Seal	2032	\$1,902
38557	PARK STREET	Railway Tracks	Gagne Road	85	46	6	Roads	HMA-Crack Seal	2032	\$2,881
491234	RAILWAY STREET	Trunk Rd	Boisvert Street	80	51	9	Roads	HMA-Crack Seal	2032	\$2,534
99734	RAILWAY STREET	Boisvert Street	Schayer Street	80	51	9	Roads	HMA-Crack Seal	2032	\$2,887
Total									2032	\$33,100
476794	DEVELOPMENT ROAD	Southshore Road	Blue Sea Road	58	32	9	Roads	ST-DST	2033	\$126,315
373427	YONGE STREET	Boisvert Street	James Street	81	51	9	Roads	HMA-Crack Seal	2033	\$5,049
360778	YONGE STREET	Trunk Road	Boisvert Street	85	51	7	Roads	HMA-Crack Seal	2033	\$2,858
427972	DEVELOPMENT ROAD	Blue Sea Road	Line 3 South	58	37	12	Roads	ST-DST	2033	\$157,960
Total									2033	\$292,181
Grand Total										\$5,593,348

Optimization Result

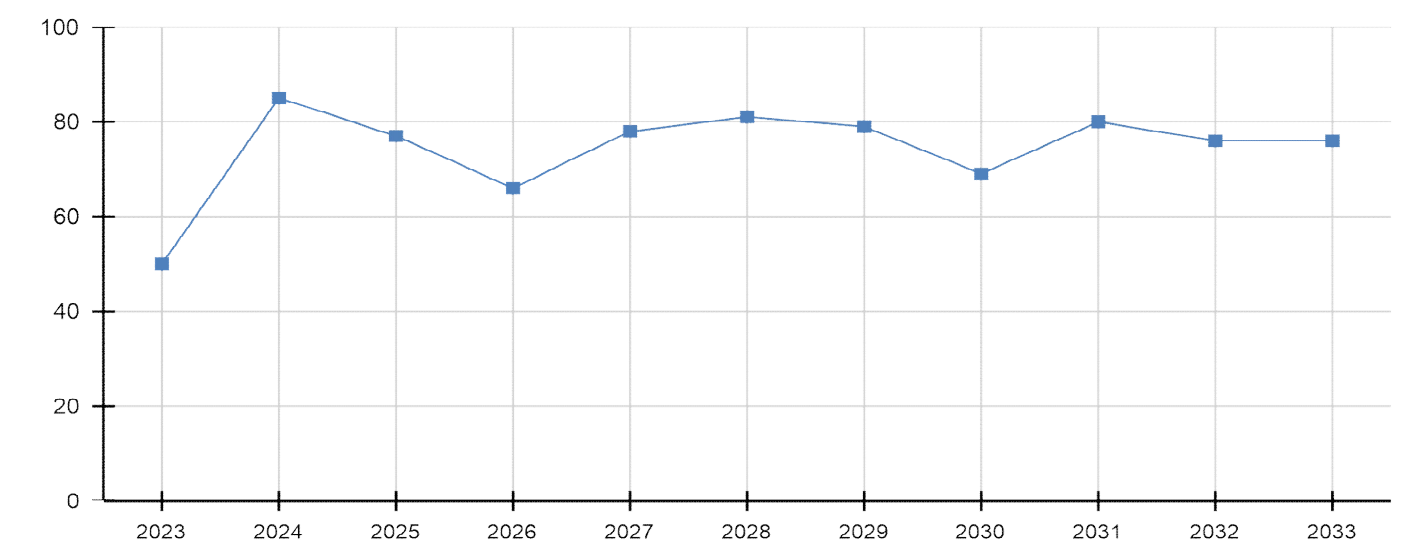
Scenario Summary

Scenario	
Name:	SC3 PCI 75 by 2024 Gravel
Description:	
Year:	2024

Optimization Settings

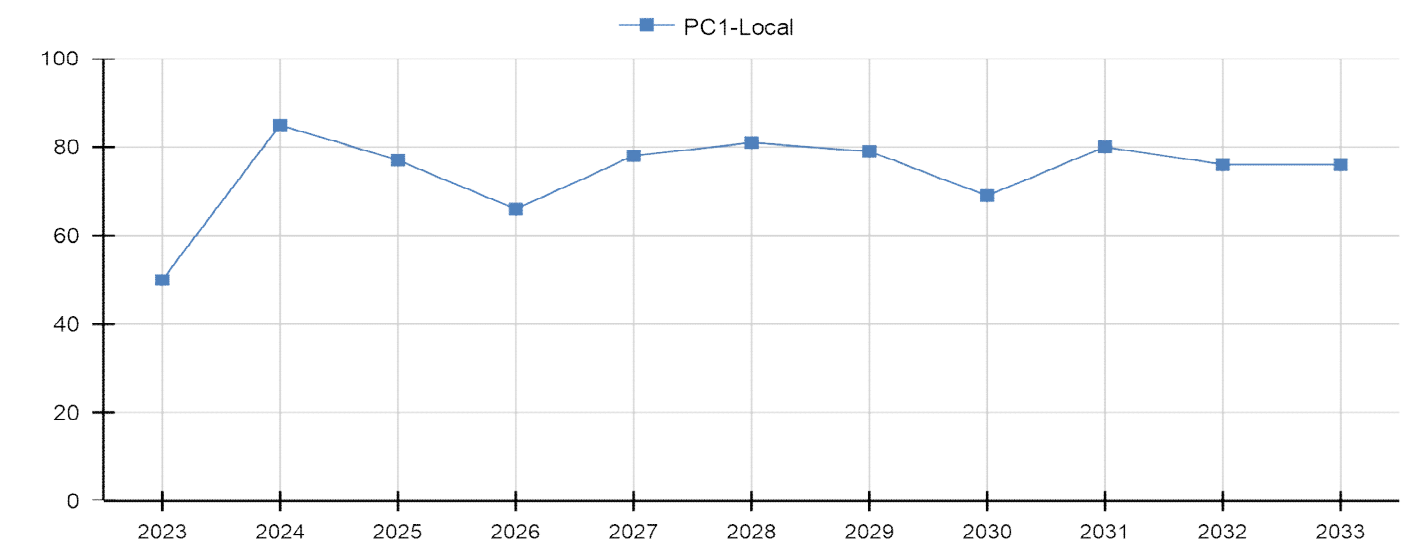
Optimization Mode	Target Optimization
Planning Horizon (Years)	10
Include Priorities	Yes
Asset Replacement Value	No
Estimate Current Condition	True
Operational Efficiency	No

Network Condition



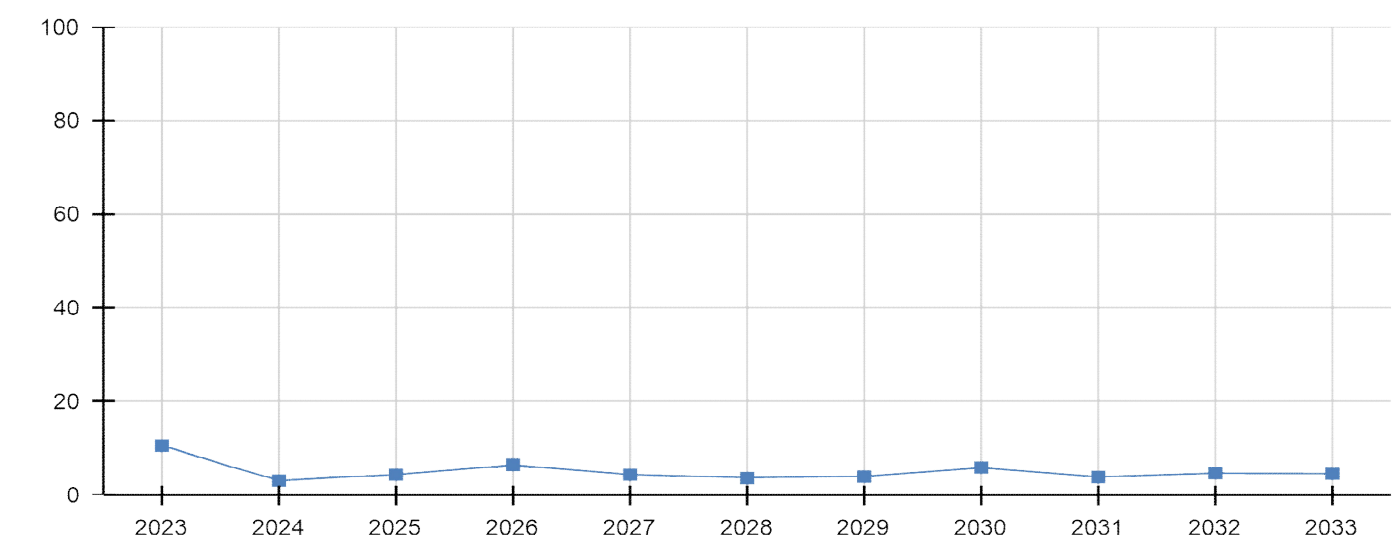
Year	Condition
2023	50
2024	85
2025	77
2026	66
2027	78
2028	81
2029	79
2030	69
2031	80
2032	76
2033	76

Network Condition by Performance Class



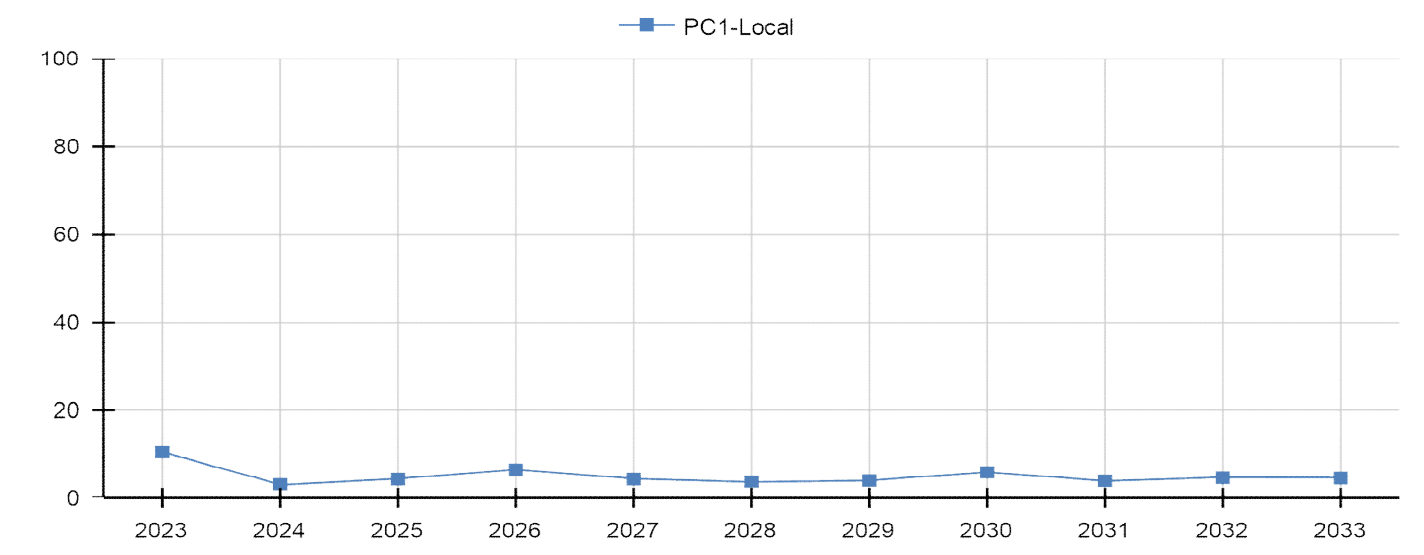
Year	PC1-Local
2023	50
2024	85
2025	77
2026	66
2027	78
2028	81
2029	79
2030	69
2031	80
2032	76
2033	76

Network Risk Index



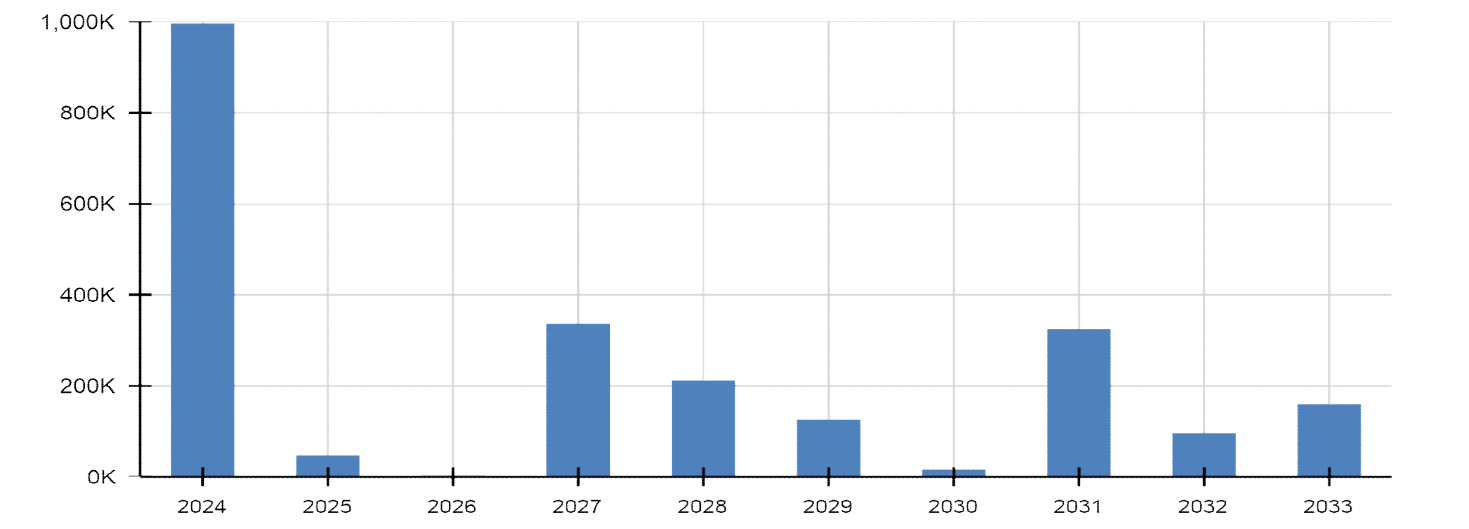
Year	Value
2023	10
2024	3
2025	4
2026	6
2027	4
2028	4
2029	4
2030	6
2031	4
2032	5
2033	5

Network Risk Index by Performance Class



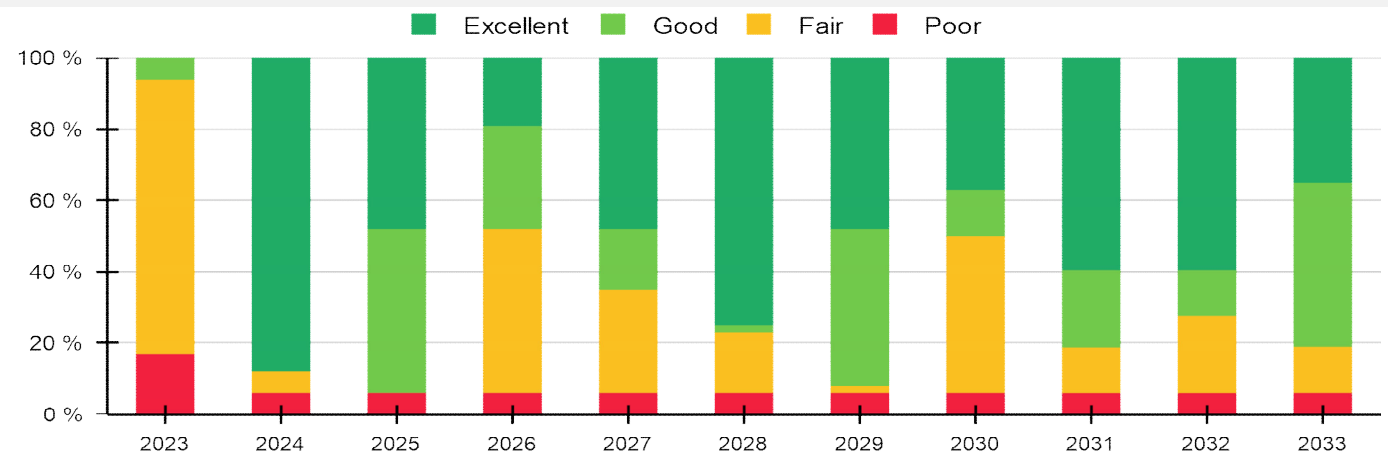
Year	PC1-Local
2023	11
2024	3
2025	4
2026	7
2027	4
2028	4
2029	4
2030	6
2031	4
2032	5
2033	5

Capital Expenditure



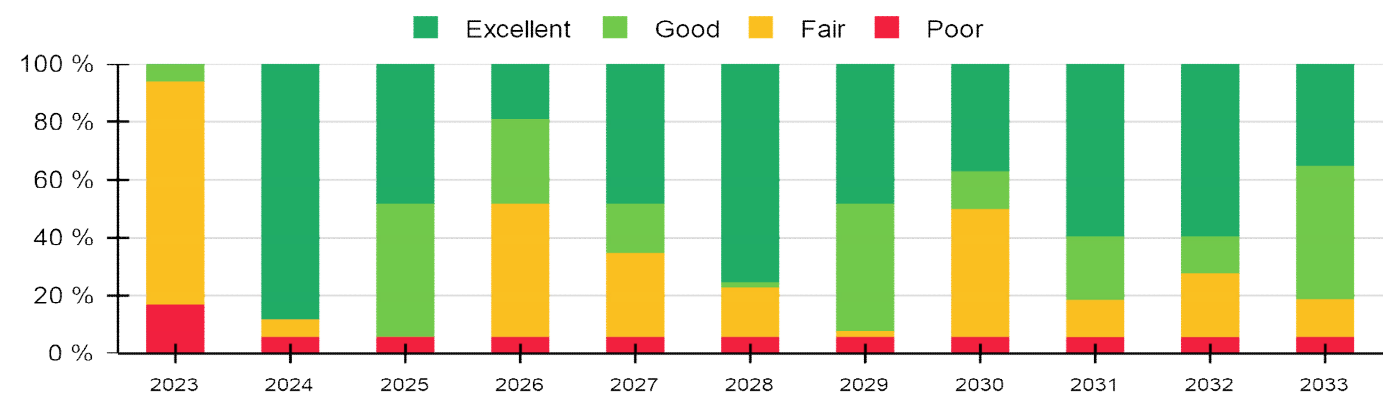
Year	Value
2024	\$994,535
2025	\$45,294
2026	\$2,111
2027	\$336,403
2028	\$211,022
2029	\$125,122
2030	\$16,091
2031	\$323,764
2032	\$95,866
2033	\$159,108

Network Condition Distribution



Year	Excellent	Good	Fair	Poor
2023	0%	6%	77%	17%
2024	88%	0%	6%	6%
2025	48%	46%	0%	6%
2026	19%	29%	46%	6%
2027	48%	17%	29%	6%
2028	75%	2%	17%	6%
2029	48%	44%	2%	6%
2030	37%	13%	44%	6%
2031	60%	22%	13%	6%
2032	60%	13%	22%	6%
2033	35%	46%	13%	6%

PC1-Local Condition Distribution

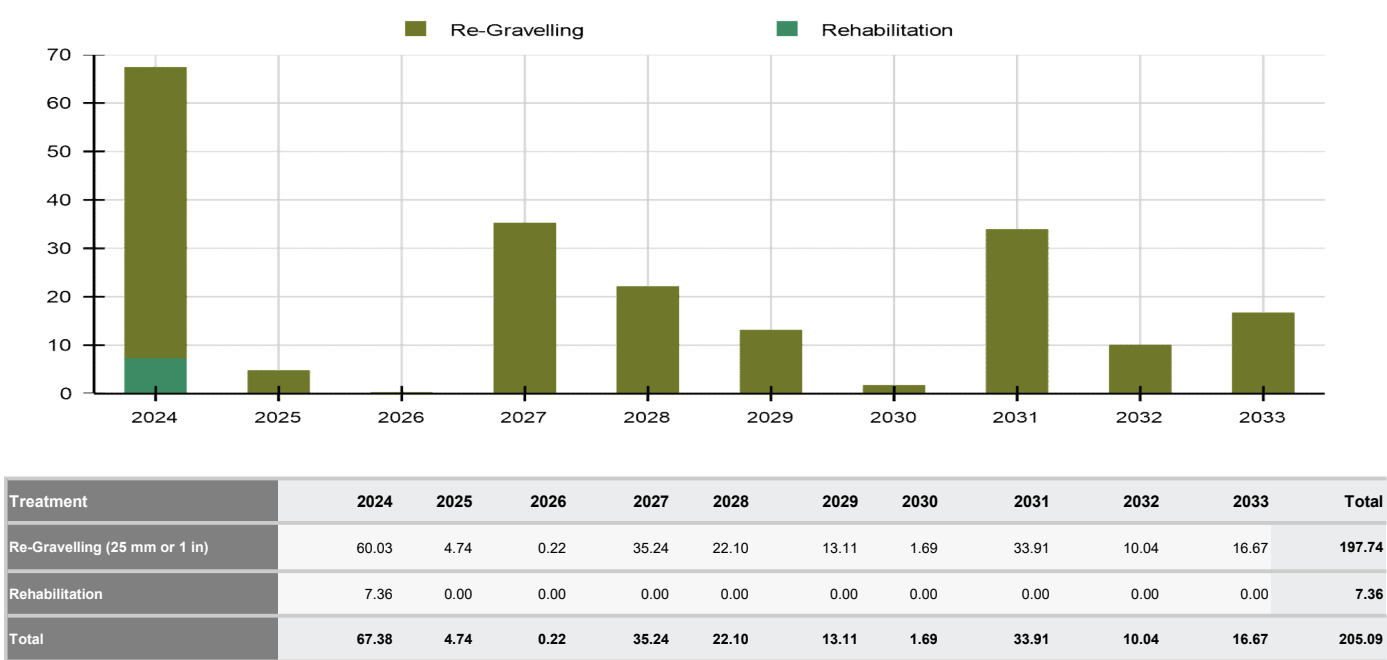


Year	Excellent	Good	Fair	Poor
2023	0%	6%	77%	17%
2024	88%	0%	6%	6%
2025	48%	46%	0%	6%
2026	19%	29%	46%	6%
2027	48%	17%	29%	6%
2028	75%	2%	17%	6%
2029	48%	44%	2%	6%
2030	37%	13%	44%	6%
2031	60%	22%	13%	6%
2032	60%	13%	22%	6%
2033	35%	46%	13%	6%

Capital Expenditure by Treatment Method



Project Size by Treatment Method (Km)



Scenario 3 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
177132	PINE LAKE ROAD	Shields Point	Georges Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,758
241548	BOXWELL ROAD	Farmer's Line	Grand Desert Road	20	28	17	Roads	Rehabilitation	2024	\$302,356
302923	LAPLANTE ROAD	Guay Road	Mount Pleasant	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$20,777
145804	RIVERSIDE DRIVE	Maple Road	Hillside Avenue	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,881
129381	LINE 3 ROAD NORTH	Highway 17	Berry Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,521
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$10,197
133834	VONDOELER ROAD	Talon Lake Road	East end of the road	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,404
89868	WEBBS ROAD	Maple Road	East end of the road	10	28	19	Roads	Rehabilitation	2024	\$119,073
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$3,538
240113	WUNDERS ROAD	Private Lane (north side)	Canoe Bay Road(turn around)	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$9,985
39753	BERRY ROAD	Line 3 North Road	East end of the road	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$5,350
320938	BOUNDARY ROAD	Grand Desert Road	South end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$20,013
343423	ERIC STREET	Gagnon Street	End	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,004
397491	FARMERS LINE	Development Road	Laplanche Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$19,152
194298	FICHAULT ROAD	Trunk Road	Development Rd	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,609
408366	GEORGES ROAD	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,230
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,800
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$49,721
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$67,758
473302	GUAY ROAD	Laplanche Road	Grand Desert Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,879
68780	JAMES STREET	Schayer Street	mark Street	25	33	19	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,448
245789	JAMES STREET	Yonge Street	Schayer Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,184
459177	LABRECQUE STREET	Church Street	Levesque Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,025
463875	LAKESHORE ROAD	Development Road	South end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,105
363317	LAKEVIEW COURT	Greenwood Drive	End of Cul De Sac	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,498
279916	LONDON STREET	Church Street	Levesques St	40	33	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,052
161925	LAPLANTE ROAD	Farmers Line	Guay Road	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,929
11580	LAURIER STREET	Lebriques Street	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,294
384699	LAURIER STREET	Gagnon Street	End (turn around)	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,624
465711	LEVESQUE STREET	Benoit Street	Lebriques Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,588
15311	LINE 3 ROAD NORTH	Berry Road	North end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,686
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$7,103
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,417
217795	LINE 3 ROAD SOUTH	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,652
485056	MAPLE ROAD	Webbs Road	Palangio Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,236
404440	MAPLE ROAD	Riverside Rd	Greenwood Drive	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,699
247683	MAPLE ROAD	Hwy 531	Riverside Rd	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$3,488
20756	MAPLE ROAD	Rainville Drive	Webbs Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$9,415
253158	MAPLE ROAD	Palangio Road	Highway 17	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,829
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$21,525
123366	MCNUTT ROAD	Development Road	Trunk Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$19,211
428961	PALANGIO ROAD	Maple Road	West end	40	28	13	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$25,843
324473	PINE LAKE ROAD	Timber Haven Lane	Turn Around (Gate)	38	33	17	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$915
304893	PINE LAKE ROAD	Pine Land	Timber Haven Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,091
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$2,548
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,264

Scenario 3 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$5,267
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$8,152
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$10,884
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$18,486
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,191
242633	RAINVILLE ROAD	Maple Road	turn around	30	28	16	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$6,761
303468	TALON CRESECENT	Talon Cresecent	North End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,207
178929	TALON CRESECENT	Rutherglen Line	Talon Cresecent	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$1,679
437815	TALON LAKE ROAD	Highway 17	Vondoeler Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$4,015
100592	TALON LAKE ROAD	TALON LAKE ROAD	North end	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$9,776
201966	TROUT POND ROAD	Development Road	Trunk Road	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$19,031
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	38	28	14	Roads	Re-Gravelling (25 mm or 1 in)	2024	\$31,412
Total									2024	\$994,534
465712	BENOIT STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$966
107422	HILLSIDE AVENUE	Riverside Rd	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$882
291789	HILLSIDE AVENUE	Greenwood Ave.	Riverside Rd	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$2,072
11581	LABRECQUE STREET	Levesques St	Laurier Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$662
142136	LEVESQUE STREET	Lebreques Street	Landon Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$1,458
327877	PINE LAKE ROAD	Talpine Road	Portage View Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$2,038
276245	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$6,565
195582	SOUTH SHORE ROAD	Development Road	Daytona Camp (Turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2025	\$30,651
Total									2025	\$45,294
68780	JAMES STREET	Schayer Street	mark Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2026	\$1,448
453389	LEVESQUE STREET	Landon Street	Gagnon Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2026	\$663
Total									2026	\$2,111
177132	PINE LAKE ROAD	Shields Point	Georges Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$6,758
39753	BERRY ROAD	Line 3 North Road	East end of the road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$5,350
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$4,800
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$49,721
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$67,758
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$7,103
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$18,417
485056	MAPLE ROAD	Webbs Road	Palangio Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$1,236
404440	MAPLE ROAD	Riverside Rd	Greenwood Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$1,699
247683	MAPLE ROAD	Hwy 531	Riverside Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$3,488
20756	MAPLE ROAD	Rainville Drive	Webbs Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$9,415
253158	MAPLE ROAD	Palangio Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$18,829
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$21,525
123366	MCNUTT ROAD	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$19,211
324473	PINE LAKE ROAD	Timber Haven Lane	Turn Around (Gate)	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$915
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$4,264
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$8,152
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$10,884
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$18,486
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$1,191
242633	RAINVILLE ROAD	Maple Road	turn around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$6,761

Scenario 3 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
201966	TROUT POND ROAD	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$19,031
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2027	\$31,412
Total									2027	\$336,403
302923	LAPLANTE ROAD	Guay Road	Mount Pleasant	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$20,777
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$10,197
133834	VONDOELER ROAD	Talon Lake Road	East end of the road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$6,404
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$3,538
240113	WUNDERS ROAD	Private Lane (north side)	Canoe Bay Road(turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$9,985
320938	BOUNDARY ROAD	Grand Desert Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$20,013
343423	ERIC STREET	Gagnon Street	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$1,004
397491	FARMERS LINE	Development Road	Laplane Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$19,152
194298	FICHAULT ROAD	Trunk Road	Development Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,609
473302	GUAY ROAD	Laplane Road	Grand Desert Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,879
245789	JAMES STREET	Yonge Street	Schayer Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$2,184
463875	LAKESHORE ROAD	Development Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$6,105
279916	LANDON STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$1,052
161925	LAPLANTE ROAD	Farmers Line	Guay Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$4,929
217795	LINE 3 ROAD SOUTH	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$18,652
428961	PALANGIO ROAD	Maple Road	West end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$25,843
304893	PINE LAKE ROAD	Pine Land	Timber Haven Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$2,091
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$2,548
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$5,267
437815	TALON LAKE ROAD	Highway 17	Vondoeleer Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$4,015
100592	TALON LAKE ROAD	TALON LAKE ROAD	North end	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2028	\$9,776
Total									2028	\$211,022
241548	BOXWELL ROAD	Farmer's Line	Grand Desert Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$50,393
145804	RIVERSIDE DRIVE	Maple Road	Hillside Avenue	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$2,881
129381	LINE 3 ROAD NORTH	Highway 17	Berry Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$2,521
89868	WEBBS ROAD	Maple Road	East end of the road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$19,845
408366	GEORGES ROAD	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$6,230
459177	LABRECQUE STREET	Church Street	Levesque Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,025
363317	LAKEVIEW COURT	Greenwood Drive	End of Cul De Sac	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,498
11580	LAURIER STREET	Lebreques Street	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,294
384699	LAURIER STREET	Gagnon Street	End (turn around)	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$2,624
465711	LEVESQUE STREET	Benoit Street	Lebreques Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,588
15311	LINE 3 ROAD NORTH	Berry Road	North end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,686
195582	SOUTH SHORE ROAD	Development Road	Daytona Camp (Turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$30,651
303468	TALON CRESECENT	Talon Cresecent	North End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,207
178929	TALON CRESECENT	Rutherglen Line	Talon Cresecent	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2029	\$1,679
Total									2029	\$125,122
465712	BENOIT STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$966
107422	HILLSIDE AVENUE	Riverside Rd	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$882
291789	HILLSIDE AVENUE	Greenwood Ave.	Riverside Rd	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$2,072
68780	JAMES STREET	Schayer Street	mark Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,448
11581	LABRECQUE STREET	Levesques St	Laurier Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$662
142136	LEVESQUE STREET	Lebreques Street	Landon Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$1,458

Scenario 3 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
327877	PINE LAKE ROAD	Talpine Road	Portage View Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$2,038
276245	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2030	\$6,565
Total									2030	\$16,091
177132	PINE LAKE ROAD	Shields Point	Georges Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$6,758
473301	GRAND DESERT ROAD	Boundary Road	Guay Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$4,800
162490	GRAND DESERT ROAD	Blue Sea Road	Boxwell Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$49,721
442217	GRAND DESERT ROAD	Boxwell Road	Boundary Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$67,758
453389	LEVESQUE STREET	Landon Street	Gagnon Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$663
430730	LINE 3 ROAD SOUTH	Francouer Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$7,103
365969	LINE 3 ROAD SOUTH	Trunk Road	Francouer Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$18,417
485056	MAPLE ROAD	Webbs Road	Palangio Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$1,236
404440	MAPLE ROAD	Riverside Rd	Greenwood Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$1,699
247683	MAPLE ROAD	Hwy 531	Riverside Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$3,488
20756	MAPLE ROAD	Rainville Drive	Webbs Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$9,415
253158	MAPLE ROAD	Palangio Road	Highway 17	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$18,829
363939	MAPLE ROAD	Greenwood Drive	Rainville Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$21,525
123366	MCNUTT ROAD	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$19,211
324473	PINE LAKE ROAD	Timber Haven Lane	Turn Around (Gate)	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$915
32579	PINE LAKE ROAD	Georges Road	Wunders Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$4,264
384252	PINE LAKE ROAD	Private lane (west side)	Talpine Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$8,152
384251	PINE LAKE ROAD	Lees Point Road	Private lane (west side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$10,884
365632	PINE LAKE ROAD	Wunders Lane	Lees Point Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$18,486
201966	TROUT POND ROAD	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$19,031
9130	TROUT POND ROAD	Trunk Road	Hwy 17 E	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2031	\$31,412
Total									2031	\$323,764
39753	BERRY ROAD	Line 3 North Road	East end of the road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$5,350
397491	FARMERS LINE	Development Road	Laplanche Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$19,152
473302	GUAY ROAD	Laplanche Road	Grand Desert Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$18,879
245789	JAMES STREET	Yonge Street	Schayer Street	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$2,184
217795	LINE 3 ROAD SOUTH	Development Road	Trunk Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$18,652
304893	PINE LAKE ROAD	Pine Land	Timber Haven Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$2,091
315184	PINE LAKE ROAD	Portage View Road	Pine Tree Lane	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$2,548
301490	PINE LAKE ROAD	Pine Tree Lane	Pineland Drive	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$5,267
413030	PINELAND DRIVE	Pine Lake Road	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$1,191
242633	RAINVILLE ROAD	Maple Road	turn around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$6,761
437815	TALON LAKE ROAD	Highway 17	Vondoeiler Road	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$4,015
100592	TALON LAKE ROAD	TALON LAKE ROAD	North end	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2032	\$9,776
Total									2032	\$95,866
302923	LAPLANCHE ROAD	Guay Road	Mount Pleasant	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$20,777
268258	FRANCOEUR ROAD	Line 3 South	Turn Around	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$10,197
133834	VONDOELER ROAD	Talon Lake Road	East end of the road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$6,404
414919	WUNDERS ROAD	Pine Lake Road	Private Lane (north side)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$3,538
240113	WUNDERS ROAD	Private Lane (north side)	Canoe Bay Road(turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$9,985
320938	BOUNDARY ROAD	Grand Desert Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$20,013
343423	ERIC STREET	Gagnon Street	End	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$1,004
194298	FICHAULT ROAD	Trunk Road	Development Rd	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$18,609

Scenario 3 - Gravel Roads

Asset ID	Name	From	To	Condition	Criticality	Risk	Asset Type	Applied Treatment	Year	Budgeted Cost
463875	LAKESHORE ROAD	Development Road	South end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$6,105
279916	LANDON STREET	Church Street	Levesques St	50	33	12	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$1,052
161925	LAPLANTE ROAD	Farmers Line	Guay Road	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$4,929
428961	PALANGIO ROAD	Maple Road	West end	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$25,843
195582	SOUTH SHORE ROAD	Development Road	Daytona Camp (Turn around)	50	28	10	Roads	Re-Gravelling (25 mm or 1 in)	2033	\$30,651
Total									2033	\$159,108
Grand Total										\$2,309,317

