



Asset Management Plan

NOW

AND BEYOND

- ✓ Sustainable
- ✓ Good stewardship
- ✓ Locally influenced



Prepared for the Corporation of the
Township of Evanturel
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Township of Evanturel

Executive Summary

The Township of Ewanturel, as a small rural municipality in Northern Ontario, continues to struggle with the cost to provide services in an affordable manner to a stagnant population of 452 as per the most current Federal Census. There are economic development constraints and limited resources. The existing infrastructure of the municipality has been managed to date with maintenance investment to aid in the preservation of assets and has been supported through Provincial/Federal support.

As indicated in the Building Together guide for Asset Management Plans set out by the Ministry of Infrastructure, most of Ontario infrastructure is aging and deteriorating while demand grows for better infrastructure facilities. This demand is in response to higher standards of safety, accessibility, health, environmental protection, and regulation. The solution proposed to this issue is to examine the way the municipalities plan, design and manage infrastructure to meet changing demands.

The Province through the Ministry of Infrastructure, Capital Program has provided funding to small municipalities to assist with the development of Asset Management Plans. The staff of the Township of Ewanturel built the said Asset Management Plan and uploaded the asset information into Ontario Good Roads asset management application known as Municipal Data Works.

Through a comprehensive analysis of all asset types and current replacement costs, the staff determined a significant infrastructure deficit heading into 2014 and over the next ten years. A realistic capital plan is required to address this deficit and serious strategies, partnerships and advocacy are deemed to be necessary and critical. There is the need for significant change.

Overview

It is necessary for municipalities to set out a plan for assets including the performance, levels of service, strategies for implementation and consideration for long term financing and debt considerations.

New concepts need to be implemented and long term thinking a must. One proven way of doing this is to apply Long Range Infrastructure Planning (LRIP). LRIP is not a new concept. It has been widely used for many years and has evolved into what is now more commonly known as “Asset Management”. Staff have reviewed long range infrastructure strategies, current technical and financial practices and consolidated them into an Asset Management Plan.

The Asset Management Plan as presented in this report is comprised of the following components:

1. An overview of the fundamentals of an Asset Management Plan based upon best management practices obtained from various sources; although this information is somewhat complex for small municipalities and difficult to scale down and simplify for smaller organizations.
2. An Asset Management Strategy for each major asset class and broken down further into specific projects, if warranted. This format was selected to ensure that the State of Local Infrastructure and Asset Management Strategies as attached in Appendix A, could be updated from time to time according to changes to the condition assessments. The Asset Management Plan as presented in this report is a systematic process that allows for the operating, maintenance, and betterments of the municipality’s assets in a cost effective manner. Implementing an Asset Management Plan will assist the municipality to become improved stewards of their assets with real data and will provide long-term strategies to become sustainable.
3. A financial review and strategy using a combination of theoretical data and real field data that will provide a long range financial planning resources that will be based on needs rather than wants.
4. Inventories of assets that are considered assets either as a group of assets such as culverts or gravel roads or inventories for the purpose of maintenance for provisions in the annual operating budget; in support of long range planning.

Introduction

Background

Infrastructure Investment is vital and a universal approach to planning for infrastructure is necessary. Recognizing that municipalities deliver many of the services that are critical to Ontarians, and that these services rely on well-planned, well-built and well maintained infrastructure, the Government of Ontario created a 10 year infrastructure plan, Building Together, and a municipal infrastructure strategy. The goal of the strategy is to standardize and provide consistency in municipal asset management. Asset Management Planning is the foundation of the strategy and the goals include making good asset management planning universal, moving toward optimal use of financing tools and addressing challenges of small communities.¹

Asset Management Planning – What is it?

Asset Management Planning is the process of making the best possible decisions regarding the building, operating, maintaining, renewing, replacing, and disposing of infrastructure assets. The objective is to maximize benefits, manage risk, and provide satisfactory levels of service to the public in a sustainable manner.²

The concept is to develop a plan for the management of infrastructure assets within the municipality that combines management techniques, including technical and financial, over the lifecycle of the asset(s) to a specified level of service in the most cost-effective, sustainable manner.

An Asset Management Plan also incorporates the existing preventative maintenance and risk management programs to prevent or minimize the risk of failure or to provide an extension to the life cycle. The preventative maintenance component ensures that the day-to-day wear and tear on the asset is dealt with to ensure that the asset can reach its expected lifecycle. The risk management component ensures that Staff manages the risk through due diligence.

Asset Management Plan – Why does the Municipality want one?

The Asset Management Plan is to prioritize needs to maintain infrastructure over the long term. The plan will help ensure that investments are made at the right time, using the best tools available to minimize rehabilitation costs and create good stewardship.

The result will be the collaboration of information and an enhanced municipal budgeting and planning process by modeling future capital costs into a long range financial plan.

¹ Building Together Guide for Municipal Asset Management Plans, Ministry of Infrastructure.

² Building Together Guide for Municipal Asset Management Plans, Ministry of Infrastructure.

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It will provide a clear understanding of the future budget pressures and assist in providing options on closing any infrastructures gaps. It will provide a strategic vision and implementation plan for infrastructure. This plan will cover the forecasted needs for the next 10 years and provides possible financial strategies for those next 10 years.

Asset Management Plan – What are the benefits?

Specific benefits associated with an Asset Management Plan are:

- Better decision making
- More effective communications with ratepayers, elected officials, organizations and regulatory agencies
- Consistent levels of service
- Better management of risk to the municipality
- More effective financial planning that ensures sustainability
- Reduces lifecycle costs
- Leads to more efficient data management
- Facilitates the implementation of policy objectives
- Avoids problems and potential crises
- Positive internal cooperation and partnerships
- Maps a course of action

Asset Management Plan – What are the key principles?

Asset management can be characterized by the following key principles:

- A strategic and proactive approach to management of infrastructure
- A comprehensive long-term view of infrastructure performance and cost
- Measures the municipal financial capacity to meet the overall strategic and business plans of the municipality.
- A visible and transparent approach that requires effective communication among all stakeholders.
- A plan involving choices that are policy driven and prioritized.
- An ongoing program – a “living” document.

Evanturel’s Asset Management Plan – What are the essential elements?

The approach to the Township of Evanturel Asset Management Plan is to manage assets that the municipality has direct ownership over and consideration of strategies for those jointly owned or operated. An example would be the shared assets under the ownership of the Joint Fire Department and the financial impact to the Township of Evanturel when planning for asset replacement. This information will be provided as determined and attached to this report, tied to the capital plan.

In terms of accounting for the value of assets as determined under PSAB, the assets of the municipality are considered significant with an opening netbook value on December 31, 2013 of \$1,954,330. It should be noted that the audited financial statements identify a NBV of \$1,835,101 a difference of \$119,229 for large structures (culverts) not identified in the original PSAB exercise.

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Specific strategies, technical ratings and in some cases, specific plans are set out for these assets in the appendices as attached. Also included in this plan are inventories of groups of assets such as culverts and an aggregate inventory plan for unpaved roads. These inventories are to be recognized and form part of the annual operating budget process and have a long term impact but are more of a level of maintenance and not considered significant in terms of definition of capital assets.

A further note is on the items capital in nature and defined as an asset, however the asset may not be considered for replacement beyond the life of the asset. An example of this would be the land owned by the municipality for winter sand purposes. This land is considered an asset and is for the purpose of winter sand operations. Should the land no longer be valuable as a sand pit the asset will likely be disposed and sand purchased annual through the annual operating budget for winter operation. The budget impact would not be that significant, thus planning for replacement unnecessary, although consideration then should be reflected and committed annually through the operational budget.

In order for an Asset Management Plan to fulfill the principles of asset management, the following essential components will be contained in the overall plan:

- 1. Asset Database and Values:**
All municipal infrastructure assets will be accounted for and have a monetary value. This value is determined by the actual capital value for some of the assets and for others an estimated value. Most of these values were determined through the Tangible Capital Asset process using PSAB 3150 Guidelines. Refer to the Tangible Capital Asset Policy, By-law no. 08-11 adopted April 9, 2008.
- 2. Lifecycle Management & Maintenance**
All assets have a limited life expectancy. To some degree the rate of deterioration can be estimated. A decision made at any point in time in the lifecycle of an asset has an effect on the remaining life and may have operational implications and related costs. The estimated lifecycle for each asset as presented in this report is contained in the asset inventory summary and managed through an inventory in Municipal Data Works (MDW).
- 3. Sustainability:**
In terms of Asset Management Planning, sustainability means identifying a plan over the long term to ensure that sufficient monies are available to replace, rehabilitate or properly dispose of that asset at the optimal time with the intention of achieving the lowest lifecycle cost. The plan helps to provide taxpayer equity and fairness over the long term and identifies challenges, barriers and opportunities.
- 4. Integration of Technical and Financial Plans:**
The plans must intermingle to minimize lifecycle costs for the infrastructure while maintaining an adequate level of service at the lowest possible level of risk. The long term financial plan must identify the financial investment required per year for each

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asset over the long term, including any larger than normal expenditures to meet the requirements of the technical plan. Without a Long term financial plan there is risk and the two plans should be integrated so the relationship between the level of service and the cost can be quantified. The plans attached to this report integrate the financial investment level required to the level of service. The technical and financial relationship may change from time to time depending on the outcome of asset condition assessments.

5. Risk Assessment

Risk should be managed in any decision making process. The municipality should analyze and document acceptable risk tolerance. The probability of failure is taken into account while the condition of the asset is being analyzed. The condition survey leads to determining the rate of failure and the consequences of such failure. Risk factors can include financial, environmental, regulatory/legal and public health and safety.

6. Performance Measurement

To optimize an Asset Management Plan, performance of the assets and rehabilitation strategies should be monitored regularly and adjustments made at the appropriate stage in the asset lifecycle to achieve an acceptable balance between cost and the performance (level of service). The municipality can take advantage of the tools provided by various organizations such as OGRA. Small municipalities are challenged to have the full range of resources to provide proper universal benchmarking. With use of the Municipal Data Works (MDW) provided by OGRA it will be the intention for the municipality to make performance measurement a best management practice moving forward.

Studies, Strategies and Other Initiatives to support or provide guidance with this plan:

- Englehart & Area Regional Community Profile, 2013
- Englehart & Area Economic Development Strategic Plan, 2013
- DM Wills Associates Ltd. 2013 Ontario Structure Inspection Manual Program Report
- Central Timiskaming Planning Board Official Plan, 2012
- Township of Evanturel Financial Statements & Supporting Accounting Records.
- Township of Evanturel Road Management Plan updated internally 2013

Data Collection and Integration

As a member of OGRA, the municipality has taken advantage of providing asset data to the association to help with the construction of a province wide database through OGRA's Municipal Data Works (MDW) program. MDW is a data collection point for all roads related assets of member municipalities in Ontario. OGRA uses the data as an illustrative tool to understand the infrastructure gap in the province. This is then used for demonstrative purposes when the association lobbies the Ontario Government for increased grant funding to provide for asset renewal and rehabilitation of roads and bridges. More importantly the data is used to establish asset management best practices and performance measures for the municipal sector.

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Another undertaking of the data integration to support the Asset Management Plan is the purchase of GIS Software that will identify various layers of infrastructure. The system should help staff to monitor scheduled maintenance and to record and monitor inspection results and work order schedules. The common database will also ensure that everyone is working from the same page to ensure coordination of projects. At December 31, 2013 the GIS software system was not yet available and is planned for acquisition in 2014.

The end result is that capital projects can be better planned, and the long term planning associated with the asset management plan can be better managed with the intention of maximizing the life of the asset.

State of Local Infrastructure

A Summary

The municipality has the following assets under its control and responsibility:

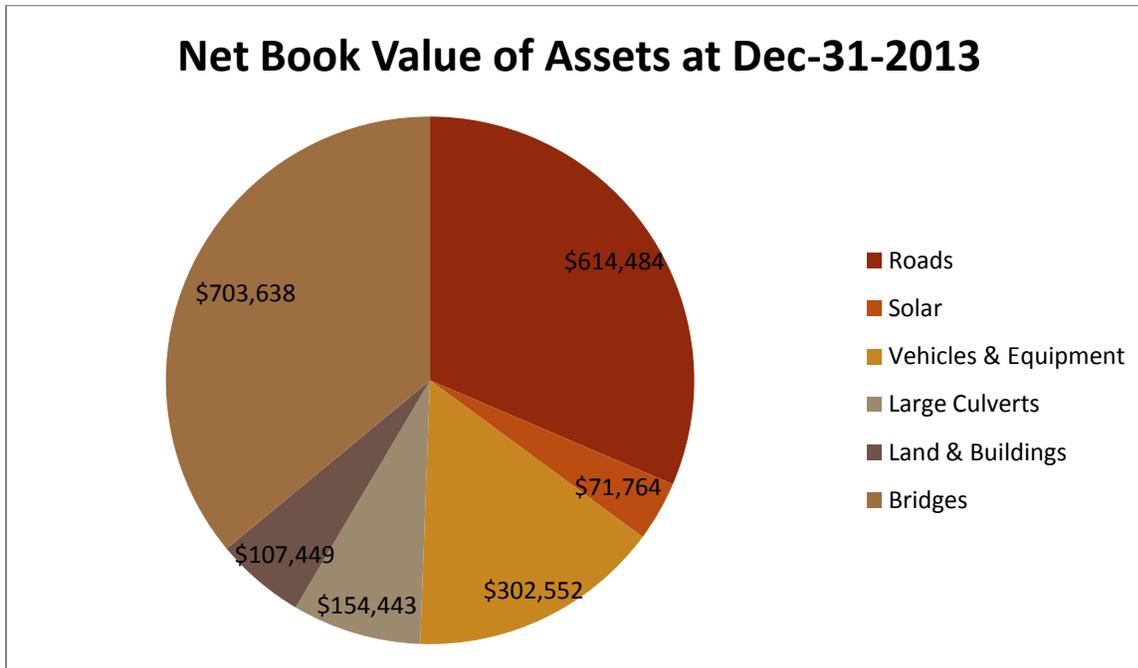
Hard Topped Roads with Asphalt	6 lane km
Hard Topped Roads with Surface Treatment	27.2 lane km
Gravel Roads – Year Round Maintenance	75.65 lane km
Gravel roads – Seasonal Maintenance	12.75 lane km
Bridges	2 single lane bridges with a combined total deck length of 155.9 m
Large Culverts over 3m diameter	6
Road Culverts of various sizes	167
Vehicles & Equipment	1 Light Duty Vehicle 1 heavy duty vehicle 6 heavy duty equipment
Land & Buildings	2 Buildings 1 10 kW PV Solar System Waste Disposal Site Aggregate Pit Sand Pit

**Exclusion - Fire department assets, recycling, private water infrastructure.*

Net Book Value of Assets

The state of local infrastructure according to the PSAB exercise represented as Net Book Value of Assets is summarized in table 1 below.

Table 1



**It should be noted that the audited financial statements identify a NBV of \$1,835,101 a difference of \$119,229 for large structures not identified in the original PSAB exercise.

Condition of Assets

The Township of Ewanturel current Capital Asset inventory and subsequent estimated historical cost and anticipated shortfall is highlighted in Table 2.

It should be noted that entering the year 2014 there is a funding deficit of \$2,215,347 this however does not fully illustrate the annual needs, as funding the depreciation only considers the replacement of assets at the historical (original) purchase price and not the current replacement value. A full understanding of state of infrastructure the requirements are attached in each strategy in the appendices.

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Table 2

	Historical (Original) Cost	Net Book Value Dec 2013	Shortfall of work at Dec- 31-13	2014 Budget	Anticipated Backlog December 2023
Land & Buildings	\$324,294	\$184,712	0	0	0
Equipment	\$529,467	\$302,553	\$108,000	0	\$98,000
Bridges & Structures	\$1,151,585	\$733,352	\$155,997	0	\$298,997
Roads	\$2,139,055	\$614,484	\$1,951,350	\$1,405,300*	\$40,800**
Total	\$4,144,401	\$1,835,101	\$2,215,347	\$1,405,300*	\$437,797**

**pending external
funding, amount if
funding is not
obtained = \$265,300*

***the backlog will be
much greater if
funding is not
obtained.*

Levels of Service (LOS)

Historically the municipality has provided satisfactory levels of service with the assets available. Moving forward will prove to be a burden on the municipality's financial capacity.

Depending on the type of asset, will depend on the expected level of service, moving forward.

Overall, levels of service are established by Council and policy makers and is to be reflected by public input. The Township of Evanturel has sought public input in a variety of sessions and exercises. These public initiatives include:

- Public meeting held April 9, 2013 to confirm the direction, service levels and expectations.
- Englehart & Area Regional Economic Development Strategic Plan including actions derived from public input and stakeholders and an implementation plan.
- Central Timiskaming Official Plan process, approved 2012.

Results and expectations from the public seem to be status quo with the continuation of the same level of service.

The quality, cost and current manner in which the services are provided seemed to be satisfactory in general. Currently the municipality does not capture or collect technical performance measures other than ensuring minimum maintenance standards and MPMP schedules tied to the FIR. Best practices and experience are relied upon heavily. It is also very difficult to benchmark and compare techniques or compare one municipality to the other due to location, weather conditions, services available and buying power of certain industries and services.

The industry led technical requirements most often referred to are:

- Provincial Minimum Maintenance Standards
- Drinking Water Quality Management Systems
- Engineering Standards Manuals such as Ontario Structure Inspection Manual (OSIM) and OPS Standards.

As the municipality progresses with the management of assets, operating performance indicators should be prepared to have a balance between asset replacement and capital funding and ongoing maintenance for the best cost efficiency and service productivity.

Capital Planning

Overview

The Capital plan is one of the most important components of the AMP. The development of the capital plan is intended to ensure that policy makers are responsible to the residents and community with respect to expending public funds. The capital plan also sets priorities based on needs rather than wants. It is intended to assist in making choices about projects that should be implemented, how they should be financed and when to establish priorities for its spending on services while controlling the impact.

The Township of Ewanturel has determined a 10 year capital plan that provides a detailed understanding of anticipated investments into capital assets required and strategies for implementation. A complete Capital Plan will provide the following:

- Coordination between capital needs and operating budgets
- Better control of tax rates
- Provides for the most economical methods of financing
- Increases ability to advocate for Provincial and Federal funds
- Relates to community policies and plans
- Focuses attention on objectives and goals
- Keeps the public informed and involved
- Encourages careful planning and design to avoid costly mistakes
- Measures risk and mitigates consequences.

Two main considerations when managing infrastructure are

- 1- Maintenance and repair of existing infrastructure to ensure assets are kept in good working condition for as long as possible.
- 2- Planning for new infrastructure; starting with the identification of needs, planning and prioritizing and investing to complete on time and on budget.

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Municipalities manage a variety of diverse assets. The Capital Plan takes into consideration assets that have the following characteristics:

- Held for the purpose of delivering a program or service or to produce something;
- It is to be used on a continuing basis and is not intended for sale;
- Has a life expectancy beyond one year;
- Has a value greater than \$10,000 for all civil infrastructure systems or \$5,000 per unit cost for all other assets.

To determine how much money is required to be allocated to existing infrastructure the following factors are taken into consideration:

- Inventory
- Condition rating
- Betterments or disposals
- New infrastructure requirements
- Predictable growth or limitations
- Future forecasts
- Service Levels
- Shared service opportunities

Methodology:

The following methods were used to build the financial capital plan:

Step 1 Financial Projections

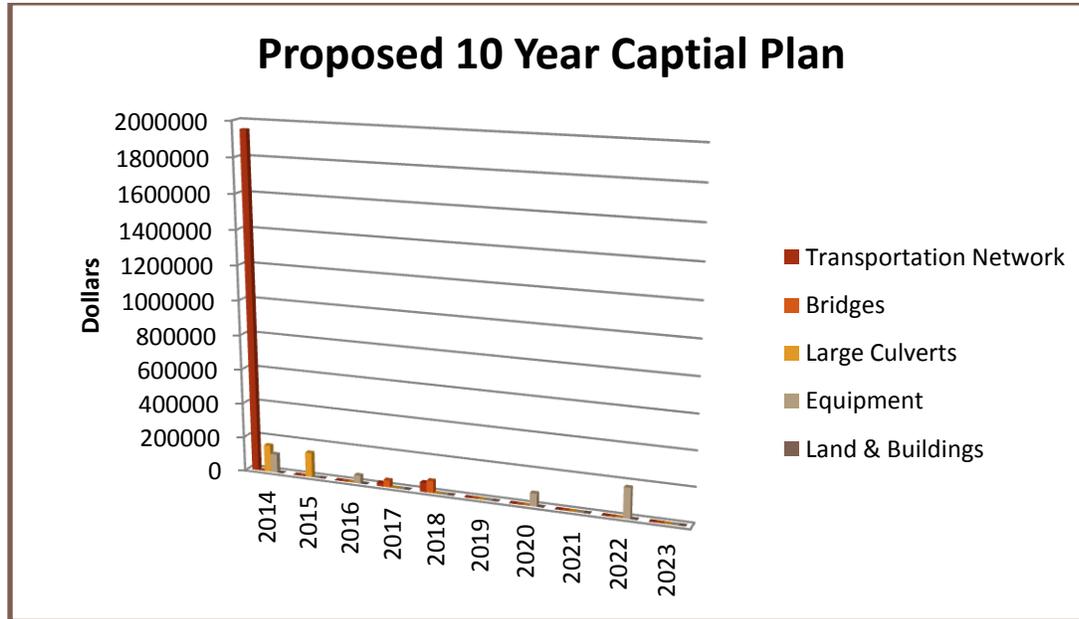
Projections were made on existing infrastructure by inflating historical costs to present value (2013). Consideration should be given to inflating these values over the 10 year plan based on the Consumer Price Index (CPI) or other valuation to ensure full cost realization is accounted for.

Step 2 Data Integration

The information was then integrated into the MDW tool Capital Planning Module (CIP). This tool identified the Township of Evanturel's current infrastructure deficit and future capital requirements. This proposed plan determined a large deficit at year one of the plan. Refer to Table 3.

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Table 3

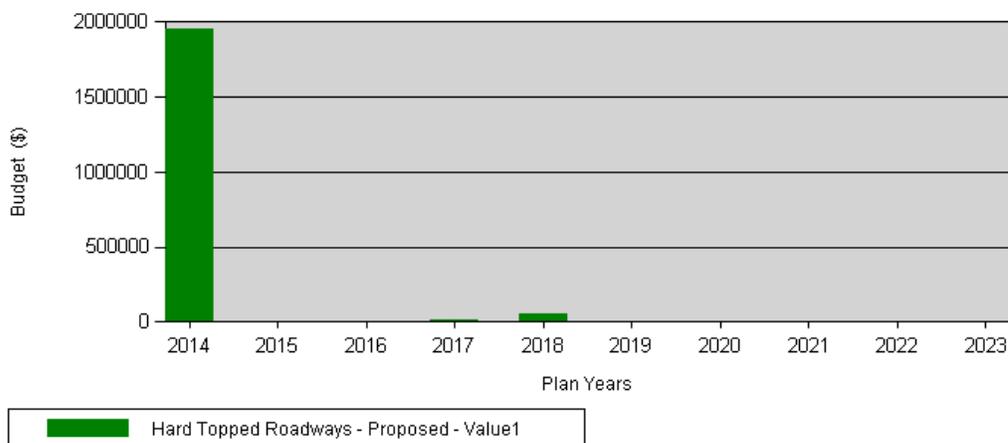


The Results of the Proposed Plan– A Snapshot

The Township of Evanturel infrastructure deficit entering 2014 is determined to be \$2,215,347 which accounts for approximately \$4,901 per person. To understand the deficit a further breakdown is illustrated between the Asset Classes.

Transportation Network

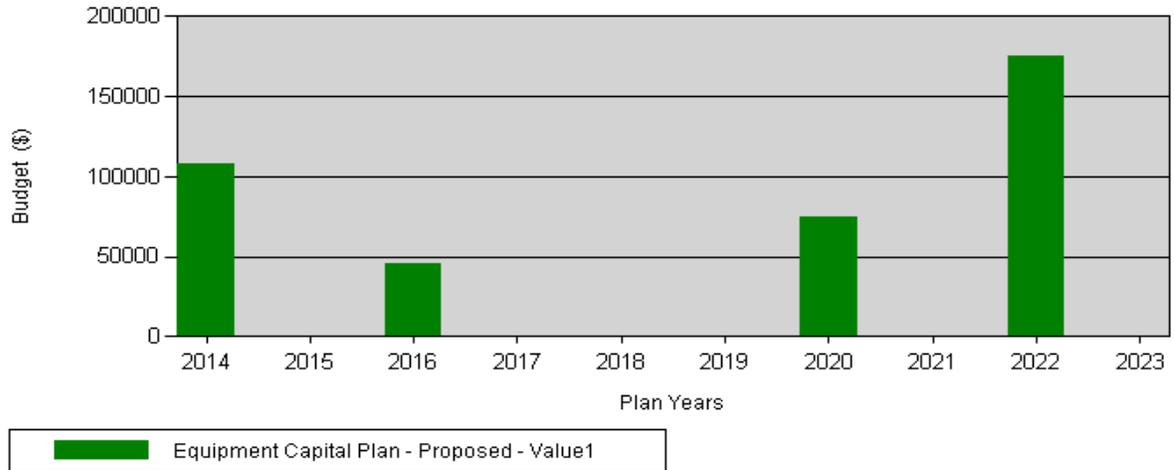
Plan Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Hard Topped Roadways - Proposed	\$1,951,350			\$18,700	\$54,400					



Township of Evanturel Asset Management Plan

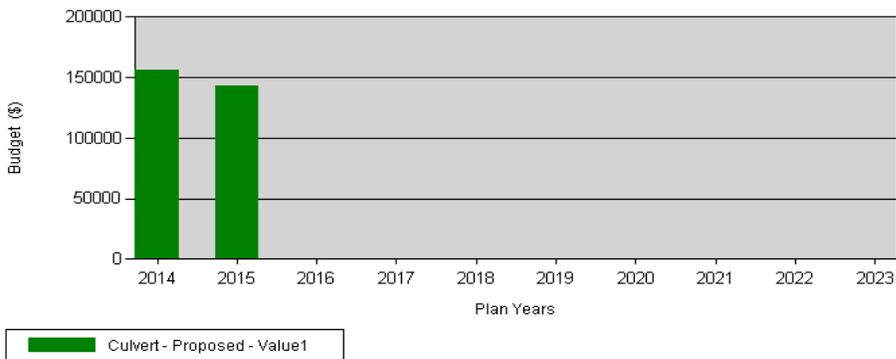
Equipment

Plan Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Equipment Capital Plan - Proposed	\$108,000		\$46,000				\$75,000		\$175,000	



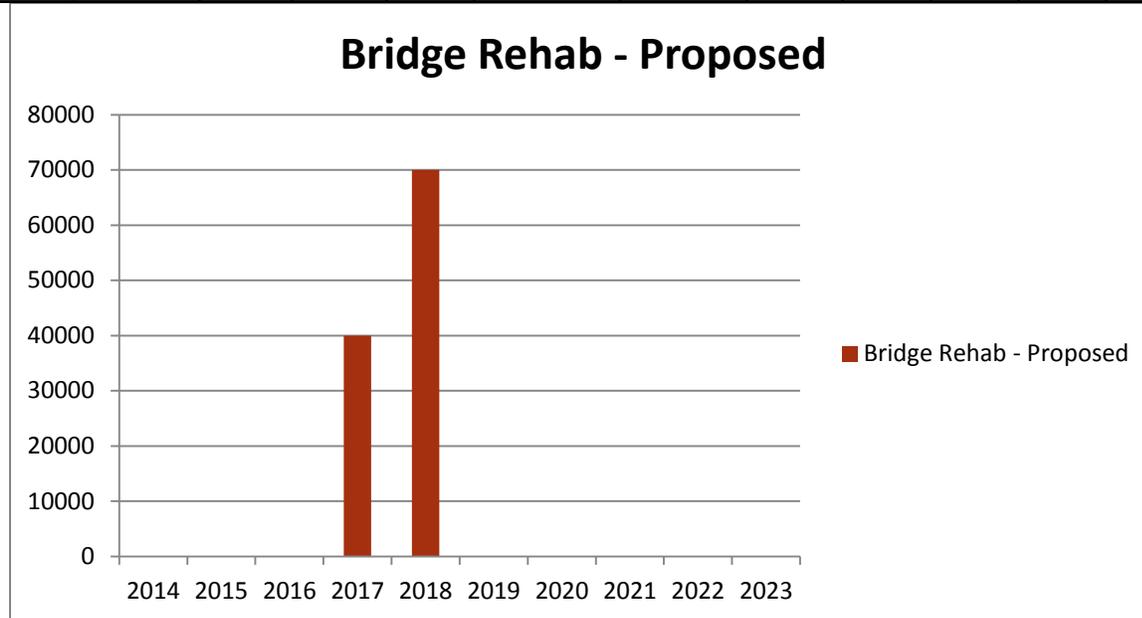
Culverts

Plan Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Culvert - Proposed	\$155,997	\$143,000								



Bridges

Plan Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bridge Rehabilitation - Proposed				\$40,000	\$70,000					



Summary

In summary of the above breakdown, this deficit cannot be addressed in a single year and thus a 2nd proposed capital plan has been created to offset the burden and provide a more realistic strategy and priority of capital items.

One risk identified in postponing capital is the deferral of the financial burden and the risk of infrastructure failure and possible emergency situations.

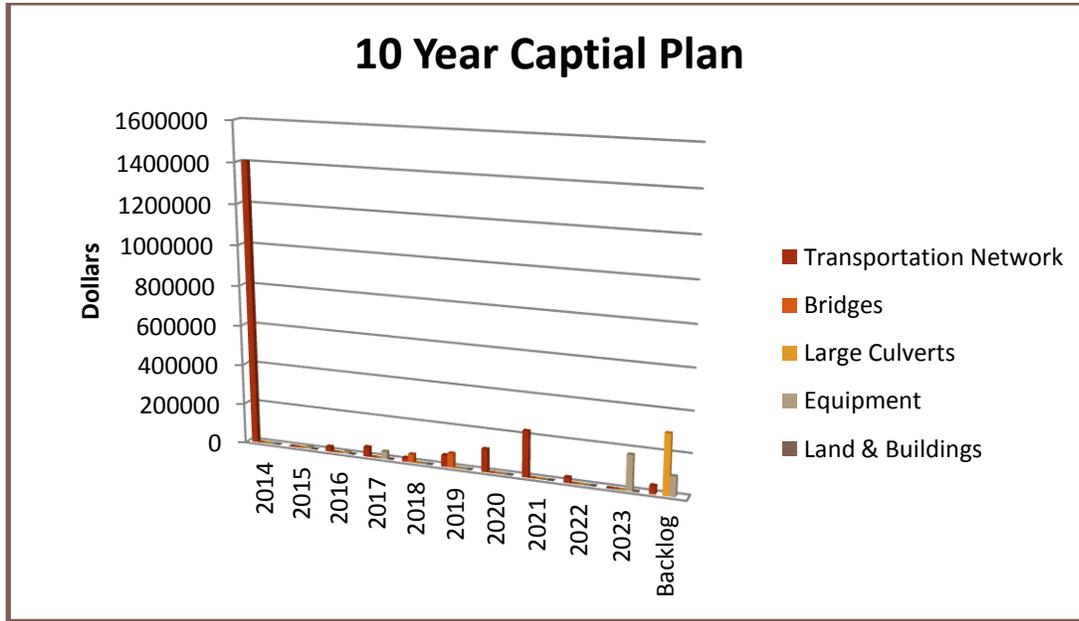
Final Capital Plan

The final 10 year Capital Plan as identified is set out in Table 4. Various strategies were discussed and options considered. Some further work is required to measure the best alternatives and cost versus benefit in some respects. One example of this would be the service of brush cutting and the replacement of equipment. Should the expense be greater than the benefit, replacing equipment upon failure, should be considered against the level of service and option of contracting the work.

Project information to support the Capital Plan is set out in Appendix C labelled - **Asset Class, List of Projects Report**. The projects have been prioritized and comments on specific strategies are identified in this report. This report should continue to be a working document as staff and council work through the construction and rehabilitation program and make solid conclusions on levels of service, funding opportunities, etc.

Township of Evanturel Asset Management Plan

Table 4



Transportation Network

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
Construction	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800
Rehabilitation											
Total	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800

Equipment

Capital Plan	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
Construction		\$10,000	\$10,000	\$36,000							\$98,000
Rehabilitation										\$175,000	
Total		\$10,000	\$10,000	\$36,000						\$175,000	\$98,000

Culverts

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
Construction											\$298,997
Rehabilitation											
Total											\$298,997

Bridges

Plan Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bridge Rehabilitation - Proposed				\$40,000	\$70,000					

Financial Strategy

The 10 year capital plan was determined from an all-encompassing review and considerations to proposed financial strategies.

To determine the financial strategy, we first reviewed the fiscal environment, economic condition of the area, the taxes receivable and the affordability. A review of the reserve position of the municipality, debt and financial position as well as a comfortable annual repayment limit were taken into consideration in drafting proposed strategies.

Funding capital expenditures generally are by way of the three following methods:

- Internal Sources – current budget, reserves, sale of an asset.
- External Sources – government grants, donations, other third party contributions.
- Debt – debentures, leases, bank loans.

Fiscal Environment

The Township of Evanturel has the typical rural challenges of a weak economic base, constraints on residential assessment, along with population decline due an aging population and youth out migration.

Demographics:

2011 Federal Census Population	452
2006 Federal Census Population	473
2001 Federal Census Population	506

Households (2013) 208

Size of the Municipality 8,816 hectares

To measure the affordability we used the Northern and Rural Municipal Fiscal Circumstances Index (MFCI) established through the calculation and consultation of the Ontario Municipal Partnership Fund. The MFCI measures a municipality’s fiscal circumstances relative to other northern and rural municipalities in the province.

The MFCI is determined by six indicators. These indicators are classified as primary or secondary to reflect their relative importance in determining the fiscal circumstance.

The primary indicators are:	Evanturel	Median
• Weighted assessment per household	207,757	231,000
• Median household income	72,083	61,000

The secondary indicators are:	Evanturel	Median
• Average annual change in assessment	0.5%	1.1%
• Employment Rate	57.7%	58%
• Ratio of working age to dependent population	175%	194%
• Percent of population above low-income threshold	95.5%	87%

Therefore the Township of Evanturel MFCI is 4.0 which is an average fiscal circumstance in comparison to other Northern and Rural communities.

Township of Evanturel Asset Management Plan

Current Debt

Our current debt position for infrastructure at December 31, 2013 is \$116,000 represented as follows:

Nature of Debt	Total at Dec-31-13	Repayment date
Bridge Loan	\$14,000	Dec 2014
Plow Truck	\$102,000	Dec 2022
Total	\$116,000	

Annual Repayment Limit

The Township of Evanturel ARL as estimated by the Province is \$97,454 which represents 25% of revenues less net debt charges. A suggested debt capacity for the Municipality would be in the range of \$25,000 – \$35,000, depending upon the nature of the debt, whether the lifecycle extends beyond the debt and if the debt to be considered impacts the municipality as a whole rather than one limited sector.

Reserves

Working Capital Reserve at December 31, 2013 is \$74,764, representing \$165 per person. Greater effort is required to build reserves to an adequate level; however the question remains “what is adequate”? Reserves should not be confused with Reserve Funds. Obligatory Reserve Funds must be created whenever a statute requires revenues received for special purposes be segregated from the general revenues such as revenue in lieu of land for park purposes under the Planning Act.

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Taxation & Assessment

All would not be complete without understanding further the impact to residents through taxation. The following Table 5 provides projected values of assessment. The levies and rates set out in Table 6 identify the taxation impact of a consistent 5% increase in the municipal levy. This increase may not be substantial enough to sustain the capital program. Consideration should be given to a greater increase in tax rates.

Table 5

Property Class (RTC)	2012 Base Year Values				
	2008 Base CVA	2012 Base CVA	2013 CVA	2014 Active CVA	2015 Projected CVA
Taxable					
R - Residential	20,191,485	25,573,600	21,460,280	22,831,389	24,202,496
C - Commercial	2,076,593	2,025,500	1,885,339	1,932,059	1,978,780
I - Industrial	44,000	36,500	36,500	36,500	36,500
L - Large Industrial	16,500	19,600	17,275	18,050	18,825
P - Pipeline	13,853,000	14,510,000	14,017,250	14,181,500	14,345,750
F - Farmland	5,785,953	5,811,500	5,728,716	5,756,311	5,783,905
Commercial Total	2,076,593	2,025,500	1,885,339	1,932,059	1,978,780
Industrial Total	60,500	56,100	53,775	54,550	55,325
Total Taxable	41,967,531	47,976,700	43,145,360	44,755,809	46,366,256
Total Taxable Excluding	41,967,531	47,976,700	43,145,360	44,755,809	46,366,256
PIL					
R - Residential	142,500	74,500	63,700	67,300	70,900
C - Commercial	951,600	629,100	622,350	624,600	626,850
Total PIL	1,094,100	703,600	686,050	691,900	697,750
Total Taxable and PIL	43,061,631	48,680,300	43,831,410	45,447,709	47,064,006
E - Exempt	539,800	721,400	583,700	629,600	675,500
Grand Total	43,601,431	49,401,700	44,415,110	46,077,309	47,739,506

**Table 6
Levies & Rates**

Proposed 5% increase		2014-2016 Projected Municipal Tax Impact Summary			
Evanturel Township, 5449					
	Total Taxation				
Class - Taxable	2013		2014	2015	2016
Tax Rates	1.001642		1.012165	1.024248	1.037838
Residential	214,955		231,091	247,893	265,413
Com. Occupied	18,431		19,075	19,758	20,482
Com. Vac. Land	317		337	357	378
Ind. Occupied	539		552	567	582
Pipelines	158,809		162,358	166,199	170,333
Farm	14,345		14,566	14,810	15,079
Com Total Taxable	18,748		19,411	20,115	20,860
Ind Total Taxable	539		552	567	582
Total Taxable	407,397		427,979	449,584	472,266
Payment in Lieu					
Residential	638		681	726	773
Com. Occupied	6,234		6,322	6,421	6,529
Com Total PIL	6,234		6,322	6,421	6,529
Total PIL	6,872		7,003	7,147	7,302
Com Grand Total	24,982		25,733	26,535	27,389
Ind Grand Total	539		552	567	582
Grand Total	414,269		434,982	456,731	479,568

Financial Impact Summary

The Financial implications are presented in the attachments to this report. It is important to recognize that based upon the Plan, the amount of funds available through the current 10 year Capital Budget process may not be sufficient to sustain the current level of service. Staff will continue to collectively work together to accommodate the financial and technical requirements of this plan, including taking advantage of any grant funding programs that may be available today or in the future.

Strategy Considerations

The following strategies should be considered to implement the Asset Management Plan for the Township of Evanturel.

1. **Strategic Use of Debt** within a comfortable annual repayment limit.
Debt should be considered for large capital projects that are long term in nature and that benefit future taxpayers, thereby spreading the cost over the users.
Ontario Infrastructure interest rates are affordable and have debt repayment flexibility options. A simple debt management policy would be considered an asset.
2. **Use of Grants** will be necessary to implement some components of the Township of Evanturel Asset Management Plan. A greater effort in advocating for funds and meeting with government officials to “pitch” proposals should be given priority. A strong leadership needs to be appointed to advocate.
3. An **Asset Levy or Asset Reserve** could be implemented that would earmark a percentage increase over time or a fixed amount annually for asset replacement, construction or rehabilitation.
 - a. An asset levy could be created as a percentage of the levy increase to increase by that percentage increment each year. For example using Table 6 with a proposed overall levy increase of 5%, a portion of that levy increase earmarked for assets of 1.0% of the total municipal levy in 2014 would be \$4,142.69,
2015 = \$4,329.11
2016 = \$4,523.92
2017 = \$4,774.77, and so on.
 - b. The alternative would be to fix an amount annually spread over the 10 year capital plan period. The amount should be in relation to the infrastructure gap. A suggested amount would be in the range of \$15,000 - \$20,000 per year. The investment income derived from the amount could also be earmarked to the asset reserve.

Further Goals

After thorough review of the Asset Management Plan, financial strategies, programs and service levels the main strategic goals the Municipality has adopted are:

Strategic Goals, in no particular order:

- Identifying existing deficiencies in the current municipal infrastructure and adjusting plans and strategies accordingly.
- Improved record keeping of all betterments, rehabilitations, inspections, etc. relating to the infrastructure.
- A greater effort into the research and advocating for funding opportunities at all levels of government and within the Private Sector.
- A greater effort into seeking partnerships and opportunities and building as a regional area.
- Commitment to stewardship and ensuring long-term financial sustainability.

Barriers & Challenges

After thorough review of the Asset Management Plan, financial strategies, programs and service levels the barriers and challenges the Municipality has identified are:

- Financial impact to the residents of the municipality.
- Tax levy affordability overall.
- Stagnant development opportunities, lack of growth and population to sustain infrastructure.
- Competitive funding program applications.
- Cost of construction in comparisons to other areas of the Province.
- Staff resources and expertise to implement more technical strategies.
- Difficulty building a plan to include all assets such as shared assets. For example fire department and boundary roads.
- Rethinking infrastructure – adapting new techniques and coming up with strategies that can be sustainable and affordable.
- Differing valuations, technical ratings, condition ratings, standards, etc.

Conclusion

The Township of Ewanturel has provided good stewardship and invested in local infrastructure. Although, today that investment has not been enough and it will become more challenging moving forward. As with many small, rural municipalities, they are disadvantaged by limited revenue sources and stagnant development opportunities. The infrastructure deficit is similar to all other municipalities in Ontario.

The municipality must embrace the principles of Asset Management and commit to the long term planning with clear, strong leadership from council and keep the public apprised of their efforts and seek public input to ensure the proper path.

Strategies should include a stronger voice in advocating funding for small municipalities and development of partnerships with neighbouring municipalities, organizations and, the private sector. Economic strengths, revenue generating opportunities and cost savings through shared service arrangements will be necessary to preserve a quality of life and sustainability for the regional area.

Levels of service will need to be revisited and greater emphasis on performance measurement may be necessary and could prove to be beneficial if resources are available to conduct proper measurements.

In general the municipality must continue with their good stewardship efforts by effectively and efficiently managing existing infrastructure and that may require a significant change in organizational culture.

Appendix A

Asset Management Breakdown & Strategy

1. Hard Topped Roads
2. Unpaved Roads
3. Culverts & Drainage
4. Bridges & Large Structures
5. Equipment
6. Land & Buildings

State of Local Infrastructure & Asset Management Strategy

1. Hard Topped Roads



Asset Management Summary

Asset	Hard Topped Roads																																																
Inventory	6.6 lane km of paved lane surface, ditched & 28 lane km of surface treated surface, ditched.																																																
Anticipated Asset Life Cycle	Pavement life of a newly constructed by design, traffic volume and loads, construction quality and climate but generally the ends of its useful life is: paved with open ditch – 30 years, surface treated – 15 years.																																																
Integrated	With other buried assets located in the utility corridor such as water, sewer, storm sewers, hydro, telephone, natural gas and cable. May also affect street lighting, traffic signals and sidewalks																																																
Rehabilitation and Replacement Criteria	Condition Rating Index is a condition rating between 0 and 5 which measures defects in the pavement or surface treatment. A condition rating equal to 5 is a new pavement/surface treatment and a condition rating equal to 0 is pavement/surface treatment that is impassible. The threshold point of rehabilitation or reconstruction for Township roads: between 3-5 is rehabilitation, below 2 – reconstruction.																																																
Rehabilitation and Replacement Strategies	Rehabilitation and Replacement strategies will be based on the condition rating, road classification, rural or urban, benefit/cost ratio and specific strategies implemented. Within the 10 year capital plan, the strategy has been identified with options for consideration and planning.																																																
Life Cycle Consequence	Under funding pavement/surface treatment rehabilitation results in more condition ratings to fall below a 2 and results in escalating construction costs. It may also affect level of service, cost more for maintenance and increase risk and liabilities.																																																
Integrated Asset Priorities	Pavement/surface treatment rehabilitation forecast is compared to underground utility forecasts. In general a rehabilitation project drives the replacement of underground water and sewer infrastructures if the infrastructure is near the end of its life cycle.																																																
Corporate/Consulting Reports on subject	Internal Review																																																
Estimated Cost for Strategy over 10 Year Capital Plan	<table border="1"> <thead> <tr> <th></th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> <th>2022</th> <th>2023</th> <th>Backlog</th> </tr> </thead> <tbody> <tr> <td>Construction</td> <td>\$1,405,300</td> <td></td> <td>\$24,650</td> <td>\$47,600</td> <td>\$18,700</td> <td>\$57,000</td> <td>\$114,000</td> <td>\$228,000</td> <td>\$27,200</td> <td></td> <td>\$40,800</td> </tr> <tr> <td>Rehabilitation</td> <td></td> </tr> <tr> <td>Total</td> <td>\$1,405,300</td> <td></td> <td>\$24,650</td> <td>\$47,600</td> <td>\$18,700</td> <td>\$57,000</td> <td>\$114,000</td> <td>\$228,000</td> <td>\$27,200</td> <td></td> <td>\$40,800</td> </tr> </tbody> </table>		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog	Construction	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800	Rehabilitation												Total	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog																																						
Construction	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800																																						
Rehabilitation																																																	
Total	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800																																						
Other information or reference materials	Asset Condition Summary Asset Class – Transportation Network List of Projects Appendix C																																																

Township of Evanturel Asset Management Plan

2. Unpaved Roads



Asset Management Summary

Asset	Unpaved Roads
Inventory	88.4 lane km of gravel surface, 0 lane km of earth lane surface 75.65 lane km year round road, 12.75 lane km of seasonal road maintenance.
Anticipated Asset Life Cycle	Infinite – gravel roads are treated as operating expenses and not included in the Capital Plan expenses.
Integrated	With other buried assets located in the utility corridor such as water, sewer, storm sewers, hydro, telephone, natural gas and cable. May also affect street lighting, traffic signals and sidewalks
Rehabilitation and Replacement Criteria	The municipal strategy for Gravel roads is to apply a minimum of 1,000 cubic yards at a rate of 208 cubic yards per kilometer of road every 10 years depending on the AADT and condition of the road.
Rehabilitation and Replacement Strategies	The current condition of the unpaved roads is satisfactory to good. The determining factors on maintenance of gravel roads are not always based on the road classification and AADT. The high AADT roads are annually treated with dust suppression and benefit from a more secure base. The determining factors for gravel maintenance and amount of aggregate are: <ul style="list-style-type: none"> • The condition of the road such as good crowning, proper drainage and adequate surface. • The benefit/cost ratio should be a factor to determine priority road rehabilitation.
Life Cycle Consequence	Under funding gravel rehabilitation results in escalating re-construction costs and affects level of service with increased risk and liabilities.
Integrated Asset Priorities	Gravel road rehabilitation forecast is compared to underground utility forecasts. In general a gravel road rehabilitation project drives the replacement of underground water and sewer infrastructures if the infrastructure is near the end of its life cycle.
Corporate/Consulting Reports on subject	Internal Review
Estimated Cost per year for Strategy described	2014 - 1,000 cubic yards @ \$16.00 = 16,000 2015 – 16,320 2016 – 16,646 2017 – 16,979 2018 - 17,319 2019 – 17,665 2020 – 18,019 2021 – 18,379 2022 – 18,747 2023 – 19,121
Other information or reference materials	n/a

3. Culverts & Drainage

Township of Evanturel Asset Management Plan



Asset Management Summary

Asset	Culverts
Inventory	167 culverts of various sizes under 3 metres in diameter
Anticipated Asset Life Cycle	<p>Culverts</p> <ul style="list-style-type: none"> • Wood – 25 years • Steel – 50 years • Plastic – 50 years • Concrete – 50 years <p>Smaller drainage systems such as culverts are treated as operating expenses and not included in the Capital Plan expenses.</p>
Integrated	May be integrated with road resurfacing or road widening projects however generally are not integrated with other infrastructures.
Rehabilitation and Replacement Criteria	Criteria for prioritizing include level of service and traffic volumes, safety and to preserve infrastructure.
Rehabilitation and Replacement Strategies	<p>Culverts are installed as required and many structures have no historical installation information to determine anticipated life cycle. Factors affecting replacement are soil types, material installed, amount of water, etc. There is no capital plan consideration for general culverts under 3 metres in diameter.</p> <p>This culvert replacement plan is based on forecasted requirements through inspection and rating and funded through the annual operating budget.</p>
Life Cycle Consequence	Under funding culvert replacement results in escalating re-construction costs and affects level of service with increased risk and liabilities.
Integrated Asset Priorities	Culvert replacement is compared to road rehabilitation or construction projects and plans. In general culvert replacements are considered when undertaking road rehabilitation/construction projects to determine if the infrastructure is near the end of its life cycle.
Corporate/Consulting Reports on subject	Updated culvert inventory with GPS coordinates, May 2013.
Estimated Cost per year for Strategy described	Typically \$2,000 is estimated annually for the replacement of two culverts per year in the operating budget.
Other information or reference materials	See attached culvert inventory in Appendix B.



4. Bridges & Large Structures

Asset Management Summary

Asset	Bridges & Large Structures																																																
Inventory	2 bridges and 6 large structures																																																
Anticipated Asset Life Cycle	Bridges <ul style="list-style-type: none"> • Wood – 25 years • Steel – 75 years • Concrete – 75 years Culverts <ul style="list-style-type: none"> • Wood – 25 years • Steel – 50 years • Plastic – 50 years • Concrete – 50 years 																																																
Integration	May be integrated with road resurfacing or road widening projects however generally are not integrated with other infrastructures.																																																
Rehabilitation and Replacement Criteria	Criteria for prioritizing include level of service and traffic volumes, safety and to preserve infrastructure. Bi-annual visual inspections of bridges and large structures are completed and detailed surveys are completed as required. Bridge and structure components are evaluated and tested according to Ontario Regulation 104/97 and in accordance with the Public Transportation and Improvement Act; Ontario Structure Inspection Manual.																																																
Rehabilitation and Replacement Strategies	As identified in the most current Ontario Structure Inspection Manual Summary Report – DM Wills, August 2013.																																																
Life Cycle	Bridge and culvert life cycles will be reduced, level of service is lowered and safety is compromised.																																																
Consequence	N/A																																																
Integrated Asset Priorities																																																	
Corporate/Consulting Reports on subject	Bridge Assessment Report – DM Wills Associates Ltd., August 2013 Updated all asset values for all bridges and large structures, identified useful life of structures and provided summary of maintenance needs.																																																
Estimated Cost per year for Strategy described	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> <th>2022</th> <th>2023</th> <th>Backlog</th> </tr> </thead> <tbody> <tr> <td>Construction</td> <td></td> </tr> <tr> <td>Rehabilitation</td> <td></td> <td></td> <td></td> <td>\$40,000</td> <td>\$70,000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td></td> <td>\$40,000</td> <td>\$70,000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog	Construction												Rehabilitation				\$40,000	\$70,000							Total				\$40,000	\$70,000						
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog																																						
Construction																																																	
Rehabilitation				\$40,000	\$70,000																																												
Total				\$40,000	\$70,000																																												
Other information or reference materials	Ontario Structure Inspection Manual Summary Report – DM Wills, August 2013. Asset Class – Bridges – List of Project Report Appendix C																																																

Township of Evanturel Asset Management Plan

5. Equipment



Asset Management Strategy

Asset	Vehicles and Equipment																																																
Inventory	1 light duty vehicle 1 heavy duty vehicle 6 pieces of heavy equipment																																																
Anticipated Asset Life Cycle	Varies depending on vehicle/equipment type with the following guidelines Vehicles <ul style="list-style-type: none"> • Light Truck – 10 years • Heavy Truck – 10 years • Heavy Equipment – 25 years 																																																
Integrated	With technical advances and financial plans, environmental regulations, operational changes, service increases or decreases.																																																
Rehabilitation and Replacement Criteria	Lifecycle cost analysis considering depreciation, fuel, repairs, insurance, downtime costs, etc. These factors will identify optimal replacement year for vehicle/equipment assets.																																																
Rehabilitation and Replacement Strategies	Review usage to warrant replacement, repair costs should not exceed 40% of the replacement costs. Review lease, seasonal rental opportunities, refurbishing strategies and possibility of contracting services to third party.																																																
Life Cycle	Cost per km increases, increased downtime require more spare units or work schedules to be lengthened increasing manpower costs, loss or production.																																																
Consequence																																																	
Integrated Asset Priorities	N/A																																																
Corporate/Consulting Reports on subject	Internal Review																																																
Estimated Cost for Strategy described	<table border="1"> <thead> <tr> <th>Capital Plan</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> <th>2022</th> <th>2023</th> <th>Backlog</th> </tr> </thead> <tbody> <tr> <td>Construction</td> <td></td> <td>\$10,000</td> <td>\$10,000</td> <td>\$36,000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$98,000</td> </tr> <tr> <td>Rehabilitation</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$175,000</td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td>\$10,000</td> <td>\$10,000</td> <td>\$36,000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$175,000</td> <td>\$98,000</td> </tr> </tbody> </table>	Capital Plan	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog	Construction		\$10,000	\$10,000	\$36,000							\$98,000	Rehabilitation										\$175,000		Total		\$10,000	\$10,000	\$36,000						\$175,000	\$98,000
Capital Plan	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog																																						
Construction		\$10,000	\$10,000	\$36,000							\$98,000																																						
Rehabilitation										\$175,000																																							
Total		\$10,000	\$10,000	\$36,000						\$175,000	\$98,000																																						
Other information or reference materials	Asset Condition Summary Asset Class – List of Projects – Appendix C																																																

Township of Ewanturel Asset Management Plan

6. Land & Buildings



Asset Management Strategy

Asset	Corporate Facilities
Inventory	2 Buildings, 1 10kW Solar System, 1 Waste Disposal Site, Land
Anticipated Asset Life Cycle	Life cycles can vary from 15 to 50 + years. A roof replacement would be in the 25-30 year range, HVAC in the 25 year range and a building super structure upwards of 50 years. These life cycles assumed adequate maintenance is provided throughout the course of the component life.
Integrated	Individual asset components are reviewed and consideration is given to minimize the disruption of operations to a given asset over time.
Rehabilitation and Replacement Criteria	Adequate maintenance shall be provided throughout the course of the component life, thus minimizing the need for replacement.
Rehabilitation and Replacement Strategies	Annual inspection and evaluation will provide asset condition and identify individual components and prioritize replacement based on actual condition, and its point in time of its life cycle. Facility roof and HVAC system inventories are generally the most important components to manage and as such annual inspections should be completed. These assets will be replaced or upgraded to meet life cycle, industry, technological and safety standards. Upgrading of ingress/egress points may also be required for many facilities as new requirement under the Accessibility for Ontarians with Disabilities Act (AODA) have set minimum accessibility standards. Along with maintaining and protecting the municipal facility assets, any upgrade program will also include the implementation of energy efficient systems and equipment.
Life Cycle Consequence	Increased deterioration of building and properties, health and safety concerns, inefficient operation, higher operating costs, accelerated depreciation of assets.
Integrated Asset Priorities	Replacement is based on actual condition, the point in time within its life cycle and the availability to complete the replacement with minimal disruption to the program/service delivery within the asset.
Corporate/Consulting Reports on subject	Internal Review
Estimated Cost per year for Strategy described	No costs for land and buildings within 10 year capital plan
Other information or reference materials	Accessibility for Ontarians with Disabilities Act – Ministry of Community and Social Services http://www.mcsc.gov.on.ca/en/mcsc/programs/accessibility/index.aspx

Appendix B

Culvert Inventory

Culvert Inventory

GPS Coordinate	Road Section	Km	Culvert Size(m)	Culvert Length(m)	
0'583313	5289822	100-1	0.2	0.6	14
0'583309	5290100	100-2	0.5	0.6	16
0'583307	5290305	100-3	0.7	0.6	12
0'583304	5290408	100-4	0.8	0.4	12
0'583300	5290498	100-5	0.9	0.45	10
0'583297	5290842	100-6	1.2	0.45	11
0'583297	5291030	100-7	1.4	0.6	12
0'583295	5291074	100-8	1.45	0.4	12
0'583268	5292671	101-1	0.2	0.76	12
0'583259	5292630	101-2		0.6	11
0'583271	5292520	101-3	0.4	0.3	9
0'583949	5296057	102-0		0.6	13.5
0'583952	5295703	102-1	0.3	1	31
0'583953	5295613	102-2	0.5	1	31
0'583953	5295514	102-3	0.65	1	31
0'583957	5295273	102-4	0.8	0.6	17
0'583957	5295141	102-5	0.9	0.6	18
0'583947	5296088	103-1		0.6	14
0'585567	5296424	104-1	0.5	0.45	10
0'585547	5297677	105-1		0.45	20
		106-1	1.6		
0'586424	5294543	107-1	0.2	0.45	22
0'586409	5295042	107-2	0.5	1.8	13
0'586412	5295166	107-3	0.7	0.3	11
0'586399	5295797	107-4	1.3	1.5	13
0'586395	5295933	107-5	1.5	0.45	9
0'586393	5295939	107-6	1.5	0.3	9
0'589649	5292948	108-1	0	0.6	9
0'589657	5292697	108-2	0.2	0.7	9.6
0'589665	5292308	108-3	0.6	0.6	9.7
0'589671	5291996	108-4	0.9	0.75	12
		108-5	1		
0'589658	5291512	108-6	1.45	0.9	12
0'589633	5293897	109-1	0.6	1	12.19
0'589645	5293464	109-2	1	1.2	12.19
0'589647	5293003	109-3	1	0.4	9.4
0'589650	5292968	109-4	1.6	0.6	8.4
0'589620	5295481	110-1	1.1	0.6	10
0'592872	5293785	111-1	0	0.75	12
0'592872	5293785	111-2	0.4	1	9.8
0'592872	5293785	111-3	0.9	3	23.4
		111-4			
0'592872	5293785	111-5	1.2	0.4	9
0'591264	5292940	111-6	1.6	1.1	12
0'591270	5292959	112-0		1	12
0'591268	5293408	112-1	1.3	1.8x1.3	8
0'591263	5293767	112-2	0.8	1.2	12.2
0'5291203	5297795	113-1	0	0.6	9
0'591169	5299058	113-2	0.4	0.4	9
0'591167	5299113	113-3	1.4	0.3	6

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0'591165	5299207	113-4	1.5		5.7
0'591170	5299349	113-5	1.6	0.4	6
0'592918	5290562	114-1	0.8	0.82	11
0'586393	5295945	114-2	1.4	4.8	21
0'592904	5291403	114-3		1	11.4
0'592911	5291737	115-1	1.3	3	25
0'592881	5293002	116-1	0	0.6	12
0'592880	5293000	116-2	0	0.77	12
0'592869	5293440	116-3	0.4	1.2	12.2
0'592877	5293788	116-4	0.8	1	15.3
0'592878	5293791	116-5	0.8	1	15.3
0'592851	5294583	116-6	1.6	0.53	9
0'592824	5296929	118-1	0.7	0.6	8.7
0'592820	5297137	118-2	1	0.75	12
0'592768	5297497	118-3	1.3	3	30
0'592801	5298156	119-1	0.4	0.6	9
0'592794	5298864	119-2	1.1	0.6	12.2
0'584732	5299295	120-0	0.2	0.4	12
0'584723	5298750	120-1	0.7	0.4	9
0'589717	5290123	121-1	0.4	0.4	6.2
		121-2	1		
		123-1	0.1		
		123-2	0.1		
		123-3	0.2		
		123-4	0.7		
		201-1	1.8		
0'588499	5289691	202-1	0.4	0.9	9
0'588811	5289693	202-2	0.7	0.4	11
0'588669	5289691	202-A		1	62
0'588827	5289693	202-3	0.7	1	16.9
0'588864	5289708	202-4		0.6	12.8
0'589711	5289719	202-5	2	0.7	6
0'589995	5289714	203-1	0.3	0.6	18
0'590760	5289727	203-2	1.05	0.37	6.5
0'590867	5289727	203-3	1.2	0.46	10
0'586393	5295945	203-4	1.3	3.2x3.2	10
0'591690	5289738	203-5		0.7	9.6
0'586886	5291295	204-1	1.2	1.1	12
0'585615	5291255	204-2	2.5	0.8	12
0'589449	5291349	205-1	0.2	0.4	18.2
0'589056	5291343	205-2		0.6	12.2
0'588103	5291326	205-3		1.2	16.8
0'590332	5291367	206-1	0.9	3.8x3.1	22.2
0'590095	5291352	206-2	1.1	0.3	9
0'590005	5291362	206-3	1.3	0.4	12.3
0'592115	5291395	207-1	0.8	0.83	12.4
0'587860	5292927	208-1	0.15	1.2	12
0'587798	5292919	208-2	0.2	0.4	9
0'587730	5292923	208-3	0.3	0.6	9
		208-4	0.32		
0'587622	5292918	208-5	0.4	0.4	9.2
0'587415	5292913	208-6	0.6	0.4	9.2
0'587266	5292915	208-7	0.8	0.45	15
		208-8	0.8		

Township of Evanturel Asset Management Plan

0'586783	5292894	208-9	1.3	0.4	9
0'586700	5292901	208-10	1.35	0.6	18.8
0'586515	5292890	208-11	1.5	0.4	12
0'586186	5292886	208-12	1.9	0.4	7.7
0'592872	5293785	209-1	1	0.6	10.5
0'592872	5293785	209-2	1.5	0.6	9
0'592871	5292989	211-1	1.6	1.23	12.5
		211-2	1.6		
0'586313	5294443	212-1	0.2	0.6	30
0'586105	5294275	212-2	0.4	1.8	32
0'585960	5294132	212-3	0.6	0.6	11
0'585135	5293825	212-4	1.7	0.4	10
0'585181	5293880	212-4a		0.3	7
0'585542	5294159	212-4b		0.45	15
0'585613	5294154	212-4c		0.75	10
0'584911	5293560	212-5	2	0.25	18
0'584759	5293472	212-6	2.2	0.4	18.2
0'584678	5293445	212-7	2.3	0.4	15
0'584650	5293425	212-8	2.3	0.75	12.8
0'583859	5293330	212-9	3.1	0.45	8
0'583778	5293326	212-10	3.2	0.6	18
0'583457	5293442	212-11	3.6	0.6	12
0'587949	5294457	213-1	0	0.8	22
0'587291	5294498	213-2	0.7	0.6	11
0'585566	5296093	214-1	0.01	0.5	6
0'586148	5296102	214-2	0.6	0.6	12
0'5287135	5296120	215-1	0	0.9	24
0'587537	5296124	216-1	0.9	0.5	10
0'587166	5296118	216-2	0.8	0.9	27
0'591169	5299058	217-0		0.6	15
0'588358	5296136	217-1	1.3	0.45	12
0'592824	5296210	218-1	0	0.6	12
0'592721	5296207	218-2	0.1	0.6	11
0'592024	5296196	218-3	0.8	0.4	12
0'587960	5297728	219-1	0	0.9	19
0'586847	5297709	219-3	1.1	1	13
0'586354	5297700	219-4	1.8	1	14
0'590596	5297784	220-1	0.6	0.6	12.6
0'589242	5297765	220-2	2	0.6	12.3
0'588931	5297758	220-3	2.4	0.9	23
0'588162	5297735	220-4	3.2	0.75	17
0'588093	5297733	220-5	3.23	0.8	12.5
0'592522	5297817	221-1	0.3	0.5	13
0'592325	5297812	221-2	0.5	0.9	13
0'591533	5297801	221-3	1.3	1.2	23
0'591385	5297795	221-4	1.5	0.75	23
0'585333	5299320	222-1	0	0.6	12
0'585436	5299319	222-2	0.2	0.6	12
0'586127	5299322	222-3	0.9	0.9	12
0'586655	5299329	222-4	1.5	0.9	12
0'586785	5299329	222-5	1.6	0.6	18
0'586571	5299329	222-6	1.7	0.3	12
0'586934	5299333	222-7	1.8	0.6	12
0'587567	5299341	222-8	2.7	0.45	18

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0'583668	5296067	223-1	0.3	0.6	11
0'583216	5296055	223-2	0.8	0.4	12.8
0'584368	5296074	224-0	0.4	0.4	10.2
0'584727	5296069	224-1	0.8	0.3	9.6
		226-1	0		
0'591169	5299058	227-1	0.8	0.55	6
0'588225	5299363	228-1	0.15	1	35
0'589214	5299373	229-1	0	0.65	10
0'583211	5296042	7 hills 1	0	0.6	9
0'583216	5295522	7 hills 2	0.5	1.1	12
0'583219	5295408	7 hills 3	0.6	0.5	6
0'583218	5295307	7 hills 4	0.7	0.45	6
0'583220	5295167	7 hills 5	0.9	0.6	6

Appendix C

Asset Class List of Projects Report

Township of Evanturel Asset Management Plan

List of Equipment Projects

Project Name	Asset Name	Lifecycle Event Type	Total Cost	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
Equipment: Backhoe - Case Backhoe 580	Case Backhoe	Replaced	\$98,000											\$98,000
Equipment: Brush Cutter Rhino Brush Cutter	Rhino Brush Cutter	Purchased	\$10,000			\$10,000								
Equipment: Pickup Ford	Ford	Replaced	\$36,000				\$36,000							
Equipment: Plow Truck International	International	Partial Reconstruction	\$175,000										\$175,000	
Equipment: Trailer JDJ	JDJ	Replaced	\$10,000		\$10,000									
Totals			\$329,000	0	\$10,000	\$10,000	\$36,000						\$175,000	\$98,000

List of Projects Large Culverts

Project Name	Asset ID	Asset Name	Lifecycle Event Type	Total Cost	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
Culvert: 06_Kirbyson Road Culvert No. 206-1	06	Kirbyson Road Culvert No. 206-1	Replaced	\$155,997											\$155,997
Culvert: 07_Evanturel-Armstrong Boundary Rd Culvert No. 203-4	07	Evanturel-Armstrong Boundary Rd Culvert No. 203-4	Replaced	\$143,000											\$143,000
Totals			\$298,997												\$298,997

List of Projects Bridges

Project Name	Asset ID	Asset Name	Lifecycle Event Type	Total Cost	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
Wendigo Road Bridge	02	Wendigo Road Bridge	Rehabilitation Slope Protection	\$40,000				\$40,000							
Wendigo Road Bridge	02	Wendigo Road Bridge	Rehabilitation Seals/Sealants	\$70,000					\$70,000						
Totals			\$110,000				\$40,000	\$70,000							

Township of Evanturel Asset Management Plan

List of Projects Transportation Network

Asset ID	Asset Name	Location	Lifecycle Event Type	Total Cost	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Backlog
PM-1960A	First Street	Hwy# 11 west for 0.1 km	Reconstructed	\$57,000	\$57,000										
PM-1960B	Third Street	Hwy# 11 north for 0.1 km	Reconstructed	\$57,000	\$57,000										
PM-1978A	Brown's Road	Entire road	Reconstructed	\$114,000							\$114,000				
PM-1978B	Bryan's Road South	Hwy. 11 south for 0.4 km	Reconstructed	\$228,000								\$228,000			
PM-1978C	Bryan's Road North	Hwy. 11 north for 0.1 km	Reconstructed	\$57,000						\$57,000					
PM-1978D	Kap Kig Iwan	Entire road	Reconstructed	\$1,140,000	\$1,140,000										
ST-1991A	Bryan's Road	Hwy 11 to Wendigo Road	Replaced	\$27,200									\$27,200		
ST-1992A	Bryan's Road	Commencing at Wendigo road to Marter Boundary Road	Replaced	\$47,600				\$47,600							
ST-1993A	First Street	Englehart Boundary to Marter Boundary	Replaced	\$27,200	\$27,200										
ST-1996A	Bryan's Road	Commencing 0.4 km South of Hwy #11 - Kerr's Road	Replaced	\$15,300			\$15,300								
ST-1999A	Sprucegrove Road	Kap Kig Iwan to Seven Hills Road	Replaced	\$20,400											\$20,400
ST-2002A	Harman's Road	Harman's Hill	Double ST	\$15,300					\$15,300						
ST-2002A	Harman's Road	Harman's Hill	Single ST	\$7,650			\$7,650								
ST-2002B	Kirbyson Road	Hwy# 11 west for 0.1 km	Single S T	\$1,700			\$1,700								
ST-2002B	Kirbyson Road	Hwy# 11 west for 0.1 km	Double ST	\$3,400					\$3,400						
	Kirbyson Road	Hwy 11 east to James Road	Revert to Gravel	\$20,400											\$20,400
ST-2010A	Wendigo Road	Location Description: Ingram Boundary to Hwy 624	Single ST	\$79,900	\$79,900										
ST-2010B	Wendigo Road	Location Description: Hwy 624 - West End of Wendigo Road	Single ST	\$44,200	\$44,200										
			Totals	\$1,963,250	\$1,405,300		\$24,650	\$47,600	\$18,700	\$57,000	\$114,000	\$228,000	\$27,200		\$40,800

Appendix D

Supporting Information

Bridge Condition Index (BCI)

All bridges have a natural life span. To keep bridges in a safe condition, maintenance and upkeep are scheduled based on inspection results, age, location and the type of bridge. Strategically scheduling bridge maintenance to ensure that repairs and upkeep are done at the most optimal time allows municipalities to ensure that bridges are safe for their entire lifespan, and that the money for repairs is wisely spent.

Every bridge in Ontario must undergo a rigorous inspection every two years by a trained inspector who is either a professional engineer or under their direction. The inspector reviews and rates each bridge component. These ratings are used in determining the bridge's current value.

The BCI rating is a planning tool that helps the Municipality schedule maintenance and upkeep. The BCI is not used to rate or indicate the safety of a bridge.

The result is organized into ranges from 0 to 100. Immediate action is taken to address any safety concerns.

Good - BCI Range 70 -100

For a bridge with a BCI greater than 70, maintenance work is not usually required within the next five years.

Fair - BCI Range 60 -70

For a bridge with a BCI between 60 and 70 the maintenance work is usually scheduled within the next five years. This is the ideal time to schedule major bridge repairs from an economic perspective.

Poor - BCI Less than 60

For a bridge with a BCI rating of less than 60, maintenance work is usually scheduled within approximately one year.

To calculate the BCI rating, the current value is divided by the replacement cost of the bridge. The replacement value is based on the cost to reconstruct a new bridge.

For example:

Current value = \$700,000

Replacement cost = \$1,000,000

$$\begin{aligned} \text{BCI} &= \frac{\text{Current Value}}{\text{Replacement Cost}} \times 100 \\ &= \frac{700,000}{1,000,000} \times 100 \\ &= 70 \end{aligned}$$