

**THE CORPORATION
OF THE TOWNSHIP OF ARMSTRONG**

BY-LAW NO. 2024-36

BEING A BY-LAW TO ADOPT AN ASSET MANAGEMENT PLAN FOR THE TOWNSHIP OF ARMSTRONG.

WHEREAS under the Infrastructure for Jobs and Prosperity Act, 2015 of Ontario Regulation 588/17 requires a municipality to prepare an Asset Management Plan in respect of all its municipal assets by July 1st, 2024;

AND WHEREAS under Section 9 of the Municipal Act, 2001, S.O. 2001, c25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any Act;

AND WHEREAS Council wishes to adopt an Asset Management Policy for the Township of Armstrong;


NOW THEREFORE the Council of the Corporation of the Township of Armstrong do hereby enact as follows:

1. **THAT** the Corporation of the Township of Armstrong adopt the Asset Management Plan as attached as Schedule A;
2. **THAT** the Clerk of the Township of Armstrong is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the by-law, where such modifications or corrections do not alter the intent of the by-law.
3. **THAT** this By-law comes into full forces and effect upon the final passing thereof.
4. **THAT** all other By-laws and resolutions, or parts thereto, contrary hereto or inconsistent herewith, be and the same are hereby repealed.

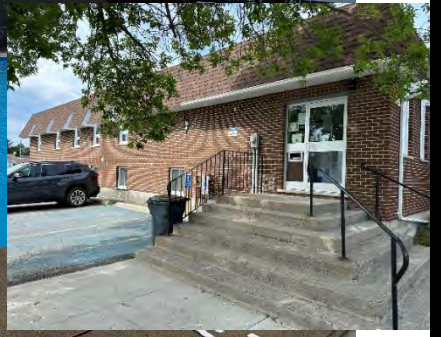
READ A FIRST, SECOND AND THIRD TIME in Open Council and finally passed under the hands of the Mayor, Clerk and Seal of the Corporation on this 10th day of July, 2024.



JEAN MARC BOILEAU, MAYOR



DAN THIBEAULT, CAO/CLERK-TREASURER



Asset Management Plan



CANTON
d'ARMSTRONG
TOWNSHIP
EARLTON

As adopted by Council on July 10th, 2024



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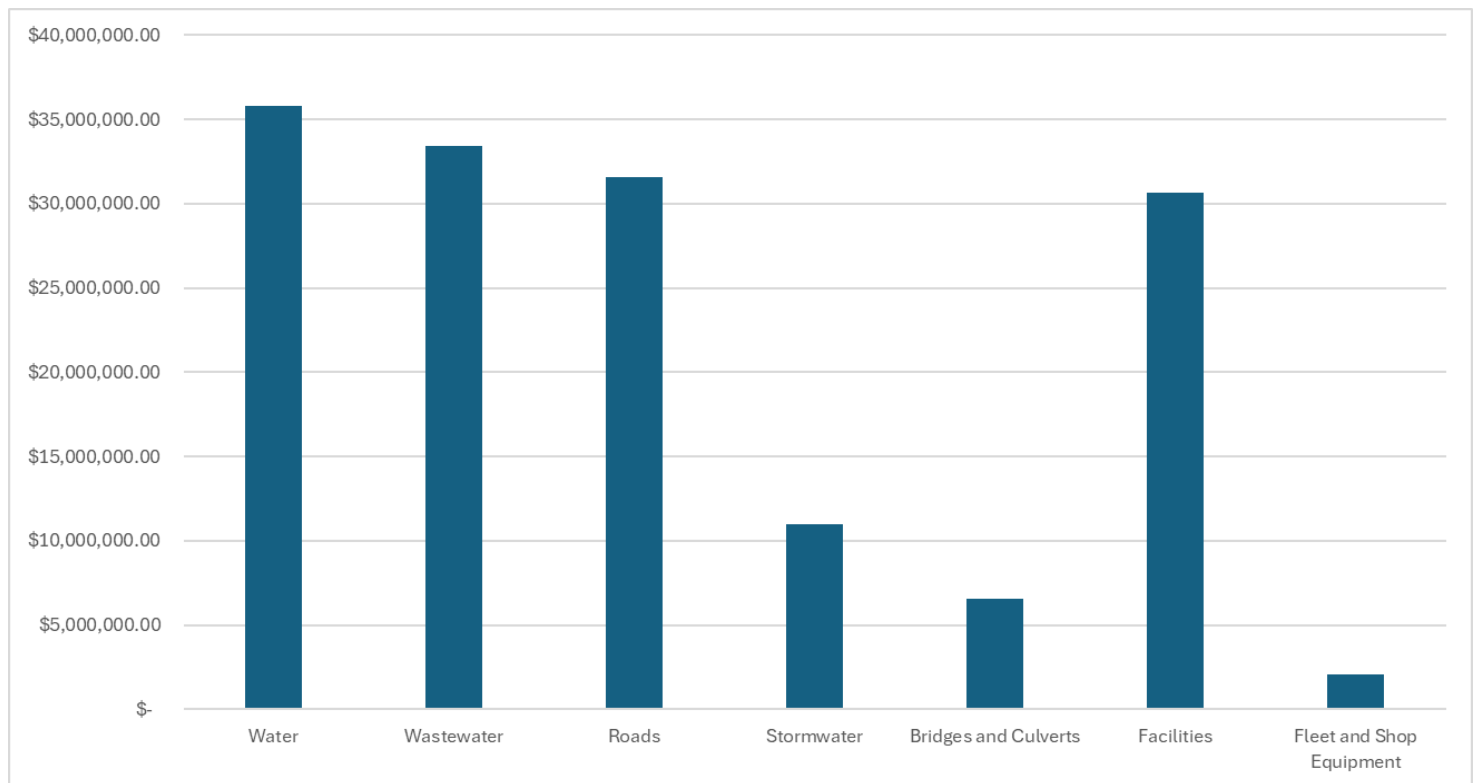
Executive Summary

Introduction:

Ontario Regulation 588/17 mandates that municipalities develop asset management plans for their core municipal infrastructure assets by July 1, 2022, and for all other municipal infrastructure assets by July 1, 2024. This executive summary outlines the key components and strategies of Township of Armstrong’s Asset Management Plan, aimed at ensuring efficient, sustainable, and resilient management of our infrastructure assets. Our Assets are broken down into Core and Non Core Assets for a total replacement cost of over \$151 million (2023).

The plan encompasses a wide range of assets, including water, wastewater, roads, stormwater, culverts, bridges, facilities, and fleet and equipment.

Figure 1- Replacement Cost of Assets by Category



Core Assets: \$118,323,478

Non Core Assets: \$32,771,024

Average Condition Rating :

- Water B (Good)
- Wastewater B (Good)
- Roads B (Good)
- Stormwater D (Poor)
- Bridges and Culverts C (Fair)
- Facilities C (Fair)
- Fleet and Shop Equipment B (Good)



Asset Inventory:

The Township of Armstrong maintains an extensive inventory of infrastructure assets critical for delivering essential services and supporting community development. This includes:

- Water infrastructure, including treatment plants, distribution networks, and storage facilities.
- Wastewater infrastructure, including treatment plants, collection systems, and pump stations.
- Road network, comprising gravel, surface treated, and asphalt roads, along with bridges and culverts.
- Stormwater management systems, encompassing drainage infrastructure, retention basins, and culverts.
- Municipal facilities, such as administrative buildings, fire halls, public works garages, and recreational facilities.
- Fleet and equipment, including vehicles and machinery essential for maintaining infrastructure and delivering services.

Challenges and Opportunities:

The asset management plan identifies several challenges and opportunities for the Township of Armstrong:

- **Aging Infrastructure:** Many assets are approaching or exceeding their expected service life, requiring increased maintenance and renewal efforts.
- **Financial Constraints:** Limited funding poses challenges for infrastructure renewal, maintenance, and capital improvements.
- **Regulatory Compliance:** Meeting regulatory requirements for water quality, environmental protection, and infrastructure standards necessitates ongoing investment and operational adjustments.
- **Technological Advances:** Leveraging technology and innovation can enhance asset performance, optimize maintenance practices, and improve service delivery efficiency.
- **Community Engagement:** Engaging residents, stakeholders, and partners in asset management initiatives can foster transparency, accountability, and support for infrastructure investments.

Asset Management Strategies:

To address these challenges and capitalize on opportunities, the Township of Armstrong will implement the following asset management strategies:

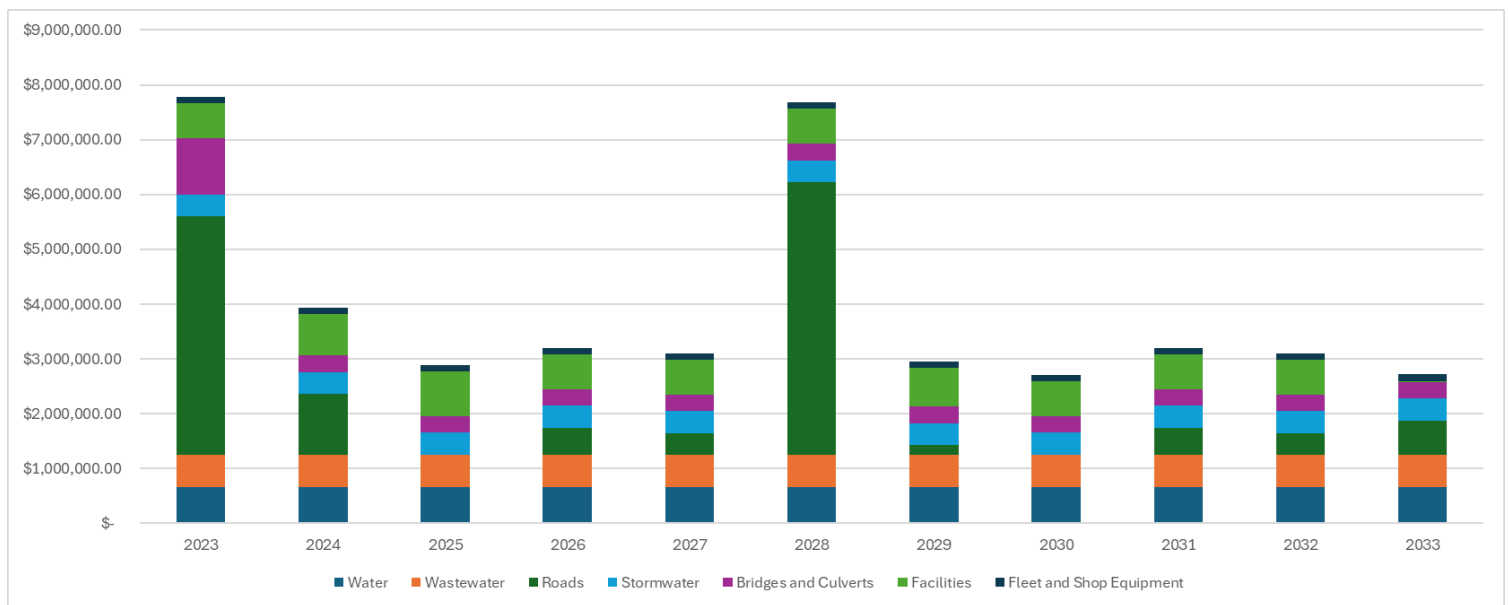
- **Prioritize Critical Assets:** Identify and prioritize high-risk assets requiring immediate attention and investment to maintain service levels and mitigate risks.
- **Adopt Risk-Based Approach:** Implement a risk-based asset management framework to assess asset condition, performance, and criticality, guiding decision-making and resource allocation.
- **Optimize Maintenance Practices:** Implement proactive maintenance programs, asset condition assessments, and predictive analytics to optimize asset performance, extend service life, and minimize lifecycle costs.



- Enhance Financial Planning: Develop long-term financial plans, funding strategies, and asset management policies to ensure sustainable funding for infrastructure renewal and capital improvements.
- Foster Collaboration: Collaborate with stakeholders, neighboring municipalities, government agencies, and community partners to share resources, leverage expertise, and maximize efficiency in asset management initiatives.

The Township will need to invest over \$43,252,722 across all its asset categories over the next 10 years. The following chart outlines the requirements by asset category and by year.

Figure 2- Capital Investments over the next 10 Years by Asset Category



Conclusion:

The Township of Armstrong is committed to effective asset management practices that optimize the performance, sustainability, and resilience of its infrastructure assets. By prioritizing critical investments, adopting risk-based approaches, and fostering collaboration and innovation, the municipality aims to deliver reliable services, enhance community well-being, and support economic growth and development for current and future generations.



Water

State of Local Infrastructure

Our local water system infrastructure plays a vital role in delivering a safe and reliable water supply to residents, businesses, and institutions within the Village of Earlington. As a critical component of the Township of Armstrong infrastructure, it requires continuous monitoring, maintenance, and strategic investment to ensure its functionality, efficiency, and resilience.

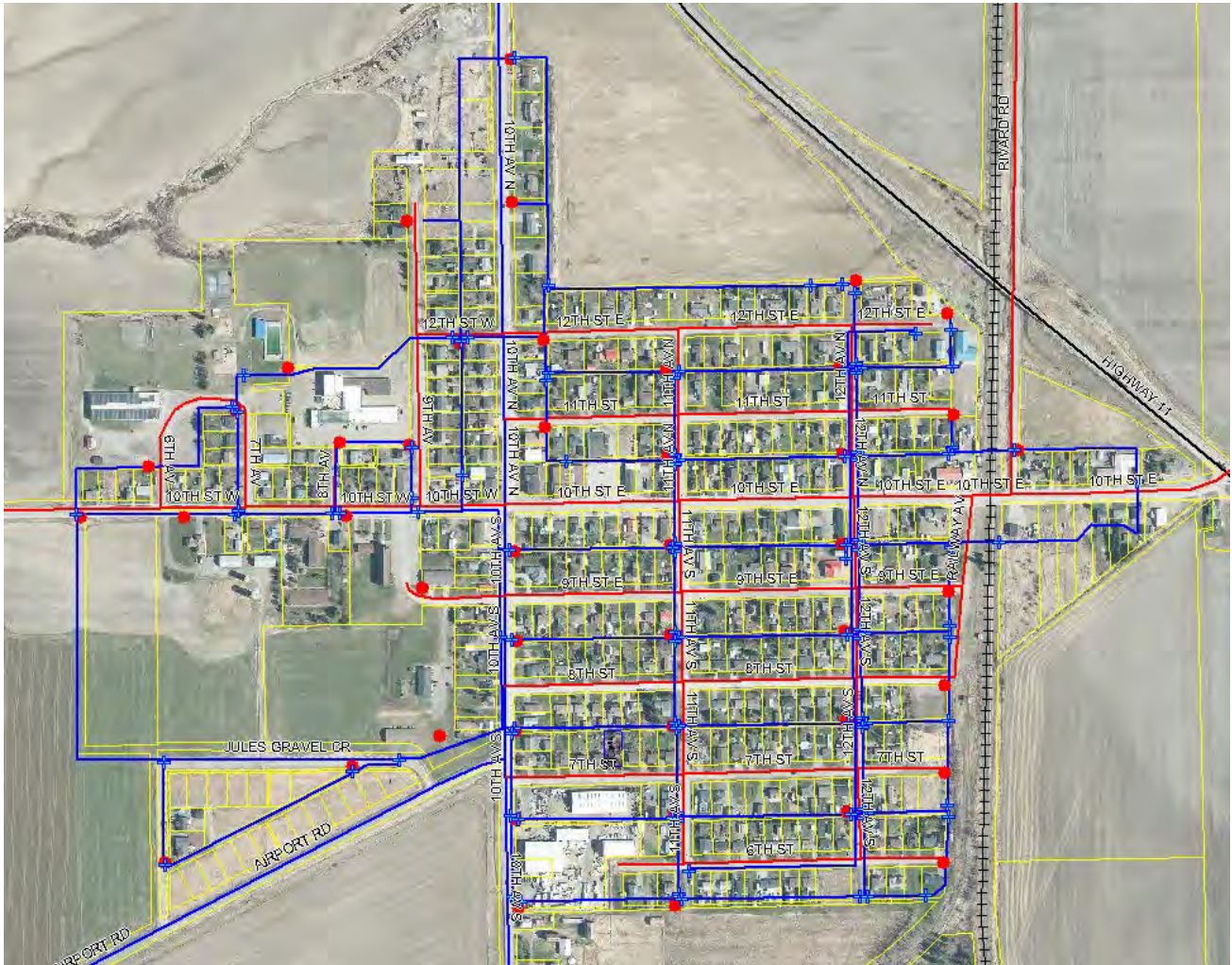
Current Asset Types include:

1. **Water Pipes:** Our network of watermains and service lines comprises the backbone of the water distribution system. While the majority of mains are within their intended service life, as their approach their design life, this leads to increased risks of leaks, breaks, and service interruptions.
2. **Treatment Facilities:** Our Water treatment facility is operating within capacity but requires upgrades to meet evolving regulatory standards and population growth demands. Aging equipment poses a risk of reduced treatment efficiency and potential compliance issues (this is located under the facility section of the asset management plan).
3. **Pumps:** Pumps play a crucial role in maintaining water pressure and flow within the distribution system. Aging pumps and control systems may lead to inefficiencies, increased energy consumption, and reliability issues.
4. **Water Quality Monitoring:** Continuous monitoring of water quality parameters is essential for ensuring compliance with health and safety standards. Investments in advanced monitoring technologies can enhance early detection of contaminants and improve response times to potential threats.

Table 1- Water Asset Types

Type	Quantity		Average Age (years)	Replacement Cost
Watermains	11,209	metres	31	\$28,023,000
Water Valves	98	valve	31	\$490,000
Hydrants	44	hydrant	31	\$264,000
Service Lines	1,242	metres	31	\$6,210,000
Curbstops	414	curbstop	31	\$414,000
Wells	3	well	31	\$105,000
Well Pumps	3	pumps	4	\$30,000
Filtering System	2	filtering systems	5	\$20,000
Chlorine Pump	10	pumps	21	\$25,000
Chlorine Analyser	2	analyser	0	\$16,000
Turbidity Analyser	2	analyser	10	\$16,000
Highlift Pump	4	pumps	12	\$32,000
Fire Pump	1	pumps	31	\$15,000
Scada	1	system	0	\$80,000
Ferric Sulfate Pump	2	pumps	1	\$5,000
Generator	1	generator	31	\$75,000
		TOTAL	19	\$ 35,820,000

Figure 3- Village of Earleton Water Distribution System



The Township of Armstrong currently owns and manages 11,209 metres of watermains and 1,242 metres of service lines. The water system is serviced by three wells and a single water treatment plant with a sophisticated Scada computer system. The system has an estimated replacement value of \$35,820,000 (2023) with an average age of 19 years.



Condition Analysis

The Township of Armstrong has adopted a five-point condition scale from ‘Very Poor’ to ‘Very Good’ based on the useful life of the asset. The Useful life of each asset was considered by staff using their experience and research into engineering best practices. An age-based asset approach was used to determine asset condition. This approach was taken as the Township does not have the funds hire a firm to undertake a comprehensive physical analysis of underground assets.

Table 2 – Water Condition Scale

Condition	Value		Description
Very Good	45%	and below	No concerns.
Good	90%	46%	Deterioration causes minimal influence on use of vehicle. Occasional concerns raised by users.
Fair	100%	91%	Some deterioration beginning to be reflected in minor restrictions on operational uses. Concerns from users.
Poor	125%	101%	Regular complaints from users.
Very Poor	126%	and above	Generally not suitable for use.

The Township water assets vary from ‘Very Poor’ to ‘Very Good’ with 99% of the replacement costs of the assets sitting in the “Good” category. The next items for replacement include a chlorine pump, turbidity analyzer and the fire pump. The primary challenge is the aging infrastructure, which requires significant investment for rehabilitation, replacement, and modernization to sustain reliable service delivery. The Township has limited funding resources which poses a challenge to addressing infrastructure needs comprehensively. Prioritization of projects based on risk assessment and cost-benefit analysis is essential. Evolving regulatory requirements necessitate ongoing upgrades and enhancements to ensure compliance, adding complexity and cost to infrastructure management. In addition, increasing frequency and intensity of extreme weather events require proactive measures to enhance the resilience of the water system infrastructure against floods, droughts, and other climate-related risks.

Table 3 - Water Service Attributes

Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong has water assets within the Village of Earleton. See attached map.	<ol style="list-style-type: none"> 1. Of the 523 households in the Township, 415 are on the water system (79%) and 108 are on private systems (21%). 2. All households on the water system have access to adequate fire



		flow although the fire pump is quite old.
Reliability	The Township has not experienced any boil water advisories or service interruptions in the last 3 years.	<ol style="list-style-type: none"> 1. The number of connection days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system: 0 2. The number of connection days per year due to water main breaks compared to the total number of properties connected to municipal water system: 0

Figure 4- Water Condition Breakdown

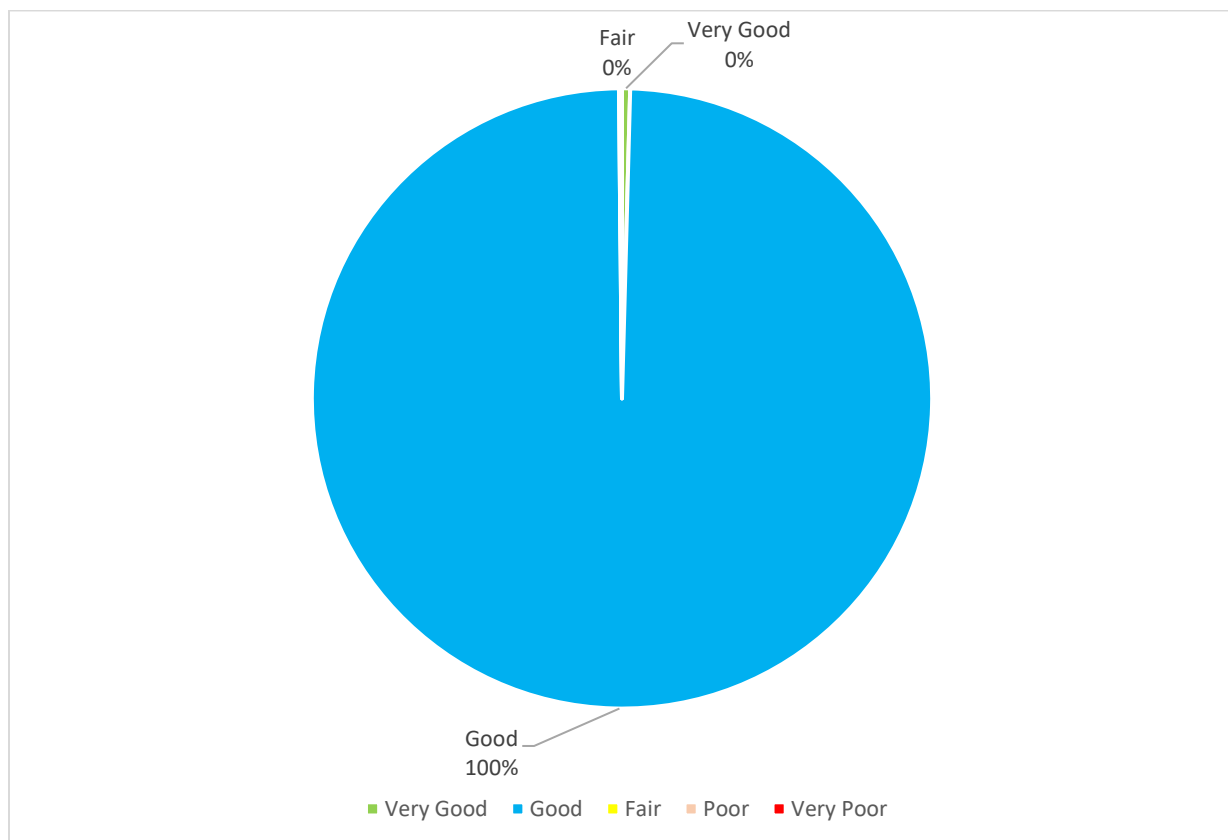




Table 4 - Water Condition Breakdown

Type	Quantity		Average Percentage	Average Condition State	Replacement Cost
Watermains	11209	metres	52%	Good	\$28,023,000.00
Water Valves	98	valve	78%	Good	\$490,000.00
Hydrants	44	hydrant	52%	Good	\$264,000.00
Service Lines	1242	metres	77%	Good	\$6,210,000.00
Curbstops	414	curbstop	77%	Good	\$414,000.00
Wells	3	well	68%	Good	\$105,000.00
Well Pumps	3	pumps	40%	Very Good	\$30,000.00
Filtering System	2	filtering systems	17%	Very Good	\$20,000.00
Chlorine Pump	10	pumps	103%	Poor	\$25,000.00
Chlorine Analyser	2	analyser	0%	Very Good	\$16,000.00
Turbidity Analyser	2	analyser	100%	Fair	\$16,000.00
Highlift Pump	4	pumps	61%	Good	\$32,000.00
Fire Pump	1	pumps	103%	Poor	\$15,000.00
Scada	1	system	0%	Very Good	\$80,000.00
Ferric Sulfate Pump	2	pumps	4%	Very Good	\$5,000.00
Generator	1	generator	62%	Good	\$75,000.00

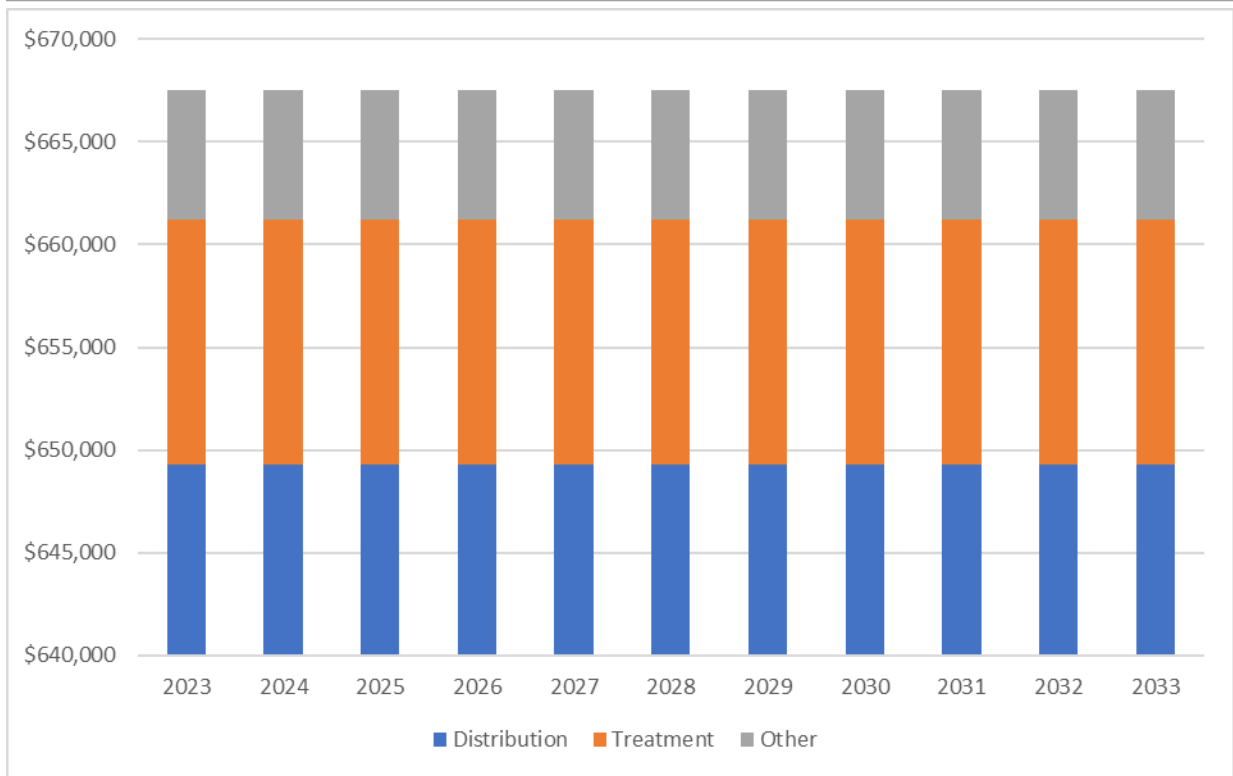
Lifecycle Analysis

The Township of Armstrong expects that replacements during the next 10 year period will be needed on some of the pumps. The Township expects that water repairs may increase as the assets reach their end of life. Based on the current expected life the Township would need to invest \$667,550 (2023) per year to maintain our water system. The Township of Armstrong is at serious risk in the future if the water system begins to fail. The majority of the settlement area was installed at the same time and will likely begin to fail at the same time. The Township is very small and is unable to generate the funds to replace these assets from user charges or taxes alone. The original system was put into place with the help of both the Provincial and Federal governments and this partnership would need to continue again in the future. If the water system fails it could trigger environmental consequences for residents. A visual inspection of the water main assets may provide a better picture of life expectancy to determine what section of the assets could fail earlier than expected. This would help generate a better long term plan and prioritize sections of town to spread the risk. Funding to help better analyze our systems would provide beneficial.

Figure 5- Average Annual Capital Investments



Township of Armstrong Asset Management Plan





Wastewater

State of Local Infrastructure

The Township of Armstrong currently manages 9,121 metres of wastewater main and 1,239 metres of wastewater personal drain connections with an average age of 37 years. These assets are split into a combination of Asbestos Cement and Plastic with sizes ranging from 30 mm to 450 mm. The Township is also responsible for manholes, a pump station, alum building, blower building and lagoon. Our wastewater assets have a replacement value of over \$33 million (2023) or approximately \$80,000 per user. The wastewater system connects to most residential, commercial and industrial spaces in the settlement area of Earleton. The wastewater system provides for the safe collection and treatment of wastewater. The buildings have been included in the facility category and are not included in these numbers.

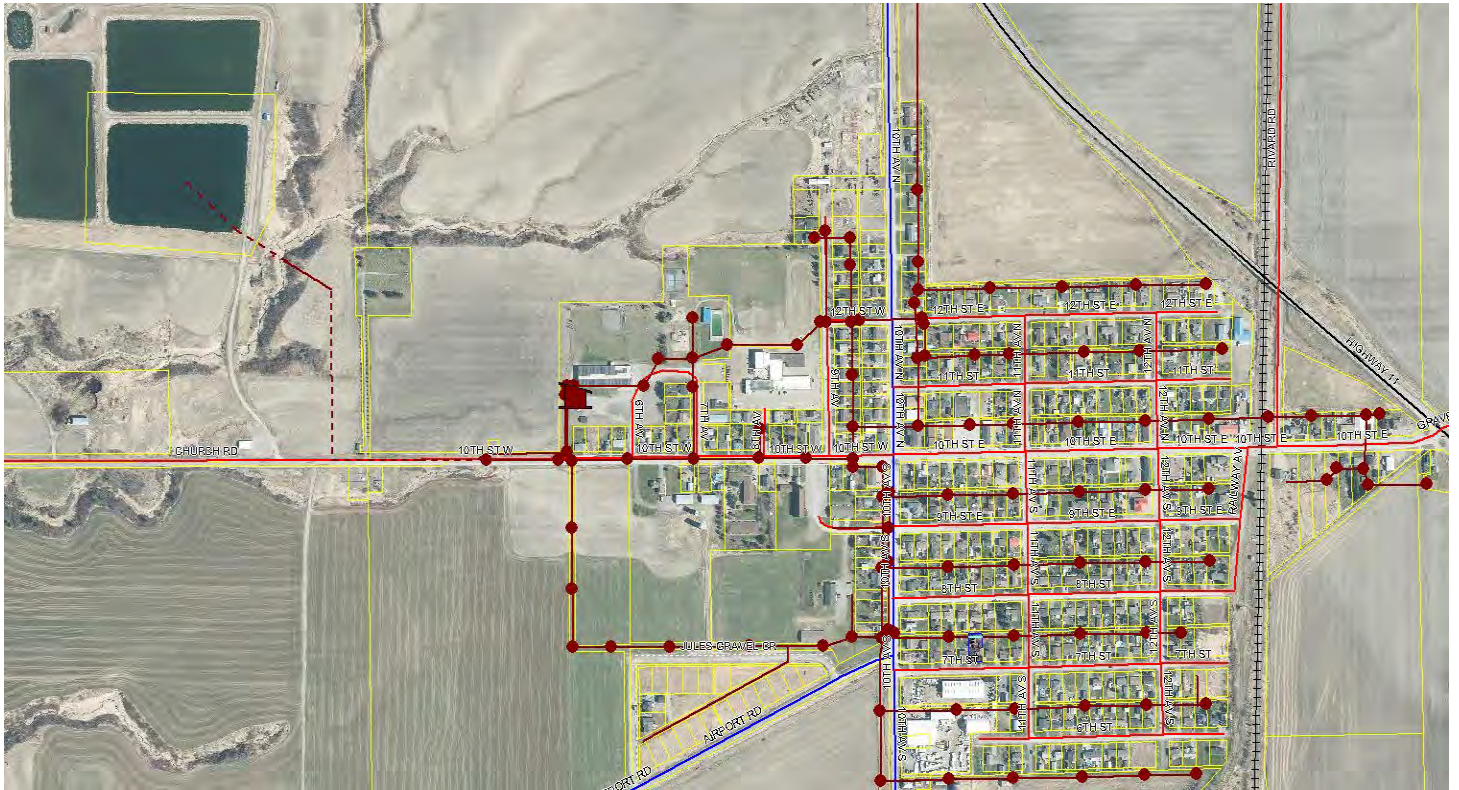
Table 5: Wastewater State of Local Infrastructure

Type	Quantity		Average Age (years)	Replacement Cost
Wastewater Mains	9121	metres	37	\$ 22,802,900
Wastewater Personal Drain Connections	1239	metres	37	\$ 1,858,500
Wastewater Manholes	109	Manholes	35	\$ 109,000
Pump Stations, Lagoon	1	unit	23	\$ 8,547,586
Generator	1	unit	0	\$ 75,000
			TOTAL	\$ 33,392,986
			Replacement Cost per User	\$ 80,855

Table 6: Breakout of Wastewater Mains

Material	Size (mm)	Length (m)
Asbestos Cement	200	5443
	250	402
Plastic	30	81
	200	566
	250	53
	300	655
	375	1139
	450	782
	TOTAL	9121

Figure 6: Village of Earlton Wastewater System





Condition Analysis

The Township of Armstrong has adopted a five-point condition scale from ‘Very Poor’ to ‘Very Good’ based on the useful life of the asset (Table 3: Condition Scale). The Useful life of each asset was considered by staff using their experience and research into engineering best practices. An age-based asset approach was used to determine asset condition. This approach was taken as the Township does not have the funds hire a firm to undertake a comprehensive physical analysis of underground assets.

Table 7: Wastewater Condition Scale

Condition	Value		Description
Very Good	45%	and below	No concerns.
Good	90%	46%	Deterioration causes minimal influence on use of vehicle. Occasional concerns raised by users.
Fair	100%	91%	Some deterioration beginning to be reflected in minor restrictions on operational uses. Concerns from users.
Poor	125%	101%	Regular complaints from users.
Very Poor	126%	and above	Generally not suitable for use.

The wastewater mains were mostly put in during the same period in 1974. This gives them approximately 62% of their life used and puts them in a ‘Good’ condition state. The generator was replaced in 2023 so is in the Very Good category. The treatment aspects of the wastewater system are in the ‘Good’ condition state. This overall puts most of the asset value in the ‘Good’ condition with the generator in ‘Very Good’ condition. (Table 4: Average Weighted Condition of Assets).

Table 8: Average Weighted Condition of Assets

Type	Quantity		Average Percentage of Life Used	Average Condition State
Wastewater Mains	9121	metres	62%	Good
Wastewater Personal Drain Connections	1239	metres	62%	Good
Wastewater Manholes	109	Manholes	59%	Good
Pump Stations, Lagoon	1	unit	47%	Good
Generator	1	unit	0%	Very Good



Figure 7: Average Weighted Condition of Assets

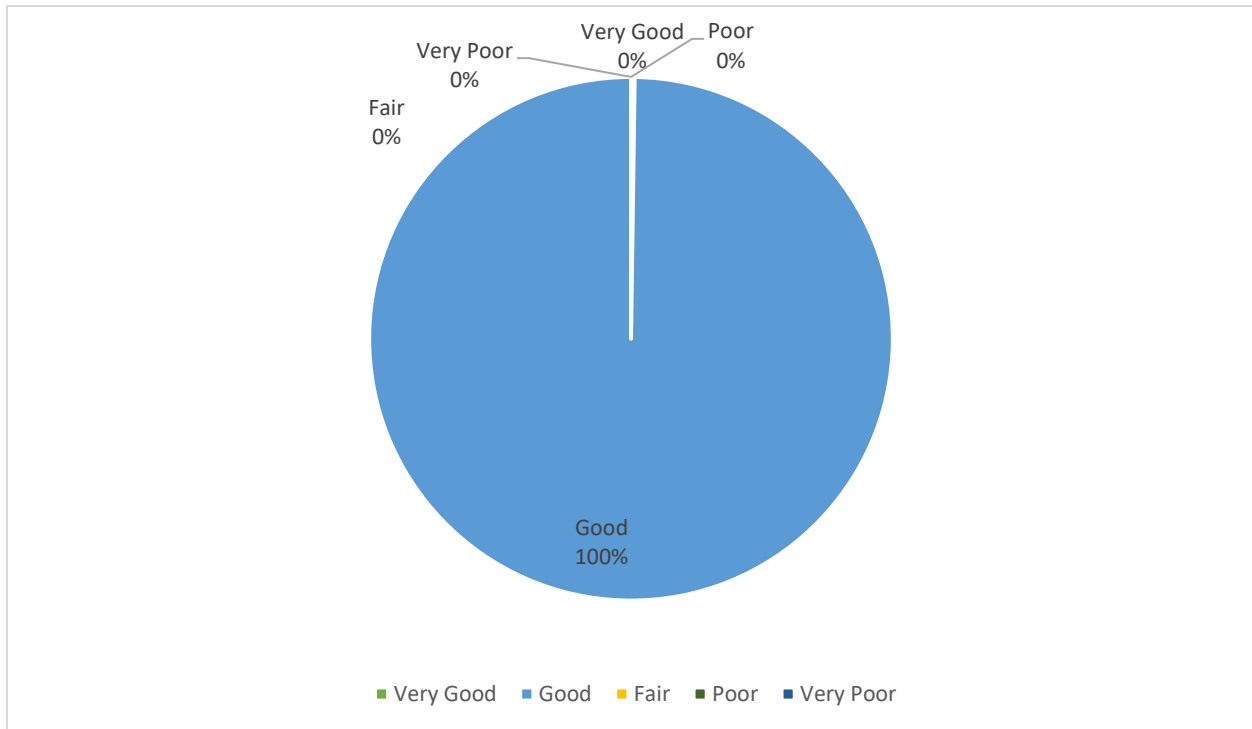


Table 9- Wastewater Service Attributes

Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong has wastewater assets within the Village of Earleton. See attached map.	1. Of the 523 households in the Township, 413 are on the wastewater system (79%) and 108 are on private systems (21%).
Reliability	<p>Description of Combined Sewers and Overflow Structures: We do not use combined sewers in the Township of Armstrong.</p> <p>Frequency and Volume of Overflows in Habitable Areas or Beaches: The frequency and volume of overflows in combined sewers within habitable areas are meticulously monitored and recorded Townships of Armstrong's wastewater</p>	<p>1. The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system: 0</p> <p>2. The number of connection-days per year due to wastewater backups compared to</p>



	<p>management team. Through continuous monitoring and data collection, we assess the impact of overflows on the surrounding environment and communities. This information informs our efforts to mitigate overflows and improve the resilience of our wastewater system.</p> <p>Description of Stormwater Infiltration into Sanitary Sewers: Stormwater infiltration into sanitary sewers occurs when excessive rainfall overwhelms the system's capacity, leading to the intrusion of stormwater into the sanitary sewer network. This influx of stormwater can cause sewage backups into streets or homes, posing health and environmental risks. The Township of Armstrong employs various strategies, such as sewer lining and maintenance programs, to minimize stormwater infiltration and reduce the likelihood of sewage overflows.</p> <p>Design Resilience of Sanitary Sewers: Sanitary sewers in Township of Armstrong are meticulously designed to be resilient against stormwater infiltration and sewage overflows. Our sewer infrastructure incorporates advanced engineering techniques, including separate sanitary and stormwater sewer systems, combined with measures such as increased capacity, improved maintenance protocols, and regular inspections. These design features enhance the reliability and durability of our sanitary sewer network, reducing the potential for overflow events</p>	<p>the total number of properties connected to the municipal wastewater system:0</p> <p>3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system:0</p>
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	<p>described above.</p> <p>Description of Discharged Effluent from Lagoon: The effluent discharged from Lagoon undergoes rigorous processes to meet or exceed regulatory standards before release into the environment. The discharged effluent is monitored regularly to ensure compliance with water quality standards and minimize adverse impacts on receiving water bodies and ecosystems.</p>	
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Lifecycle Analysis

The Township of Armstrong expects that all wastewater assets will be in service during the next 10 year period. The Township expects that wastewater repairs may increase as the assets reach their end of life. Based on the current expected life the Township would need to invest \$585,291 (2023) per year to maintain our wastewater system. The Township of Armstrong is at serious risk in the future if the wastewater begins to fail. The majority of the settlement area was installed at the same time and will likely begin to fail at the same time. The Township is very small and is unable to generate the funds to replace these assets from user charges or taxes alone. The original system was put into place with the help of both the Provincial and Federal governments and this partnership would need to continue again in the future. If the wastewater system fails it could environmental consequences for residents. A visual inspection of the wastewater main assets may provide a better picture of life expectancy to determine what section of the assets could fail earlier than expected. This would help generate a better long term plan and prioritize sections of town to spread the risk.



Figure 8: Average Annual Capital Investment





Stormwater

State of Local Infrastructure

The local stormwater system infrastructure plays a crucial role in managing rainfall runoff, mitigating flooding, and protecting water quality within the community. It consists of a network of pipes, channels, detention basins, and other structures designed to convey, store, and treat stormwater runoff from the Village of Earlton. In the rural areas of the Township of Armstrong culverts and open ditches provide similar services.

Current Asset Categories:

1. **Drainage Network:** The drainage network comprises pipes and channels that collect and convey stormwater runoff from streets, rooftops, and other impervious surfaces. While much of the network is functional, aging infrastructure and inadequate capacity in certain areas contribute to localized flooding and erosion.
2. **Detention and Retention Basins:** Detention and retention basins are designed to temporarily store stormwater runoff. Regular maintenance is essential to ensure proper functionality and prevent sediment accumulation and vegetation overgrowth.
3. **Erosion Control:** Erosion control measures, such as riprap, and vegetative buffers, are essential for stabilizing streambanks, protecting infrastructure, and preserving natural habitats. Continued investment in erosion control is critical to mitigate the impacts of urbanization and land development.

The Town of Armstrong has 12,448 m of stormwater pipe which varies in diameter from 200 mm to 900 mm and has an average age of 23 years and a replacement cost of \$6,597,477 (2023). The Township also has 8,238 m of rural culverts with an average age of 24 years and a replacement cost of \$4,366,140 (2023).

Table 10 - Stormwater State of Local Infrastructure

Material Type	Size (mm)	Quantity	Count	Average Age (years)	Replacement Cost	
PVC	200	2390.21	m	35	23	\$1,266,811.30
	250	3583.14	m	33	23	\$1,899,064.20
	300	888.38	m	22	23	\$470,841.40
	375	547.69	m	2	23	\$290,275.70
	400	623.2	m	26	23	\$330,296.00
	450	2983.04	m	16	23	\$1,581,011.20
	457	17.11	m	1	23	\$9,068.30
	500	240.92	m	7	23	\$127,687.60
	600	56.24	m	6	23	\$29,807.20
	700	728.89	m	29	23	\$386,311.70
	900	389.25	m	11	23	\$206,302.50
		12448.07	m	188	23	\$6,597,477.10

Figure 9- Stormwater System Village of Earlton

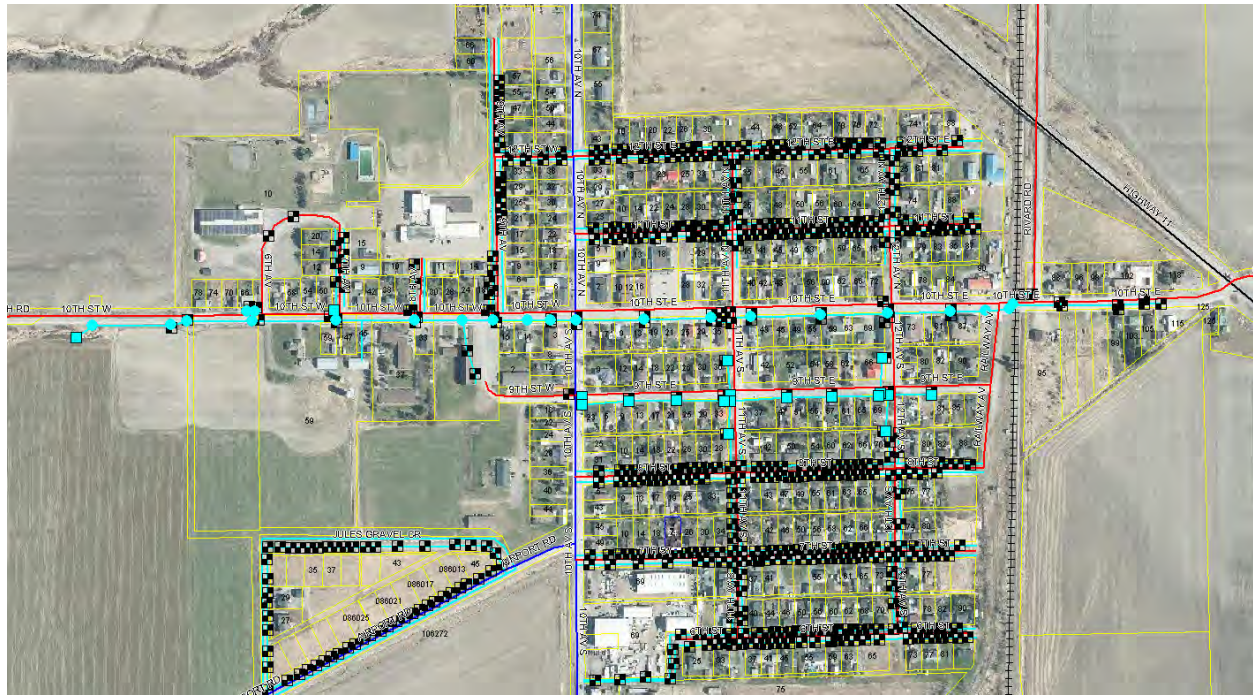
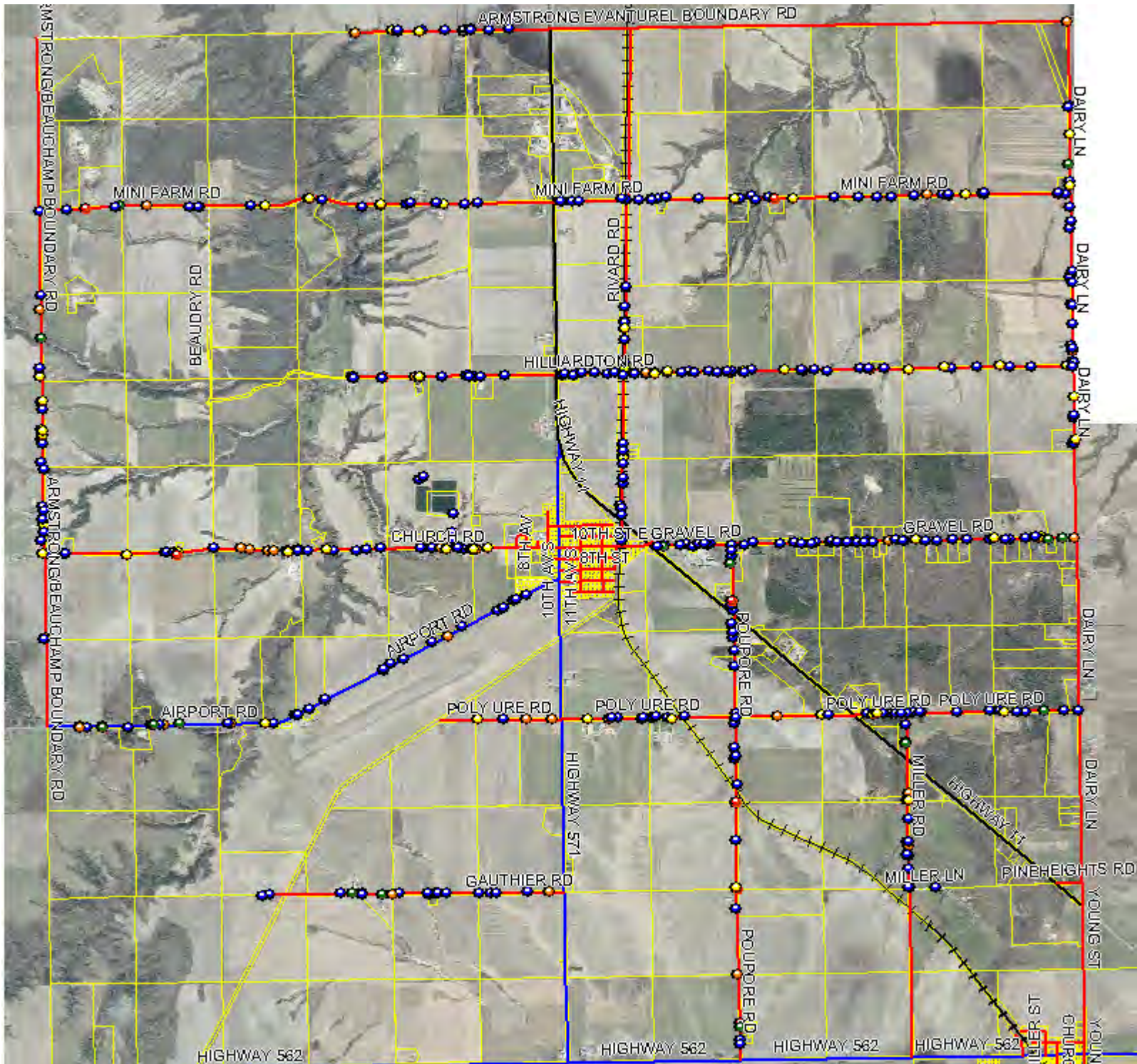


Table 11- Culvert Breakdown by Road Type

Road Type	Material Type	Quantity	Count	Average Age (years)	Replacement Cost
Arterial	Metal	315	m	20	\$166,950.00
	Plastic	154	m	11	\$81,620.00
	Wood	0	m	0	\$0.00
	Cement	18	m	2	\$9,540.00
Local	Metal	3907	m	211	\$2,070,710.00
	Plastic	3452	m	196	\$1,829,560.00
	Wood	21	m	2	\$11,130.00
	Cement	371	m	13	\$196,630.00
TOTAL		8238	m	455	\$4,366,140.00



Figure 10- Stormwater System Township of Armstrong (Culverts)





Condition Analysis

The Township had its public works staff visually inspect and assess all our rural culverts from ‘Very Poor’ to ‘Very Good’. We took pictures of each culvert and its location to help compare the change in conditions overtime. The stormwater system was assessed based on the age relative to its useful life. This was a big undertaking but now allows us to have an accurate assessment of our stormwater infrastructure.

Table 12- Stormwater Condition Index

Condition	Value	Description
Very Good	80 and above	Well Maintained, good condition, new or recently rehabilitated.
Good	60 and above	Acceptable, generally approaching mid stage of expected service life.
Fair	40 and above	Signs of deterioration, some elements exhibit significant deficiencies.
Poor	20 and above	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration.
Very Poor	0 and above	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable.

The stormwater and culvert system has nothing above poor with 60% of these stormwater assets sitting in the Poor category.

Table 13- Culvert Condition State

Road Type	Material Type	Quantity		Average Age (years)	Average Condition State	Replacement Cost
Arterial	Metal	315	m	23	Good	\$166,950.00
	Plastic	154	m	12	Good	\$81,620.00
	Wood	0	m	N/A	N/A	\$0.00
	Cement	18	m	23	Good	\$9,540.00
Local	Metal	3907	m	31	Good	\$2,070,710.00
	Plastic	3452	m	17	Good	\$1,829,560.00
	Wood	21	m	23	Very Poor	\$11,130.00
	Cement	371	m	23	Good	\$196,630.00

Table 14- Stormwater Condition State

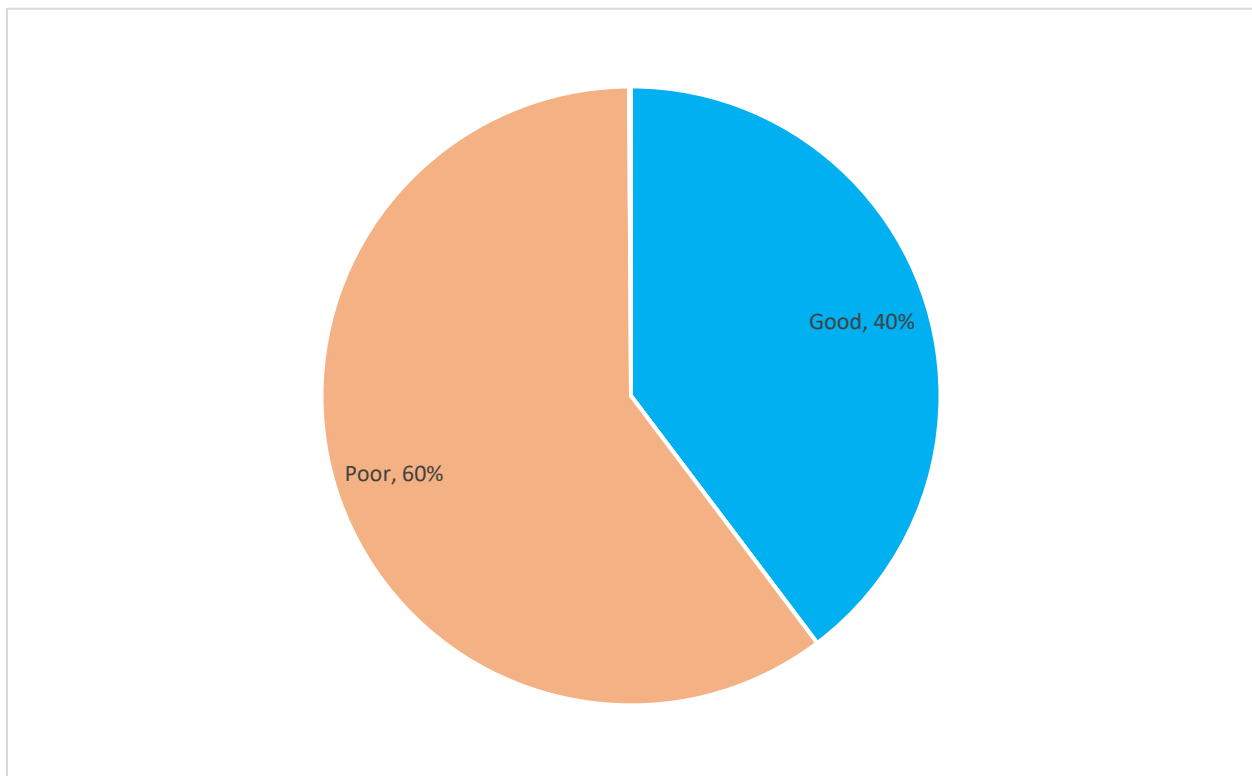
Road Type	Surface Type	Quantity		Count	Average Age (years)	Average Condition State	Replacement Cost
PVC	200	2390.21	m	35	23	Poor	\$1,266,811.30
	250	3583.14	m	33	23	Poor	\$1,899,064.20
	300	888.38	m	22	23	Poor	\$470,841.40
	375	547.69	m	2	23	Poor	\$290,275.70
	400	623.2	m	26	23	Poor	\$330,296.00
	450	2983.04	m	16	23	Poor	\$1,581,011.20
	457	17.11	m	1	23	Poor	\$9,068.30
	500	240.92	m	7	23	Poor	\$127,687.60
	600	56.24	m	6	23	Poor	\$29,807.20
	700	728.89	m	29	23	Poor	\$386,311.70
	900	389.25	m	11	23	Poor	\$206,302.50
		12448.07	m	188	23	Poor	\$6,597,477.10



Table 15- Stormwater Service Attributes

Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong has stormwater assets throughout the Township of Armstrong. See attached maps.	1. Percentage of properties in municipality resilient to a 100-year storm: 0 2. Percentage of the municipal stormwater management system resilient to a 5-year storm: 100%

Figure 11- Stormwater Condition Breakdown





Lifecycle Analysis

1. Rural Culverts:

- **Lifespan:** 20-50 years (depending on material, size, and environmental factors)
- **Lifecycle Stages:**
 - **Planning:** Assessing culvert needs, prioritizing replacements, budgeting for maintenance and upgrades.
 - **Design:** Engineering specifications, material selection, hydraulic calculations, environmental considerations.
 - **Construction:** Installation, site preparation, culvert placement, erosion control measures.
 - **Operation:** Regular inspection, debris removal, sediment management, monitoring for structural integrity.
 - **Maintenance:** Routine cleaning, repair of damage, corrosion protection, vegetation management.
 - **Renovation/Replacement:** Periodic assessments, identifying deteriorated culverts, planning for replacements or upgrades.
- **Key Activities:**
 - Conducting regular inspections to identify signs of deterioration, sediment buildup, or blockages.
 - Implementing maintenance practices such as debris removal, sediment dredging, and erosion control.
 - Performing repairs to address structural issues, joint failures, corrosion, or other damage.
 - Upgrading culverts to accommodate changes in water flow, road usage, or environmental conditions.
 - Replacing culverts at the end of their service life or when rehabilitation is no longer feasible.

2. Urban Stormwater System:

- **Lifespan:** 30-75 years (depending on components and maintenance practices)
- **Lifecycle Stages:**
 - **Planning:** Stormwater management planning, watershed assessments, identifying infrastructure needs.
 - **Design:** Engineering stormwater infrastructure, including pipes, drains, retention basins, and green infrastructure.
 - **Construction:** Installing stormwater infrastructure, grading, pipe laying, inlet and outlet construction.
 - **Operation:** Monitoring water quality, flow rates, and system performance, routine inspections, debris removal.
 - **Maintenance:** Cleaning catch basins, repairing pipe damage, retrofitting outdated infrastructure, vegetation management.
 - **Renovation/Replacement:** Assessing aging infrastructure, upgrading capacity, implementing flood mitigation measures, replacing deteriorated components.

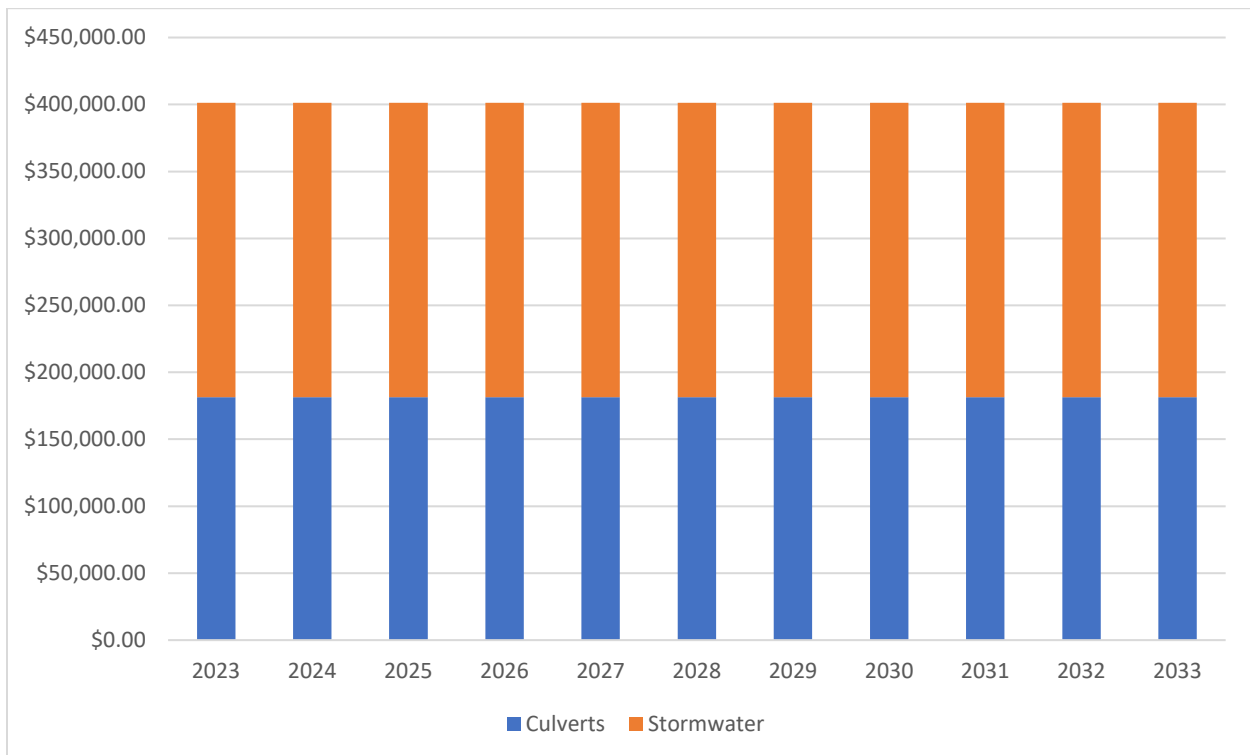


○ **Key Activities:**

- Regular inspections of stormwater infrastructure to identify deterioration, blockages, or system failures.
- Implementing maintenance programs to address sediment buildup, debris accumulation, and vegetation overgrowth.
- Retrofitting outdated infrastructure with modern stormwater management practices, such as green infrastructure.
- Monitoring water quality parameters to assess the effectiveness of stormwater management practices.
- Planning for system upgrades or replacements to accommodate changing climate conditions, urban development, or regulatory requirements.

Conclusion: Effective lifecycle management of rural culverts and urban stormwater systems is essential for ensuring the functionality, resilience, and sustainability of the Township of Armstrong's infrastructure. By implementing proactive maintenance practices, prioritizing capital investments, and integrating sustainable stormwater management strategies, the municipality can optimize asset performance, minimize lifecycle costs, and enhance the overall quality of life for residents while mitigating environmental impacts. The stormwater and culvert systems require an average annual investment of \$401,215 (2023).

Figure 12- Average Annual Investment Culverts and Stormwater





Roads

State of Local Infrastructure

The local road system infrastructure serves as a critical transportation network, facilitating the movement of people, goods, and services within the community. It encompasses various road types, including asphalt, surface-treated, and gravel roads, each with unique characteristics and maintenance requirements. The Township of Armstrong has 131.74 lane kilometres (65.87 km) of roads spread across our municipality with a total replacement cost of approximately \$31.6 million. This is split between Asphalt, Surface Treatment and Gravel for Surface type as well as urban vs rural. We further break down our roads to arterial vs local to account for traffic that varies by road type. The average age of our roads varies from 2 years to 14 years with Arterial Gravel roads having the youngest age and Asphalt across all areas as the older age.

Additional Information:

- 1. Asphalt Roads:** Asphalt roads serve on our main roads and exhibit moderate to heavy traffic volumes and are subject to significant wear and tear. Pavement distresses such as cracking, rutting, and potholes are common, requiring regular maintenance and rehabilitation.
- 2. Surface-Treated Roads:** Surface-treated roads, such as chip seal, provide a cost-effective alternative to asphalt and are commonly used on lower-volume residential roads. Regular reapplication of chip seal layers is necessary to mitigate aggregate loss and maintain surface integrity.
- 3. Gravel Roads:** Gravel roads are mainly in the rural areas serving as local access routes and require ongoing maintenance to address surface corrugations, potholes, and drainage issues. Grading, gravel replenishment, and dust suppression measures are essential to ensure adequate surface stability and drivability.



Area	Road Type	Surface Type	Quantity		Average Age (years)	Replacement Cost
Urban	Arterial	Asphalt	1.54	km	14	\$2,541,000.00
		Surface Treatment	0	km	N/A	\$0.00
		Gravel	0	km	N/A	\$0.00
	Local	Asphalt	0	km	N/A	\$0.00
		Surface Treatment	4.86	km	6	\$4,860,000.00
		Gravel	0.72	km	13	\$216,000.00
Rural	Arterial	Asphalt	0.78	km	14	\$1,287,000.00
		Surface Treatment	4.52	km	14	\$4,520,000.00
		Gravel	15.9	km	2	\$4,770,000.00
	Local	Asphalt	0.66	km	14	\$1,089,000.00
		Surface Treatment	1.76	km	9	\$1,760,000.00
		Gravel	35.13	km	8	\$10,539,000.00
TOTAL						\$31,582,000.00

Table 17 - Road Breakdown by Area, Road Type and Surface Type

Area	Length (km)	% of Total	Replacement Value
Urban	7.12	11%	\$7,617,000.00
Rural	58.75	89%	\$23,965,000.00
Road Type	Length (km)	% of Total	Replacement Value
Arterial	22.74	35%	\$13,118,000.00
Local	43.13	65%	\$18,464,000.00
Surface Type	Length (km)	% of Total	Replacement Value
Asphalt	2.98	5%	\$4,917,000.00
Surface Treatment	11.14	17%	\$11,140,000.00
Gravel	51.75	79%	\$15,525,000.00



Condition Analysis

The Township of Armstrong has adopted a five point condition scale to outline the condition of our road network. This varies from Very Poor to Very Good. Our roads were all visually assessed by our Public Works Department in 2023 using the Ministry of Transportation Pavement Condition Index and Gravel Condition Index. These scales were used to help better ensure consistency with other communities. Beauchamp Boundary Road and Hilliardton Road currently have the lowest condition ranking.

Table 18- Road Condition Index

Condition	Value	Description
Very Good	80 and above	Well Maintained, good condition, new or recently rehabilitated.
Good	60 and above	Acceptable, generally approaching mid stage of expected service life.
Fair	40 and above	Signs of deterioration, some elements exhibit significant deficiencies.
Poor	20 and above	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration.
Very Poor	0 and above	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable.

Our lowest average weighted assessment condition was 48.19 in the Fair category for Rural Local Asphalt Roads. Our highest average weighted assessment condition was 93.13 in the Very Good category for Urban Local Surface Treatment Roads.

Table 19 - Road Condition State

Area	Road Type	Surface Type	Average Condition	Average Condition State
Urban	Arterial	Asphalt	56.61	Fair
		Surface Treatment	N/A	N/A
		Gravel	N/A	N/A
	Local	Asphalt	N/A	N/A
		Surface Treatment	93.13	Very Good
		Gravel	82.48	Very Good
Rural	Arterial	Asphalt	73.49	Good
		Surface Treatment	63.37	Good
		Gravel	69.75	Good
	Local	Asphalt	48.19	Fair
		Surface Treatment	63.31	Good
		Gravel	51.44	Fair



Table 20 - Road Service Attributes

Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong has roads assets including asphalt, surface treated and gravel.	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality: Township size: 90.20km ² Arterial: 0.50 Collector: 0.00 Local Roads: 0.96
Reliability	The Township follows the Pavement Condition Index for the assessment of its pavement conditions.	1. For paved roads in the municipality, the average pavement condition index value: PCI 66.35 (Good) 2. For unpaved roads in the municipality, the average surface condition: GCI 67.89 (Good)



Lifecycle Analysis

Much of the road infrastructure is aging, leading to increased maintenance needs and rehabilitation costs. Limited funding resources and competing priorities pose challenges to addressing deferred maintenance backlog and infrastructure renewal. As equipment gets larger and our population grows the volumes and heavier loads accelerate deterioration necessitating upgrades to accommodate current and future demand. In addition, climate impacts including heavier precipitation, climate variability through freeze thaw cycles, exacerbates distressed and erosion on all types of roads.

The Township determines its road maintenance depending on the type of road:

1. Asphalt Roads: The Township uses crack filling techniques to extend the life of our asphalt roads. As they make up the main throughway this section of road impacts most of the community. A new layer of asphalt is applied every 15 years.

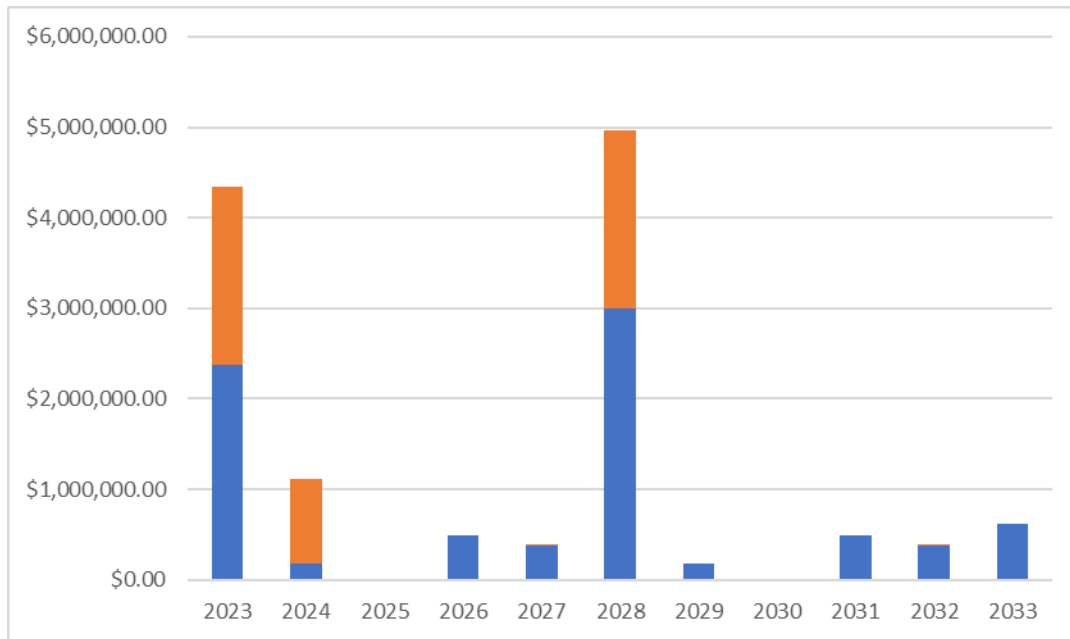
2. Surface-Treated Roads: Surface-treated roads, make up many of our local in town residential areas. These areas are monitored and cracks filled as required. Regular additional layers are added approximately every 5 years to extend the life of the roads as they are worn down.

3. Gravel Roads: Gravel roads are graded regularly and calcium is applied to higher traffic roads to help hold in fines and extend their life. A six inch layer of gravel is added to each road every 5 years as they are worn down.

Currently, 30 roads need more immediate attention with other roads deteriorating during the 10 year evaluation period. The Township has a higher requirement for the condition of Arterial roads compared to its Local roads. This is reflected in the maintenance required and arterial roads may receive attention ahead of a local road depending on its condition. Arterial roads are maintained at an 80 PCI/GCI and local roads are maintained at a 60 PCI/GCI. To maintain our lifecycle we would need an average annual contribution of \$1,182,035 per year for the next 10 years with most of it in a scheduled backlog.



Figure 13 - Road Annual Investment



Bridges and Culverts

State of Local Infrastructure

The Township of Armstrong has six bridges and large culverts throughout the rural area of our community. These bridges and culverts are vital components of our transportation network, facilitating the safe and efficient movement of people, vehicles, and goods across water bodies and other obstacles. Given the rural nature of the community often these bridges and culverts are single access causing either no access or very large detours in the event of a failure.

Table 21- Bridges and Culverts State of Local Infrastructure

Structure Name	Type	Year	BCI	Expected Life Remaning	Replacement Cost
Armstrong/Beauchamp	Culvert	2015	95.3	42	\$877,360.00
Gauthier Road	Culvert	Unknown	57.9	6	\$359,800.00
Mini Farm Road	Bridge	Unknown	69.2	24	\$2,308,520.00
Church Road	Bridge	1981	71.3	20	\$1,508,080.00
Airport	Bridge	2008	61.5	23	\$1,045,512.00
Mini Farm Road	Culvert	Unknown	16	0	\$465,600.00

Condition Analysis

All bridges in Ontario are inspected every 2 years using the Ontario Structure Inspection Manual (OSIM) format. The weighted condition of all elements is summarized in the Bridge Condition Index (BCI). Our structures were last assessed in 2023 by ART Engineering using the BCI index to measure the general condition of the structure. We have two of our structures rated Poor and another two rated Fair. This includes one structure as listed as needing immediate replacement. The Condition scaled used for bridges and large culverts is the one recommended by the engineering firm who conducted the analysis.

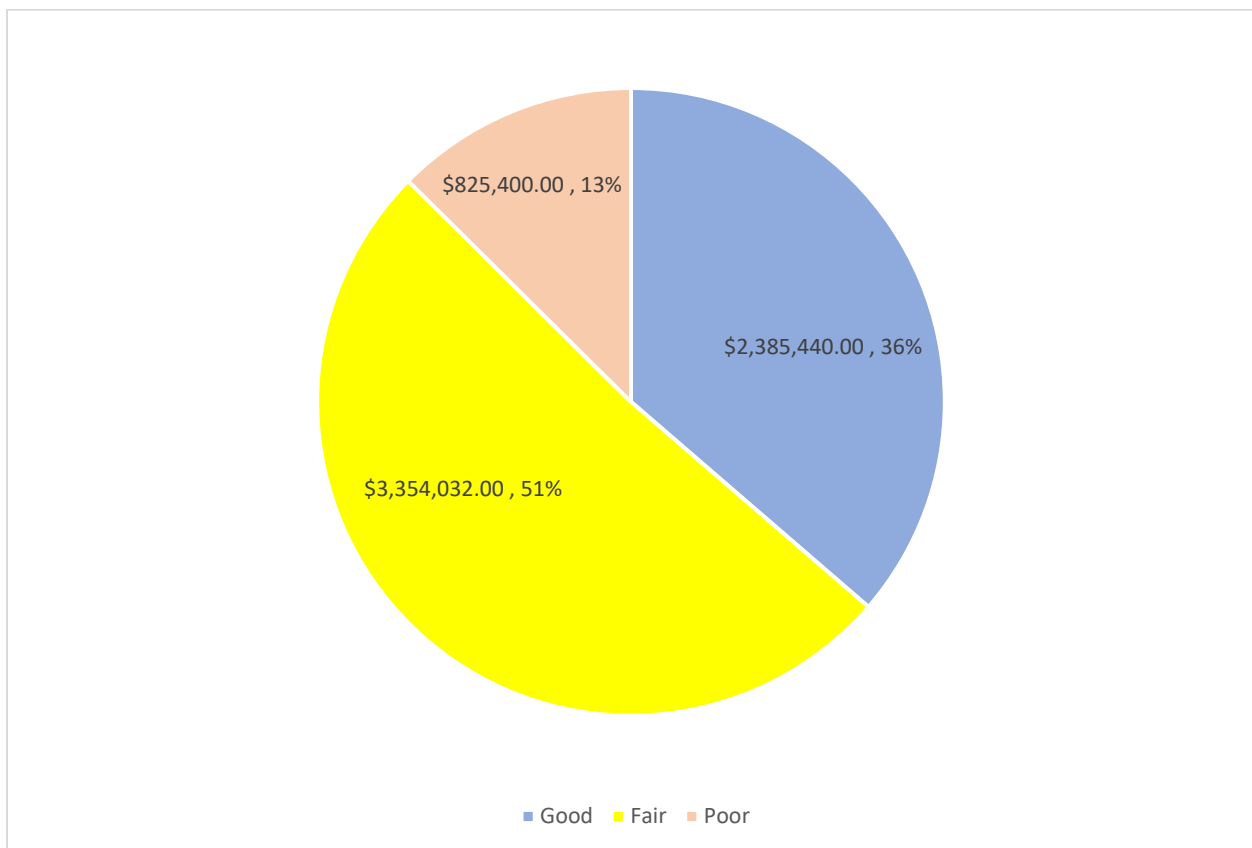
Table 22- Bridge and Culvert Condition Index

Rating	Maintenance Schedule
Good: BCI Range 70-100	Maintenance is not usually required within the next five years.
Fair: BCI Range 60-70	Maintenance work is usually scheduled within the next five years. This is the ideal time to schedule major bridge repairs to get the most out of bridge spending.
Poor: BCI Less than 60	Maintenance work is usually scheduled within one year.



Figure 14- Breakdown of Bridge and Culverts

Structure Name	Type	Year	BCI	Expected Life Remaining	Replacement Cost	Repairs Needed	Annual Contribution	Condition
Armstrong/Beauchamp	Culvert	2015	95.3	42	\$877,360.00	\$8,500.00	\$20,889.52	Good
Gauthier Road	Culvert	Unknown	57.9	6	\$359,800.00	\$81,500.00	\$59,966.67	Poor
Mini Farm Road	Bridge	Unknown	69.2	24	\$2,308,520.00	\$91,900.00	\$96,188.33	Fair
Church Road	Bridge	1981	71.3	20	\$1,508,080.00	\$51,500.00	\$75,404.00	Good
Airport	Bridge	2008	61.5	23	\$1,045,512.00	\$36,830.00	\$45,457.04	Fair
Mini Farm Road	Culvert	Unknown	16	0	\$465,600.00	\$465,600.00	\$465,600.00	Poor





The total replacement cost of all Township bridges is estimated at \$6,564,872 (2023). The Township has the majority of its bridges in Fair condition with 13% in Poor condition and 36% in Good condition. The Mini Farm culvert is listed as needing an immediate replacement.

Table 23- Bridges and Culverts Service Attribute

Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong bridges support motor vehicles, emergency vehicles, farm equipment, and logging trucks.	Percentage of bridges in the municipality with loading or dimensional restrictions: 0
Reliability	The Township follows the BCI condition index and its bridges and large culverts.	1. For bridges in the municipality, the average bridge condition index value: BCI 67.3 2. For structural culverts in the municipality, the average bridge condition index value: BCI 56.4



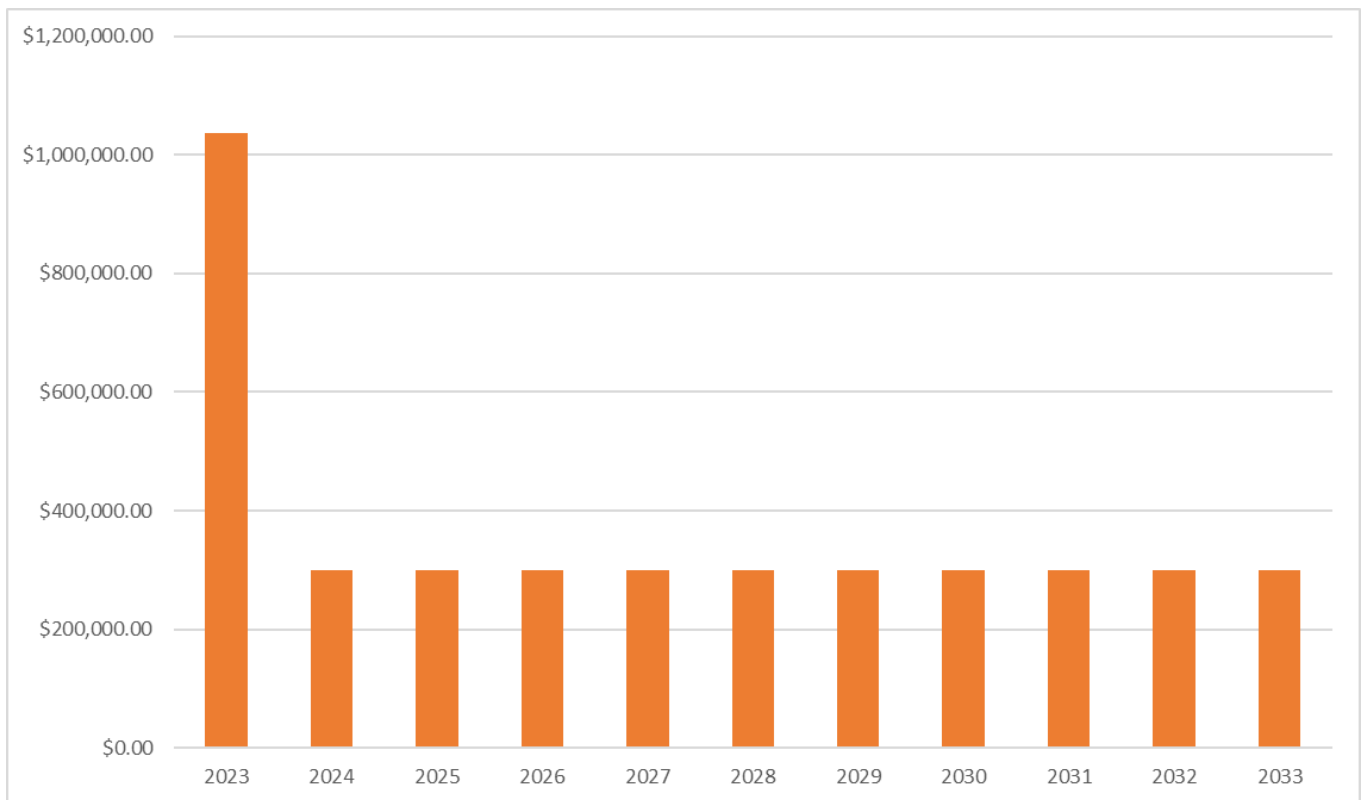
Lifecycle Analysis

The Township takes direction from the engineering report to conduct required maintenance in the next year. The following are the recommendations provided by ART Engineering Inc. for work at each structure in the future over the next 10 years.

Structure	Recommendation	Estimate Cost
Armstrong/Beauchamp Culvert	None	\$8500
Gauthier Road Culvert	Culvert walls and soffit need to be reconstructed at inlet and outlet due to severe disintegration and exposed reinforcing steel. Barrel walls and soffit should be refaced to extend the life of the structure. Vegetation should be cleared from stream bed. Rock protection should be placed on embankments to prevent erosion.	\$81,500
Mini Farm Road Bridge	Deck drains should be extended, railing posts should be repaired, joint seals should be replaced. Concrete repairs required on curb, diaphragm, pier cap, ballast walls, and girder ends. Joints should be re-caulked along deck/curb. Slopes are eroding at abutments.	\$91,900
Church Road Bridge	Concrete spall at SW corner of barrier wall, and small spall on underside of intermediate diaphragm. One missing end cap, and missing fasteners on bridge hand railing. Damaged guiderail posts and panels. Leaking joint seals. Asphalt should be patched/ smoothed out at ballast walls. Rock protection should be placed in front of abutments.	\$51,500
Airport Bridge	Complete a condition survey of the girder ends, diaphragms, and steel diaphragm angles to determine the appropriate remedial actions required to extend the life of the structure. Girders and diaphragms are corroding at a faster rate at the abutments.	\$36,830
Mini Farm Rd Culvert	No signs of structural concern are detectable from roadway, however the structure has failed. The walls of the structure are rotating inward at the bottom and the footing is severely undermined at the south end due to erosion. No one should enter the structure and the structure should be replaced as soon as practically possible.	Replacement of Structure



Figure 15- Capital Expenditures over next 10 years



According to the engineering report the Township will need to invest \$4,012,791 over the next 10 years into its bridges and structural culverts.



Facilities

State of Local Infrastructure

The local infrastructure of the Township of Armstrong encompasses a diverse range of facilities crucial to providing essential services, recreational opportunities and community amenities. Our facility infrastructure has a 2023 replacement value of \$30,679,850 with \$729,200 in interventions over the next 10 years. The Township has the following facilities:

1. **Municipal Office and Library:** The municipal office/library serves as a hub for administrative functions, public meetings, and community services. It provides residents with access to government services, information resources, and recreational programs.
2. **Fire Hall:** The fire hall houses firefighting equipment, vehicles, and personnel essential for emergency response, fire suppression, and public safety. Regular maintenance and equipment upgrades are essential to ensure readiness and effectiveness in emergency situations.
3. **Public Works Garage:** The public works garage serves as a maintenance facility for municipal vehicles, equipment, and machinery used for road maintenance, snow removal, and infrastructure repairs. Proper maintenance and equipment replacement are critical for efficient operations and service delivery.
4. **Water Treatment Plant and Well #4/ Pumphouse and Storage Well #1/ Pumphouse Well #3:** The water treatment plant is responsible for treating and distributing clean and safe drinking water to residents and businesses. Regular monitoring, maintenance, and upgrades are necessary to ensure compliance with regulatory standards and meet the needs of the community.
5. **Pool and Changeroom:** The pool and pool changeroom provide recreational opportunities for residents and visitors, promoting physical activity, wellness, and community engagement. Proper maintenance, lifeguard training, and safety protocols are essential to ensure a safe and enjoyable experience for users.
6. **Wastewater Pumping Station:** The wastewater pumping station is a critical component of the wastewater collection and treatment system, responsible for conveying sewage to treatment facilities. Regular inspections, preventive maintenance, and upgrades are necessary to prevent system failures and protect public health and the environment.
7. **Recreation Centre:** The recreation centre offers a variety of indoor and outdoor recreational facilities and programs, including sports facilities, fitness amenities, and community events. Upgrading facilities, expanding programming, and enhancing accessibility can help meet the evolving needs of the community.



8. Cemetery Vault: The cemetery vault provides dignified and respectful burial services for deceased residents. Proper maintenance and upkeep of the vault infrastructure are essential to ensure the integrity of burial sites and preserve historical records.
9. Sand and Salt Shed: The sand/salt shed stores sand and salt for winter road maintenance and snow removal operations. Adequate storage capacity, inventory management, and equipment maintenance are essential to ensure effective snow and ice control during winter months.
10. Alum Building/ Blower Building: The alum building and blower building house equipment and infrastructure related to wastewater treatment and distribution systems. Regular inspections, equipment calibration, and technological upgrades are necessary to maintain wastewater quality and system reliability.
11. Park and Park Washrooms: The park provides green space, recreational amenities, and natural habitats for residents to enjoy outdoor activities, leisure, and community events. Park maintenance, landscaping, and infrastructure improvements contribute to the overall livability and wellness of the community.

Effective management and maintenance of these facilities are essential to sustaining the quality of life, safety, and well-being of residents in the Township of Armstrong. By prioritizing asset management practices, investing in infrastructure upgrades, and leveraging community partnerships, the Township can continue to provide reliable services and foster a vibrant and resilient community for generations to come. Pictures of our facilities are included as an Appendix.



Condition Analysis

Our facilities were inspected internally by the Chief Building Official, Public Works Superintendent, and Waterworks Superintendent. These visual inspections included evaluating building based on the following where applicable on a scale of 1 to 5:

1. Substructure
2. Shell
3. Interiors
4. Conveyance
5. Plumbing
6. HVAC
7. Fire Protection
8. Electrical
9. Equipment
10. Site

Table 24- Facility Condition Index

Condition Assessment Rating Scale		
Rating	Condition	Description
4.8-5.0	Very Good	No visible defects, new or near new condition, may still be under warranty if applicable
4.0-4.7	Good	Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional
3.0-3.9	Fair	Moderately deteriorated or defective components; but has not exceeded useful life
2.0-2.9	Poor	Defective or deteriorated component(s) in need or replacement; exceeded useful life
1.0-1.9	Very Poor	Critically damaged component(s) or in need of immediate repair; well past useful life

The Township has facilities in the Poor, Fair and Good categories with the Municipal Office and Library in the best shape after receiving upgrades in 2023. The Pool Changeroom is the facility rated worse in the poor category with many upgrades needed during the next 10 year period.



Table 25- Facility Condition Table

	Facility	Condition Rating	Condition	Intervention over next 10 years	Replacement Cost (2023)	Average Age (years)
1	Municipal Office and Library	80.67%	Good	\$ 236,200.00	\$ 1,458,000.00	45
2	Fire Hall	75.58%	Fair	\$ 90,000.00	\$ 1,932,000.00	51
3	Pumphouse and Storage Well#1	79.58%	Fair	\$ 5,000.00	\$ 425,250.00	34
4	Pumphouse Well#3	76.67%	Fair	\$ 5,000.00	\$ 40,050.00	29
5	Public Works Garage	68.77%	Fair	\$ 5,000.00	\$ 2,684,700.00	48
6	Water Treatment Plant and Well #4	77.92%	Fair	\$ 5,000.00	\$ 1,081,600.00	29
7	Pool	74.29%	Fair	\$ -	\$ 2,756,250.00	56
8	Pool Changeroom	59.09%	Poor	\$ 100,000.00	\$ 1,144,000.00	56
9	Park Washrooms	66.24%	Fair	\$ 13,000.00	\$ 84,800.00	43
10	Wastewater Pumping Station	77.93%	Fair	\$ 15,000.00	\$ 392,000.00	20
11	Recreation Centre	71.63%	Fair	\$ 120,000.00	\$ 15,117,400.00	41
12	Cemetery Vault	73.64%	Fair	\$ -	\$ 125,400.00	51
13	Sand and Salt Shed	73.33%	Fair	\$ -	\$ 408,400.00	15
14	Alum Building	77.70%	Fair	\$ 5,000.00	\$ 89,000.00	20
15	Blower Building	78.64%	Fair	\$ 5,000.00	\$ 55,000.00	20
16	Park	80.00%	Good	\$ 125,000.00	\$ 2,886,000.00	6
			TOTAL	\$ 729,200.00	\$ 30,679,850.00	

Table 26 - Service Attributes Facilities

Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong has all its facilities located in the Village of Earlton.	Number of Facility Closures: 0
Reliability	The only facility that has redundancies are the wells which can provide backup for short durations of time. All facilities are therefore vital to the community.	Percentage of Redundant Facilities: 18%



Lifecycle Analysis

The Township has outlined the following Lifecycle analysis for each of its buildings.

Lifecycle Analysis for Local Infrastructure Facilities:

1. Municipal Office/Library:
 - Lifespan: 50 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Regular maintenance, technology upgrades, energy efficiency improvements, space reconfiguration, accessibility enhancements
2. Fire Hall:
 - Lifespan: 50 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Vehicle and equipment maintenance, training programs, facility upgrades, safety inspections, fire prevention initiatives
3. Public Works Garage:
 - Lifespan: 50 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Vehicle and equipment maintenance, facility repairs, energy efficiency improvements, storage optimization, technology upgrades
4. Water Treatment Plant and Well #4/ Pumphouse and Storage Well #1/ Pumphouse Well #3:
 - Lifespan: 50 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Routine maintenance, equipment upgrades, technology modernization, regulatory compliance, capacity expansions, infrastructure rehabilitation
5. Pool and Pool Changeroom:
 - Lifespan: 40 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Regular maintenance, pool liner replacement, filtration system upgrades, safety inspections, accessibility improvements, energy efficiency enhancements
6. Wastewater Pumping Station:
 - Lifespan: 50 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Pump and equipment maintenance, system inspections, capacity upgrades, energy efficiency improvements, odor control measures
7. Recreation Centre:
 - Lifespan: 50 years



- Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Facility maintenance, equipment upgrades, program enhancements, accessibility improvements, energy efficiency retrofits, community engagement initiatives
8. Cemetery Vault:
- Lifespan: 75 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Vault inspections, structural repairs, preservation efforts, record management, landscaping maintenance, historical documentation
9. Sand Shed:
- Lifespan: 40 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Sand and salt replenishment, structural inspections, roof repairs, ventilation system maintenance, inventory management, environmental compliance
10. Alum Building and Blower Building:
- Lifespan: 50 years
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Equipment maintenance, technology upgrades, corrosion prevention, energy efficiency improvements, process optimization, regulatory compliance
11. Park and Park Washrooms:
- Lifespan: Indefinite (with ongoing maintenance and enhancements)
 - Lifecycle Stages: Planning, design, construction, operation, maintenance, renovation/replacement
 - Key Activities: Landscape maintenance, infrastructure repairs, amenities upgrades, biodiversity conservation, community programming, master planning

Most lifecycle upgrades will focus on emergency efficiency, accessibility and structural requirements to extend the life of our facilities. The facilities will need \$729,200 in interventions in the next 10 years and would require an average annual investment of \$634,304 to ensure future continuity.



Fleet and Shop Equipment

State of Local Infrastructure

The local fleet equipment infrastructure encompasses a diverse range of vehicles and machinery essential for maintaining and enhancing public services, infrastructure, and community amenities. This includes loaders, graders, plow trucks, pickup trucks, fire trucks and other specialized vehicles deployed for road maintenance, snow removal, landscaping, waste management, and public safety operations.

Examples of the function of current equipment:

1. **Loader:** Loaders are crucial for material handling, earthmoving, and construction activities, including road maintenance, excavation, and landscaping projects. Regular maintenance is essential to ensure operational efficiency, including lubrication, fluid checks, and component inspections. The Township has a single loader which makes this piece of equipment extremely important.
2. **Grader:** Graders play a vital role in maintaining road surfaces, leveling gravel roads, and shaping ditches and embankments, and snow plowing. Routine inspections and servicing of the engine, hydraulics, blade, and tires are necessary to optimize grader performance and extend service life. The Township has a single loader which makes this piece of equipment extremely important.
3. **Plow trucks:** Plow trucks are indispensable for snow and ice removal operations during winter months, ensuring safe and accessible roadways for motorists and pedestrians. Pre-season equipment checks, including blade integrity, hydraulic system functionality, and salt/sand spreader calibration, are critical for effective snow management.
4. **Pickup Trucks:** Pickup trucks serve multiple functions, including transportation of personnel, equipment, and materials, as well as general utility tasks such as towing, hauling, and emergency response. Regular vehicle inspections, maintenance scheduling, and fleet tracking software utilization help ensure fleet readiness and operational reliability.
5. **Specialized Vehicles:** Specialized vehicles, such as sidewalk cleaners, Zambonis, and emergency response vehicles, fulfill specific operational requirements related to waste management, infrastructure maintenance, and public safety. Comprehensive training programs, preventive maintenance schedules, and equipment calibration procedures are essential for optimizing vehicle performance and operator safety. Our fire department services three organized as well as many unorganized townships and provides extraction services to the busy Highway 11. Ensuring these vehicles function is essential to public safety.



Table 27- Fleet State of Local Infrastructure

Type	Brand	Vehicle	Department	Age Type	Total
Equipment	John Deere Loader	544E	Public Works	Hours/Mileage	24599
Equipment	John Deere Tractor	4300 - Lawn	Public Works	Hours/Mileage	4636
Equipment	John Deer Grader	772G	Public Works	Hours/Mileage	10249
Vehicle	Sterling Plow & Wing	L9500	Public Works	Hours/Mileage	198972
Equipment	Case 1H Tractor	485	Public Works	Hours/Mileage	3500
Vehicle	GMC pickup truck	Sierra 2WD	Recreation	Hours/Mileage	213364
Equipment	John Deere Backhoe	310SJ	Public Works	Hours/Mileage	4969
Vehicle	GMC Rescue Van	5500	Fire Department	Years	
Equipment	Ice Resurfacer	Champion	Recreation	Hours/Mileage	2000
Vehicle	Freightliner Water Pumper	FL 80	Fire Department	Years	
Vehicle	Chevrolet pickup truck	Silverado 1500 4X4	Waterworks	Hours/Mileage	57793
Vehicle	Chevrolet Pickup Truck	Silverado 2500HD 4X4	Public Works	Hours/Mileage	52254
Equipment	Steamer	Thompson	Public Works	Years	
Vehicle	Asphodel Fire Truck	3000 Gallon Tanker	Fire Department	Years	
Vehicle	Freightliner	114SD	Public Works	Hours/Mileage	600

Condition Analysis

The Township understands that when it comes to vehicles often when 100% life is reached the equipment or vehicle may still be functional but reliability will be affected. It is at this point that the Township will begin exploring its options for replacement. With a limited fleet each piece is essential for the safety of the community.

Table 28- Fleet Condition Index

Condition	Value		Description
Very Good	45%	and below	No concerns.
Good	90%	46%	Deterioration causes minimal influence on use of vehicle. Occasional concerns raised by users.
Fair	100%	91%	Some deterioration beginning to be reflected in minor restrictions on operational uses. Concerns from users.
Poor	125%	101%	Regular complaints from users.
Very Poor	126%	and above	Generally not suitable for use.

The Township of Armstrong has three pieces of equipment in the “Poor” condition and due for immediate replacement at an estimated replacement cost of \$328,282. This includes the Loader, Tractor, and Grader which are all over 100% of their expected life. This is concerning as these three pieces of equipment and required to operate the Township and are generally no funding is available. Further to this a plow truck – one of only two in our fleet in northern Ontario – is due for replacement in 2024.



Table 29- Fleet Condition

Brand	% of Life	Vehicle Year	Year Bought	Year of Replacement	Purchase Price	Replacement Cost	Residual Value	Condition
John Deere Loader	123%	1991	2003	2023	\$ 16,507.00	\$ 25,467.00	\$ 2,546.70	Poor
John Deere Tractor	116%	2001	2001	2023	\$ 31,838.00	\$ 51,473.06	\$ 5,147.31	Poor
John Deere Grader	102%	2009	2013	2023	\$ 194,925.00	\$ 251,342.32	\$ 25,134.23	Poor
Sterling Plow & Wing	88%	2004	2016	2024	\$ 200,000.00	\$ 246,620.00	\$ 24,662.00	Good
Case 1H Tractor	88%	1987	1987	2027	\$ 18,662.00	\$ 42,771.58	\$ 4,277.16	Good
GMC pickup truck	85%	2012	2012	2028	\$ 35,000.00	\$ 45,600.00	\$ 4,560.00	Good
John Deere Backhoe	58%	2011	2013	2024	\$ 98,452.80	\$ 126,948.08	\$ 12,694.81	Good
GMC Rescue Van	56%	2009	2009	2034	\$ 175,000.00	\$ 242,131.00	\$ 24,213.10	Good
Ice Resurfacer	50%	1986	1993	2026	\$ -	\$ 75,000.00	\$ 7,500.00	Good
Freightliner Water Pumper	46%	2000	2002	2050	\$ 245,000.00	\$ 338,984.00	\$ 33,898.40	Good
Chevrolet pickup truck	23%	2022	2022	2035	\$ 47,600.00	\$ 49,502.00	\$ 4,950.20	Very Good
Chevrolet Pickup Truck	21%	2019	2018	2032	\$ 58,848.00	\$ 69,590.00	\$ 6,959.00	Very Good
Steamer	20%	2019	2019	2039	\$ 30,000.00	\$ 34,480.23	\$ 3,448.02	Very Good
Asphodel Fire Truck	20%	2013	2015	2063	\$ 226,000.00	\$ 281,745.00	\$ 28,174.50	Very Good
Freightliner	0%	2024	2024	2044	\$ 319,000.00	\$ 319,000.00	\$ 31,900.00	Very Good



Table 30- Fleet Service Attributes

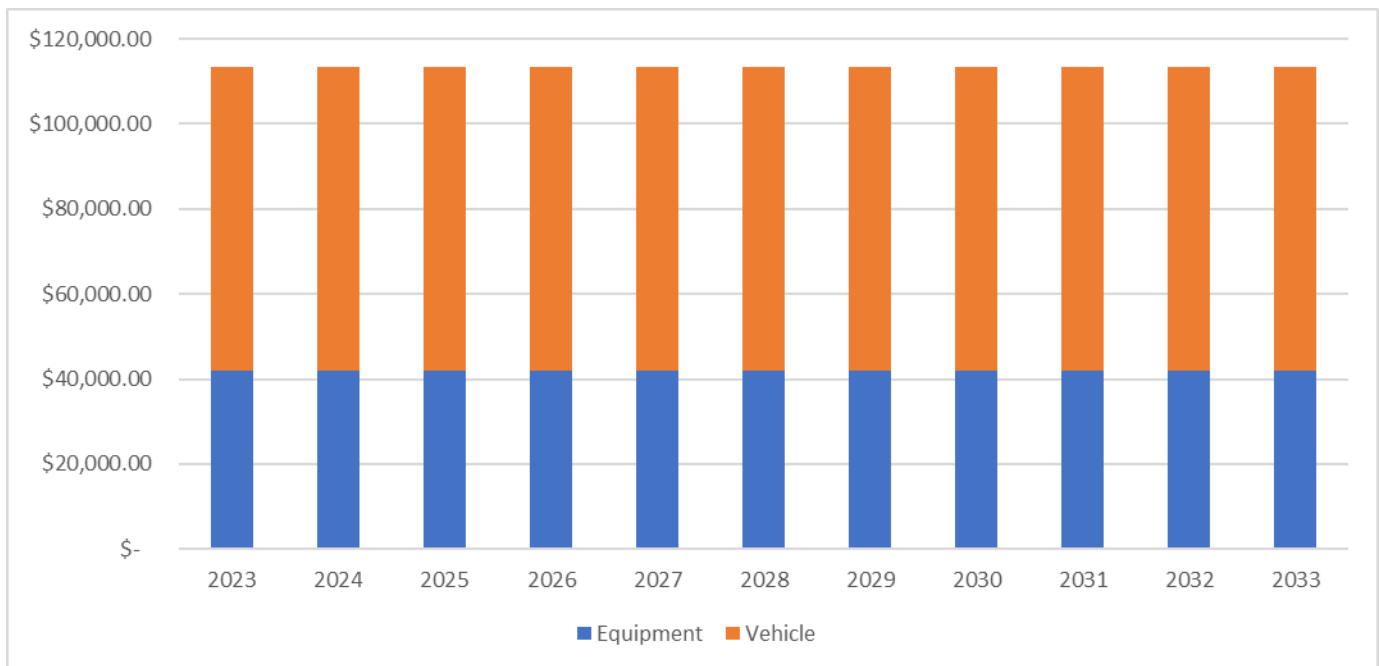
Service Attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	The Township of Armstrong owns a variety of fleet and equipment assets. We keep only the assets which are needed as we are a small community with limited backup.	Number of road lane kilometres per Snow Removal Vehicle: 44km per vehicle Number of Residents per Emergency Vehicles: 400 residents per vehicle
Reliability	The reliability of our equipment is key as there are no redundancies. The equipment is continuously maintained by staff and if we have any issues are serviced by licensed technicians.	Annual repair costs as a percentage of replacement cost of vehicles: 2%



Lifecycle Analysis

Much of the fleet equipment is aging, leading to increased maintenance costs, reduced reliability, and decreased operational efficiency. Strategic fleet replacement planning and equipment modernization initiatives are necessary to address obsolescence and mitigate service disruptions. We have now inventoried and done a condition assessment on our fleet to establish a baseline for lifecycle analysis. The Township conducts regular maintenance on its equipment to extend its life and will continue to do so. We will also work to prioritize equipment but at an annual lifecycle cost of \$116,899 the Township will likely struggle to meet its equipment replacement obligations. At the time of replacement the Township will look at any technology integration, new environmental compliance in an effort to be more efficient and reduce overall costs.

Figure 16- Fleet Average Annual Contribution





Appendix

Water

Asset ID	Size (mm)	Material	Length (m)	Year Installed	Notes
1	150	PVC	206.39	1992	
2	150	PVC	38.85	1992	
3	150	PVC	94.29	1992	
4	150	PVC	303.24	1992	
5	150	PVC	36.76	1992	
6	150	PVC	14.25	1992	
7	150	PVC	4.91	1992	
8	150	PVC	4.03	1992	
9	150	PVC	4.26	1992	
10	150	PVC	45.84	1992	
11	150	PVC	73.53	1992	Raw water LineWell # 3 and #1
12	150	PVC	37	1992	
13	150	PVC	5.33	1992	
14	150	PVC	5.7	1992	
15	150	PVC	103.96	1992	
16	150	PVC	41.49	1992	
17	150	PVC	23.37	1992	
18	150	PVC	2.25	1992	
19	150	PVC	4.48	1992	
20	150	PVC	92.32	1992	
21	150	PVC	14.17	1992	
22	150	PVC	191.51	1992	
23	150	PVC	6.13	1992	
24	150	PVC	7.68	1992	
25	150	PVC	90.18	1992	
26	150	PVC	4.91	1992	
27	150	PVC	5.41	1992	
28	150	PVC	4.69	1992	
29	150	PVC	192.1	1992	
30	150	PVC	14.83	1992	
31	150	PVC	4.69	1992	
32	150	PVC	4.9	1992	
33	150	PVC	5.76	1992	
34	150	PVC	99.01	1992	
35	150	PVC	4.83	1992	
36	150	PVC	6.41	1992	
37	150	PVC	38.26	1992	
38	150	PVC	71.86	1992	



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39	150	PVC	140.87	1992
40	150	PVC	40.9	1992
41	150	PVC	7.39	1992
42	150	PVC	230.12	1992
43	150	PVC	51.38	1992
44	150	PVC	4.82	1992
45	150	PVC	6.13	1992
46	150	PVC	39.09	1992
47	150	PVC	52.19	1992
48	150	PVC	6.04	1992
49	150	PVC	6.56	1992
50	150	PVC	98.36	1992
51	150	PVC	5.16	1992
52	150	PVC	5.81	1992
53	150	PVC	4.85	1992
54	150	PVC	52.52	1992
55	150	PVC	44.75	1992
56	150	PVC	95.27	1992
57	150	PVC	4.69	1992
58	150	PVC	5.6	1992
59	150	PVC	5.28	1992
60	150	PVC	59.12	1992
61	150	PVC	38.56	1992
62	150	PVC	6.66	1992
63	150	PVC	7	1992
64	150	PVC	92.34	1992
65	150	PVC	4.54	1992
66	150	PVC	5.6	1992
67	150	PVC	5.28	1992
68	150	PVC	94.66	1992
69	150	PVC	88.11	1992
70	150	PVC	91.46	1992
71	150	PVC	6.56	1992
72	150	PVC	6.03	1992
73	150	PVC	6.12	1992
74	150	PVC	100.52	1992
75	150	PVC	91.41	1992



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76	150	PVC	55.65	1992	
77	150	PVC	51.37	1992	
78	150	PVC	66.63	1992	
79	150	PVC	3.88	1992	
80	150	PVC	5.3	1992	
81	150	PVC	89.71	1992	
82	150	PVC	16.27	1992	
83	150	PVC	189.81	1992	
84	150	PVC	3.92	1992	
85	150	PVC	5.06	1992	
86	150	PVC	182.76	1992	
87	150	PVC	9.22	1992	
88	150	PVC	3.4	1992	
89	150	PVC	5.49	1992	
90	150	PVC	85.71	1992	
91	150	PVC	15.35	1992	
92	150	PVC	201.03	1992	
93	150	PVC	3.78	1992	
94	150	PVC	4.53	1992	
95	150	PVC	6.1	1992	
96	150	PVC	824.48	1992	Raw Water Line Well #3 and Well #1
97	150	PVC	15.33	1992	
98	150	PVC	197	1992	
99	150	PVC	3.74	1992	
100	150	PVC	2.83	1992	
101	150	PVC	2.94	1992	
102	150	PVC	98.07	1992	
103	150	PVC	209.73	1992	
104	150	PVC	4.54	1992	
105	150	PVC	5.7	1992	
106	150	PVC	3.68	1992	
107	150	PVC	95.95	1992	
108	150	PVC	186.49	1992	
109	150	PVC	3.67	1992	
110	150	PVC	6.13	1992	
111	150	PVC	94.9	1992	
112	150	PVC	4.96	1992	



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113	150	PVC	8.85	1992
114	150	PVC	89.07	1992
115	150	PVC	177.86	1992
116	150	PVC	112.31	1992
117	150	PVC	3.89	1992
118	150	PVC	12.82	1992
119	150	PVC	189.44	1992
120	150	PVC	100.84	1992
121	150	PVC	11.81	1992
122	150	PVC	187.92	1992
123	150	PVC	3.77	1992
124	150	PVC	4.48	1992
125	150	PVC	94.46	1992
126	150	PVC	4.05	1992
127	150	PVC	197.85	1992
128	150	PVC	17.06	1992
129	150	PVC	14.76	1992
130	150	PVC	92.48	1992
131	150	PVC	125.69	1992
132	150	PVC	117.09	1992
133	150	PVC	7.41	1992
134	150	PVC	3.46	1992
135	150	PVC	43.92	1992
136	150	PVC	144.1	1992
137	150	PVC	57.7	1992
138	150	PVC	5.01	1992
139	150	PVC	89.35	1992
140	150	PVC	8.56	1992
141	150	PVC	5.13	1992
142	150	PVC	9.14	1992
143	150	PVC	155.21	1992
144	150	PVC	40.72	1992
145	150	PVC	87.22	1992
146	150	PVC	52.38	1992
147	150	PVC	5.9	1992
148	150	PVC	14.07	1992
149	150	PVC	59.49	1992



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150	150	PVC	176.4	1992
151	150	PVC	4.2	1992
152	150	PVC	84.18	1992
153	150	PVC	5.47	1992
154	150	PVC	108.06	1992
155	150	PVC	4.05	1992
156	150	PVC	4.9	1992
157	150	PVC	182.04	1992
158	150	PVC	301.63	1992
159	150	PVC	115.56	1992
160	150	PVC	4.91	1992
161	150	PVC	6.04	1992
162	150	PVC	43.44	1992
163	150	PVC	257.71	1992
164	150	PVC	135.81	1992
165	150	PVC	41.8	1992
166	150	PVC	252.01	1992
167	150	PVC	1.05	1992
168	150	PVC	17.04	1992
169	150	PVC	122.86	1992
170	150	PVC	4	1992
171	150	PVC	21.54	1992
172	150	PVC	104.51	1992
173	150	PVC	243.99	1992
174	150	PVC	3.06	1992
175	150	PVC	272.97	1992
176	150	PVC	37.78	1992
177	150	PVC	2.05	1992
178	150	PVC	8.43	1992



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Asset Management Plan

Wastewater

Asset ID	Size (mm)	Material	In-Service Date	Length (m)	Notes
1	200	Asbestos Cement	1974	105.03	
256	200	Asbestos Cement	1974	98.03	
267	200	Asbestos Cement	1974	105.03	
278	200	Asbestos Cement	1974	96.03	
289	200	Asbestos Cement	1974	79.02	
300	200	Asbestos Cement	1974	101.62	
311	200	Asbestos Cement	1974	8.34	
322	200	Asbestos Cement	1974	9.19	
333	200	Asbestos Cement	1974	116.66	
230	200	Asbestos Cement	1974	90.03	
241	200	Asbestos Cement	1974	105.84	
248	200	Asbestos Cement	1974	94.53	
249	200	Asbestos Cement	1974	91.03	
250	200	Asbestos Cement	1974	45	
254	200	Asbestos Cement	1974	107.67	
255	200	Asbestos Cement	1974	102.63	
257	200	Asbestos Cement	1974	99.55	
258	200	Asbestos Cement	1974	102.23	
259	200	Asbestos	1974	100.23	



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		Cement		
		Asbestos		
260	200	Cement	1974	53.19
		Asbestos		
261	200	Cement	1974	100.23
		Asbestos		
262	200	Cement	1974	100.83
		Asbestos		
263	200	Cement	1974	102.53
		Asbestos		
264	200	Cement	1974	98.63
		Asbestos		
265	200	Cement	1974	99.03
		Asbestos		
266	200	Cement	1974	100.23
		Asbestos		
268	200	Cement	1974	98.83
		Asbestos		
269	200	Cement	1974	101.33
		Asbestos		
270	200	Cement	1974	101.63
		Asbestos		
271	200	Cement	1974	96.83
		Asbestos		
272	200	Cement	1974	44.91
		Asbestos		
275	200	Cement	1974	42.52
		Asbestos		
276	200	Cement	1974	71.42
		Asbestos		
277	200	Cement	1974	72.62
		Asbestos		
279	200	Cement	1974	98.73
		Asbestos		
280	200	Cement	1974	102.33
		Asbestos		
281	250	Cement	1974	105.13
		Asbestos		
282	250	Cement	1974	109.63
283	200	Asbestos	1974	46.51



Township of Armstrong Asset Management Plan

		Cement		
		Asbestos		
284	200	Cement	1974	76.22
		Asbestos		
285	200	Cement	1974	77.82
		Asbestos		
286	200	Cement	1974	83.42
		Asbestos		
287	200	Cement	1974	40.01
		Asbestos		
288	250	Cement	1974	54.02
		Asbestos		
290	200	Cement	1974	12.4
		Asbestos		
291	200	Cement	1974	100.54
		Asbestos		
292	200	Cement	1974	79.02
		Asbestos		
293	200	Cement	1974	79.94
		Asbestos		
294	200	Cement	1974	90.03
		Asbestos		
295	200	Cement	1974	24.16
		Asbestos		
296	200	Cement	1974	42.28
		Asbestos		
297	200	Cement	1974	21.01
		Asbestos		
298	200	Cement	1974	84.03
		Asbestos		
299	200	Cement	1974	66.02
		Asbestos		
301	200	Cement	1974	90.03
		Asbestos		
302	200	Cement	1974	97.55
		Asbestos		
303	200	Cement	1974	102.03
		Asbestos		
304	200	Cement	1974	99.63
305	200	Asbestos	1974	66.32



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		Cement		
		Asbestos		
306	200	Cement	1974	88.03
		Asbestos		
307	200	Cement	1974	53.02
		Asbestos		
308	200	Cement	1974	115.03
		Asbestos		
309	200	Cement	1974	84.53
		Asbestos		
310	200	Cement	1974	126.54
		Asbestos		
312	200	Cement	1974	99.53
		Asbestos		
336	200	Cement	1974	62.81
		Asbestos		
342	250	Cement	1974	133.06
		Asbestos		
236	200	Cement	1974	125.62
		Asbestos		
237	200	Cement	1974	86.65
		Asbestos		
233	200	Cement	1974	45.96
		Asbestos		
234	200	Cement	1974	10.02
		Asbestos		
246	200	Cement	1974	22.99
235	450	Plastic	2006	13.79
238	250	Plastic	2006	53.17
239	375	Plastic	2006	5.6
240	375	Plastic	2006	100.1
242	450	Plastic	2006	59.67
243	450	Plastic	2006	12.86
244	450	Plastic	2006	85.09
245	375	Plastic	2006	13.63
343	450	Plastic	2006	51.8
231	375	Plastic	2006	95.69
232	375	Plastic	2006	49.25
337	450	Plastic	2006	89.37



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338	450	Plastic	2006	112.77
339	450	Plastic	2006	121.92
340	450	Plastic	2006	46.93
341	450	Plastic	2006	88.48
313	30	Plastic	2006	81.41
314	200	Plastic	2006	19.51
315	300	Plastic	2006	41.01
316	300	Plastic	2006	105.03
317	300	Plastic	2006	302.73
318	200	Plastic	2006	107.03
319	200	Plastic	2006	112.53
320	200	Plastic	2006	109.73
321	200	Plastic	2006	109.73
323	375	Plastic	2006	48.95
324	375	Plastic	2006	83.59
325	375	Plastic	2006	9.88
326	375	Plastic	2006	50.39
327	375	Plastic	2006	56.41
328	375	Plastic	2006	106.34
329	375	Plastic	2006	44.38
330	375	Plastic	2006	53.49
331	375	Plastic	2006	10.35
332	375	Plastic	2006	106.57
334	450	Plastic	2006	98.82
335	375	Plastic	2006	97.46
273	300	Plastic	2006	105.92
274	300	Plastic	2006	100.03
251	200	Plastic	2006	44.36
252	375	Plastic	2006	103.8
253	375	Plastic	2006	103.43
247	200	Plastic	2016	63.11



Township of Armstrong Asset Management Plan

Stormwater

ID (Auto)	Picture ID (Folder Name)	Road	Diameter	Length (m)	Material	Type	Year Installed	Condition	Notes	Road Type
1	1	Airport	350	12	Metal	Road	2000	Good		Arterial
2	2	Bouchamp	400	11	Plastic	Entrance	2000	Good		Local
3	3	Mini farm	460	15	Metal	Entrance	2000	Good		Local
4	4	Polyure	380	11	Metal	Entrance	2000	Good		Local
5	5	Mini farm east	340	13	Metal	Entrance	2015	Good		Local
6	6	Church	380	24	Plastic	Road	2000	Good		Local
7	7	Hill	380	8	Metal	Entrance	2000	Good		Local
8	8	Poupore	600	21	Metal	Road	2000	Good		Local
9	9	Grav	300	30	Plastic	Entrance	2021	Good		Local
10	10	Church	300	9	Plastic	Entrance	2000	Good		Local
11	11	Rivard	400	9	Metal	Entrance	2000	Good		Local
12	12	Mini farm	600	17	Metal	Entrance	2015	Good		Local
13	13	Airport	450	18	Metal	Road	2000	Good		Arterial
14	14	Poupore	600	18	Metal	Entrance	2000	Good		Local
15	15	Church	250	6	Plastic	Entrance	2000	Good		Local
16	16	Bouchamp	400	8	Metal	Entrance	2000	Fair		Local
17	17	Bouchamp	400	8	Metal	Entrance	2000	Fair		Local
18	18	Hillardton	380	15	Plastic	Entrance	2000	Good		Local
19	19	Air	300	8	Plastic	Entrance	2020	Very Good		Arterial
20	20	Gravel	300	40	Plastic	Entrance	2023	Very Good		Local
21	21	Rivard	460	18	Plastic	Road	2000	Good		Local
22	22	Church	450	9	Metal	Entrance	2000	Good		Local
23	23	Airport	400	12	Plastic	Entrance	2015	Good		Arterial
24	24	Curch	200	9	Plastic	Entrance	2000	Good		Local
25	25	Gravel	300	11	Plastic	Entrance	2022	Good		Local
26	26	Gauthier	760	15	Plastic	Road	2015	Good		Local
27	27	Airport	400	11	Metal	Entrance	2000	Poor		Arterial
28	28	Polyure	760	10	Metal	Entrance	2000	Poor		Local
29	29	Gravel	380	16	Plastic	Entrance	2000	Good		Local
30	30	Poupore	250	19	Metal	Entrance	2000	Poor		Local
31	31	Lagoon	200	12	Plastic	Entrance	2000	Good		Local
32	32	Gravel	380	22	Metal	Entrance	2000	Good		Local
33	33	Hillardton	300	18	Metal	Road	2000	Fair		Local



Township of Armstrong Asset Management Plan

34	34	Church	250	9	Plastic	Entrance	2000	Good	Local
35	35	Polyure east	800	9	Metal	Entrance	2000	Fair	Local
36	36	Hillardton	300	9	Metal	Entrance	2000	Good	Local
37	37	Gravel	460	15	Metal	Entrance	2000	Good	Local
38	38	Church	300	9	Plastic	Entrance	2015	Good	Local
39	39	Bouchamp	600	30	Metal	Road	2000	Fair	Local
40	40	Hill	460	9	Metal	Entrance	2020	Good	Local
41	41	Mini farm	380	9	Metal	Entrance	2000	Good	Local
42	42	Hillardton	380	12	Plastic	Entrance	2000	Good	Local
43	43	Airport	460	18	Metal	Entrance	2000	Good	Arterial
44	44	Polyure east	700	7	Metal	Entrance	2000	Good	Local
45	45	Gravel	750	18	Plastic	Road	2000	Poor	Local
46	46	Church	500	6	Metal	Entrance	2000	Fair	Local
47	47	Rivard	380	15	Plastic	Entrance	2015	Good	Local
48	48	Gravel	460	8	Metal	Entrance	2000	Good	Local
49	49	Poupore	760	18	Metal	Entrance	2000	Very Poor	Local
50	50	Gravel	600	12	Plastic	Entrance	2000	Good	Local
51	51	Miller south	460	12	Metal	Entrance	2000	Poor	Local
52	52	Hill	380	17	Plastic	Entrance	2000	Good	Local
53	53	Dairy lane	560	24	Metal	Entrance	2000	Poor	Local
54	54	Church	1800	20	Cement	Road	2000	Good	Local
55	55	Mini	300	13	Plastic	Entrance	2000	Good	Local
56	56	Hillardton	500	17	Metal	Entrance	2000	Fair	Local
57	57	Bouchamp boundary south	600	8	Plastic	Entrance	2000	Good	Local
58	58	Gauthier	380	20	Metal	Entrance	2000	Good	Local
59	59	Dairy lane	300	11	Plastic	Entrance	2000	Good	Local
60	60	Mini farm	460	32	Metal	Road	2000	Good	Local
61	61	Rivard	900	26	Plastic	Road	2000	Good	Local
62	62	Mini farm	800	22	Metal	Road	2000	Fair	Local
63	63	Dairy lane	380	15	Metal	Road	2000	Good	Local
64	64	Poupore	17	380	Metal	Road	2000	Good	Local
65	65	Mini farm	300	45	Plastic	Entrance	2000	Good	Local
66	66	Poly	700	25	Metal	Road	2000	Good	Local
67	67	Airport	200	24	Plastic	Entrance	2015	Fair	Arterial
68	68	Hillardton	380	15	Plastic	Entrance	2015	Good	Local
69	69	Hill	460	10	Metal	Entrance	2000	Good	Local
70	70	Hillardton	600	18	Metal	Entrance	2000	Good	Local



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71	71	Dairy lane	460	13	Plastic	Entrance	2000	Good	Local
72	72	Mini farm	460	17	Plastic	Road	2015	Very Good	Local
73	73	Dairy lane	300	12	Plastic	Entrance	2000	Good	Local
74	74	Hillardton	1250	26	Metal	Road	2000	Good	Local
75	75	Lagoon	450	12	Plastic	Road	2000	Good	Local
76	76	Dairy lane	380	13	Metal	Road	2015	Good	Local
77	77	Gauthier	380	15	Plastic	Entrance	2023	Very Good	Local
78	78	Gravel	300	16	Plastic	Entrance	2015	Good	Local
79	79	Church	300	6	Metal	Entrance	200	Fair	Local
80	80	Mini	300	17	Plastic	Entrance	2000	Good	Local
81	81	Mini farm	200	29	Plastic	Entrance	2000	Good	Local
82	82	Airport	360	9	Cement	Entrance	2000	Good	Arterial
83	83	Church	12	24	Cement	Road	2000	Poor	Local
84	84	Church	450	12	Wood	Entrance	2000	Fair	Local
85	85	Polyure	300	15	Plastic	Entrance	2000	Good	Local
86	86	Bouchamp	400	20	Metal	Road	2000	Good	Local
87	87	Hillardton	400	15	Plastic	Entrance	2000	Good	Local
88	88	Mini farm	900	18	Plastic	Entrance	2000	Good	Local
89	89	Gravel	600	150	Plastic	Entrance	2000	Good	Local
90	90	Poupore	400	24	Metal	Entrance	2000	Good	Local
91	91	Poupore	530	17	Plastic	Entrance	2015	Very Good	Local
92	92	Dairy lane	260	90	Plastic	Entrance	2015	Good	Local
93	93	Church	300	6	Metal	Entrance	2000	Poor	Local
94	94	Airport	200	12	Plastic	Entrance	2000	Good	Arterial
95	95	Poly	250	14	Metal	Entrance	2000	Fair	Local
96	96	Hillardton	400	8	Plastic	Entrance	2000	Fair	Local
97	97	Gauthier	460	11	Metal	Entrance	2000	Fair	Local
98	98	Poupore	380	15	Metal	Road	2000	Good	Local
99	99	Church	200	18	Plastic	Entrance	2000	Good	Local
100	100	Hillardton	950	20	Metal	Road	2000	Good	Local
101	101	Hillardton	380	12	Plastic	Entrance	2000	Good	Local
102	102	Poupore	200	9	Metal	Entrance	2000	Good	Local
103	103	Poly	900	27	Metal	Road	2000	Good	Local
104	104	Hillardton	380	12	Metal	Entrance	2000	Good	Local
105	105	Gravel	300	16	Plastic	Entrance	2015	Good	Local
106	106	Church	450	18	Plastic	Road	2000	Good	Local
107	107	Poupore	300	12	Metal	Entrance	2000	Good	Local



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108	108	Mini farm	800	35	Metal	Road	2000	Good	Local
109	109	Airport	600	12	Metal	Entrance	2000	Very Good	Arterial
110	110	Rivard	360	16	Plastic	Entrance	2000	Good	Local
111	111	Gravel	530	26	Plastic	Entrance	2015	Good	Local
112	112	Dairy lane	760	13	Plastic	Road	2015	Very Good	Local
113	113	Rivard	300	17	Plastic	Entrance	2000	Fair	Local
114	114	Church	200	6	Plastic	Entrance	2000	Good	Local
115	115	Mini farm	900	9	Metal	Entrance	2000	Fair	Local
116	116	Gravel	460	9	Metal	Entrance	2000	Good	Local
117	117	Poupore	460	10	Metal	Entrance	2000	Good	Local
118	118	Hillardton east	600	12	Metal	Road	2000	Good	Local
119	119	Mini farm	300	12	Plastic	Entrance	2000	Good	Local
120	120	Gravel	380	18	Plastic	Entrance	2000	Good	Local
121	121	Rivard	380	15	Metal	Entrance	2000	Good	Local
122	122	Airport	460	9	Cement	Entrance	2000	Good	Arterial
123	123	Gauthier	46	17	Metal	Entrance	2000	Good	Local
124	124	Hillardton	600	12	Metal	Entrance	2000	Good	Local
125	125	Poupore	400	155	Metal	Entrance	2000	Good	Local
126	126	Dairy lane	460	10	Metal	Entrance	2000	Fair	Local
127	127	Mini farm	260	7	Plastic	Entrance	2000	Good	Local
128	128	Bouchamp	360	15	Metal	Entrance	2000	Fair	Local
129	129	Hillardton	600	12	Plastic	Entrance	2000	Good	Local
130	130	Dairy lane	460	15	Plastic	Entrance	2015	Good	Local
131	131	Church	400	12	Plastic	Entrance	2000	Good	Local
132	132	Rivard	430	9	Plastic	Entrance	2000	Good	Local
133	133	Church	700	30	Metal	Road	2000	Fair	Local
134	134	Polyure	460	19	Metal	Entrance	2000	Good	Local
135	135	Evantrual	840	11	Metal	Entrance	2000	Good	Local
136	136	Mini farm	600	11	Metal	Entrance	2000	Good	Local
137	137	Polyure	250	12	Plastic	Entrance	2000	Good	Local
138	138	Hillardton	360	15	Plastic	Entrance	2000	Good	Local
139	139	Dairy lane	460	20	Plastic	Entrance	2015	Good	Local
140	140	Church	300	30	Plastic	Entrance	2000	Good	Local
141	141	Mini farm	200	8	Plastic	Entrance	2000	Good	Local
142	142	Miller	600	20	Plastic	Road	2000	Good	Local
143	143	Mini farm	1830	50	Cement	Road	2000	Fair	Local
144	144	Hillardton	930	20	Metal	Road	2000	Good	Local



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145	145	Miller	400	13	Metal	Entrance	2000	Good	Local
146	146	Mini farm	380	24	Plastic	Road	2015	Good	Local
147	147	Polyure	460	8	Metal	Entrance	2023	Fair	Local
148	148	Polyure	1500	52	Metal	Road	2000	Good	Local
149	149	Hillardton	450	9	Metal	Entrance	2000	Good	Local
150	150	Polyure	250	11	Plastic	Entrance	2000	Good	Local
151	151	Hillardton	900	18	Plastic	Road	2000	Fair	Local
152	152	Rivard	460	7	Metal	Entrance	2000	Good	Local
153	153	Gravel	260	14	Plastic	Entrance	2000	Fair	Local
154	154	Hillardton	600	14	Plastic	Entrance	2000	Good	Local
155	155	Rivard	300	8	Metal	Entrance	2000	Good	Local
156	156	Gravel	600	12	Plastic	Entrance	2000	Good	Local
157	157	Polyure east	350	11	Metal	Entrance	2000	Poor	Local
158	158	Bouchamp	300	14	Plastic	Entrance	2000	Good	Local
159	159	Polyure east	460	16	Plastic	Entrance	2015	Good	Local
160	160	Rivard	460	13	Metal	Entrance	2000	Fair	Local
161	161	Gravel	300	11	Plastic	Entrance	2000	Good	Local
162	162	Bouchamp	400	8	Metal	Entrance	2000	Good	Local
163	163	Gravel	300	12	Plastic	Entrance	2015	Good	Local
164	164	Lagoon	1800	33	Metal	Road	2000	Good	Local
165	165	Gauthier	1100	20	Metal	Road	2000	Good	Local
166	166	Mini farm	380	18	Plastic	Entrance	2015	Good	Local
167	167	Church	300	9	Metal	Entrance	2000	Good	Local
168	168	Poupore	1200	19	Metal	Entrance	2000	Good	Local
169	169	Air	600	12	Plastic	Entrance	2015	Very Good	Arterial
170	170	Mini farm	300	20	Plastic	Entrance	2015	Good	Local
171	171	Gravel	460	16	Plastic	Entrance	2015	Good	Local
172	172	Gravel	580	15	Metal	Entrance	2000	Good	Local
173	173	Bouchamp	1100	50	Metal	Road	2000	Good	Local
174	174	Hillardton	450	28	Metal	Road	2000	Fair	Local
175	175	Gauthier	300	8	Plastic	Entrance	2015	Poor	Local
176	176	Dairy lane	1170	20	Metal	Road	2000	Fair	Local
177	177	Airport	900	17	Metal	Entrance	2000	Good	Arterial
178	178	Church	250	9	Plastic	Entrance	2000	Good	Local
179	179	Church	250	9	Plastic	Entrance	2000	Very Good	Local
180	180	Mini farm	300	9	Metal	Entrance	2000	Good	Local
181	181	Mini farm	400	11	Metal	Entrance	2000	Fair	Local



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182	182	Gravel	460	112	Plastic	Entrance	2015	Good	Local
183	183	Poupore north	900	19	Metal	Road	2000	Good	Local
184	184	Polyure	400	17	Plastic	Entrance	2015	Good	Local
185	185	Evantrual	880	8	Metal	Entrance	2000	Fair	Local
186	186	Hill	380	11	Plastic	Entrance	2000	Good	Local
187	187	Mini farm	1200	14	Metal	Road	2000	Good	Local
188	188	Poupore	400	24	Metal	Entrance	2000	Good	Local
189	189	Mini farm	260	12	Plastic	Entrance	2000	Good	Local
190	190	Dairy lane	500	22	Metal	Entrance	2000	Good	Local
191	191	Gravel	460	18	Metal	Entrance	2000	Poor	Local
192	192	Airport	450	7	Metal	Entrance	2000	Poor	Arterial
193	193	Gravel	600	12	Plastic	Entrance	2000	Good	Local
194	194	Hillardton	750	26	Metal	Road	2000	Good	Local
195	195	Mini farm	300	17	Plastic	Entrance	2023	Very Good	Local
196	196	Poly	360	8	Metal	Entrance	2023	Good	Local
197	197	Dairy lane	400		Metal	Entrance	2000	Poor	Local
198	198	Poupore	600	20	Metal	Road	2000	Good	Local
199	199	Hillardton	390	13	Plastic	Entrance	2000	Good	Local
200	200	Hillardton	380	16	Plastic	Entrance	2000	Good	Local
201	201	Lagoon	200	12	Plastic	Entrance	2000	Good	Local
202	202	Poupore	460	12	Metal	Entrance	2000	Good	Local
203	203	Mini farm	460	20	Metal	Road	2000	Good	Local
204	204	Gravel	400	31	Plastic	Entrance	2000	Good	Local
205	205	Bouchamp	3600	80	Metal	Road	2015	Very Good	Local
206	206	Hillardton	600	18	Plastic	Entrance	2015	Good	Local
207	207	Hillardton	380	15	Plastic	Entrance	2000	Good	Local
208	208	Mini farm	1900	50	Cement	Road	2000	Good	Local
209	209	Poly	1800	25	Cement	Road	2000	Good	Local
210	210	Church	250	10	Metal	Entrance	2000	Good	Local
211	211	Hillardton	800	18	Metal	Entrance	2000	Poor	Local
212	212	Hillardton	600	13	Metal	Entrance	2000	Good	Local
213	213	Polyure	300	80	Plastic	Entrance	2000	Poor	Local
214	214	Church	250	6	Plastic	Entrance	2000	Good	Local
215	215	Airport	400	16	Plastic	Entrance	2015	Good	Arterial
216	216	Church	200	9	Plastic	Entrance	2000	Good	Local
217	217	Polyure	460	14	Metal	Entrance	2000	Good	Local
218	218	Mini farm	460	7	Plastic	Entrance	2000	Good	Local



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219	219	Dairy	660	8	Metal	Entrance	2000	Good	Local
220	220	Church	1800	18	Cement	Road	2000	Very Good	Local
221	221	Mini farm	300	6	Metal	Entrance	2000	Good	Local
222	222	Gravel	360	12	Metal	Entrance	2000	Good	Local
223	223	Rivard	440	10	Metal	Entrance	2000	Good	Local
224	224	Church	750	18	Plastic	Road	2015	Good	Local
225	225	Hillardton	1500	9	Metal	Entrance	2000	Very Poor	Local
226	226	Mini farm	260	7	Plastic	Entrance	2000	Good	Local
227	227	Hillardton	380	17	Metal	Entrance	2000	Good	Local
228	228	Polyure	460	19	Metal	Road	2000	Good	Local
229	229	Bouchamp boundary south	300	10	Metal	Entrance	2000	Poor	Local
230	230	Mini farm	1200	30	Metal	Road	2000	Good	Local
231	231	Bouchamp	600	25	Plastic	Road	2000	Good	Local
232	232	Miller	260	13	Plastic	Entrance	2000	Good	Local
233	233	Evantrual	750	32	Metal	Road	2000	Poor	Local
234	234	Gauthier	300	16	Plastic	Entrance	2015	Good	Local
235	235	Bouchamp	460	25	Metal	Road	2000	Poor	Local
236	236	Hillardton	900	17	Plastic	Entrance	2000	Good	Local
237	237	Hill	560	8	Metal	Entrance	2000	Good	Local
238	238	Gauthier	600	20	Plastic	Road	2015	Good	Local
239	239	Gravel	750	7	Plastic	Entrance	2015	Very Good	Local
240	240	Mini farm	900	45	Metal	Road	2000	Good	Local
241	241	Polyure	400	11	Plastic	Entrance	2015	Fair	Local
242	242	Miller lane	600	20	Plastic	Road	2022	Good	Local
243	243	Hillardton	380	12	Plastic	Entrance	2000	Good	Local
244	244	Gauthier	550	16	Metal	Road	2000	Poor	Local
245	245	Dairy lane	300	6	Metal	Entrance	2000	Fair	Local
246	246	Poupore	380	20	Plastic	Road	2000	Good	Local
247	247	Airport	600	12	Metal	Entrance	2000	Good	Arterial
248	248	Rivard	900	27	Plastic	Road	2000	Good	Local
249	249	Miller lane	260	63	Plastic	Entrance	2015	Good	Local
250	250	Polyure east	600	14	Metal	Entrance	2000	Poor	Local
251	251	Hillardton	500	10	Metal	Entrance	2020	Good	Local
252	252	Mini farm	1200	20	Metal	Road	2000	Good	Local
253	253	Gravel	750	5	Metal	Entrance	2000	Fair	Local
254	254	Mini farm	460	16	Metal	Entrance	2022	Good	Local
255	255	Hillardton	600	22	Plastic	Entrance	2000	Good	Local



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256	256	Evantrual	600	14	Metal	Entrance	2000	Good	Local
257	257	Dairy lane	380	13	Plastic	Road	2015	Good	Local
258	258	Poupore	380	11	Metal	Entrance	2000	Good	Local
259	259	Miller	300	13	Plastic	Entrance	2000	Very Good	Local
260	260	Church	250	12	Plastic	Entrance	2000	Poor	Local
261	261	Polyure	600	8	Metal	Entrance	2000	Good	Local
262	262	Bou	460	15	Metal	Entrance	2000	Good	Local
263	263	Church	200	15	Plastic	Entrance	2000	Fair	Local
264	264	Church	600	12	Metal	Road	2000	Fair	Local
265	265	Polyure	460	17	Metal	Entrance	2015	Good	Local
266	266	Gravel	400	10	Metal	Entrance	2000	Fair	Local
267	267	Mini farm	740	40	Metal	Road	2000	Good	Local
268	268	Poupore	600	16	Metal	Entrance	2000	Very Poor	Local
269	269	Church	1800	24	Cement	Road	2000	Poor	Local
270	270	Evantrual	600	9	Metal	Entrance	2000	Good	Local
271	271	Bouchamp	460	14	Metal	Entrance	2000	Fair	Local
272	272	Polyure	660	25	Metal	Road	2000	Good	Local
273	273	Polyure	400	27	Metal	Entrance	2000	Good	Local
274	274	Airport	600	24	Metal	Entrance	2000	Good	Arterial
275	275	Bouchamp	460	22	Metal	Entrance	2000	Fair	Local
276	276	Miller	800	26	Plastic	Road	2000	Poor	Local
277	277	Airport	450	8	Metal	Entrance	2000	Good	Arterial
278	278	Poupore	400	10	Metal	Entrance	2000	Good	Local
279	279	Mini farm	260	7	Plastic	Entrance	2000	Good	Local
280	280	Rivard	380	16	Plastic	Entrance	2000	Good	Local
281	281	Mini farm	600	40	Metal	Road	2000	Good	Local
282	282	Polyure	400	12	Plastic	Entrance	2000	Good	Local
283	283	Hill	430	9	Metal	Entrance	2000	Good	Local
284	284	Evantrual	500	10	Metal	Entrance	2000	Good	Local
285	285	Mini farm	460	18	Metal	Road	2000	Very Poor	Local
286	286	Dairy lane	500	12	Plastic	Entrance	2015	Good	Local
287	287	Miller north	300	22	Metal	Entrance	2000	Good	Local
288	288	Hillardton	360	8	Metal	Entrance	2000	Fair	Local
289	289	Mini farm	400	8	Metal	Entrance	2000	Good	Local
290	290	Mini farm	2900	40	Cement	Road	2000	Poor	Local
291	291	Evantrual	760	9	Metal	Entrance	2000	Good	Local
292	292	Gauthier	3000	18	Cement	Road	2000	Good	Local



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293	293	Airport	460	20	Metal	Entrance	2000	Good	Arterial
294	294	Airport	200	6	Plastic	Entrance	2000	Good	Arterial
295	295	Polyure	560	10	Metal	Entrance	2000	Fair	Local
296	296	Polyure	360	9	Metal	Entrance	2000	Good	Local
297	297	Gravel	300	8	Plastic	Entrance	2022	Good	Local
298	298	Airport	500	10	Metal	Entrance	2000	Good	Arterial
299	299	Rivard	380	20	Plastic	Entrance	2000	Good	Local
300	300	Evanturel	380		Metal	Entrance	2000	Fair	Local
301	301	Church	380	6	Metal	Entrance	2000	Poor	Local
302	302	Gauthier	400	17	Plastic	Entrance	2015	Good	Local
303	303	Airport	1600	27	Metal	Road	2000	Good	Arterial
304	304	Poupore	760	17	Plastic	Entrance	2020	Very Good	Local
305	305	Hillardton	480	35	Metal	Entrance	2000	Good	Local
306	306	Poly	900	15	Plastic	Road	2000	Good	Local
307	307	Evantrual	380	9	Metal	Entrance	2000	Fair	Local
308	308	Airport	500	22	Plastic	Road	2015	Very Good	Arterial
309	309	Mini farm	360	12	Metal	Road	2000	Fair	Local
310	310	Hillardton	400	15	Plastic	Entrance	2015	Good	Local
311	311	Gravel	750	7	Plastic	Entrance	2015	Very Good	Local
312	312	Airport	900	27	Metal	Road	2000	Good	Arterial
313	313	Church	380	6	Metal	Entrance	2000	Fair	Local
314	314	Gravel	400	13	Plastic	Entrance	2015	Very Good	Local
315	315	Rivard	260	13	Plastic	Entrance	2015	Fair	Local
316	316	Hillardton	760	22	Metal	Entrance	2000	Good	Local
317	317	Gauthier	380	20	Plastic	Road	2020	Good	Local
318	318	Church	1200	24	Cement	Road	2000	Poor	Local
319	319	Gravel	600	12	Plastic	Entrance	2000	Good	Local
320	320	Mini farm	300	8	Plastic	Entrance	2000	Good	Local
321	321	Mini farm west	600	27	Plastic	Road	2000	Good	Local
322	322	Dairy lane	1500	11	Metal	Road	2000	Poor	Local
323	323	Miller	300	16	Plastic	Entrance	2000	Good	Local
324	324	Poupore	380	15	Metal	Entrance	2000	Good	Local
325	325	Miller	460	11	Plastic	Entrance	2000	Good	Local
326	326	Airport	150	12	Plastic	Entrance	2000	Poor	Arterial
327	327	Gravel	460		Metal	Entrance	2000	Good	Local
328	328	Hillardton	260	15	Plastic	Road	2015	Good	Local
329	329	Hillardton	380	10	Plastic	Entrance	2000	Good	Local



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330	330	Dairy lane	400	10	Metal	Entrance	2000	Good	Local
331	331	Polyure	460	17	Metal	Entrance	2000	Good	Local
332	332	Evantrual	440	10	Plastic	Entrance	2000	Good	Local
333	333	Church	300	9	Plastic	Entrance	2000	Good	Local
334	334	Rivard	460	10	Plastic	Entrance	2015	Good	Local
335	335	Hillardton	300	11	Metal	Entrance	2000	Fair	Local
336	336	Dairy	380	13	Metal	Entrance	2000	Good	Local
337	337	Church	250	10	Plastic	Entrance	2000	Good	Local
338	338	Dairy lane	700	12	Metal	Entrance	2000	Good	Local
339	339	Gauthier	380	15	Plastic	Entrance	2000	Good	Local
340	340	Hillardton	380	12	Plastic	Entrance	2015	Good	Local
341	341	Poupore	460	18	Metal	Entrance	2000	Very Poor	Local
342	342	Gravel	460	31	Metal	Entrance	2000	Good	Local
343	343	Gauthier	460	15	Metal	Entrance	2000	Poor	Local
344	344	Gravel	600	30	Plastic	Entrance	2015	Good	Local
345	345	Bouchamp boundary south	450	11	Plastic	Entrance	2015	Good	Local
346	346	Airport	800	10	Metal	Entrance	2000	Good	Arterial
347	347	Bouchamp	602	50	Metal	Road	2000	Good	Local
348	348	Poupore	740	27	Plastic	Road	2000	Good	Local
349	349	Bouchamp	480	50	Metal	Road	2000	Good	Local
350	350	Dairy lane	460	14	Plastic	Entrance	2000	Good	Local
351	351	Rivard	300	12	Plastic	Entrance	2015	Good	Local
352	352	Poupore	500	13	Metal	Entrance	2000	Good	Local
353	353	Bouchamp	400	8	Metal	Entrance	2000	Fair	Local
354	354	Rivard	380	15	Plastic	Entrance	2015	Good	Local
355	355	Gravel	750	14	Metal	Entrance	2000	Fair	Local
356	356	Miller	460	10	Metal	Entrance	2000	Fair	Local
357	357	Mini farm	260	9	Wood	Entrance	2000	Very Poor	Local
358	358	Bouchamp	1200	50	Metal	Road	2000	Good	Local
359	359	Church	300	14	Metal	Entrance	2000	Fair	Local
360	360	Church	450	18	Metal	Road	2000	Poor	Local
361	361	Hill	670	7	Metal	Entrance	2000	Fair	Local
362	362	Dairy lane	600	13	Metal	Entrance	2000	Good	Local
363	363	Hillardton	340	7	Metal	Entrance	2000	Fair	Local
364	364	Polyure	200	8	Plastic	Entrance	2000	Good	Local
365	365	Poupore	460	13	Metal	Entrance	2000	Good	Local
366	366	Gauthier	800	18	Metal	Road	2000	Good	Local



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367	367	Poly	500	25	Metal	Entrance	2000	Fair	Local
368	368	Gravel	380	20	Metal	Entrance	2000	Good	Local
369	369	Dairy lane	460	10	Metal	Entrance	2000	Good	Local
370	370	Church	300	14	Plastic	Entrance	2000	Good	Local
371	371	Dairy lane	460	10	Metal	Entrance	2000	Fair	Local
372	372	Rivard	900	15	Metal	Road	2000	Good	Local
373	373	Mini farm	260	16	Plastic	Entrance	2000	Good	Local
374	374	Poly	300	16	Plastic	Entrance	2020	Fair	Local
375	375	Lagoon	300	7	Plastic	Road	2000	Good	Local
376	376	Mini farm	460	28	Metal	Road	2000	Good	Local
377	377	Hillardton	600	7	Metal	Entrance	2000	Good	Local
378	378	Mini farm	380	16	Plastic	Entrance	2000	Good	Local
379	379	Poupore	760	40	Plastic	Road	2015	Good	Local
380	380	Poly	250	27	Plastic	Entrance	2015	Good	Local
381	381	Gauthier	760	16	Metal	Road	2000	Good	Local
382	382	Gravel	460	11	Plastic	Entrance	2000	Good	Local
383	383	Gauthier	460	10	Metal	Entrance	2000	Good	Local
384	384	Dairy lane	800	5	Metal	Entrance	2000	Good	Local
385	385	Gravel	600	11	Plastic	Entrance	2015	Very Good	Local
386	386	Polyure and dairy lane	600	15	Plastic	Road	2000	Good	Local
387	387	Mini farm	300	11	Metal	Entrance	2000	Poor	Local
388	388	Polyure	400	12	Plastic	Entrance	2015	Good	Local
389	389	Gravel	460	24	Plastic	Road	2000	Good	Local
390	390	Gravel	460	16	Plastic	Entrance	2000	Good	Local
391	391	Gravel	380	16	Plastic	Entrance	2023	Good	Local
392	392	Gravel	460	16	Plastic	Entrance	2000	Good	Local
393	393	Hillardton	460	17	Metal	Entrance	2000	Good	Local
394	394	Church	450	18	Plastic	Road	2000	Good	Local
395	395	Poupore	430	16	Plastic	Road	2015	Good	Local
396	396	Evantrual	380	8	Metal	Entrance	2000	Good	Local
397	397	Church	250	28	Plastic	Entrance	2000	Fair	Local
398	398	Airport	460	21	Metal	Entrance	2000	Good	Arterial
399	399	Polyure	760	18	Plastic	Entrance	2015	Very Good	Local
400	400	Gravel	300	12	Plastic	Entrance	2015	Good	Local
401	401	Mini farm	460	17	Plastic	Road	2000	Good	Local
402	402	Gravel	300	23	Plastic	Entrance	2015	Good	Local
403	403	Gravel	460	16	Plastic	Entrance	2015	Good	Local



Township of Armstrong Asset Management Plan

404	404	Miller lane	600	22	Plastic	Road	2000	Good	Local
405	405	Airport	400	19	Plastic	Entrance	2000	Good	Arterial
406	406	Airport	900	23	Metal	Entrance	2000	Good	Arterial
407	407	Airport	600	11	Metal	Entrance	2000	Poor	Arterial
408	408	Bouchamp	600	23	Plastic	Road	2015	Good	Local
409	409	Church	600	9	Cement	Entrance	2000	Very Poor	Local
410	410	Mini farm	300	7	Metal	Entrance	2000	Good	Local
411	411	Rivard	380	19	Plastic	Road	2015	Good	Local
412	412	Airport	400	11	Plastic	Entrance	2021	Very Good	Arterial
413	413	Bouchamp boundary	1200	45	Metal	Road	2000	Good	Local
414	414	Gravel	460	17	Plastic	Road	2015	Good	Local
415	415	Bouchamp	400	8	Metal	Entrance	2000	Good	Local
416	416	Dairy lane	400	6	Plastic	Entrance	2000	Good	Local
417	417	Poupore	200	16	Plastic	Entrance	2015	Good	Local
418	418	Poupore	400	25	Metal	Entrance	2000	Very Poor	Local
419	419	Hill	480	9	Metal	Entrance	2000	Good	Local
420	420	Hill	400	7	Plastic	Entrance	2000	Good	Local
421	421	Mini farm	1830	50	Cement	Road	2000	Good	Local
422	422	Miller	460	23	Metal	Road	2000	Good	Local
423	423	Polyure	300	42	Metal	Entrance	2000	Fair	Local
424	424	Gauthier	760	10	Metal	Road	2000	Good	Local
425	425	Poupore south	3080	19	Cement	Road	2000	Good	Local
426	426	Hillardton	400	9	Metal	Entrance	2000	Good	Local
427	427	Gravel	300	15	Plastic	Entrance	2015	Good	Local
428	428	Evantrual	460	15	Metal	Entrance	2000	Good	Local
429	429	Poupore	380	15	Metal	Entrance	2000	Fair	Local
430	430	Mini	260	6	Metal	Entrance	2000	Fair	Local
431	431	Hillardton	300	12	Plastic	Entrance	2000	Good	Local
432	432	Evantrual	790	11	Metal	Entrance	2000	Fair	Local
433	433	Airport	450	10	Metal	Entrance	2000	Fair	Arterial
434	434	Rivard	760	18	Metal	Road	2000	Good	Local
435	435	Gauthier	400	16	Metal	Entrance	2000	Good	Local
436	436	Hillardton	200	15	Plastic	Entrance	2000	Good	Local
437	437	Lagoon	250	9	Plastic	Road	2015	Good	Local
438	438	Air	900	17	Metal	Entrance	2000	Good	Arterial
439	439	Mini farm	200	17	Plastic	Entrance	2000	Fair	Local
440	440	Mini	260	8	Metal	Entrance	2000	Fair	Local



Township of Armstrong Asset Management Plan

441	441	Dairy lane	460	10	Plastic	Entrance	2015	Good	Local
442	442	Hillardton	260	12	Plastic	Entrance	2000	Poor	Local
443	443	Church	1200	15	Metal	Road	2000	Fair	Local
444	444	Rivard	400	9	Plastic	Entrance	2000	Good	Local
445	445	Dairy lane	380	13	Plastic	Road	2015	Good	Local
446	446	Miller	270	13	Plastic	Entrance	2000	Good	Local
447	447	Mini farm	200	9	Plastic	Entrance	2000	Good	Local
448	448	Gauthier	900	21	Plastic	Road	2015	Very Good	Local
449	449	Church	500	9	Plastic	Entrance	2000	Good	Local
450	450	Hillardton	460	17	Plastic	Entrance	2000	Fair	Local
451	451	Hillardton	920	18	Metal	Road	2000	Fair	Local
452	452	Mini farm	300	34	Plastic	Entrance	2000	Good	Local
453	453	Polyure	360	11	Metal	Entrance	2015	Good	Local
454	454	Miller	300	17	Plastic	Entrance	2000	Good	Local
455	455	Gravel	260	38	Plastic	Entrance	2000	Good	Local

Asset ID	Size (mm)	Material	Length (m)	Install Date	Notes
1	200	PVC	101.53	2000	
2	200	PVC	13.42	2000	
3	200	PVC	97.92	2000	
4	400	PVC	4.1	2000	
5	300	PVC	11.85	2000	
6	300	PVC	2.92	2000	
7	300	PVC	55.52	2000	
8	300	PVC	46.58	2000	
9	300	PVC	3.97	2000	
10	300	PVC	4.67	2000	
11	300	PVC	44.41	2000	
12	300	PVC	4.57	2000	
13	300	PVC	4.36	2000	
14	300	PVC	3.58	2000	
15	300	PVC	59.92	2000	
16	300	PVC	57.02	2000	
17	400	PVC	3.65	2000	
18	400	PVC	41.51	2000	



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19	300	PVC	3.6	2000
20	400	PVC	73.02	2000
21	457	PVC	17.11	2000
22	400	PVC	10.22	2000
23	400	PVC	3.5	2000
24	400	PVC	3.54	2000
25	400	PVC	60.02	2000
26	400	PVC	60.02	2000
27	400	PVC	7.81	2000
28	400	PVC	60.92	2000
29	400	PVC	44.01	2000
30	400	PVC	7.97	2000
31	400	PVC	8.71	2000
32	400	PVC	4.05	2000
33	900	PVC	21.01	2000
34	900	PVC	25.99	2000
35	900	PVC	100.03	2000
36	900	PVC	3.3	2000
37	900	PVC	83.03	2000
38	900	PVC	8.57	2000
39	900	PVC	13.03	2000
40	900	PVC	5.88	2000
41	900	PVC	6.45	2000
42	900	PVC	13.93	2000
43	700	PVC	8	2000
44	700	PVC	5.06	2000
45	700	PVC	6.5	2000
46	900	PVC	108.03	2000
47	700	PVC	50.06	2000
48	700	PVC	100.03	2000
49	700	PVC	10.81	2000
50	700	PVC	3.6	2000
51	700	PVC	4.58	2000
52	700	PVC	60.02	2000
53	700	PVC	12.89	2000
54	700	PVC	31.01	2000
55	700	PVC	38.51	2000



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56	700	PVC	44.01	2000
57	700	PVC	6	2000
58	700	PVC	20.98	2000
59	700	PVC	14.8	2000
60	700	PVC	3.75	2000
61	700	PVC	3.29	2000
62	700	PVC	10.43	2000
63	700	PVC	3.93	2000
64	700	PVC	40.01	2000
65	700	PVC	29.01	2000
66	700	PVC	33.01	2000
67	700	PVC	4.99	2000
68	700	PVC	3.86	2000
69	700	PVC	86.03	2000
70	700	PVC	86.03	2000
71	700	PVC	3.92	2000
72	700	PVC	3.77	2000
73	600	PVC	12.27	2000
74	600	PVC	11.65	2000
75	600	PVC	12.02	2000
76	600	PVC	12.53	2000
77	600	PVC	3.88	2000
78	600	PVC	3.89	2000
79	500	PVC	51.02	2000
80	500	PVC	89.03	2000
81	500	PVC	3.98	2000
82	500	PVC	3.97	2000
83	500	PVC	3.96	2000
84	500	PVC	3.93	2000
85	500	PVC	85.03	2000
86	400	PVC	11.97	2000
87	400	PVC	6.29	2000
88	400	PVC	4.41	2000
89	400	PVC	8.47	2000
90	400	PVC	4.06	2000
91	400	PVC	45.01	2000
92	400	PVC	80.52	2000



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93	400	PVC	6.9	2000
94	400	PVC	30.01	2000
95	400	PVC	15.5	2000
96	400	PVC	17.01	2000
97	300	PVC	6	2000
98	300	PVC	5.5	2000
99	300	PVC	21.51	2000
100	300	PVC	33.51	2000
101	300	PVC	5.65	2000
102	300	PVC	71.52	2000
103	300	PVC	62.02	2000
104	250	PVC	201.26	2000
105	250	PVC	46.17	2000
106	250	PVC	203.12	2000
107	200	PVC	112.76	2000
108	200	PVC	42.99	2000
109	300	PVC	196.44	2000
110	450	PVC	205.71	2000
111	450	PVC	206.37	2000
112	200	PVC	44.24	2000
113	450	PVC	196.31	2000
114	375	PVC	286.74	2000
115	375	PVC	260.95	2000
116	300	PVC	183.26	2000
117	250	PVC	46.16	2000
118	250	PVC	46.13	2000
119	200	PVC	47.03	2000
120	250	PVC	45.48	2000
121	200	PVC	98.94	2000
122	200	PVC	47.88	2000
123	200	PVC	47.69	2000
124	450	PVC	251.45	2000
125	450	PVC	241.36	2000
126	250	PVC	204	2000
127	250	PVC	204.78	2000
128	200	PVC	103.47	2000
129	450	PVC	207.28	2000



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130	250	PVC	201.32	2000
131	200	PVC	103.27	2000
132	200	PVC	45.69	2000
133	250	PVC	46.65	2000
134	250	PVC	46.47	2000
135	200	PVC	47.62	2000
136	250	PVC	47.14	2000
137	200	PVC	45.99	2000
138	250	PVC	47.37	2000
139	250	PVC	201.09	2000
140	200	PVC	41.99	2000
141	250	PVC	46.63	2000
142	450	PVC	198.68	2000
143	450	PVC	199.45	2000
144	250	PVC	200.18	2000
145	250	PVC	41.98	2000
146	200	PVC	46.23	2000
147	450	PVC	200.43	2000
148	450	PVC	78.39	2000
149	250	PVC	120.62	2000
150	450	PVC	150.89	2000
151	250	PVC	200.33	2000
152	250	PVC	45.14	2000
153	200	PVC	115.41	2000
154	250	PVC	64.9	2000
155	450	PVC	81.09	2000
156	250	PVC	204.51	2000
157	200	PVC	118.28	2000
158	200	PVC	116.27	2000
159	200	PVC	43.44	2000
160	250	PVC	104.42	2000
161	450	PVC	150.15	2000
162	250	PVC	103.41	2000
163	450	PVC	194.66	2000
164	200	PVC	101.46	2000
165	250	PVC	116.77	2000
166	250	PVC	116.45	2000



Township of Armstrong Asset Management Plan

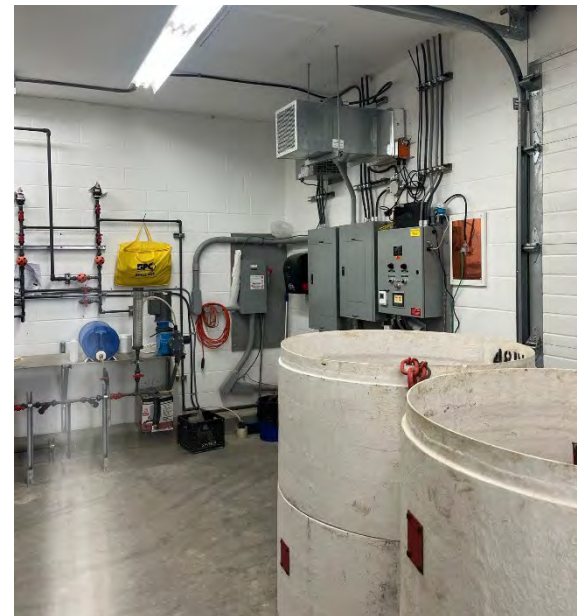
167	450	PVC	213.38	2000
168	250	PVC	99.58	2000
171	200	PVC	88.9	2000
172	200	PVC	41.78	2000
173	250	PVC	69.51	2000
174	250	PVC	69.46	2000
175	250	PVC	99.63	2000
176	200	PVC	114.99	2000
177	200	PVC	42.17	2000
178	200	PVC	42.26	2000
179	200	PVC	41.18	2000
180	250	PVC	202.98	2000
181	200	PVC	111.99	2000
182	450	PVC	207.44	2000
183	200	PVC	99.84	2000
169	250	PVC	44.66	2000
170	250	PVC	44.84	2000
184	200	PVC	43.88	2000
185	200	PVC	45.23	2000
186	200	PVC	43.21	2000
187	200	PVC	45.5	2000
188	200	PVC	45.76	2000



Township of Armstrong Asset Management Plan

Facilities

Alum Building





Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		4	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		4	PW			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		4	PW			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		0				
Stairs: Interior stairs and landings, Guards, Railings		0				
Finishes: Materials used on walls, floors and ceilings		0				
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		0				
Water distribution		0				
Sanitary Waste		0				
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		4	PW			
Ventilation systems		3.8	PW			
Heat Generation and distribution systems		3.8	PW			
Cooling generation and distribution systems		0	PW			
Testing, balancing, controls and instrumentation		3.8	PW			
Chimneys and vents		4	PW			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		4				
Lighting & branch wiring (interior and exterior)		3.5		\$ 5,000.00	2025	LED upgrade
Communications and security		4.5				
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		3.5				
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		0				
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		3.5				
Parking lots and associated signage, markings and equipment		3.5				
Pedestrian areas and associated signage, markings, and equipment		4				
Site development such as fences, walls, and miscellaneous structures		4				
Site Utilities		3.8				
Overall Assessment Score		77.70	77.70%	\$ 5,000.00		

Blower Building





Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intls.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		4	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		4	PW			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		4	PW			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	PW			
Stairs: Interior stairs and landings, Guards, Railings		0				
Finishes: Materials used on walls, floors and ceilings		4	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		0				
Water distribution		0				
Sanitary Waste		0				
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		4	PW			
Ventilation systems		3.5	PW			
Heat Generation and distribution systems		3.5	PW			
Cooling generation and distribution systems		0	PW			
Testing, balancing, controls and instrumentation		3.5	PW			
Chimneys and vents		4	PW			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		4	PW			
Lighting & branch wiring (interior and exterior)		3.5	PW	\$ 5,000.00	2025	LED upgrade
Communications and security		4.5	PW			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4	PW			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle						
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>						
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		4	PW			
Site development such as fences, walls, and miscellaneous structures		4	PW			
Site Utilities		4	PW			
Overall Assessment Score		86.50	78.64%	\$ 5,000.00		

Cemetery Vault





Township of Armstrong Asset Management Plan

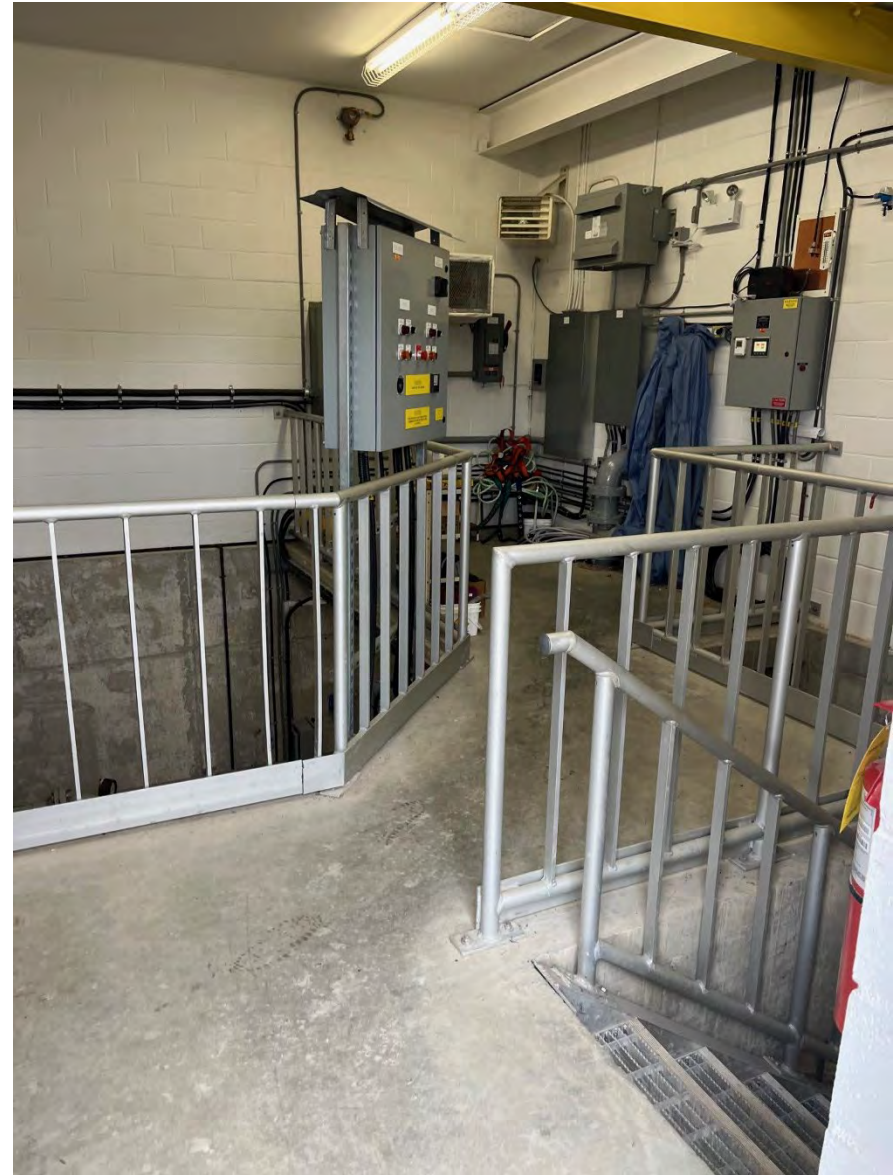




Wastewater Lift Pump Station











Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		4	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		4	PW			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		4	PW			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	PW			
Stairs: Interior stairs and landings, Guards, Railings		4	PW			
Finishes: Materials used on walls, floors and ceilings		4	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		4	PW			
Plumbing						
Fixtures		0				
Water distribution		3.5	PW			
Sanitary Waste		3.5	PW			
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		4	PW			
Ventilation systems		3.8	PW			
Heat Generation and distribution systems		3.5	PW			
Cooling generation and distribution systems		0	PW			
Testing, balancing, controls and instrumentation		3.5	PW			
Chimneys and vents		4	PW			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		4	PW			
Lighting & branch wiring (interior and exterior)		3.5	PW	\$ 5,000.00	2025	LED upgrade?
Communications and security		4.5	PW			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4.5	PW			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		2.9	PW	\$ 10,000.00	2028	Sewage Auto-sampler will need to be replaced
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>						
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		4	PW			
Site development such as fences, walls, and miscellaneous structures		4	PW			
Site Utilities		4	PW			
Overall Assessment Score		105.20	77.93%	\$ 15,000.00		



Water Treatment Plant













Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		4	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3.9	PW			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		4	PW			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	PW			
Stairs: Interior stairs and landings, Guards, Railings		4	PW			
Finishes: Materials used on walls, floors and ceilings		4	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		0				
Water distribution		3.5	PW			
Sanitary Waste		0				
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		3.5	PW			
Ventilation systems		4	PW			
Heat Generation and distribution systems		4	PW			
Cooling generation and distribution systems		0				
Testing, balancing, controls and instrumentation		4	PW			
Chimneys and vents		4	PW			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		3.5	PW			
Lighting & branch wiring (interior and exterior)		3.5	PW	\$ 5,000.00	2025	LED upgrade?
Communications and security		4	PW			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4	PW			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		3.5	PW			
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		4	PW			
Site development such as fences, walls, and miscellaneous structures		4	PW			
Site Utilities		4	PW			
Overall Assessment Score		97.40	77.92%	\$ 5,000.00		



Township of Armstrong Asset Management Plan

Park





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intls.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		0				
Basement: Materials, insulation, slab, floor underpinnings		0				
Shell						
Superstructure/structural frame: columns, pillars, walls		0				
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		0				
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		0				
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		0				
Interiors						
Partitions: Walls, interior doors, fittings such as signage		0				
Stairs: Interior stairs and landings, Guards, Railings		0				
Finishes: Materials used on walls, floors and ceilings		0				
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		0				
Water distribution		0				
Sanitary Waste		0				
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		0				
Ventilation systems		0				
Heat Generation and distribution systems		0				
Cooling generation and distribution systems		0				
Testing, balancing, controls and instrumentation		0				
Chimneys and vents		0				
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		0				
Lighting & branch wiring (interior and exterior)		0				
Communications and security		0				
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		0				
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle			PW	\$ 125,000.00	2025	old pavillion needs to be replaced
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>						
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		4	PW			
Site development such as fences, walls, and miscellaneous structures		4	PW			
Site Utilities		4	PW			
Overall Assessment Score		20.00	80.00%	\$ 125,000.00		

Park Washrooms

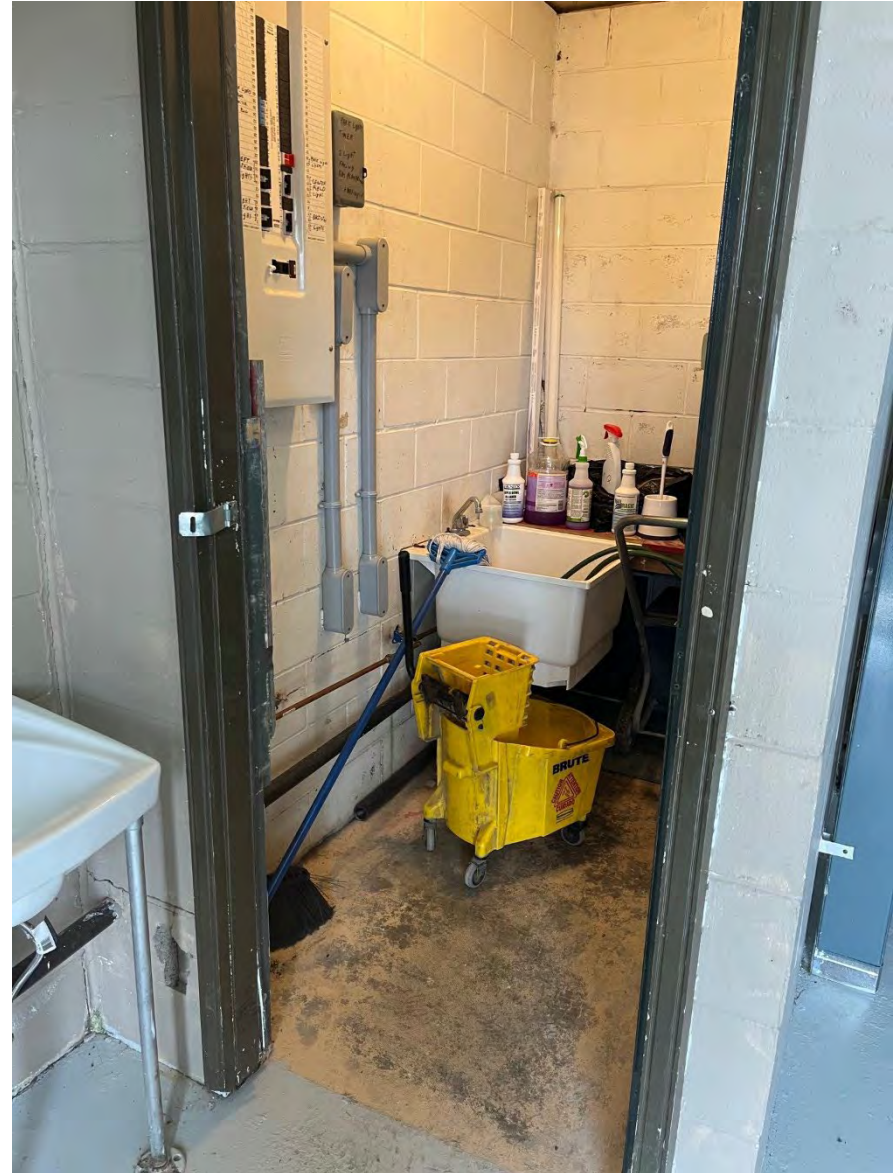






Township of Armstrong Asset Management Plan





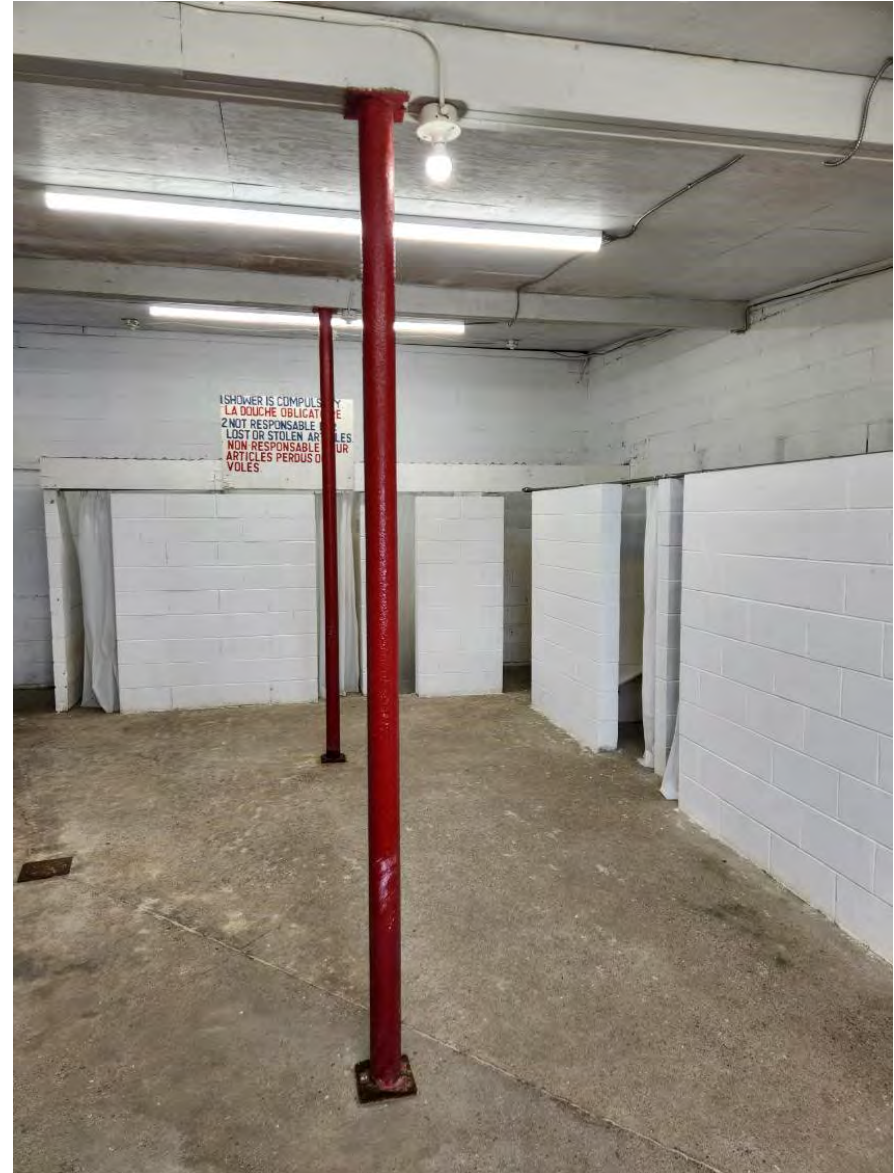


Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		4	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		3.5	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		2.5	PW	\$ 3,000.00	2024	exterior siding work
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		0				
Interiors						
Partitions: Walls, interior doors, fittings such as signage		2.9	PW			
Stairs: Interior stairs and landings, Guards, Railings		0				
Finishes: Materials used on walls, floors and ceilings		3	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		3	PW	\$ 5,000.00	2024	replacement of sinks and taps
Water distribution		3	PW			
Sanitary Waste		2.9	PW			
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		0				
Ventilation systems		2	PW			
Heat Generation and distribution systems		0				
Cooling generation and distribution systems		0				
Testing, balancing, controls and instrumentation		0				
Chimneys and vents		3	PW			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		3.5	PW			
Lighting & branch wiring (interior and exterior)		3	PW	\$ 5,000.00	2025	LED upgrade
Communications and security		0				
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		0				
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		0				
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		0				
Pedestrian areas and associated signage, markings, and equipment		4	PW			
Site development such as fences, walls, and miscellaneous structures		0				
Site Utilities		4	PW			
Overall Assessment Score		56.30	66.24%	\$ 13,000.00		

Pool Changerooms











Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		3.5	PW			
Basement: Materials, insulation, slab, floor underpinnings		3	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		3.5	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		2.5	PW			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		0				
Interiors						
Partitions: Walls, interior doors, fittings such as signage		2.5	PW			
Stairs: Interior stairs and landings, Guards, Railings		2.5	PW			
Finishes: Materials used on walls, floors and ceilings		3	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		2.5	PW			
Water distribution		2.5	PW			
Sanitary Waste		2.5	PW			
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		0				
Ventilation systems		0				
Heat Generation and distribution systems		0				
Cooling generation and distribution systems		0				
Testing, balancing, controls and instrumentation		0				
Chimneys and vents		2.5	PW			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		3	PW			
Lighting & branch wiring (interior and exterior)		2	PW			LED upgrade happening in 2024
Communications and security		2.5	PW			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		2.5	PW			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		3	PW	\$ 100,000.00	2025	Pool heater needs to be replaced in the next 10
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>						
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		3	PW			
Site development such as fences, walls, and miscellaneous structures		3.5	PW			
Site Utilities		3	PW			
Overall Assessment Score		65.00	59.09%	\$ 100,000.00		



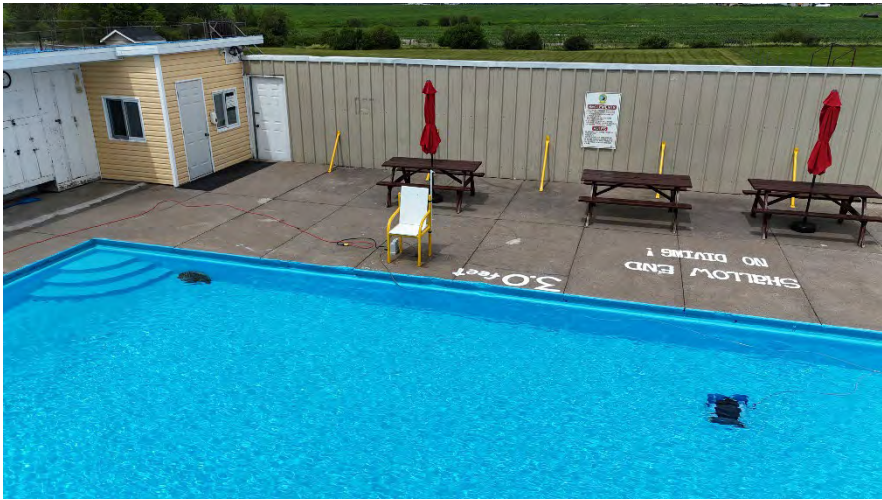
Township of Armstrong Asset Management Plan

Pool





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		4	PW			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		0				
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		0				
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		0				
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	PW			
Stairs: Interior stairs and landings, Guards, Railings		3	PW			
Finishes: Materials used on walls, floors and ceilings		4	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		3.5	PW			
Water distribution		4	PW			
Sanitary Waste		4	PW			
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		0				
Ventilation systems		0				
Heat Generation and distribution systems		0				
Cooling generation and distribution systems		0				
Testing, balancing, controls and instrumentation		0				
Chimneys and vents		0				
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		0				
Lighting & branch wiring (interior and exterior)		0				
Communications and security		0				
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		0				
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle <i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		3	PW			
Site development such as fences, walls, and miscellaneous structures		3.5	PW			
Site Utilities		3	PW			

Sand and Salt Shed









Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	PW			
Basement: Materials, insulation, slab, floor underpinnings		0				
Shell						
Superstructure/structural frame: columns, pillars, walls		3.5	PW			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		3.5	PW			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3	PW			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		0				
Interiors						
Partitions: Walls, interior doors, fittings such as signage		3.5	PW			
Stairs: Interior stairs and landings, Guards, Railings		0				
Finishes: Materials used on walls, floors and ceilings		3.5	PW			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		0				
Water distribution		0				
Sanitary Waste		0				
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		0				
Ventilation systems		0				
Heat Generation and distribution systems		0				
Cooling generation and distribution systems		0				
Testing, balancing, controls and instrumentation		0				
Chimneys and vents		0				
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		0				
Lighting & branch wiring (interior and exterior)		0				
Communications and security		0				
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		0				
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		0				
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	PW			
Parking lots and associated signage, markings and equipment		4	PW			
Pedestrian areas and associated signage, markings, and equipment		4	PW			
Site development such as fences, walls, and miscellaneous structures		0				
Site Utilities		0				



Public Works Garage













Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		3.8	CBO			
Basement: Materials, insulation, slab, floor underpinnings		3.8	CBO			
Shell						
Superstructure/structural frame: columns, pillars, walls		3.5	CBO			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	CBO			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3	CBO			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		3	CBO			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		3	CBO			
Stairs: Interior stairs and landings, Guards, Railings		3	CBO			
Finishes: Materials used on walls, floors and ceilings		3	CBO			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		3	CBO			
Water distribution		3	CBO			
Sanitary Waste		3	CBO			
Rain water drainage		0	CBO			
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		3.5	CBO			
Ventilation systems		2.8	CBO			
Heat Generation and distribution systems		3.5	CBO			
Cooling generation and distribution systems		0	CBO			
Testing, balancing, controls and instrumentation		3	CBO			
Chimneys and vents		4	CBO			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		3.5	CBO			
Electrical						
Electrical service and distribution		3.5				
Lighting & branch wiring (interior and exterior)		3	CBO	\$ 5,000.00	2025	LED upgrade
Communications and security		4	CBO			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4	CBO			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		0				
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	CBO			
Parking lots and associated signage, markings and equipment		4	CBO			
Pedestrian areas and associated signage, markings, and equipment		4	CBO			
Site development such as fences, walls, and miscellaneous structures		0	CBO			
Site Utilities		3.5	CBO			

Well #3









Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4.2	CBO			
Basement: Materials, insulation, slab, floor underpinnings		4	CBO			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	CBO			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	CBO			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		4	CBO			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		4	CBO			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	CBO			
Stairs: Interior stairs and landings, Guards, Railings		0	CBO			
Finishes: Materials used on walls, floors and ceilings		3.5	CBO			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		3.5	CBO			
Water distribution		3.5	CBO			
Sanitary Waste		0				
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		4	CBO			
Ventilation systems		4	CBO			
Heat Generation and distribution systems		3.5	CBO			
Cooling generation and distribution systems		0	CBO			
Testing, balancing, controls and instrumentation		3	CBO			
Chimneys and vents		4	CBO			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		4	CBO			
Lighting & branch wiring (interior and exterior)		3.5	CBO	\$ 5,000.00	2025	LED upgrade
Communications and security		4.5	CBO			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4	CBO			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle <i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	CBO			
Parking lots and associated signage, markings and equipment		4	CBO			
Pedestrian areas and associated signage, markings, and equipment		3.8	CBO			
Site development such as fences, walls, and miscellaneous structures		4	CBO			
Site Utilities		3	CBO			



Township of Armstrong Asset Management Plan

Municipal Office and Library





Township of Armstrong Asset Management Plan

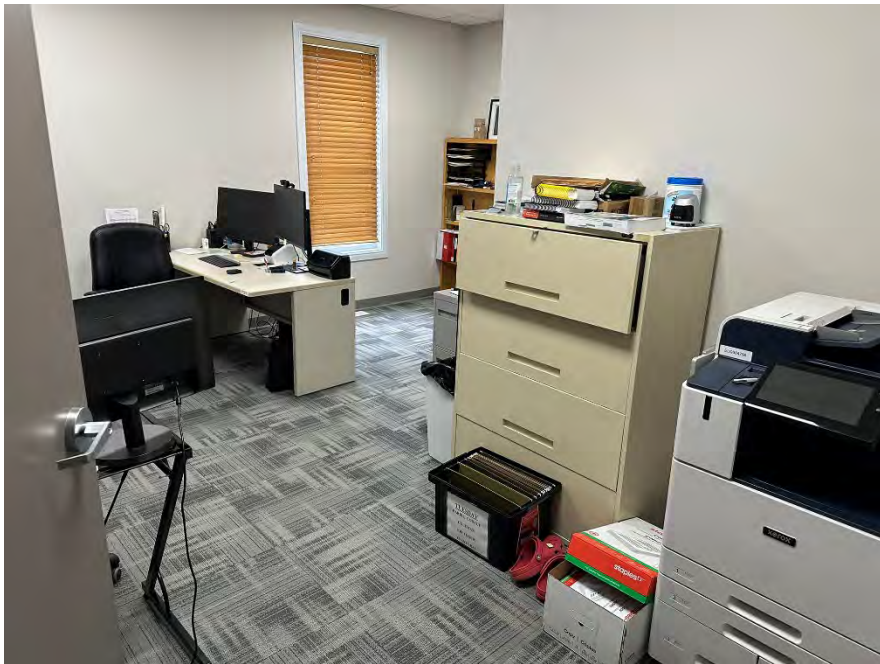




Township of Armstrong Asset Management Plan

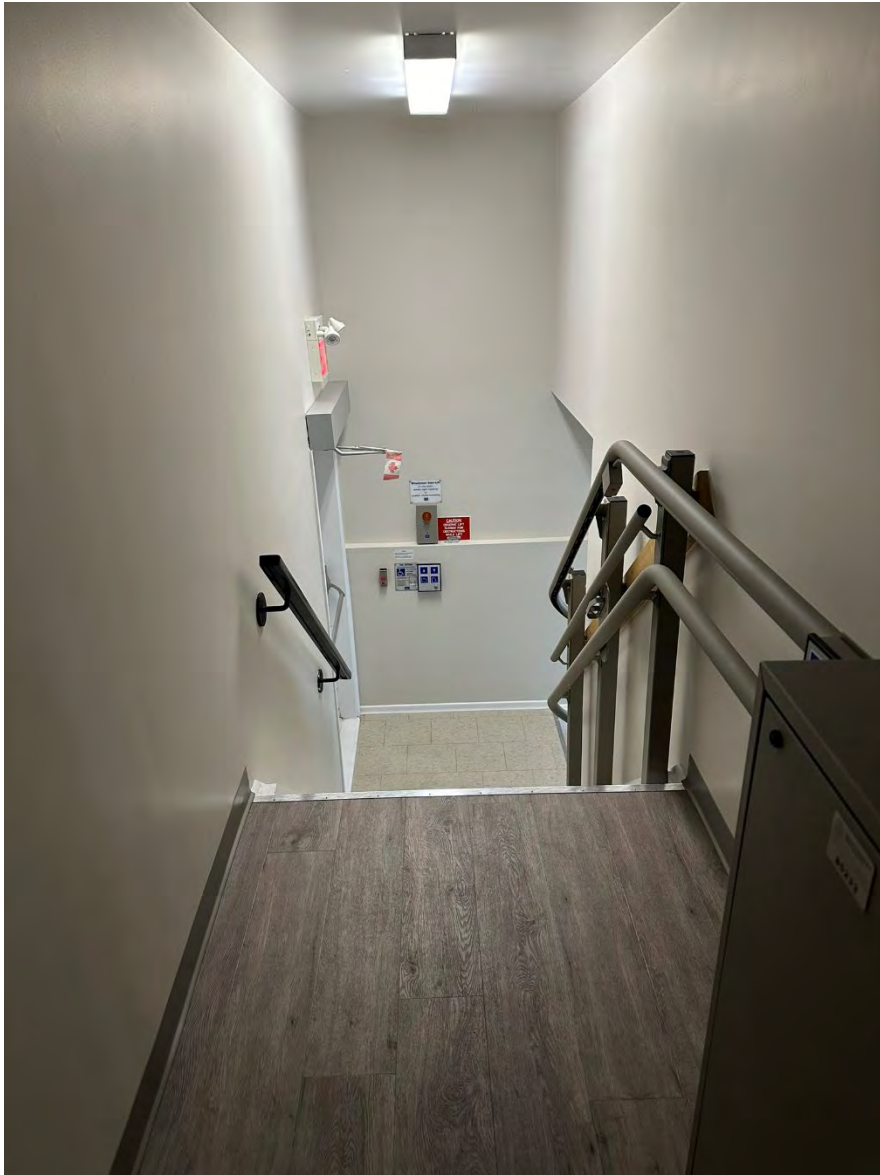








Township of Armstrong Asset Management Plan





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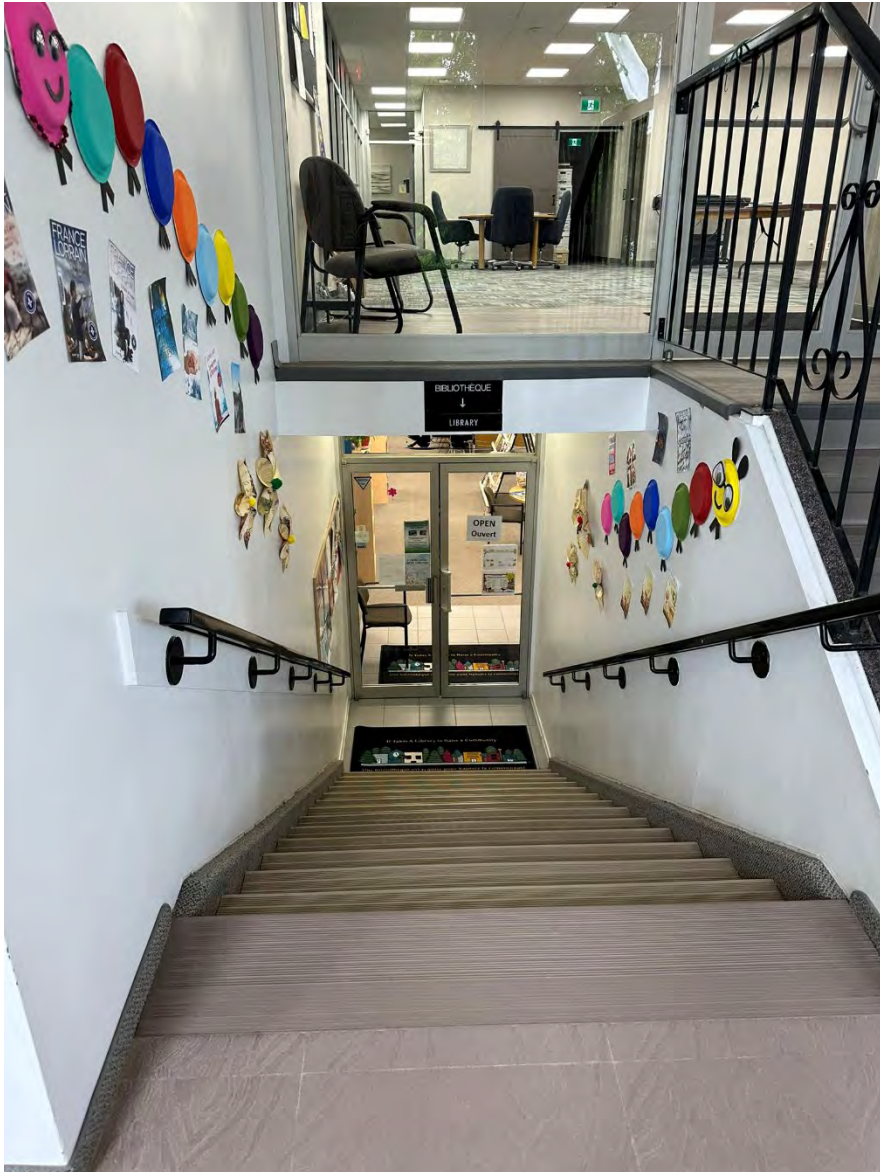






Township of Armstrong Asset Management Plan







Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan







Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		3.8	CBO	\$ 30,000.00	2029	signs of deterioration in 30% of total area
Basement: Materials, insulation, slab, floor underpinnings		3.8	CBO			not visible
Shell						
Superstructure/structural frame: columns, pillars, walls		4	CBO			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	CBO			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3.5	CBO	\$ 50,000.00	2029	exterior stairs deteriorating
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		4	CBO			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4.8	CBO			new
Stairs: Interior stairs and landings, Guards, Railings		4	CBO			new
Finishes: Materials used on walls, floors and ceilings		4.5	CBO	\$ 10,000.00	2025	rear refinish, front good
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0	CBO			
Lifts: any other such fixed apparatuses for the movement of goods or people		1	CBO	\$ 80,000.00	2024	Lift plus stairs
Plumbing						
Fixtures		4.5	CBO	\$ 200.00	2024	urinals need drains, corrosion visible
Water distribution		4	CBO			
Sanitary Waste		3	CBO			75%done
Rain water drainage		4.5	CBO			
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		4	CBO			
Ventilation systems		4.5	CBO			
Heat Generation and distribution systems		4.5	CBO			
Cooling generation and distribution systems		4	CBO	\$ 10,000.00	2034	
Testing, balancing, controls and instrumentation		4.5	CBO			
Chimneys and vents		4.5	CBO			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		4.5	CBO			new alarm and detection
Electrical						
Electrical service and distribution		4.8	CBO			
Lighting & branch wiring (interior and exterior)		4	CBO			
Communications and security		4.5	CBO			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		3.9	CBO	\$ 10,000.00	2030	old generator; 50%lighting to be done
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		4.5	CBO	\$ 46,000.00	2034	see above
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>						
Site						
Roadways/driveways and associated signage, markings and equipment		4	CBO			
Parking lots and associated signage, markings and equipment		4	CBO			
Pedestrian areas and associated signage, markings, and equipment		3.4	CBO		2030	stairs and railings to be replaced
Site development such as fences, walls, and miscellaneous structures		0	CBO			
Site Utilities		4	CBO			



Township of Armstrong Asset Management Plan

Fire Hall







Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	CBO			
Basement: Materials, insulation, slab, floor underpinnings		4	CBO			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	CBO			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	CBO			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3	CBO			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		3	CBO			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	CBO			
Stairs: Interior stairs and landings, Guards, Railings		0	CBO			
Finishes: Materials used on walls, floors and ceilings		4	CBO			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		0				
Plumbing						
Fixtures		4	CBO			
Water distribution		3.5	CBO			original
Sanitary Waste		3.5	CBO			original
Rain water drainage		0	CBO			
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		3.5	CBO			
Ventilation systems		2	CBO			
Heat Generation and distribution systems		4	CBO			
Cooling generation and distribution systems		4	CBO			
Testing, balancing, controls and instrumentation		0	CBO			
Chimneys and vents		3.9	CBO			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0				
Electrical						
Electrical service and distribution		4	CBO			
Lighting & branch wiring (interior and exterior)		4	CBO	\$ 5,000.00	2026	LED Upgrade
Communications and security		4	CBO			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		3.9	CBO			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle <i>For clarity, includes items valued above \$5,000 and related to facility function</i>		4.5	CBO	\$ 85,000.00	2024	SCBAs and Bunker Gear
Site						
Roadways/driveways and associated signage, markings and equipment		4	CBO			
Parking lots and associated signage, markings and equipment		4	CBO			
Pedestrian areas and associated signage, markings, and equipment		0	CBO			
Site development such as fences, walls, and miscellaneous structures		0	CBO			
Site Utilities		3.9	CBO			

Pumphouse and Well #1





Township of Armstrong Asset Management Plan





Township of Armstrong Asset Management Plan

Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		4	CBO			
Basement: Materials, insulation, slab, floor underpinnings		0	CBO			
Shell						
Superstructure/structural frame: columns, pillars, walls		4	CBO			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		4	CBO			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3.9	CBO			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		3.9	CBO			
Interiors						
Partitions: Walls, interior doors, fittings such as signage		3	CBO			
Stairs: Interior stairs and landings, Guards, Railings		0	CBO			
Finishes: Materials used on walls, floors and ceilings		4	CBO			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0	CBO			
Lifts: any other such fixed apparatuses for the movement of goods or people		0	CBO			
Plumbing						
Fixtures		3.5	CBO			
Water distribution		3.5	CBO			
Sanitary Waste		3.5	CBO			
Rain water drainage		3.5	CBO			
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		4	CBO			
Ventilation systems		0	CBO			
Heat Generation and distribution systems		4.8	CBO			
Cooling generation and distribution systems		0	CBO			
Testing, balancing, controls and instrumentation		4.8	CBO			
Chimneys and vents		4.8	CBO			
Fire Protection						
Fire Dampers		0	CBO			
Sprinklers		0	CBO			
Standpipes		0	CBO			
Hydrants, Pumps, Valves, Panels and other fire protection specialties		0	CBO			
Electrical						
Electrical service and distribution		4	CBO			
Lighting & branch wiring (interior and exterior)		3.5	CBO	\$ 5,000.00	2025	LED upgrade
Communications and security		4.8	CBO			
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4	CBO			
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle		0	CBO			
<i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0	CBO			
Site						
Roadways/driveways and associated signage, markings and equipment		4	CBO			
Parking lots and associated signage, markings and equipment		4	CBO			
Pedestrian areas and associated signage, markings, and equipment		4	CBO			
Site development such as fences, walls, and miscellaneous structures		4	CBO			
Site Utilities		4	CBO			



Recreation Centre

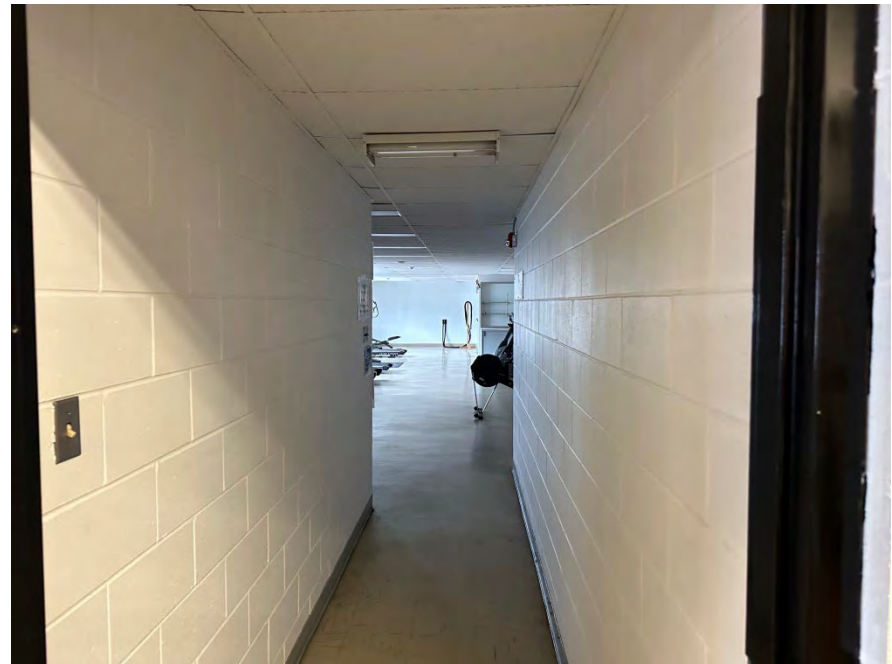
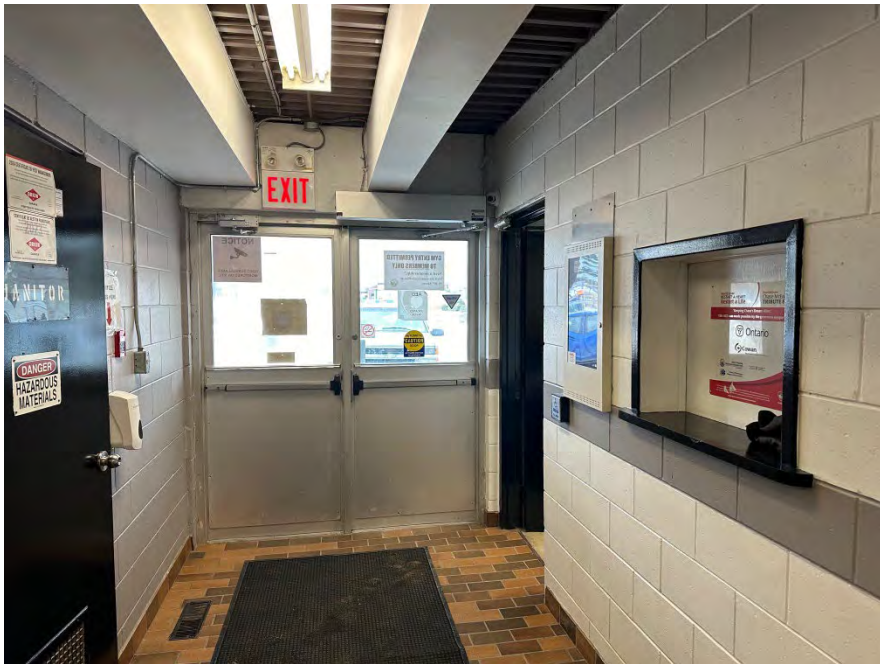






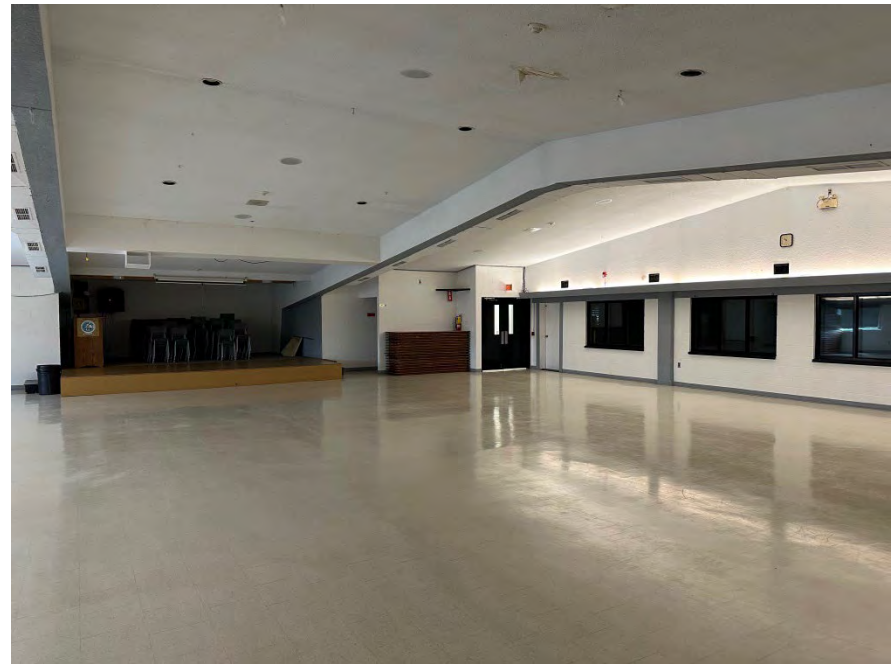
Township of Armstrong Asset Management Plan





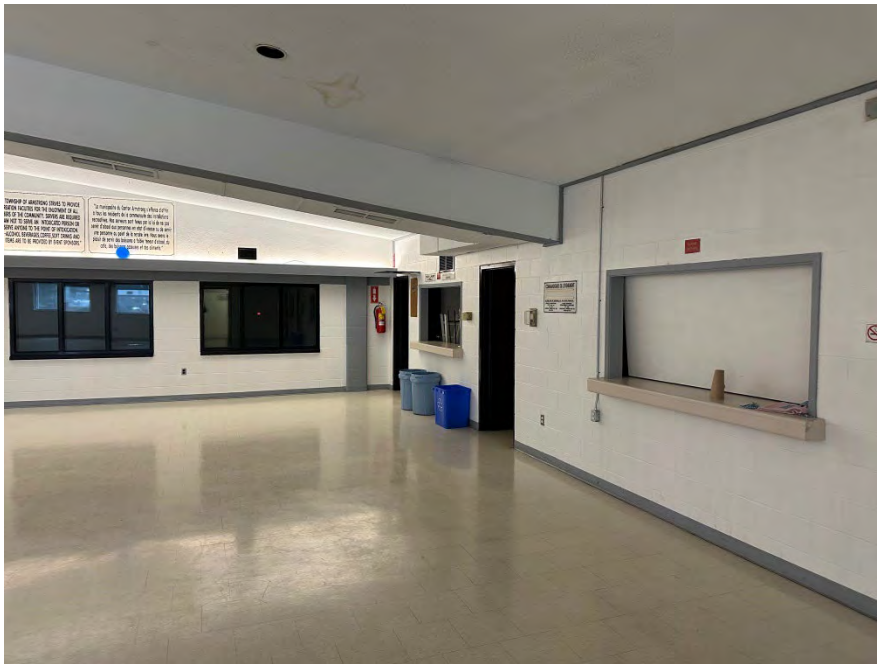


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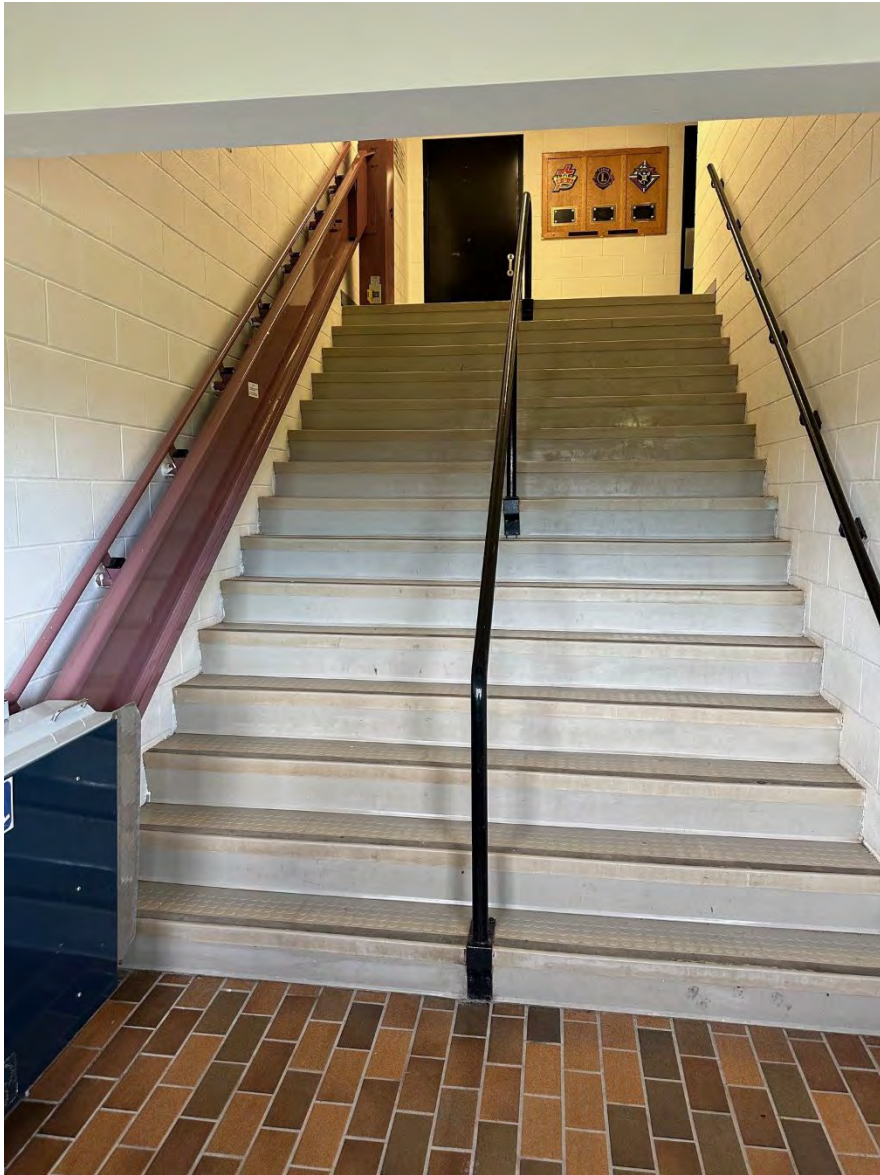


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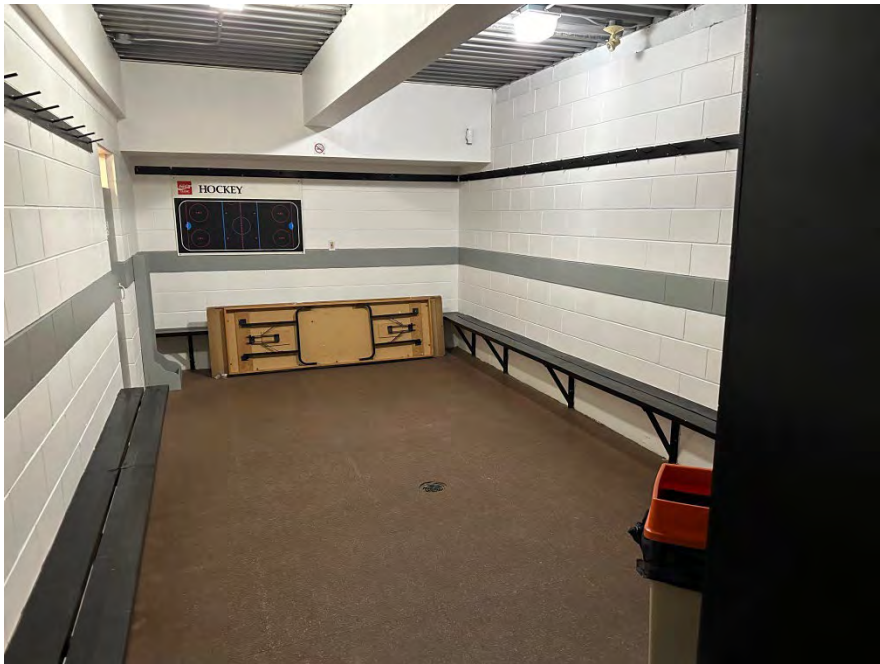








Township of Armstrong Asset Management Plan







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Conditional Assessment	NTD ID	SCORE	Assessor Intl.	Cost of Intervention	Year of Intervention	Description
Inspection Area						
Substructure						
Foundations: Walls, columns, pilings other structural components		3	CBO	\$ 20,000.00	2025	should inspect as cracks seen in foundation
Basement: Materials, insulation, slab, floor underpinnings		3.7	CBO			
Shell						
Superstructure/structural frame: columns, pillars, walls		3	CBO			
Roof: Roof surface, gutters, eaves, skylights, chimney surrounds		3	CBO			
Exterior: Windows, doors, Power Operators and all finishes (paint, masonry)		3.1	CBO			
Shell appurtenances: Balconies, fire escapes, gutters, downspouts		0				
Interiors						
Partitions: Walls, interior doors, fittings such as signage		4	CBO			
Stairs: Interior stairs and landings, Guards, Railings		4	CBO			
Finishes: Materials used on walls, floors and ceilings		4	CBO			
<i>This component covers all interior spaces, regardless of use</i>						
Conveyance (Elevators and Escalators)						
Elevators		0				
Lifts: any other such fixed apparatuses for the movement of goods or people		4	CBO	\$ 80,000.00	2030	
Plumbing						
Fixtures		3	CBO			
Water distribution		3	CBO			
Sanitary Waste		2.9	CBO			
Rain water drainage		0				
HVAC (Heating, ventilation, and air conditioning)						
Energy supply		3.5	CBO			
Ventilation systems		3.5	CBO			
Heat Generation and distribution systems		3.8	CBO			
Cooling generation and distribution systems		3.8	CBO			
Testing, balancing, controls and instrumentation		3.5	CBO			
Chimneys and vents		3.5	CBO			
Fire Protection						
Fire Dampers		0				
Sprinklers		0				
Standpipes		0				
Hydrants, Pumps, Valves, Panels and other fire protection specialties		4	CBO			
Electrical						
Electrical service and distribution		3.5	CBO			
Lighting & branch wiring (interior and exterior)		3	CBO	\$ 15,000.00		LED upgrade happening on ice surface in 202
Communications and security		3.9	CBO	\$ 5,000.00		LED upgrade on the rest
Other electrical systems (lighting protection, generators, exit signs and emergency lighting)		4				
Equipment/Fare Collection						
Equipment related to the function of the facility, including maintenance or vehicle <i>For clarity, includes items valued above \$5,000 and related to facility function</i>		0				
Site						
Roadways/driveways and associated signage, markings and equipment		4	CBO			
Parking lots and associated signage, markings and equipment		4	CBO			
Pedestrian areas and associated signage, markings, and equipment		4	CBO			
Site development such as fences, walls, and miscellaneous structures		0				
Site Utilities		4	CBO			



Fleet and Shop Equipment



Loader



Tractor



Grader



Sterling Plow



Case Tractor





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Chevrolet Pickup Silverado 2500



Ice Resurfacers





Freightliner Water Pumper





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Chevrolet Pickup Silverado 1500



Steamer





Asphodel Fire Truck





Fire Rescue Truck



Freightliner Plow Truck





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Bridges and Structural Culverts

Table 2: Capital Inventory Data

Structure No.	Structure Name	Road Name	Location	Year of Const.	Crossing Type	No of Spans	Deck Length (m)	Deck Width (m)	BCI	Expected Life Remaining	Rehabilitation History	Required Works	Replacement Cost	Residual Value	Rehabilitation Cost
-	Armstrong/Beauchamp Culvert	Honey Road	Lot 12, Concessions 5 (1.2 km South of Mini Farm Road)	2015	Over Water	1	-	-	95.3	42	Installation completed in fall of 2015.	- Monitor barrel at inlet for signs of movement - Place rock protection at inlet - Remove beaver dam upstream	\$877,360.00	\$836,124.08	\$8,500.00
-	Gauthier Road Culvert	Gauthier Road	Lot 8, Concessions 1 & 2 (1.2 km West of Road 571)	Unknown	Over Water	1	15	2.5	57.9	6	Rock protection placed in NW quadrant in 2023+/-	- Repair inlet/outlet concrete. - Repair barrel concrete. - Clear vegetation from stream - Place rock protection on slopes	\$359,800.00	\$208,324.20	\$81,500.00
47-###	Mini Farm Road Bridge	Mini Farm Road	Concession 6, Lot 9	Unknown	Over Water	3	44.7	8.6	69.2	24	Erosion control work done on west side in 2004. Remedial work on east pier cap completed in 2020 +/-	- Extend deck drains below soffit. - Repair curb concrete. - Re-caulk joints along deck/curb. - Repair steel railing posts. - Replace joint seals. -Repair Ballast Walls - Repair embankment washouts. - Repair concrete spalls on pier diaphragm, pier caps, deck soffit, and girder ends.	\$2,308,520.00	\$1,597,495.84	\$91,900.00
47-160	Church Road Bridge	Church Road	Concessions 3 & 4, Lot 9	1981	Over Water	1	24.0	8.6	71.3	20		- Repair barrier wall concrete. - Repair railings. - Replace joint seals. - Patch repair asphalt along ballast walls. - Replace damaged guiderail posts and panels. - Repair diaphragm concrete. -Place rock protection at abutments	\$1,508,080.00	\$1,075,261.04	\$51,500.00
47-161	Airport Bridge	Airport Road	Concessions 2 & 3, Lot 10	2008	Over Water	1	18.4	5.8	61.5	23	Bridge deck, steel beam guide rails, railing posts, and wooden curbs replaced in 2008. West approach re-paved in 2023	- Clean tops of abutments. - Clean abutment diaphragms. - Patch repair approach asphalt. - Reface abutment seats. - Replace abutment bearings. -Localized concrete repairs on abutments and wingwalls - Place rock protection at abutments. - Perform detailed inspection of girder ends diaphragms, and their connections.	\$1,045,512.00	\$642,989.88	\$36,830.00
-	Mini Farm Rd Culvert	Mini Farm Road	Concessions 5 & 6, Lot 2	Unknown	Over Water	1	3.0	18.0	16.0	0		-Replace culvert ASAP - install hazard markers - Install guiderail	\$465,600.00	\$74,496.00	Replacement Recommended



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Roads

Road ID	Road Name	Type	Arterial or Local?	Rural or Urban?	Start	End	Condition	Rank
272	Beauchamp Boundary	Gravel	Local	Rural	Church Road	Concession 4	11.9	-48.1
173	Beauchamp Boundary	Gravel	Local	Rural	Concession 5	Mini Farm Road	13.1	-46.9
196	Beauchamp Boundary	Gravel	Local	Rural	Airport Road	Church Road	21.43	-38.57
199	Hilliardton Road	Gravel	Local	Rural	Lot 5	Lot 5	21.43	-38.57
290	Hilliardton Road	Gravel	Local	Rural	Lot 34	Lot 34	22.62	-37.38
165	Hilliardton Road	Gravel	Local	Rural	Dairy Lane	Lot 12	23.81	-36.19
292	Poupore Road	Gravel	Arterial	Rural	Concession 2	Poly-Ure Road	47.62	-32.38
295	Poupore Road	Gravel	Arterial	Rural	Highway 562	Concession 1	48.81	-31.19
188	Poupore Road RR273	Gravel	Arterial	Rural	Poly-Ure Road	Gravel Road	51.19	-28.81
142	Airport Road	Gravel	Arterial	Rural	Airport	Beauchamp Boundary	53.57	-26.43
180	10th St	Pavement	Arterial	Urban	West End	10th Ave	55.42	-24.58
164	10th St	Pavement	Arterial	Urban	Rail St	Highway 11	56.02	-23.98
247	10th St	Pavement	Arterial	Urban	10th Ave	Rail St	56.63	-23.37
242	Hilliardton Road	Gravel	Local	Rural	Lot 78	Lot 78	36.9	-23.1
237	Rivard Road	Gravel	Local	Rural			38.1	-21.9
268	Airport Road	Pavement	Arterial	Rural	10th Ave	Airport	58.43	-21.57
276	Church Road	Pavement	Arterial	Urban	TC Pipe Compound	West End	60.24	-19.76
297	Poupore Road	Pavement	Local	Rural			48.19	-11.81
197	Poly-Ure Road	Gravel	Local	Rural	Dairy Lane	Miller Road	50	-10
191	Rivard Road	Gravel	Local	Rural			51.19	-8.81
205	Gravel Road	Pavement	Arterial	Urban			71.69	-8.31
160	Gravel Road	Pavement	Arterial	Rural			72.29	-7.71
296	Rivard Road	Pavement	Local	Rural	10th Street East	Gravel Section	52.41	-7.59
163	Gravel Road	Pavement	Arterial	Rural			73.49	-6.51
240	Gauthier Road	Gravel	Local	Rural	Highway 571	Lot 78	53.57	-6.43
270	Mini Farm Road	Gravel	Local	Rural	Dairy Lane	Lot 1,2	53.57	-6.43
293	Miller Road	Gravel	Local	Rural	Concession 2	Poly-Ure Road	53.57	-6.43
256	Mini Farm Road	Gravel	Local	Rural	Lot 3, 4	Lot 3,4	54.76	-5.24
288	Mini Farm Road	Gravel	Local	Rural	Highway 11	Lot 7,8	55.95	-4.05
257	Poly-Ure Road	Gravel	Local	Rural	Highway 571	Lot 7,8	59.52	-0.48
212	Evanturel Boundary	Gravel	Local	Rural	Highway 571	Lot 8	60.71	0.71
287	Hilliardton Road	Pavement	Local	Rural	Hwy 11	Rivard Road	63.25	3.25



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274	Church Road	Gravel	Arterial	Rural	Lot 910	Lot 910	83.33	3.33
153	Church Road	Gravel	Arterial	Rural	Lot 1112	Beauchamp Boundary	84.52	4.52
278	Mini Farm Road	Gravel	Local	Rural	Highway 11	East of Rivard Road	65.48	5.48
208	Dairy Lane RR235	Gravel	Arterial	Rural	Hilliardton Road	Mini Farm Road	85.71	5.71
148	Dairy Lane	Gravel	Arterial	Rural	Gravel Road	Hilliardton Road	85.71	5.71
182	Dairy Lane RR236	Gravel	Arterial	Rural	Mini Farm Road	Evanturel Boundary	85.71	5.71
151	Railway Avenue	Gravel	Local	Urban	8th St	10th St	67.86	7.86
225	Gauthier Road	Gravel	Local	Rural	Lot 9	Lot 10	73.81	13.81
169	12th St	Pavement	Local	Urban	9th Ave	10th Ave	78.31	18.31
178	Mini Farm Road	Pavement	Local	Rural			84.94	24.94
244	Poly-Ure Road	Gravel	Local	Rural	Miller Road	Poupore Road	85.71	25.71
198	Poly-Ure Road	Gravel	Local	Rural	Poupore Road	Highway 571	88.1	28.1
281	Miller Lane	Gravel	Local	Rural	Miller Road	East End	88.1	28.1
258	Mini Farm Road	Gravel	Local	Rural	12Lot 11	Beauchamp Boundary	88.1	28.1
220	Mini Farm Road	Gravel	Local	Rural	Lot 9, 10	Lot 9,10	88.1	28.1
299	Jules Gravel Cr	Gravel	Local	Urban			88.1	28.1
137	11th Ave	Pavement	Local	Urban	6th St	7th St	90.36	30.36
219	11th Ave	Pavement	Local	Urban	7th St	8th St	91.57	31.57
232	11th Ave	Pavement	Local	Urban	8th St	9th St	91.57	31.57
202	6th St	Pavement	Local	Urban	11th Ave	East End	91.57	31.57
298	9th St	Pavement	Local	Urban			91.57	31.57
211	11th Ave	Pavement	Local	Urban	9th St	10th St	92.17	32.17
255	12th Ave	Pavement	Local	Urban	6th St	8th St	92.17	32.17
143	12th Ave	Pavement	Local	Urban	8th St	9th St	92.77	32.77
154	7th St	Pavement	Local	Urban	12th Ave	East End	92.77	32.77
233	12th Ave	Pavement	Local	Urban	10th St	11th St	92.77	32.77
262	11th Ave	Pavement	Local	Urban	10th St	11th St	92.77	32.77
265	12th Ave	Pavement	Local	Urban	9th St	10th St	92.77	32.77
277	12th Ave	Pavement	Local	Urban	11th St	12th St	92.77	32.77
286	7th St	Pavement	Local	Urban	10th Ave	12th Ave	92.77	32.77
246	11th St	Pavement	Local	Urban	12th Ave	Yard	93.37	33.37
260	9th Ave	Pavement	Local	Urban	12th St	14th St	93.37	33.37
252	6th Ave	Pavement	Local	Urban	10th St	7th Ave	93.37	33.37
245	11th Ave	Pavement	Local	Urban	11th St	12th St	93.98	33.98
285	Mini Farm Road RL 163	Pavement	Local	Urban	10th St	School	93.98	33.98



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284	9th Ave	Pavement	Local	Urban	10th St	12th St	93.98	33.98
159	6th St	Pavement	Local	Urban	11th Ave, East of	11th Ave	93.98	33.98
273	7th Ave	Pavement	Local	Urban	10th St	6th Ave	93.98	33.98
152	12th St	Pavement	Local	Urban	10th Ave	Yard	93.98	33.98
207	8th St	Pavement	Local	Urban	10th Ave	Rail St	93.98	33.98
215	11th St	Pavement	Local	Urban	10th Ave	12th Ave	95.18	35.18
275	9th St	Pavement	Local	Urban	10th Ave	Rail St	95.18	35.18