



Meeting Date: June 7, 2023

Submitted by: Tiffany Farrell, Director of Corporate Services

Report No: CPS-28-2023

Subject: Asset Management Plan Report – 2023

Recommendation:

THAT Report No. CPS-28-2023 dated June 7, 2023 regarding the Municipality’s Asset Management Plan be received for information.

Purpose:

The purpose of this report is to provide Council with information on the municipality’s asset management program. Annually, staff will present a report to Council on the asset management plan as required under O. Reg. 588/2017.

Background:

The municipal asset management planning regulation (O. Reg. 588/2017) was made under the *Infrastructure for Jobs and Prosperity Act, 2015*, and came into force on January 1, 2018. The purpose of the Act and its regulation(s) is to “establish mechanisms to encourage principled, evidence-based and strategic long-term infrastructure planning that supports job creation and training opportunities, economic growth and protection of the environment, and incorporate design excellence into infrastructure planning.”

In compliance with the O. Reg 588/2017, Middlesex Centre Council approved the municipal asset management plan on June 9, 2021. A key piece of the municipality’s overall asset management program, the plan is intended:

- to guide the consistent use of asset management across the organization,
- to facilitate logical and evidence-based decision-making for the management of municipal infrastructure assets, and
- to support the delivery of sustainable community services now and in the future.

About Asset Management

The Municipality of Middlesex Centre is responsible for providing a range of essential services to the community, including transportation networks, municipal water and sewer, stormwater management, and parks & recreation. To deliver these services, it owns and manages a diverse municipal asset portfolio of roads, bridges, culverts, facilities, parks, and water and wastewater infrastructure. As the social, economic, and environmental wellbeing of the community depends on the reliable performance of these municipal infrastructure assets, it is critical to implement a systemic, sustainable approach to their management.

An asset management approach allows municipalities to make informed decisions regarding the planning, building, operating, maintaining, renewing, replacing and disposing of their infrastructure assets throughout their lifecycle.

Asset management is an organization-wide process that involves the coordination of activities across multiple departments and service areas. As such, it is useful to adopt a structured and coordinated approach which outlines the activities, roles and responsibilities required of organizational actors, as well as the key principles that guide all asset management decision-making.

A comprehensive and holistic asset management approach supports efficient and effective service delivery and ensures that due regard and process are applied to the long-term management and stewardship of all municipal infrastructure assets. It aligns Middlesex Centre with provincial and national standards, and enables us to take full advantage of available grant funding opportunities.

Tangible Capital Assets (TCA)

The service focus of our asset management plan may require assets to be defined differently from the definitions within the municipality's Tangible Capital Assets Policy (e.g., assets that do not meet the minimum capitalization thresholds set out in the Tangible Capital Assets Policy). The determination of which assets will be covered by the municipality's asset management planning processes will be independent of the municipality's Tangible Capital Assets Policy.

Analysis:

Middlesex Centre's Asset Management Plan is in-line with the municipality's strategic asset management policy and meets the requirements of O.Reg 588/2017. It includes:

- Identification of current levels of service and the cost of maintaining those levels of service for core assets, fleet and facilities;
- Identification of proposed levels of service, what activities will be required to meet proposed levels of service, and a strategy to fund these activities for core assets, fleet and facilities.

Our asset management program is intended to achieve the following goals and objectives:

- Manage assets based on the principles of sustainability, continuous improvement and simplicity.
- Enable the integration of corporate priorities and plans.
- Provide reliable data with the integrity to meet or surpass regulatory demands.
- Enable clear, accurate reporting in a timely manner.
- Enable robust, repeatable and defensible decision-making with regard to asset decisions (purchases, rehabilitation and disposal).

Annually, staff will prepare a report to Council to outline the following:

1. The municipality's progress in implementing its asset management plan;
2. Any factors impeding the municipality's ability to implement its asset management plan; and
3. A strategy to address the factors described in clause (2).

Asset Management Plan Progress

Middlesex Centre Council approved the Asset Management Plan on June 9, 2021.

Staff have made numerous improvements to the asset management program and plan over the past few years. Specific improvements outlined below are for the period of June 15, 2022 to June 7, 2023.

Middlesex Centre's asset management improvements and initiatives have included the following:

- Adopted an improved asset management strategic policy, June 15, 2022
- Established an asset management governance structure that defines roles and responsibilities
 - Included in the asset management strategic policy as amended June 15, 2022.
 - Included in various job descriptions
 - Dedicated asset management resource hired in 2022 – Asset Management Coordinator
- Developed a roadmap and a dedicated budget to meet provincial asset management requirements over the next 10 years

- The approved asset management plan includes a roadmap and the financing strategy to accomplish this.
- Staff have developed an internal asset management roadmap to guide staff in improving the asset management plan and continuing to update the data and make it a living document. Key elements of the roadmap included:
 - Updating operating procedures and protocols on recording asset changes in the asset management software (plan).
 - Establishing an asset management coordinator to act as a central guiding position to ensure uniform and consistent approach to asset management is completed.
 - Establishing standardized asset numbering.
 - Annually reviewing the performance of the overall asset management program, including reviewing best practices and updating our processes.
 - Taking ownership of the asset management plan by the senior management team. The team will review the strategy and objectives, asset performance requirements, resources and other elements to ensure the program is successful.
 - Annually reviewing asset management data against tangible capital asset data.
 - Aligning asset management data with the capital budget.
- The plan includes the implementation of an asset management software. Middlesex Centre is in the process of implementing Brightly's 'Asset Essentials' as the municipality's asset management software. Implementation began in 2021 with certain asset classes fully implemented while others are still a work in progress.
- In 2022, the Municipality implemented the work order module of Asset Essentials to better track repairs, maintenance and improvements in assets.
- Five-year capital budget 2023-2027 was financed in accordance with the asset management plan as applicable.
- Collected and/or updated condition assessment data on core assets such as roads and bridges completed
 - 2021 Bridge Inspection Report as completed by BM Ross and Associates Limited
 - 2022 Street Logic Report on the Street Scan results for roadways and sidewalk condition as funded by the Federation of Canadian Municipalities (FCM); joint initiative with other municipalities in the County of Middlesex
 - 2022 Roads Needs Study completed
 - Master Servicing Plans commenced in 2022 for Transportation, Water, Wastewater and Stormwater, to be completed in mid to late 2023

- Updated the roads asset inventory by including a process for accounting for shared responsibility for boundary roads and a field has been added to the GIS file for roads to identify which roads are boundary roads.
- Collected and/or updated condition assessment data on non-core assets
 - Preliminary data collected from Dillon Consulting Limited on condition assessments for our facilities in 2019/2020
 - Additional condition assessment data on facilities and parks (structures and equipment) completed by internal staff 2020, 2021 and 2022
 - Preliminary data collection on culverts under 3m
 - Preliminary data collection on trees
 - Preliminary data collection on streetlights
- Identified current service levels based on performance metrics
 - Included in the asset management plan as approved June 9, 2021
- Developed a financial strategy to address future infrastructure investment priorities
 - Included in the asset management plan as approved June 9, 2021 for all property tax supported assets and rate supported assets (water, wastewater and stormwater) for a ten-year period.
 - Wastewater and stormwater financial strategy included in the asset management plan require refinement. This will be completed in winter of 2024 when the municipality completes the wastewater and stormwater long-range financial plans.
 - Five-year capital budget 2023-2027 was financed in accordance with the asset management plan as applicable.
 - Formula grants applied to assets
 - Canada Community Building Fund 2023 – \$571,270 (2022- \$547,466.49)
 - Ontario Community Infrastructure Fund 2023 – \$1,962,071 (2022- \$2,064,113)
 - Raised an additional \$1M investment into property tax supported reserve funds for property tax support assets as outlined in the asset management plan (included in the 2023 budget).
 - Roads Capital Reserve Fund – \$550,000
 - Buildings and Facility Reserve Fund – \$150,000
 - Fire Vehicles and Equipment Reserve Fund – \$50,000
 - General Vehicles and Equipment Reserve Fund – \$250,000

- Adopted an infrastructure levy and/or have dedicated reserves to address required funding needs
 - As indicated above. Specific reserve funds allocated for assets as noted in the asset management plan; 2023 annual dedicated amount to support capital asset needs:
 - Roads Capital Reserve Fund – \$3,650,000 (2022 -\$3,100,000)
 - Buildings and Facility Reserve Fund - \$1,503,000 (2022-\$1,353,000)
 - Fire Vehicles and Equipment Reserve Fund - \$325,000 (2022-\$275,000)
 - General Vehicles and Equipment Reserve Fund - \$1,250,000 (2022-\$1,000,000)

The following items were included in the 2021 approved asset management plan as next steps. At this time, some of these items are in progress, while for others a plan is in place to complete these over the next five years.

Table: Asset Management, In-Progress and Next Steps

Time Frame	Next Step
In Progress	<ul style="list-style-type: none"> • The municipality should review asset inventories to ensure that all equipment with a replacement value over the tangible capital asset (TCA) threshold of \$5,000 is included when doing the next asset management plan update. As an example, equipment in facilities such as large refrigerators may need to be captured. ○ Staff will be updating the TCA policy in the summer of 2023; at this time, staff will be reviewing the threshold of \$5,000. Once this policy is approved and a standard practice is developed, consistent application will occur between the assets as recorded in the AMP and in the financial statements (TCA). • The municipality should assess condition of streetlights and sidewalks either directly or based on age and include the information in a future update of the asset management plan. ○ Condition assessment of sidewalks was completed as part of the 2021/2022 street scan results. ○ Streetlight condition assessment is being completed in 2023. • The municipality should consider adding smaller culverts to the asset management plan either as stand-alone assets or as part of roads. These are culverts with a diameter less than three metres not covered by the biennial OSIM inspections. <p>All of this data still needs to be updated in Asset Essentials.</p>

Time Frame	Next Step
<p>Short term – Started within a year.</p>	<ul style="list-style-type: none"> • The municipality should develop a condition assessment methodology for watermains, perhaps based on number of breaks. • The municipality should develop a method for assessing the condition of wastewater mains, perhaps involving CCTV inspections. • The municipality should develop a method for assessing the condition of stormwater mains and ponds. This could involve CCTV inspections or the performance of the system during flood events.

Time Frame	Next Step
<p>Medium term – Start in next two to three years.</p>	<ul style="list-style-type: none"> • The municipality should evaluate the capital needs of the three gravel pits and include in the next update of the asset management plan. • The cost estimate of \$9,048 per square metre for bridge replacement includes a factor of 20% to account for the deck area of replacement bridges typically being 20% larger than the deck area of the existing bridges. The Municipality should review this assumption on a case-by-case basis to identify more precisely the deck area of future replacement bridges. This could be done as part of a future OSIM bridge inspection. Once more accurate dimensions for replacement bridges are determined, the municipality should recalculate the estimated replacement costs for the bridges. These updated costs should be included in the next update to the asset management plan. • The municipality should develop a methodology for reporting on the percentage of properties in the municipality resilient to a 100-year storm and the percentage of the municipal stormwater management system resilient to a 5-year storm. These measures should be included in a future update to the asset management plan.
<p>Long-term – Complete when guidance and data becomes available.</p>	<ul style="list-style-type: none"> • The municipality should review and update the generalized lifecycle models and associated condition degradation profiles when more data on how road condition degrades over time is available.

Additionally, staff will be working on incorporating a growth component to the asset management plan in 2025 following the completion of the 2024 Development Charge Study that will incorporate the master servicing plans being completed in 2023. The growth component of asset management plans is not a requirement for Middlesex Centre, however staff believe it will be imperative for future asset planning and financing.

Financial Update

Presently, the estimated replacement costs reported in the asset management plan are based on a combination of the following:

- Information on inflation and historical costs

- Cost information on recent projects completed by the municipality or other municipalities
- Information obtained by engineering firms or consulting first based on a per unit costing
- Actual cost data provided by vendors who perform the type of work

In 2021, the municipality purchased asset management software, Brightly's Asset Essentials, to manage our assets and Asset Predictor for financial modeling of such assets. These two systems are integrated with each other so that any changes in the asset data are included in the financial models. However, as staff are continuing to update assets in the Asset Essentials software in 2023, with the expected completion being the end of 2023, staff have been unable to use Asset Predictor for any new financial models at this time.

Staff used the approved financial models from the asset management plan for the creation of the five-year capital budget 2023-2027. Staff will continue to use this data in 2023 to support/inform the creation of the five-year capital budget 2024-2028. Once the data in the asset management software is complete and accurate, it will be integrated with asset predictor in the spring of 2024 to produce updated financial models. This update will include:

- Updated long-range financial plan (to be presented to Council in 2024)
- Wastewater financial plan (to be presented to Council in 2024)
- Stormwater financial plan (to be presented to Council in 2024)
- Updated bridge and culvert data (the incorporation of the new structures identified in 2021)
- Updated small culvert data
- Updated sidewalk and streetlight data
- Information from the transportation, stormwater, water and wastewater master plans
- Updated costing for replacement values

Staff are continuing with incorporating the asset data in the software into 2023, with the expected completion being the end of 2023. Staff have or will be incorporating the results of the following updates, however no levels of services have been modified since the approval of the plan in June of 2021:

- 2021 Bridge Inspection Report as completed by BM Ross and Associates Limited. The inspection identified 21 new structures. These structures will be included in the asset management system and the updated plan.

- 2022 Street Logic Report, based on the street scan results from 2020 for roadways and sidewalk condition as funded by the Federation of Canadian Municipalities (FCM); joint initiative with other municipalities in the County of Middlesex. The results of this review will be updated in the asset management system and the updated plan.
- Additional condition assessment data on facilities and parks (structures and equipment) completed by internal staff in 2021 and 2022. The results of these reviews have been updated in the asset management system, however no levels of service have been impacted.
- SCADA road map and 10 year planned implementation

Staff will continue to regularly update information. This process is outlined in the internal roadmap and includes the following:

- Compare and contrast the proportion of assets in poor condition from one year to the next to track improvements.
- Update asset improvements and rehabilitations and linking data to the annual capital budgets.
- Review levels of service being provided annually to community expectations.
- Compare audit documents for changes in Asset Essentials to TCA data and budget data.

Factors Impacting the Implementation of the Asset Management Plan

One item that is important to note with respect to the implementation of the financial sustainability aspect of the asset management program is the uncertainty of the replacement costs. Staff have developed reasonable replacement costs, however, 2021, 2022 and 2023 has seen a significant increase in costs of projects. It is difficult for staff to project replacement costs of items with so much fluctuation in such a short amount of time. Items impacting the estimates of replacement costs include:

- The COVID-19 pandemic has and is expected to continue to impact the world economy. The municipality is seeing impacts to capital and operating budgets in 2022 and 2023 due to the pandemic. Specifically, we are seeing increases in material and manufacturing costs, increases in project delays, supply issues, and increases in equipment and vehicles pricing.
- Inflationary Pressures. Inflation is commonly defined as the general increase in prices for goods and services in an economy over a period of time. The Consumer Price Index (CPI) is used as an indicator of the changes in consumer prices and is tracked and circulated monthly by the Bank of Canada. CPI rose to 6.9% on a year-

over-year basis for September 2022 and significant further increases have been seen since that time.

- CPI increased significantly over 2022, however it is beginning to decrease in Q2 2023.
- Increasing Fuel Costs. The increased costs of fuel have had a significant impact on the cost of infrastructure in 2022 and 2023. A combination of rising oil prices, the state of the Canadian dollar, provincial taxes and the federal government's Clean Fuel Standard (CFS), could result in the continuation of significantly increased fuel costs.
- Many of the construction materials and supplies used by the municipality rise in price at a generally higher rate than household items. The construction costs normally increase along with the Construction Price Index, which rose to 15.6% on a year-over-year basis in the third quarter of 2022 and significant further increases have been seen since that time.

This challenge has presented itself in the implementation of the asset management plan, which may see identified assets in the capital budgets being under estimated and result in budget overruns. Staff are monitoring this closely.

The uncertainty in replacement costs has been identified by the province as an issue with Municipality's asset management planning, and now the Ministry of Infrastructure has developed a standardized data collection template to collect Current Replacement Value (CRV) data from all municipalities. Staff are required to complete their template and submit by July 31, 2023.

Secondly, as noted above the municipality purchased software in 2021 to track the assets for the asset management plan. Implementation of this program has taken longer than anticipated, and due to that, only limited improvements to the data in the plan has been incorporated to date. The full implementation is expected to be completed by the end of 2023. Prior to the system, the data was stored in Excel.

Strategy to Address Factors Impeding the Implementation of the Asset Management Plan

The strategies are in place to address all factors impeding the implementation of the asset management plan. These strategies have been addressed in throughout this report.

Financial Implications:

Costs and funding identified in the asset management plan have been incorporated into the budget planning process annually.

No additional costs have been identified as a result of the annual review and report.

Strategic Plan:

This matter aligns with following strategic priorities:

- Sustainable Infrastructure and Services

This report responds directly to Objective 4.3 – Continue with our asset management plan and apply a financial sustainability lens to all municipal assets and infrastructure. It highlights how we are progressively updating our asset management plan and building the reserve funds for the timely repair/replacement of our assets. Additionally it addresses the communication of our approach to funding capital projects.

Attachments:

CPS-28-2023 A1 Performance Measures