



CITY OF
ST. CATHARINES

Corporate Report

Report from Financial Management Services, Director/City Treasurer and
Transportation and Environmental Services, Director/ City Engineer

Date of Report: November 18, 2013 **Date of Meeting:** December 16, 2013

Report Number: FMS-TES-388-2013 **File:** 60.2.101

Subject: Asset Management Plan

Recommendation

That Council receive the report from Financial Management Services and Transportation and Environmental Services, dated November 18, 2013, regarding the Asset Management Plan, for information purposes; and

That Council approve the Asset Management Plan; and

That staff continue to develop the Asset Management Plan and incorporate further municipal infrastructure elements. FORTHWITH

Summary

To be eligible for funding under the Ontario Ministry of Infrastructure's Municipal Infrastructure Strategy, municipalities must have an asset management plan in place prior to December 31, 2013. In anticipation of this deadline staff have prepared a corporate Asset Management Plan for Council's approval.

As in other communities, aging infrastructure in St. Catharines places tremendous burden on municipal resources. While the City's infrastructure is currently in fair to good condition, current spending levels for bridges, roads, water distribution and sanitary sewers will not maintain acceptable levels of service on a long-term basis. The Asset Management Plan identifies current funding shortfalls and proposes financing strategies to address these shortfalls.

Background

At the meeting of February 27, 2012, Councillor Siscoe requested that staff report on the City's plan to achieve sustainable funding for infrastructure as outlined in the report regarding Early Budget and Approval of Proposed 2012 Construction Programs funded by 2012 Operating Budget, 2012 Capital Budget and 2012 Water/Wastewater Budget.

On August 16, 2012, the Ontario Ministry of Infrastructure announced the first phase of the Municipal Infrastructure Strategy and indicated that future grants to municipalities will be based on alignment with a Council approved asset management plan.

On December 10, 2012, Council received a report from Financial Management Services providing rationale and preliminary considerations for the development of a comprehensive asset management plan. At that time Council directed staff to complete a comprehensive asset management plan prior to December 31, 2013.

Report

Staff have prepared an Asset Management Plan for Council's approval, ([Appendix 1 – follow link](#)). This plan has been prepared according to guidelines from the Ontario Ministry of Infrastructure and includes the mandated infrastructure categories of roads, bridges, water and sanitary sewers.

The Asset Management Plan does not currently include the category of City Facilities. Most significantly, facilities are a significant infrastructure category that requires specific attention by the City. This initiative is the subject of a report from Transportation and Environmental Services for consideration by Council at the December 16, 2013 meeting.

In time, corporate asset management will be expanded to account for an even broader infrastructure complement that includes traffic control signals, streetlights, sidewalks, storm sewers, pollution control facilities, the urban forest, heritage and cultural resources.

The Asset Management Plan contains the following information, as per guidelines issued by the provincial government:

- Goals and the municipal asset management planning process
- State of local infrastructure
- Desired levels of services
- Plans to meet desired levels of service
- Financing strategy

The findings of the Asset Management Plan in each of the four mandated infrastructure categories can be summarized as follows:

Bridges

The City owns 80 bridge structures, the majority of which are pedestrian bridges. The current net book value of these bridges is \$6.6 million and the estimated replacement cost is \$39 million. Many of these bridges are reaching the end of their useful life, with 67.5 per cent of bridges in the last 10 years of their service life.

Despite this aging bridge network, the City has been successful at extending the expected lifecycle of its bridges through strong preventative and regular maintenance. Of the City's 80 bridges, 72 meet or exceed the desired level of service. For those

bridges that do not meet desired level of service, asset management strategies are in place to either: replace the bridge with funding from the capital budget; demolish the bridge if use is low; or repurpose the bridge to an alternative use.

Funding required for bridges can tend to spike from year to year as there are relatively few bridges owned by the City. The 10 year forecast projects that funding will be sufficient to complete the asset management plan for bridges as presented.

Roads

The City owns and maintains 562 km of roadway or 1,148 km of traffic lanes. The current net book value of these roads is \$98.7 million and the replacement cost is estimated at \$624 million. Over 98 per cent of roadways are made of asphalt, asphalt on concrete and concrete surfaces and have an average remaining life of approximately 14 years.

Of the City's roadways, 69 per cent are rated in excellent, good or fair condition, with 31 per cent rated in poor condition. Less than 0.5% of the roads have received a fail rating. Due to the age of the City's road network, failing grades could appear in 10 years if funding remains at current levels of \$6.4 million annually. In order to respond to this predicted trend, the City recommends the implementation of a 4% annual funding increase. This increase will address the aging road network and work towards attaining desired levels of service.

Water

The City's water distribution system consists of 613 km of watermains and 41,200 water service connections. The current net book value of this system is \$64.7 million and the estimated replacement cost is \$460 million. Watermains generally have a service life of 50 to 100 years and the average age of the City's watermains is 44. The City has received perfect scores under the Ministry of the Environment's Safe Drinking Water Act requirements for four of the last five years with an average score of 98.4.

Five per cent of the water distribution system is considered in critical condition, not due to age but because of breaks and failures. While user fees address operating and maintenance needs, this revenue is currently insufficient to fund capital replacements.

While there are fluctuations from year to year, watermain breaks and break rates have generally been trending lower. Staff attribute the decrease in average break rates to increased watermain replacement budgets and increased effectiveness in targeting areas with higher risks of breakage. Cast iron and ductile iron watermains are susceptible to corrosion which will leave the pipe brittle and susceptible to breakages. As 41% of the City's watermains are constructed from these materials, there is an extremely high likelihood that breakage rates will reverse and there will be an upward trend in break rates unless funding is increased.

Over the next 10 years it is recommended that total revenues from user fees be increased by 4.5% annually to gradually reduce the funding deficit and to work towards a self-sufficient water distribution system.

Sanitary Sewer

The City's wastewater system consists of 561 km of sanitary mainline, 41,529 sanitary service connections and 8,477 manholes. The current net book value of this system is \$39.5 million and the estimated replacement cost is \$357 million. The majority of pipes (87.5 per cent) are in good to fair condition; nine percent are expected to fail within 10 years and four per cent are expected to fail within five years.

To address current deficiencies and avoid deficiencies in the future, the City has employed several financing strategies. The City has previously used federal gas tax funding as well as funding from Niagara Region to remediate combined sewer overflows. As with the water distribution system, user fees address operating and maintenance needs.

An update of the City's Pollution Control Plan which will include a comprehensive condition assessment of all sewer assets as well as a technical analysis of system functions in dry and wet weather conditions is required before recommending wholesale changes to funding. One of the deliverables from the update to the PCP will be to identify the funding required to operate a sustainable sewer system.

Financial Implications

In order to maintain desired levels of service for each of the above infrastructure categories, the Asset Management Plan contains the following financing strategies:

- New debenture debt to fund bridge rehabilitation and replacement that will fluctuate according to the bridge maintenance schedule. This debenture debt does not pose material risk to the City.
- The annual shortfall for road and water rehabilitation and replacement projects is approximately \$6.5 million. To address this shortfall over a 10 year horizon:
 - Budgets associated with road rehabilitation and replacement will require an annual 4% increase to manage projected unfunded balances
 - 4% increase to the road rehabilitation and replacement budgets represents \$250,000 which is approximately 0.3% of the annual tax levy.
 - Budgets associated with water system renewal will require an annual 4.5% increase to manage projected unfunded balances.
 - 4.5% increase to the water system renewal budgets represents \$265,000 which is approximately 0.5% of the annual water and wastewater budget.
- The update to the City's Pollution Control Plan will determine the recommended level of funding required to operate a sustainable sewer system.

These strategies will be reflected in the 2014 draft budget submissions and will be reassessed on an annual basis as part of the budgeting process.

Conclusion

The Asset Management Plan will be reviewed and updated as required on a regular basis as part of the budget process. A full scale review of the asset management plan will be mandated in 2023, after the first 10 years of operation.

New infrastructure categories will be included as sufficient and appropriate data is received. The City is preparing a facilities plan that will be integrated with the Asset Management Plan when complete. In addition, work will begin in 2014 to develop plans for recreational facilities and urban forestry are also planned in 2014. Staff continue to work toward integrating other infrastructure categories, including: traffic control signals, streetlights, sidewalks, storm sewers, pollution control facilities, the urban forest, heritage and cultural resources.

Notification

Should Council approve the Asset Management Plan, staff are to advise the City Clerk to notify Ontario Ministry of Infrastructure, 900 Bay Street, 5th Floor, Mowat Block Toronto, ON M7A 1C2, of Council's decision on this matter.

Submitted by:

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Approved by:

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