



City of
Peterborough

To: Members of the General Committee

From: Blair Nelson, Commissioner, Infrastructure, Planning and Growth Management

Meeting Date: November 18, 2024

Report: Road Service Area – Capital Program Funding Update, Report IPGACP24-033

Subject

A report to provide an update on the Road Service Area – Capital Program to highlight requirements to maintain current Levels of Service, deliver capital projects identified in the Transportation Master Plan to accommodate growth and status of current funding deficit.

Recommendation

That Council approve the recommendation outlined in Report IPGACP24-033 dated November 18, 2024, of the Commissioner of Infrastructure, Planning and Growth Management as follows:

That Report IPGACP24-033 be received for information.

Executive Summary

- A report to provide a 2025 update on the Roads Service Area – Capital Program report IPGACP24-033 dated November 18, 2024. Highlighting requirements to maintain current Levels of Service, deliver capital projects identified in the Transportation Master Plan to accommodate growth, and status of current funding deficit.
- The proposed 2025 level of investment in the Road Service Area to maintain assets in a State of Good Repair (SOGR) continues to fall short of required funding levels.

Over time, roads – particularly Local Roads – will fall into an unmanageable state of disrepair.

- The Road Service Area projects included in the 2025 Draft Capital Budget continue to fall behind the pace of investment outlined in the Transportation Master Plan required to meet the needs of the growing community. At the current rate of investment levels of service will continue to decline as the City grows. This will result in higher levels of congestion, longer travel times, more “cut-through” traffic, and insufficient mode shift to more efficient and economical forms of transportation.

Background

Asset Management

The complete Asset Management Plan that was approved by Council through Report IPGACP24-017 can be viewed here: [2024 Asset Management Plan](#)

For the service areas reported in the Asset Management Plan, which included Roads & Related Assets, the 2024 funding shortfall for renewal and growth needs has been estimated at approximately \$135 million. Insufficient funding levels to address required renewal needs continues to pose a risk to the City’s ability to deliver established service levels and maintain assets in a state of good repair. This results in an increased backlog of work, increased treatment costs, and the City’s image is negatively affected.

With the City experiencing increasing demands from growth, more severe and frequent weather events, and growing asset inventories, the funding shortfall is expected to continue to increase. Furthermore, levels of service are likely to decrease over the long-term planning period.

Maintaining and Improving Road Conditions

The existing condition of the City’s roads continues to be a source of concern for Council, citizens, and staff. The 2024 Asset Management Plan established the current replacement value of the City’s Roads & Related Assets Service Area at \$1.45 billion dollars. This report illustrates the continued backlog of road related work and the effects of funding pressures.

Ontario Regulation 239/02 of the **Municipal Act** sets out maintenance standards for Municipal highways and roads. The regulation outlines classification categories for roads, requirements and frequency of inspection, rehabilitation methods and seasonal maintenance standards. While there is some flexibility within the road rehabilitation programs, regulatory requirements must be met.

Industry standard for developing a roads rehabilitation program involves a thorough assessment of the condition of the road network. The condition assessment involves a

complex matrix of criteria, such as classification, regulatory requirements, bus routes, traffic loads, urbanized/non-urbanized, sub-surface infrastructure, surface material, surface infrastructure, etc.

A standard road rehabilitation and maintenance program uses the assessment criteria to develop a Pavement Condition Index (PCI) and treatment option:

- Roads with PCI under 25 are intended to be re-constructed
- Roads with PCI under 40 are intended for re-design and then re-construction
- Roads with PCI above 40 are intended to be captured in a regular maintenance program with treatments scoped to types of defects (i.e., micro surfacing / crack sealing or grind & overlay/resurfacing)

In 2014, the City conducted a Road Needs Study and developed Pavement Condition Indexes (PCI) for the roads/road segments. Since the 2014 Study, some roads requiring reconstruction have been included in draft budget documents; however, competing budget priorities have resulted in many road reconstructions being deferred, thereby pushing such roads beyond their state of good repair envelope. State of good repair (SOGR) means the asset is in an acceptable condition to be used for what it was meant to be used. With regular preventative maintenance, our roads will remain in a state of good repair extending the life of the road before the requirement of a costly replacement. Table 1 below shows the current state of good repair programs proposed for 2025.

Table 1 – State of Good Repaid Programs for 2025

Project	Ref	2024 Investment
Pavement Preservation Program*	22-020	\$ 5,500,000
Road Surface Repair Program*	25-051	\$ 2,300,000
Sanitary Sewer Rehabilitation	19-038	\$ 1,100,000
Storm Sewer Rehabilitation Program	19-073	\$ 1,100,000
Total		\$10,000,000

* projects directly addressing pavement condition through preservation

Deferral of these projects creates a backlog throughout the entire road asset management program and results in increased costs as time goes by.

In 2021, the City completed an update to the Pavement Condition Index (PCI) inventory as established in the comprehensive Road Needs Study (Report USEC14-005). This monitoring work updates the pavement condition index (PCI) ranking for each road or segment of road. This industry standard method helps the City establish a consistent framework for prioritizing roads and demonstrates the value of pavement preservation. Typically, the PCI inventory is updated on a two to three-year cycle.

The investments made in pavement preservation since 2015 are summarized in Table 2 below. While the annual investment has been gradually increased year-over-year – including support from the Provincial government’s Ontario Community Infrastructure Fund – the purchasing power of that investment has been declining when factoring in construction cost escalation and the fact that road conditions continue to deteriorate because of the chronic underinvestment in pavement preservation. As the funding gap persists, more road surfaces are falling out of a preservable state and will require more expensive reconstruction.

Table 2 – Summary of Pavement Preservation Investments, Needs and Funding Gap

Year	Actual Pavement Preservation Investment	Investment Required to Maintain Road Conditions	Funding Gap
2015	\$1,950,000	\$11,450,000	(\$9,500,000)
2016	\$2,900,000	\$12,130,000	(\$9,230,000)
2017	\$3,000,000	\$12,860,000	(\$9,860,000)
2018	\$3,300,000	\$13,630,000	(\$10,330,000)
2019	\$3,700,000	\$14,450,000	(\$10,750,000)
2020	\$4,100,000	\$15,320,000	(\$11,220,000)
2021*	\$5,500,000	\$16,240,000	(\$10,740,000)
2022*	\$5,750,000	\$17,210,000	(\$11,460,000)
2023	\$5,150,000	\$18,250,000	(\$13,100,000)
2024**	\$7,800,000	\$19,345,000	(\$11,545,000)
2025***	\$7,800,000	\$24,015,000	(\$16,215,000)

*These years included a pilot road resurfacing program to implement surficial asphalt treatments without addressing underlying drainage, grading and subgrade deficiencies to provide a short-term improvement of the pavement condition. Due to budget pressures, this program was not proposed for future years. The best long-term value for taxpayers is to implement pavement lifecycle management strategies in line with best asset management practices.

**2024 included the Downtown Street Surface Repairs project designed to improve the smoothness of the surface asphalt and appearance; keeping the downtown streets from falling into an unmanageable state of repair while we wait for the capital dollars required to address underground infrastructure reconstruction. This project will be similar to the pilot road resurfacing program described above in that it will not address underlying drainage, grading, subgrade and infrastructure deficiencies.

***2025 includes the Road Surface Repair Program, which will be allocated over 3 years to address surface deficiencies in the areas of Reid Street, Park Street South, Park Street North and Rubidge Street.

Implementation of the Transportation Master Plan and Accommodating Growth

The estimated capital costs associated with the recommendations outlined in the Transportation Master Plan (TMP) are just over \$900,000,000 (expressed in 2022 dollars), which will be required over the 30-year horizon of the plan. This translates into an average of \$30.0 million annually; however, the timing of projects will influence the actual annual capital budget requests. Recognizing the funding pressures on the capital road program, the bulk of the investment proposed in the TMP was planned beyond the 20-year horizon and identified as a “Long-term Priority.” This approach allows for subsequent updates to the TMP to confirm the pace of projected growth in the City and then reassess or reconfirm the need for, and timing of, those projects.

Notwithstanding the back end loading of the TMP, the “Short-term Priorities” – projects to be completed with the first 10-years of the plan – still require a significant investment. The “Short-term Priorities” amount to approximately \$200 million, or approximately \$20.0 million per year. Table 3 summarizes the 2025 capital projects proposed that were identified in the TMP as “Short-term Priorities.” These projects represent an investment of \$15,080,000, which is \$4,920,000 short of the annual investment required. Future annual investments will need to be increased in subsequent capital budgets or the implementation schedule of the TMP will continue to slip.

Table 3 – Summary of TMP “Short-term Priorities” Proposed for 2024 Capital Budget

Project	2025 Funding
Brealey Dr – Lansdowne to Sherbrooke	\$10,580,000
Lansdowne St W – Park to Otonabee River (Phase 1 – Park to Lock)	\$ 2,000,000
Charlotte St – Water to Park	\$ 1,500,000
Lily Lake Area Development Network Improvements	\$ 1,000,000
Total	\$15,080,000
Average Annual Investment for TMP “Short-term Priorities”	\$20,000,000
Shortfall	(\$4,920,000)

In addition to the priorities established in the TMP, growth pressures resulting from both infill and greenfield development can require additional localized improvements (i.e., turning lanes, intersection/crossing improvements, active transportation network enhancements). The cost of these improvements is typically the responsibility of the development proponent in line with the “growth-pays-for-growth” principle, with the City negotiating cost sharing agreements where a reasonable existing municipal need for the improvement has been identified.

Next Steps

As the City continues to refine its asset management practices, collect better data, and define more accurate models on pavement deterioration, further updates will be provided. With both the Asset Management Plan and Transportation Master Plan being recently updated, a long-term roads lifecycle renewal/reconstruction capital plan will be developed in 2025 that seeks to maximize investments in required growth projects that also address deferred maintenance needs in an effort to maximize the value from each dollar invested. The Asset Management Plan development and updates will also seek input from stakeholders on current and desired Levels of Service in various Service Areas – including Roads and Related Assets. This exercise will help quantify the cost to provide the desired levels of service and make recommendations on changes to the lifecycle management strategies in the development of a sustainable financing strategy. This could include recommendations on increasing available funding through increased property tax revenues to meet desired Levels of Service or accepting lower Levels of Service (within regulatory limits) to mitigate the need for additional funding sources.

Strategic Plan

Strategic Pillar: Infrastructure

Strategic Initiative: Develop and implement robust long-term capital planning forecasts and budget planning to ensure municipal infrastructure (horizontal, vertical and underground assets) remain in a state of good repair.

This report demonstrates the City is developing long-term capital planning forecasts to define investments required to maintain assets in a state of good repair and provides an update on how current levels of investment in the Road Service Area are not sufficient to maintain existing assets and invest in the growth needs required.

Budget and Financial Implications

There are no budget or financial implications associated with approval of this report.

As investments in preventative maintenance are deferred, the cost to maintain road conditions increase over time. If road conditions deteriorate beyond a certain point, maintaining the road condition to minimum maintenance standards becomes more challenging until such time as a more expensive road reconstruction is required.

As investments in expanding or improving the road network are deferred, the cost to implement these upgrades increases over time due to construction cost escalation; and operational challenges (i.e., higher traffic volumes, slower transit service, longer

queuing at intersections, reduced mode shift away from single occupancy vehicles, higher greenhouse gas emissions) become more common as the City grows.

Conclusion

The road network is a core asset of significant scale that is required to move people and goods around the City by various modes of transportation. Chronic underinvestment in preventative maintenance during the second half of the 20th-century has resulted in many existing road assets having a deteriorated condition and operating beyond their appropriate lifecycle renewal stage. As asset management planning has become commonplace in recent years, the City has completed condition assessments and projected investments required to maintain or improve current pavement conditions. Given the extent of the backlog, the necessary investments have not been made due to competing budget pressures for other important service areas, and limits on property tax increases. As the City grows, further dedicated funding investments are required to enhance the road network as recommended in the TMP and to support infill and greenfield development projects, putting further strain on limited capital dollars available.

Submitted by,

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