

Arterial Road Paving Renewal Analysis

At the June 10, 2025, City Council meeting, the following motion was passed:

That Administration perform an analysis of arterial road paving renewal based on condition priorities and provide a report with options to increase the funding for the Arterial Renewal Program in 2026 as part of the 2025 Fall Supplementary Capital Budget Adjustment.

This attachment responds to the motion, and provides three options for increasing funding for the Arterial Renewal Program in 2026.

Executive Summary

- The City’s roadway network is critical to supporting local and regional economic competitiveness and prosperity. It connects people to opportunities and businesses to markets. Roads facilitate the movement of goods and services, emergency response services and people using public transit, vehicles, taxis, bicycles and active modes.
- Arterial roads function as the spine of the roadway network, providing basic access as well as carrying higher volumes of traffic between areas. In order to optimize use and condition throughout the life cycle, Administration uses multiple capital renewal strategies, such as paving and full reconstruction.
- Administration’s analysis focused on arterial roads that are still in fair condition, which can be paved without concrete or base repairs. This selection provides a high return for a one-time funding investment, and it also enables this work to be completed within one construction season.
- Other arterial roads, that are in noticeably worse condition, were not selected as part of this analysis, as they require additional work over and above just paving.
- The following are three funding options for Council to consider:

	Option 1	Option 2	Option 3
Funding Required	\$5 million	\$7.5 million	\$10 million
Paving Length Centerline-km	9.8	15.4	18.5
Useful Life Extension	Approximately 10-15 years		

- Appendix 1 shows the proposed paving locations. As the arterial road paving candidates are in similar condition, Administration has geographically distributed the proposed locations. Of note, the analysis excludes arterial roads within the Downtown neighbourhood, as they will be analyzed as part of the actions outlined in the May 13, 2025, Urban Planning Committee UPE02813 Downtown Action Plan report.

Background

The City of Edmonton has approximately 1,200 centreline kilometres of arterial roads, which represent approximately 20 per cent of the road inventory by length. Based on the most recent available data (collected as of end 2024), the overall arterial road pavement condition is Good (B), with the following breakdown:

Condition	Per cent
Very Good or Good Condition (A & B)	69%
Fair condition (C)	20%
Poor or Very Poor Condition (D & F)	11%

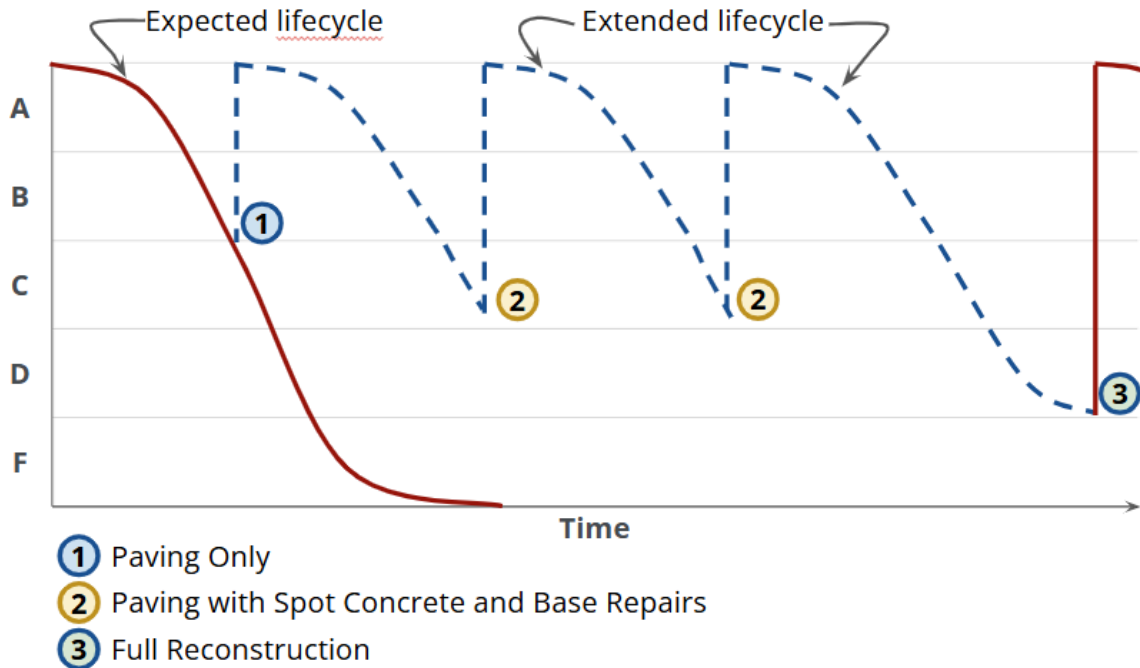
Arterial roads function as the spine of the roadway network, providing basic access as well as carrying higher volumes of traffic between areas. As a valuable municipal asset, the City must plan, operate, maintain and renew its arterial roads.

Lifecycle Management Activities Overview

The City applies maintenance and renewal activities to optimize the useful life of the arterial roads. Maintenance activities ensure that the roads are accessible and enable assets to achieve their design useful life. These activities include street sweeping, snow clearing, crack sealing and pothole filling. Maintenance activities are funded from the City's operating budget.

Renewal activities improve the physical condition of arterial roads and extend their useful lives. For arterial roads, these activities include: paving, paving with concrete repairs and/or base repairs, and full reconstruction (replacement of pavement, sidewalks, curb and gutters, street lights and streetscape upgrades where required). Significant upgrades are treated as asset growth and are funded separately from renewal. Renewal activities are funded from the City's capital budget.

Each of the renewal activities are performed at the appropriate time in the asset's life cycle to optimize their useful lives. The following chart illustrates the various renewal activities that are performed on arterial roads and the extended useful life benefits.



Arterial Road Paving Analysis & Selection

Administration assesses the physical condition of arterial road infrastructure on a two year cycle. Based on the most recent data, Administration identified a list of potential candidates for paving that could be completed within three funding levels: \$5 million, \$7.5 million and \$10 million.

Administration’s analysis focused strictly on arterial roads that are still in fair condition (e.g. some deterioration such as cracks or ruts), which can be paved without concrete or base repairs. Downtown arterial roads were not included, as they will be assessed as part of the actions outlined in the May 13, 2025, Urban Planning and Economy report, UPE02813 Downtown Action Plan.

Locations that require paving with concrete and/or base repairs were excluded, as this strict paving provides a higher return on investment (e.g. length of roads impacted, future renewal and maintenance savings) for a one time funding investment that is to be completed within one construction season.

These locations were validated by Administration through site visits and circulations to utility companies (EPCOR, ATCO, Telus) for coordination of proposed work.

Maintenance - Current State

The number of pothole repairs for the entire road network (arterials, collectors and locals) has been trending upwards over the past few years, from approximately 538,674 in 2023 to 511,185 in 2024 and 630,504 so far in 2025 (as of November 9). The number of repairs to date in 2025 is approximately 1.2 times the amount for the entire year in 2024, and approximately 1.2 times the amount for the entire year in 2023. It should be noted that these numbers do not represent when potholes formed, only when they were repaired. Differences in weather, staff resources and other factors may mean that potholes that form toward the end of the maintenance season may be addressed in the following year.

The number of vehicular damage claims varies; as of November 13, 2025 the year-to-date total is approximately 17 per cent higher than the same time in 2024, but approximately eight per cent lower than in November 2023. Claims are an indication of damages caused and safety issues.

Potholes are filled by priority, based on location (road type), severity, and safety. The recent exponential increase in arterial roadway deterioration has drastically increased the demand for pothole repairs. This has resulted in a greater quantity of repairs needed, as well as larger, more complex repairs. This has impacted service levels by extending repair timelines. Other road types are also impacted, as repair priority is focused on arterial roads.

If approved, funding for the proposed arterial paving options would help reduce the number of potholes that need to be repaired on arterial roads in the next 10 to 15 years.

Renewal - Current State

As part of the 2023-26 Capital Budget, arterial roads were funded at 24 per cent of their ideal renewal needs. In addition, the amount of funded arterial renewal work has been decreasing over the past few budget cycles. The following table summarizes the total amount of renewal (paving, paving including repairs and reconstruction) funded over three capital budget cycles.

Completed Arterial Road Renewal Centerline-km		
2015-18 Budget Cycle	2019-22 Budget Cycle	2023-26 Budget Cycle
222	115	46

Attachment 9

This trend is directly connected with the increase in the number of pothole repairs being experienced in the city and it will also lead to a decrease in the overall physical condition of arterial roads left unaddressed.

Funding Options

	Option 1	Option 2	Option 3
Funding Required	\$5 million	\$7.5 million	\$10 million
Paving Length Centerline-km	9.8	15.4	18.5
Useful Life Extension	Approximately 10-15 years		

There is no capital budget to support any of the options identified above, and limited opportunity to allocate funding with the City's available resources.

If approved, the recommendations in the Fall 2025 Supplemental Capital Budget Adjustment (SCBA) would result in a Corporate Funding Pool deficit of \$7.1 million, which would need to be addressed through the Spring 2026 SCBA.

The October 22, 2024 Financial and Corporate Services report, FCS02471 - Analysis of the 2023-2026 Capital Plan, examined options available to redirect funding within the 2023-2026 Capital Budget. Council direction would be required to undertake further analysis as to the current status of identified projects and the feasibility of transferring funding.

No additional opportunities for funding have been identified since the October 2024 report, related to projects currently on pause, awaiting further information, or otherwise held in abeyance. All available funds have been committed within the 2023-2026 capital budget cycle.

Next Steps

If Council approves additional funding for arterial paving renewal, Administration will begin planning and implementation as part of the 2026 construction season.

Attachment 8 - FCS03159 Arterial Road Paving Renewal Analysis

Appendix 1

