


2023 ASSET MANAGEMENT REPORT CARD

Transportation

Total asset replacement value	\$1.1 billion
Current condition	FAIR 
Projected condition in 25 years	VERY POOR
Annual funding needed to meet target performance	\$30 million
Annual average funding	\$7.0 million
Annual funding gap	\$23 million
Funding source	Tax base
Data maturity level	High

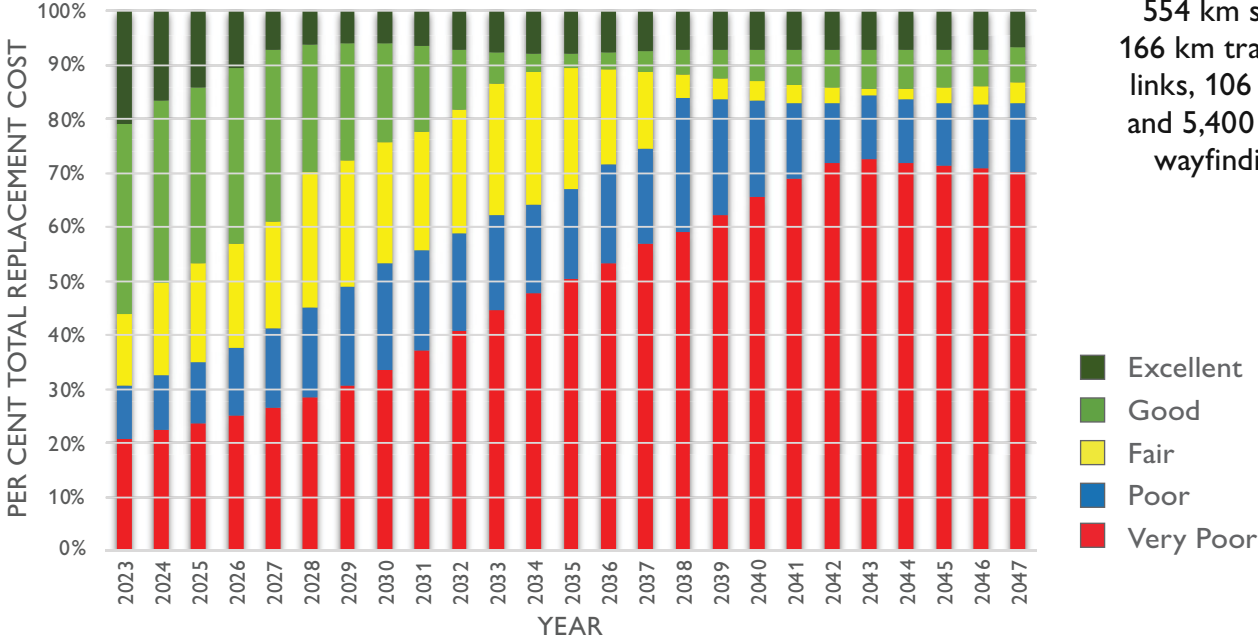


Annual funding needed: \$30 million



Assets include 850 lane km roads, 554 km sidewalks, 166 km trails and trail links, 106 bike racks and 5,400 traffic and wayfinding signs.

Annual performance of transportation assets



- Excellent
- Good
- Fair
- Poor
- Very Poor

CURRENT STRATEGY

The City's transportation assets are roads (including bike lanes), signs (traffic and wayfinding), sidewalks and trails (multi-use paths, community trails and trail links), bike racks, retaining walls and streetlights. A well-maintained transportation network helps people and goods move around our city and encourages many ways to move. Roads are a tax base-funded asset.

Roads are rehabilitated when their condition falls below the target pavement quality index (PQI) for a portion of the road. PQI is a rating from zero (very poor condition) to 100 (excellent condition). It considers surface condition, ability to support and bear weight, and how rough the road is. The target condition for each road segment is based on the classification of larger volume arterial roads (like Union Street and Albert Street), and collector roads (such as William Street and Beechwood Drive) have a higher target condition than lower volume local and residential roads. The city has an overall road network target of 60 PQI; currently, the assessed PQI level is 59.

Roads are primarily replaced in coordination with other underground infrastructure work, such as watermains or sanitary/storm sewers repairs or replacements. Roads are typically rehabilitated rather than replaced when only the road requires attention. The timing of proposed developments is also considered when deciding whether to replace or rehabilitate a road. For sidewalks and trails, we repair as needed and replace them once they reach a very poor performance.

ASSET PERFORMANCE

Transportation asset performance is evaluated using historical knowledge, age and observed conditions. The quality and availability of our asset data (data maturity) are continuously evolving. The current data maturity level for transportation assets is assessed to be high. The City is continuously working to improve asset data quality.

Approximately 31% of transportation assets are currently considered in poor or very poor performance. Over the 25 year timeline, with the current level of funding, we anticipate the percentage of our transportation network with a poor or very poor performance profile to increase from 31% in 2023 to over 83% by 2047. Based on the best available transportation asset data, deterioration rates and 2023-2032 capital funding, we estimate that transportation assets have an annual infrastructure funding gap of \$23 million.



31%

Transportation
assets with
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LEVELS OF SERVICE

The following tables show the levels of service established by the city for parking assets. These metrics include the technical and community level of service required as part of the Ontario Regulation 588/17. Service metrics are reported for the prior year ending on December 31.

COMMUNITY LEVELS OF SERVICE

The following table outlines the qualitative descriptions that determine the community levels of service for transportation assets.

SERVICE ATTRIBUTE	QUALITATIVE DESCRIPTION	2022
Scope	Description, which may include maps, of the road network in the city and its level of connectivity.	The City of Waterloo is a lower-tier municipality within the Region of Waterloo and is interconnected by a network of Regional, Arterial, Collector and Local roads which facilitate travel between in all areas of the City.
Quality	Description or images that illustrate the different levels of road class pavement condition.	See Table 16 in the 2020 Asset Management Plan for details.



TECHNICAL LEVELS OF SERVICE

The following table outlines the quantitative metrics that determine the technical level of service for transportation assets.

SERVICE ATTRIBUTE	QUANTITATIVE METRICS	2021	2022
Scope	Number of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.	0.9	0.8
Scope	Number of lane-kilometres of collector roads as a proportion of square kilometres of land area of the municipality.	2.8	2.8
Scope	Number of lane-kilometres of local roads as a proportion of square kilometres of land area of the municipality.	8.9	8.9
Quality	For paved roads in the municipality, the average pavement condition index value.	58	59
Quality	For unpaved roads in the municipality, the average surface condition.	Good	Good

The information presented here is based on the best currently available data regarding asset inventory, performance, and degradation curves, along with funding included in 2023 approved capital budget and 2024-2032 capital forecast.