



Committee of the Whole Report

rvReport Number: **ENG2024-003**

Meeting Date: March 5, 2024

Title: **Update to Roads 5 Year Plan**

Description: Providing Council with the current progress of the Roads 5 Year Plan

Author and Title: Michael Farquhar Manager of Technical Services

Recommendation(s):

That Report ENG2024-003, **Update to Roads 5 Year Plan**, be received;

That staff update the Plan annually based on capital project approvals and in accordance with the Asset Management Plan; and

That these recommendations be brought forward to Council for consideration at the next Regular Council Meeting.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

At the Regular Council Meeting of September 26, 2023 Council adopted the following resolution:

CW2023-228

That the Memorandum from Councillor Perry, **regarding an Evaluation of the City's Roads Program**, be received;

That Engineering Staff be directed to bring forward an evaluation of the roads plan to Council; and

That the evaluation plan include: performance and progress on targets; contingencies and process(es) for re-prioritizing road work; recommendations regarding climate change, new technology, and links to transit and active transportation by end of Q1 2024.

Carried

This report is in response to the above-mentioned Council resolution. The Councillor's memorandum is attached as Appendix "A" to this report. As well, this report implements the previous commitment to the updating of the Roads 5-year Plan as was identified in Council report ENG2022-031 - Update of the Roads Needs Information and Roads 5 Year Plan (2023-2027), attached as Appendix "B" to this report.

The previous report ENG2022-031 outlined the process of how and why the City conducts a condition evaluation of its road network through a "Roads Needs Study" as well as what the City uses the collected data for. This process as described in Appendix B has been in place since 2011, and was utilized for the development of the current 5 Year Roads Plan.

In summary of report ENG2022-031, the intent of a Roads Needs Study is:

- The assessment and review of the condition of the 2,704 km's of road network within the City;
- To provide unit costs for improvements to the road sections;
- To prioritize rehabilitation and replacement needs as "Now", "1-5 year" and "6-10 year";
- To provide a life cycle costing analysis, identifying road sections for preventative maintenance that would extend the overall life of the road network; and
- To update GIS roads database with the collected information.

This data is then used as a guideline for developing the Roads 5 Year Plan based on the identified Now, 1-5 and 6-10 year needs recommended to be addressed in the yearly capital programs of Urban/Rural Reconstruction, Urban/Arterial Resurfacing and Rural Resurfacing. The plan did not deal with the resurfacing needs of gravel roads. Those needs are addressed in the current 10-year Gravel Road capital plan.

This Plan utilized past criteria from the previous Roads Five Year Capital Plan. They are as follows:

1. Projects taking into consideration the road section and priority of underground infrastructure coordination (water waste water) and recommendations through EA studies and Master plans;
2. Life cycle initiatives for prolonging the operating life of a road section;
3. Resolving operational and maintenance demands within a road section;
4. Boundary road sections in keeping with established agreements;
5. Existing Council resolutions and priorities for various road sections (attached as Appendix D);
6. Carryover road segments from previous plan; and
7. Tracked condition complaints from residents.

The Plan then informs on a yearly basis the above-mentioned programs within the Capital budget process. As well it outlines the yearly spending amount targets for the identified programs, in order to maintain an acceptable level of adequacy for the road network. The targeted spending for the programs are: Urban/ Arterial Reconstruction \$5-9.5 million, Urban/Arterial Resurfacing \$6-7.5 million and for Rural Resurfacing \$5-6.5 million. The Plan advises on these needs that are then included in the City's long term financial plan that allows the City to properly track and plan for them. These spending targets also take into consideration overall affordability within the City's long term financial plan, which this plan provides inputs into as well as the achievable work schedule for these programs in a capital budget cycle as outlined in the City's capital close policy.

Rationale:

Performance and Progress on Targets:

The current plan as seen in Appendix B, began in 2023 and has seen year 1 implemented as well as year 2 (2024) budgeted for. The targeted and budgeted amounts in year 1 and 2 can be seen in Table 1 below:

Table 1
Program spending

| | 2023 (targeted) | 2023 (budgeted) | 2024 (targeted) | 2024 (budgeted) |
|------------------------------|-----------------|-----------------|------------------|------------------|
| Urban / Rural Reconstruction | \$ 4,862,000.00 | \$ 4,904,000.00 | \$ 7,408,000.00 | \$ 7,783,000.00 |
| Urban / Arterial Resurfacing | \$ 6,425,000.00 | \$ 6,710,190.00 | \$ 7,474,000.00 | \$ 8,490,000.00 |
| Rural Resurfacing | \$ 5,343,000.00 | \$ 6,100,000.00 | \$ 6,264,555.00 | \$ 6,439,000.00 |
| Lifecycle Management | \$ 2,033,000.00 | \$ 2,033,000.00 | \$ 2,033,000.00 | \$ 2,335,000.00 |
| Totals | \$18,663,000.00 | \$19,747,190.00 | \$ 23,179,555.00 | \$ 25,047,000.00 |

In 2023 there was variance of approximately \$1,084,190 between what was targeted in the plan for that year and what was budgeted. This variance is attributed to the addition of Elliot St for redesign (from Lindsay St to Murray St) in the Urban/Rural reconstruction program as well as Council’s decision to add Coldstream Road, Grey Wood Dr. and Kagawong Road (community partnership project) within the Rural resurfacing program. The addition of these roads has had the effect of slightly accelerating the plan.

In 2024 there is a variance of approximately \$1,867.445 between what was targeted in the plan and what was budgeted for. This variance is attributed to the advancement of the following streets under the Urban/ Rural reconstruction program:

- | | |
|---|--------------------|
| • Glenelg St. - Cambridge St. to Victoria Ave. | Design |
| • Canal St. - Sherwood St. to CKL Rd. 36 | Utility Relocation |
| • Lindsay St. - Queen St. to Lindsay St. Bridge | Reconstruction |
| • Caroline St. - Queen St. to King St. | Reconstruction |
| • St. Paul St. - Queen St. to King St. | Reconstruction |
| • St. Patrick St. - Queen St. to King St. | Reconstruction |
| • St. Peter St. - Queen St. to South End | Reconstruction |

This was done in coordination with the King St design due to proximity of streets to each other and overlapping underground infrastructure connection. It was also advantageous for the City to advance these road section along with the planned King St project in coordination with previously received grants monies specific to replacement of watermain. It was also required to advance the utility relocation on Canal St in advance of its proposed reconstruction date. In addition to these streets in the Urban/Rural reconstruction program Council added a project for the design of George St between Queen St and Colborne St. As well as Colborne St between Hwy 35 and Charles St has now been adjusted in the plan due to design and utility coordination.

Within the 2024 Urban/ Arterial resurfacing program Council added the following roads:

- Mill St
- Manvers Dr.
- Neals Dr.

By doing so it advanced Mill St in the plan as well as adding Manvers Dr. and Neals Dr. to the Plan. Kent St west from Victoria Ave to the west limits was adjusted in the Plan due to coordination with underground infrastructure needs as well as timing of improvements to the intersection of Angeline St and Kent St intersection.

Within the 2024 Rural resurfacing program the following roads were advanced in the plan due to condition and maintenance demand as well as coordination work with a boundary road.

- Killarney Bay Road
- Solanum Way
- Simcoe St

As well, the following were added to the program in 2024 and advanced in the Plan:

- Anderson Road
- Golf Links Road
- Pleasant View Cres
- Shirley Anne Dr.

These changes to the original plan presented through report ENG2022-031 can be seen in Appendix C attached to this report. Additionally, updates to future years in the Plan are identified due to completion of works, adjustments of works due to coordination of projects through design of underground infrastructure, and coordination with boundary municipalities.

Based on the overview of current spending and variances within the years of 2023 and 2024 of the Plan the City has met or exceeded the spending targets that were set forward in the Plan that was identified through report ENG2022-031 for the years 2023 and 2024.

Over the course of performing road network condition evaluations through roads needs studies from 2011 to present, the City has consistently reported on the health of its road network based on an overall adequacy rating. The rating used was the structural adequacy rating of the road network which identified it as 13.5/20 in the 2016 roads needs study and 14.3/20 in 2021. For a network the size of the City's it was recommended through the roads needs study that the adequacy rating be maintained or improved to an overall 72% adequacy rating based on the funding targets set forth in the plan. These targets are pursued through achieving the funding goals of the plan to deal with identified network needs, however as the City moves forward with the Plan there will always be roads in a state of repair (requiring maintenance) before they are captured within the current or future Plans. For the situations outside of performing standard maintenance the City has developed current contingencies to deal with these situations.

Contingencies and process(es) for re-prioritizing road work:

The City conducts a road needs assessment of its network every 5 years, producing a road needs study which informs a "Roads 5-year Plan" which is a guideline used for inputs into the yearly capital budget. The Plan is viewed as a living document which is reviewed each year as a whole in order to ensure priorities are current and in line with the City's overall financial plan. Through this review the City can encounter road segments that have been identified in the Plan but require advancement in the Plan due to increased maintenance demands and costs. In addition to this, the City will adjust timing of reconstruction projects from time to time to better correspond with completion of design, relocation of utilities,

coordination of development, alignment with grants and development of the yearly capital budget.

In the situation where a road segment is deemed as unmaintainable by staff, the road segment can be re-evaluated and prioritized into an upcoming capital budget.

In the scenario where there is a need to address the surface condition of a road segment prior to the budgeting for full resurfacing the City can proceed by:

- 1) Pulverizing the existing surface of the road and maintaining the road segment as a gravel road for a period of 1-2 years before prioritizing in a capital budget for resurfacing. (this would only be done on lower volume hard topped roads);
- 2) Perform localized asphalt overlays on roads to extend their life until the segments can be resurfaced or reconstructed; or
- 3) An emergency procurement could occur in response to unplanned and unforeseen circumstances (i.e. Floods, accidents).

The City's yearly capital program of Life Cycle extension addresses roads within Options 1 and 2, above. On a yearly basis the department of Engineering and Corporate Assets meets with Public Works to review its current year list for priority projects under this program for:

- Asphalt overlays
- Crack sealing of roads
- Slurry sealing of roads

Once a list is compiled, staff then report back to Council on an annual basis with the recommended works to be completed under this program.

Recommendations regarding climate change, new technology:

The City is currently updating its Strategic Plan, which outlines the goals of the City. Among those applicable to road planning:

- Affordable housing is needed
- Sustainable and environmentally conscious development is desired
- Improved health care, education and services are needed now and as we grow
- Amenities such as outdoor spaces, community events and recreational facilities are desired and valued
- Transportation – roads, active transportation, transit, connections to GO Transit – are all needed now and to support growth and business
- Preservation of small town culture and heritage is important

Within those goals are needs for the City to have a healthy transportation network as well as to have sustainable environmentally conscious development. Although not specifically identified in the roads plan, detailed scoping of works for all programs takes into account the methodology of how the work is performed as well as utilizing new technologies in order to find efficiencies in the building and resurfacing of roads. With the use of alternative methods and technologies it creates efficiencies which equates to a lesser amount of inputs to a project and impact to the environment. Other uses include preservation techniques that can extend the life of the network there by reducing the frequency needed for resurfacing, which would also limit the overall impact of the future need of the road network on the local environment.

Current examples of this being used by the City as it relates to the City's current Strategic plan:

A Healthy Environment

- Through low impact development (LID) options when designing for reconstruction

A Vibrant and Growing Economy

- Through the creation of Master plans, like the Transportation Master plan which informs on recommendations and policies that effect the 5 Year Roads Plan

Good Government

- Through the creation of sustainable improvement plans like the Roads 5 Year Plan
- Through Paving methods like "Cold in place paving", which uses the existing asphalt layer in the resurfacing process (recycling it in place) cutting down the inputs as well as timing to complete projects
- The use of preservation methods such as slurry seals, and micro-sealing to "keep our good roads good" increasing the timeframe of when a road needs to be resurfaced

Links to transit and active transportation:

The structure of the current roads plan does not specifically identify links to transportation or active transportation however it does contain projects that have these elements imbedded in them.

Master plans such as the Transportation Master Plan and Active Transportation plan contain such specific recommendations. When the City completes such plans the identified projects

and recommendations are brought forward sometimes through the Provincial Environmental Assessment process into the detailed design of a road. Once the design is completed the overall project is identified within the Roads 5-year Plan or the long-term financial plan.

The City is currently completing its update to its Transportation Master Plan, this can be viewed through the link below.

<https://jumpinkawarthalakes.ca/transportation-master-plan>

The Transportation Master plan is inclusive in its policies and network improvement reconditions of other City adopted plans and strategies like the active transportation master plan and the parking strategy. By doing so it collectively informs on recommendations and strategies when detailed projects are being developed for inclusion into plans like the roads 5-year plan and the City's long term financial plan. Through this process the City works within the goals of a vibrant and growing economy and Good Government by coordinating these plans as well as balancing the affordability of them.

Other Alternatives Considered:

The baseline funding for this plan was based on the recommendations made in the Roads Needs Study presented to Council in this report. An alternative consideration would be to change this funding level. If considered it would be addressed in the Asset Management Plan.

Alignment to Strategic Priorities

This project relates to Goal 2 and Goal 5 by maintaining and improving efficiency of the City's existing infrastructure:

- Sustainable and environmentally conscious development is desired
- Transportation – roads, active transportation, transit, connections to GO Transit – are all needed now and to support growth and business

Financial/Operation Impacts:

The funding model for this 5-year plan for Urban/Rural Reconstruction, Urban/ Arterial Resurfacing and Rural Resurfacing will be addressed in the Asset Management Plan, the long term financial plan and each individual budget year for approval.

Attachments:

Appendix A



Councillor Perry
Memorandum - Roa

Appendix B



ENG2022-031
Update of Roads Ne

Appendix C (updated 2023-2027 roads plan)



Appendix C
Updated road 5 year

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