

Report TR-TAPS-30-16

To: Chair Bell and Members of the Transportation and Public Safety Committee
From: Kimberly Wingrove CAO and Patrick Hoy, Engineering Manager
Meeting Date: April 21, 2016
Subject: Transportation Services 2017-2021 Draft Five Year Capital Forecast
Status: Recommendation adopted by Committee as presented per Resolution TAPS52-16; Endorsed by County Council May 3, 2016 per Resolution CC54-16;

Recommendation(s)

THAT Report TR-TAPS-30-16 regarding the Transportation Services 2017-2021 Draft Five Year Capital Forecast be received as presented and forwarded for inclusion in the corporate Five Year Capital Forecast for consideration by County Council.

Background

The following summary chart outlines the 2016 capital budget as well as the five year forecast.

COMMITTEE/FUNCTION	2016 Approved Budget	2016-2020 Five Year Capital & Extra-Ordinary Expenditures					
		2017	2018	2019	2020	2021	TOTAL
Construction, Resurfacing and Minor Capital	7,292,152	7,778,705	8,262,025	8,738,338	9,201,894	9,664,698	43,645,660
Machinery	675,000	675,000	675,000	675,000	675,000	675,000	3,375,000
Housing	300,000	300,000	300,000	300,000	300,000	300,000	1,500,000
NET LEVY REQUIREMENTS	8,267,152	8,753,705	9,237,025	9,713,338	10,176,894	10,639,698	48,520,660
Levy Increase		486,553	483,320	476,313	463,556	462,804	

It is recognized that the proposed capital investments require an increase of \$486,553 to levy requirements or a 5.8% increase over the 2016 approved budget. This \$486,553 would reflect a 0.92% increase to the corporate net levy requirement for 2017.

Construction, Resurfacing and Minor Capital

It is anticipated that a reconstructed road should last on average of 16 to 18 years provided the appropriate preventative maintenance work is completed. With 877 kilometres of road, the County should be rehabilitating approximately 52 kilometres of road annually. However, in the past many of the Grey Roads were not constructed to a sufficient standard to last for 17 years and, as a result, more than 52 kilometres of roads should be considered for rehabilitation annually. Given finite funding envelopes, road reconstruction must be balanced against necessary investments in structures (bridges and culverts over 3m). The 2017 capital plan includes paving 31 km of road and addressing five structures.

Roads

The 5 year capital plan for roads is based on staff's technical assessment of the roads including pavement condition rating, environmental conditions and usage. The forecast year for a project is subject to fluctuation depending on information gathered during annual assessments.

For 2017-2021 the timing of the following projects has been modified:

- 1) Grey Road 3 and Grey Road 16 Intersection Improvements (modified) – The semi urban work required in Keady is proposed to be completed as one project as stormwater issues should be resolved. Keeping the semi urban work together was more logical and cost effective than only doing half of the hamlet in consecutive years.
- 2) Grey Road 10 Hanover – 12th to 16th Street (new) – Hanover would like to replace water, sidewalk and sanitary infrastructure and the pavement surface is deteriorating. Completing the projects concurrently increases efficiencies.
- 3) Grey Road 119 hot mix overlay (advanced from 2020 to 2017) – the surface treated road condition is adequate and the majority of the project could be completed via asphalt overlay if completed soon. By waiting until 2020, a more cost prohibitive pulverize and pave would be required.
- 4) Grey Road 4 Lambton Street to Chester Street (new) – West Grey is hoping to complete underground service work in Durham.
- 5) Grey Road 15 Rehabilitation – 18th Street to Water Treatment Plant (new) – Road in very poor condition and the water treatment plant construction has accelerated the deterioration of this section. This project will be completed in conjunction with Owen Sound underground works.

- 6) Grey Road 40 Pulverize and Pave – 700m west of Veterans Way north to Grey Road 12 (modified) – this job was extended as the entire section would benefit from a consistency of design and economies of scale.
- 7) Grey Road 17B pulverize and pave – Highway 21 to Grey Road 17 (new)– Road is deteriorating more quickly than anticipated and pedestrian and cyclist activity is increasing in the area.
- 8) Grey Road 30 pulverize and pave – Lower Valley Road to Grey Road 13 (new) – many stormwater issues have occurred within the last year and the surface treatment is deteriorating.
- 9) Grey Road 5 – both sections (delayed from 2016 to 2020) – Grey County completed a patch on the worst section in 2015 and another in 2016. Coordination with Owen Sound indicated that they have other projects of a higher priority and Grey Road 5 could wait. Coordination with Owen Sound, Grey and Georgian Bluffs make waiting the preferred solution.
- 10) Grey Road 9 pulverize and pave – Grey Road 23 to Southgate Sideroad 13 (delayed from 2018 to 2020) – Grey completed a patch on the worst section in 2015 which should extend the life by a few years.

The following projects included in the previous 5 year plan have been removed:

- 1) Grey Road 17 Preventative Overlay – Grey Road 17B – Girl Guide Road – Removed as per report TR-TAPS-17-16.
- 2) Grey Road 113 Pulverize and Pave – Beaver Street – 10th Line – This section is being patched as part of the minor capital program in 2017.
- 3) Grey Road 170 preventative overlay – East of Con 2 NCD to Highway 6 – This overlay was removed as Grey Road 170 is still in good condition and is a lower volume road.
- 4) Grey Road 3 preventative overlay – Grey Road 25 – Sideroad 8 – It was determined that other projects having a much higher maintenance cost should take precedence within the 5 year window.

Transportation Services contacted the local municipalities to inquire regarding their plans for local municipal work on County Roads to enhance the coordination of work.

The five year plan includes transferring funding to a reserve for future Infrastructure needs. In the future years this funding will be allocated to specific road and bridge projects.

Structures

In 2013 Transportation Services initiated the work of reviewing and prioritizing structure replacement. As a result, the 2017-2021 five year forecast includes addressing 8 structures. The structures were selected based on condition and the coordination of adjacent road work. In 2017 three structures will be replaced and two removed.

- 1) Structures 10-590 and 10-900 (delayed 2016 to 2017) – These two structures were delayed as Grey and Bruce Counties are pursuing moving a municipal drain to facilitate two road crossings. It is anticipated that these two structures could be replaced by culverts reducing the amount of structures in the system.
- 2) Normanby-Bentinck Townline Structure 900-188 (new to capital) – This bridge has been reduced to a single lane and it currently has a load limit. Discussions with the lower tier regarding the cost benefit of a repair vs. a replacement are ongoing.
- 3) Grey Road 9 structure 009-900 (new to capital) – had the lowest Bridge Condition Index (BCI) in the most recent bridge inspection summary report.

Housing and Depots

The Housing and Depot Five Year Capital Forecast includes projects identified in the 2011 Building Condition Assessment Report, and updated information provided by the Area Foremen.

The area of the County known as Patrol D is serviced by two patrol yards – a County-owned facility in Dundalk and a leased facility in Flesherton.

The Dundalk patrol yard includes a maintenance building and a sand dome. The maintenance building is in poor shape. In addition, the sand dome needs to be re-shingled and structural repairs are required. There is not a salt shed at the yard.

The Flesherton depot is owned by the MTO. It is unknown as to how long the County will be permitted to remain at this location or if there are opportunities for the County to enter into a more permanent arrangement at this site.

At this time, the Transportation Services Department is considering options as to how to best service the Patrol D area. The first priority is to determine the structural integrity of the Dundalk maintenance building. In 2016 a structural engineer will be hired to assess this building. The results of this assessment will then frame the discussion as to how to proceed in Patrol D.

Within the 5-year plan, it has been recommended to set aside \$60,000 per year to finance the future course of action in Patrol D. These funds will be put into a reserve

that has been set up for a new depot in Patrol D – at the end of 2015 the balance in this reserve was \$448,000.

The Markdale dome (also known as the Pendleton dome) was not included in the 2016-2020 plan as it may not be required in the future. Until the decision is made the capital forecast shows funds for replacement of the electrical panel in 2017 and yard repaving in 2018.

The County's sand domes are aging and are expected to require replacement in several years. It is staff's opinion that the best course of action is to replace the sand domes with structures that can store both sand and salt and can have indoor loading. Therefore, a large portion of the 2017 to 2021 plan is made up of transfers to the dome/depot replacement reserve. The balance in this reserve at the end of 2015 was \$136,000.

Machinery

The 2017-2021 plan has not changed significantly from the 2016-2020 plan. The changes made for the 2017 year are as follows:

1. The engineering staff has requested a passenger van in order to have a closed-in vehicle that has the capacity to carry equipment out of the elements and the capability for multiple passengers when doing site meetings and road assessments. Currently, staff has had to use multiple vehicles to accommodate the above stated needs, which is not as safe when pulling off to the side of the road to make observations and have discussions.
2. Staff are recommending the purchase of two new tandem trucks, while disposing of three older tri-axle trucks. The tri-axes have surpassed their useful life, as determined by the approved Fleet Management Practice Manual, and there is one surplus vehicle. This will bring our fleet of snowplows to 21 units. This allows the Department to plow 17 routes, and have 4 back-up vehicles - one for each patrol.
3. There are currently three graders in the fleet. Staff has determined that two graders will be sufficient, and recommends to dispose of two graders, and to purchase a new grader in 2017.

The balance in the equipment replacement reserve as of December 31, 2015 was approximately \$4,400,000. Total gross purchases for 2017-2021 are planned to be \$7,117,500. Taking into account the projected sale of machinery, and looking ahead 15 years, it has been determined that an annual contribution of \$675,000 to the equipment reserve will maintain adequate funding for future machinery replacement.

Financial / Staffing / Legal / Information Technology Considerations

The proposed five year forecast levy includes an increase of \$486,553 in 2017, which is an increase to the Grey County levy of 5.8% percent. This \$486,553 would reflect a 0.92% increase to the corporate net levy requirement for 2017.

In accordance with the Asset Management Plan for the County of Grey completed in 2013 by Public Sector Digest there are pent up investment demands of approximately \$60,000,000 and \$9,000,000 for roads and structures respectively. It concludes that the levy for roads should be increased \$11,354,500 from \$7,855,500 to \$19,210,000 and the levy for structures should be increased \$2,451,000 from \$546,000 to \$2,997,000. It was suggested that the Grey County levy be increased 5.5%, 2.7%, 1.8% or 1.4% over the next 5, 10, 15 or 20 years respectively to fund the short fall required for roads and bridges.

Link to Strategic Goals / Priorities

The Capital Forecast includes ongoing capital funding to preserve the portfolio of capital assets under the care and control of the Transportation and Public Safety Committee, which supports Goal 1.6 of the Corporate Strategic Plan. The goal identifies the importance of accelerating Council's commitment to lifecycle planning for the long term investment of county owned capital assets.

Communication is a key value to the County's Strategic Plan. The report provides information to Council in regards to the estimated future capital funding requirements and needs.

Attachments

Attachment to TR-TAPS-30-16 Machinery 2017-2021 Five Year Capital

Attachment to TR-TAPS-30-16 Housing 2017-2021 Five Year Capital

Attachment to TR-TAPS-30-16 Construction, Resurfacing and Minor Capital 2017-2021 Five Year Capital

Attachment to TR-TAPS-30-16 2017-2021 Five Year Capital Construction and Resurfacing Map

Respectfully submitted by,

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