

APPENDIX B: ANALYSIS OF FUND ALLOCATION OPTIONS

Category 1: Fund allocation option that considers the current funding with the current fund allocation

Option 1 – Current Strategy (10-65-25) (Not Recommended)

Option 1 reviews the performance of the current strategy as approved at the initiation of the Residential Road Renewal Program, under the new model (10% Good-65% Fair-25% Poor, funded by 25% of the Street Infrastructure Renewal budget and five dedicated 1% mill rate increases).

Benefits	Risks
<ul style="list-style-type: none">• Analysis using the new model showed that the long term goal of 85% of the residential road network in ‘fair’ condition or better (long term goal) would not be achieved in 25 years. Under this option, approximately 80% of the residential road network would be in ‘fair’ condition or better after 25 years.• Although the current strategy does not meet the long term goal, it has shown to be effective in slowing deterioration and stabilizing the overall road network condition. Furthermore, continuing with the current option would not require any operating budget increases for the additional employees required to manage and deliver the roadways projects or increases to supporting areas such as Waterworks, as the costs to coordinate work between the areas are already considered in the existing programs and budgets.• Under Option 1, the program would treat roads in all areas of the City as there is a distribution of ‘good’ and ‘fair’ condition roads throughout, where most of the poor roads are concentrated in two or three wards.	<ul style="list-style-type: none">• Compared to other options discussed, Option 1 is the slowest at addressing the backlog of ‘poor’ roads. Without considering cost escalation or network deterioration, analysis shows that it would take 64 years to address all of the roads that are currently in ‘poor’ condition, based on 2017 modelling.

Category 2: Fund allocation option that considers the current funding with adjusted fund allocation

Option 2 – Reallocation of Funding (10-45-45) (Recommended)

Option 2 does not require additional funding for roadways and reallocates 20% of the Residential Road Program funding from roads in ‘fair’ to ‘poor’ condition starting in 2019.

Benefits	Risks
<ul style="list-style-type: none">• This is a preventative maintenance option that helps to prevent roads from in ‘good’ and ‘fair’ (to a lesser amount compared to the current strategy) from deteriorating to ‘poor’ condition, while accelerating the rate of addressing the backlog of roads in ‘poor’ condition with reallocated funding.• The modeling of the road network with Option 2 shows that after 25 years, the network level of service will be increased to 82% in ‘fair’ condition or better. This is a 2% improvement over the results from the 25 year model for the current strategy of 10-65-25.• In discussing this Option with other supporting areas, it was determined that Waterworks can accommodate an increase to the number of ‘poor’ roads receiving treatment in the short term (3 to 5 years) as there is good alignment between roads rated ‘poor’ and underground infrastructure in ‘poor’ condition. Beyond that point, a utility rate increase or adjustment of program priorities would be required to continue underground utility upgrades on ‘poor’ roads identified for rebuild treatments.• Option 2 increases the rate at which the backlog of ‘poor’ roads can be addressed and reduces the time to 36 years compared to 64 years for Option 1 (without considering cost escalation or network deterioration).	<ul style="list-style-type: none">• One of the risks with this option is that less roads in ‘fair’ condition are addressed annually and therefore less roads are prevented from becoming ‘poor’. Furthermore, there will be less roads treated annually under this option as the cost to treat a road in ‘poor’ condition is greater than a treatment for a ‘fair’ road.• With the increased number of ‘poor’ roads being treated annually, there is a potential for these road construction projects being extended over two years, due to the significant amount of work required on these types of projects and a short construction season. Under this option, construction may take place over two years with underground assets being upgraded in the first year and the surface upgrades occurring in the second year. This would double the number of road projects as both the Water Works and Roadways & Transportation crews would be completing their work at different locations in the same year and would have a greater impact on the residents. Impacts on the residents would consist of construction duration, additional dust concerns, limited or no access for extended periods of time and a poorer driving experience on the temporary road surface.

Category 3: Options Considering Additional Funding

Option 3a – Current Strategy (10-65-25) + 1 % Mill Rate Increases for Five Years (0-0-100)
(Not Recommended)

Option 3a uses the current base funding (up to 2018) under the current fund allocation, as well as introducing additional 1% mill-rate increases for five years of funding strictly for “poor” roads to help reduce the backlog of ‘poor’ roads. This is a hybrid option that uses the preventative maintenance strategy to maintain roads, while introducing additional funding to address ‘poor’ roads.

Benefits	Risks
<ul style="list-style-type: none">• Modeling of Option 3a shows that a long term goal of 85% of the roads in ‘fair’ condition or better will be achieved after 25 years.• This option splits the additional funding to fund both the road upgrades and water infrastructure upgrades without impacting current utility rates or Waterworks programs for additional work on ‘poor’ roads.• Option 3a further increases the rate at which the current backlog of ‘poor’ roads is addressed to 32 years (without considering cost escalation or deterioration).	<ul style="list-style-type: none">• One of the risks that exist with this option is that by continuing the 1% mill rate increases to roads, it limits the flexibility that City Council has to address other priorities such as facilities, parks and open spaces, community programs, etc.• As 50% of the additional funding from the increases would be directed towards the utility-related work on the rebuild projects, this could be perceived as changing the status of the utility away from a self-sustaining system. Currently, all utility related work is covered under the Utility budgets.• The number of ‘poor’ roads treated under Option 3a is greater than Option 2. There would be even greater likelihood of two year construction projects under this option.

Option 3b – Current Strategy (10-65-25) + 1% Mill Rate Increases for Seven Years (0-0-100)
(Not Recommended)

Option 3b achieves the same results as Option 3a but the mill rate increases are extended for an additional two years to move away from the reliance on the 25% of the Street Infrastructure Renewal Program (SIRP) budget and therefore becomes fully funded by the tax-base.

This Option enables 100% of the SIRP funding to be directed towards treating major roads in the City’s network that carry majority of the traffic in the City.