

---

## **Administration Response and Timelines – PwC -Roads Maintenance Program Value for Money Report**

### **Recommendation**

That the information be received

### **Topic and Purpose**

To provide an update to the PwC Roads Maintenance Program Value for Money report.

### **Report Highlights**

An update is provided on the current status, next steps and timelines to the recommendations in the PwC Roads Maintenance Program Value for Money report.

### **Strategic Goal**

This report supports the Strategic Goals of A Culture of Continuous Improvement, Moving Around, and Asset and Financial Sustainability. Process improvements focus on identification of root cause issues and innovative and creative solutions that will provide optimal service improvements. Increasing efficiency and effectiveness in roadways design, construction, and maintenance ensures people and goods can move around the city quickly and easily.

### **Background**

A value for money review was conducted by PwC to determine whether those divisions which act as the custodians of the roadways and are entrusted with executing on spending (being Roadways Maintenance within Public Works, Major Projects, and Construction & Design) are achieving economy, efficiency and effectiveness in the manner in which they are operating.

### **Report**

Attachment 1 provides an update on the current status, next steps and timelines for each of the eight recommendations in the PwC Roads Maintenance Program Value for Money report.

### **Other Considerations/Implications**

There are no public and/or stakeholder involvement, communications, policy, financial, environmental, privacy, or CPTED implications or considerations

### **Due Date for Follow-up and/or Project Completion**

In addition to the various specific reports that will be brought forward on each item, a specific follow-up report on the status of all Audit recommendations will be brought forward in September of 2018.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Attachment**

1. Administration Response – Current Status, Next Steps and Timelines

**Report Approval**

Written by: Trent Schmidt, Acting Director of Public Works  
Rob Frank, Engineering Manager, Asset Preservation, Major Projects  
Celene Anger, Director of Construction and Design  
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities  
Department

Finance – TS – Administration Response and Timelines – PwC Roadways Audit Report.docx

	Recommendation	Response	Timeline for Full Implementation
1	We recommend that administration implement activity-based budgeting using detailed inventory unit costs to develop the annual spring/summer road maintenance budget. This will assist in determining the level of spending by activity and create a detailed financial history that can be used by PW for trend analysis and other operational improvements. Items such as the impact of weather and the amount of new roads being planned, completed and "handed off" by growth to PW and MP from C&D or T&U should be factored in when determining the request for the annual spring/summer road maintenance/rehabilitation budgets for PW/MP. The growth in inventory should be directly factored in when preparing the annual budget for roadway maintenance.	Administration agrees with the recommendation. Activity based budgeting (ABB) will also require documented levels of service.	<p>For the past 2 years PW has been tracking job numbers and activities within each program within Timberline.</p> <p>Winter service levels were updated and approved in 2015. Levels of Service are currently being developed and will be submitted to Committee and Council throughout 2016 and 2017, with the final item submitted by August, 2017.</p> <p>In the long term, the City is investigating enterprise Resource Planning and Asset Management tools.</p> <p>For the next 5 year period, Roadways will use existing systems to achieve this objective. A portion of the 2017 operating budget will be developed using ABB and for the 2018 budget, and the entire Roadways budget will be activity based.</p>
2	The decision to cut back on spending should be reviewed in a holistic manner, to ensure that predefined work plans and level of service are not impacted. PW should determine the adequate level of work to be completed and the desired level of service to be provided for their programs to ensure adequate planning from the onset takes place. Development of a work plan in advance will help alleviate expectation gaps felt by program sponsors and citizens.	Administration agrees that program specific levels of service will enable the operations to determine the correct labor, equipment and materials resourcing requirements to achieve adequate work levels. This will enable the development of the work plan to be determined in advance while meeting budgetary levels. Utilization of overtime to meet operational requirements with regard to the work plan and levels of service may best be applied by ensuring adequate personnel are in place at regular rates of pay funded by the corresponding reduction in overtime rates of pay.	By October of 2017, a formal process will be developed which will outline how in-year budget adjustments are made considering budget status and documented service levels.
3	PW should develop a formal detailed activity-based annual maintenance plan. The plan should factor in the new roads that are added to the overall inventory as far in advance as possible (given the plans in place within MP). The actual annual road maintenance plan should be formalized as part of the budgeting discussions and MP and PW should work in collaboration to identify an effective planned maintenance program that contains an appropriate mix of strategic preventative maintenance and anticipated reactive maintenance.	Administration agrees with the recommendation. PW is currently working with MP to develop a formal maintenance plan to determine the best practices of what, where and when roadway treatments are most effective for longevity, efficiency and effectiveness. This along with long range planning that incorporates inventory growth will aid the budget process to determine the preventative maintenance requirements and reduce the requirements for reactive mode maintenance.	<p>A proactive maintenance strategy is underway through the development of defined level of services.</p> <p>In concert with the timelines for documented Service Levels and ABB methodology, the 2017 budget will be partially (approximately 50%) activity based and coordinated between PW and MP. For 2018, the entire budget will be activity based and all maintenance activities related to preservation of assets will be coordinated between MP and PW.</p>

## Administration Response – Current Status, Next Steps, and Timelines

4	<p>We recommend that PW and MP increase their formal level of communication and the synchronization of their planning and reporting. The key objective of improving in this area is to reduce inefficiencies relating to planning and coordination, redundancies of work performed and ultimately preserving/safeguarding the City's monetary resources.</p>	<p>Administration agrees with the recommendation. The level of communication between PW and MP should continue to increase, and adequate staff are in place with the appropriate mandate to ensure this happens. The action plan is to work closely together to create mutually beneficial programs using the network condition data and historical treatment data that was collected as a driver for both programs. While some reactive work will inherently be required on the road network, the majority of maintenance and preservation can be driven with the condition and historical treatment data. This initiative can be achieved through increased communication and planning activities.</p>	<p>This item has been achieved.</p> <p>MP and PW currently meet regularly to discuss and develop proactive maintenance and preservation initiatives and plans. The groups will continue to communicate and work together with the ultimate goal to create mutually beneficial programs and reduce inefficiencies that may exist between the two programs.</p> <p>L&amp;P is currently meeting weekly with MP for Sidewalk condition assessment and development of the 2016 sidewalk maintenance plan. PW and MP are meeting regularly in the monthly preservation meeting.</p> <p>This ongoing coordination will continue to result in improved coordination and efficiencies.</p>
5	<p>We understand that an ERP evaluation project is currently underway by the City. Ideally, in the future PW should have implemented a completely integrated solution which allows PW to adequately track their activities, costs, time spent on projects and any other relevant details. Particularly for PW, this is critical as there are multiple custodians of the road infrastructure and it is critical to report maintenance efforts on road infrastructure to MP. The ultimate solution should factor in the current computer systems and their ability to integrate modules and reports where possible.</p> <p>We understand that this is perhaps a longer-term recommendation due to inherent limitations in the current system and the City-wide evaluation of an ERP system. In the short term, we believe that improvements can be made by merely increasing the level of communication and formal planning/reporting between the various road custodians.</p>	<p>Administration agrees with the recommendation. Tracking of maintenance costs, along with the locations treated, needs to be integrated into a common computer based system, as this will allow this information to be utilized as an additional decision making tool or trigger when selecting roads for surface treatment. Communication efforts will be increased in the short term to begin this process.</p>	<p>An ERP evaluation project is currently underway. Monthly project status updates continue between PW and MP, helping ensure coordination and awareness.</p> <p>At this time, an implementation date of May, 2021 is estimated for Roadways.</p> <p>In the interim, existing systems will be used to satisfy this recommendation, along with increased formal coordination already implemented.</p>

## Administration Response – Current Status, Next Steps, and Timelines

6	<p>We recommend that prioritized, proactive full life cycle planning begin to be implemented (i.e. the Condition Rating Index that is used to prioritize work within MP) on a go-forward basis for new roadways infrastructure in the City which clarifies the scope of PW and MP's responsibilities for maintenance, preservation and rehabilitation.</p>	<p>Administration agrees with the recommendation.</p>	<p>MP, C&amp;D and PW are working together to create an Asset Management Plan to document and identify the groups responsible for each component of the life cycle of the asset right from planning to salvage of the asset. L&amp;P is currently meeting weekly with MP for Sidewalk Condition Assessment and development of the 2016 Sidewalk Maintenance Plan.</p> <p>The next step will be to develop a life cycle plan for our roadway assets (Roads, Sidewalks, Back Lanes, Rural Roads, Pathways and Bike Lanes) and implement a proactive asset management plan by utilizing the appropriate treatments to extend the life cycle of the infrastructure in a cost effective manner.</p> <p>Although interim reports will be brought forward, this is a significant undertaking and is expected to be fully complete by September, 2018.</p>
7	<p>We recommend that PW maintain sufficient engineering technologists to allow them to ensure all projects are being looked at from a quality perspective. The existence of an annual maintenance plan will assist in determining the correct level of planned (proactive) activity that will occur during the year and will allow for a determination of how many technologists are necessary to properly monitor quality. Process procedures should be created for all roadway maintenance activities within the scope of PW (in addition to pothole maintenance) to measure quality throughout their projects (such as controls and sampling to verify grading of asphalt material, specifications delivered etc.).</p>	<p>Administration agrees with the recommendation. Engineering technologists have been hired as temporary inspectors in recent years to achieve this objective. Going forward, these positions will be expanded to ensure that quality control (QC) and quality assurance (QA) continue to be a primary focus. Through the Logistics &amp; Procurement section of C&amp;D that is assigned to PW a project scope has been developed to define both QC and QA between design, operations and administration of such. The inclusion of QA and QC into the tender process is currently in development and will be included in the 2016 spring tenders.</p>	<p>Two Engineering Technologist 12-month temporary postings are currently in place with an additional two 6-month temporary postings to be hired in May, 2016. This is the second year where technologists have been used in this capacity. The summer 2016 positions will be focused on QA and QC, as well as project management and coordination, of the Utility Cut Management Program.</p> <p>T&amp;U will be evaluating the impact of these temporary positions and expects to bring forward a staffing request in the 2017 budget.</p>

## Administration Response – Current Status, Next Steps, and Timelines

8	<p>We recommend that vendor pre-qualification criterion be drafted in a collaborative workspace, allowing all relevant professionals, engineers, management and any other relevant stakeholders to provide feedback to the process. This will ensure that only vendors of the desired quality level and caliber could be awarded the respective tender. It is understandable that on certain projects, there may be a limited number of vendor applications, which restricts the City's ability to be extremely stringent in their pre-qualification criteria. To combat this risk, we suggest that the City hold information sessions (in addition to the annual Contractors' Breakfast) with vendors which allow the City and their vendors to work together and learn about quality control, quality assurance and what the City expects from the workmanship of applicants.</p>	<p>Administration agrees with the recommendation. An information report will be submitted to the appropriate Committee in the first quarter of 2016 providing an update on the changes being made for 2016, which build upon the improvements implemented in 2015. Best practices will be followed, including implementation of a system that measures and pre-qualifies contractors based on financial, quality, safety, and delivery performance metrics.</p>	<p>The fall 2015 contractor engagement session was modified to address the spirit of this recommendation. Further, two separate meetings were held with Water &amp; Sewer and Roadway contractor groups in the fall of 2015. Significant two-way discussion occurred. Specific follow-up items were identified and these meetings will be ongoing at least annually. Both the Administration and contractors noted great benefit of such meetings.</p> <p>A subsequent contractor engagement session focused on safety is scheduled for April 5, 2016. The target audience is contractor safety professionals, site foreman and field personnel.</p> <p>In both the 2015 and 2016 construction seasons, more extensive use of RFP's and prequalification processes was used. For example, water main lining was procured using prequalification 2015, which led to a more successful program than prior years. Also, the Broadway construction work in 2016 was procured using a prequalification process, which required proponents to demonstrate an ability to complete the work in the context of an extremely sensitive business and traffic environment.</p> <p>A report to Committee will be brought forward by June 2016, which will provide information on a broader prequalification process, and will provide an update on an RFP to be issued seeking a formal prequalification system and process. This system is expected to be in place for the 2017 construction year for priority contracts.</p>
---	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------