

ROADS ZERO BASED REVIEW: 2015 UPDATE REPORT

EXECUTIVE SUMMARY

This report provides progress updates on the five areas of Roads that were reviewed during the Zero Based Review (ZBR) process: Street Light Maintenance, Pavement Marking, Sign Manufacturing, Gravel Crushing, and Pavement Rehabilitation (Attachments 1 & 2). Updates are also provided for three additional service areas that Administration identified during the ZBR review, which include the Traffic Management Centre, Excavation Permits, and Spring Clean-up (Attachment 2).

Efficiency and productivity gains were identified within the ZBR, with a target of \$1.4 million to \$1.9 million in annual savings by 2017. The savings attributed to the ZBR are expected to contribute to the overall \$10.6 million in efficiency gains that were identified in Action Plan for Roads and removed from the 2015-2018 four year operating budget. Achieving the ZBR financial target will help Roads absorb the growth of annual operating costs that were not funded within the four-year budget.

While the 2015 operations data will not be complete until year end, Roads is forecasting favourable productivity gains or cost savings of approximately \$3.4 million, compared to the 2012 baseline numbers used for the ZBR.

Roads have improved performance in a number of areas that were identified in the ZBR. Response times for street light repair have improved. Daily production increased by fifteen percent for road paving. The gravel mine increased production and lowered their cost per tonne measures. More road lines and stencils were painted than ever before, and more cameras and dynamic message signs were added to improve traffic monitoring and communication to the public.

The Sign Manufacturing Shop operation underwent further review in 2015 to examine the possibility of expanding the sale of product to other municipal and public sector customers. The recommendation is that there is a market and capacity for the Sign Shop to develop a larger customer base, however there are cost management and production tracking standards that must be addressed first.

ADMINISTRATION RECOMMENDATION(S)

That the SPC on Transportation and Transit recommends that Council receive this update report for information.

RECOMMENDATION OF THE SPC ON TRANSPORTATION AND TRANSIT, DATED 2015 NOVEMBER 18:

That the Administration Recommendation contained in Report TT2015-0792 be approved.

PREVIOUS COUNCIL DIRECTION / POLICY

At its 2014 November 3 meeting, Council approved a motion arising, "Moved by Councillor Chabot, Seconded by Councillor Pincott, that with respect to Report PFC2014-0802 and the Sign Manufacturing business case, Council direct the Administration to develop for Council's

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consideration, a plan to offer sign manufacturing services to other government and institutional customers at full cost, and report back to Council through the SPC on Transportation and Transit, along with the update on other business cases, no later than Q2 2015.”

At its 2015 June 29 meeting, Council approved Administration’s request to defer Report TT2015-0476 until 2015 November. The reason for this recommendation was to allow for additional time to complete a market analysis and business case for the sign manufacturing shop with the assistance of an external expert.

BACKGROUND

The Roads Zero Based Review (ZBR) was conducted by Western Management Consultants and ISL Engineering in 2013-2014. The final report presented on 2014 November 3 focused on key findings from an in-depth examination of five services and provided business cases with recommendations for improvements to services. In their response and comments to Council, Administration identified three additional service areas where improvements were possible.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The ZBR progress update for each service area is summarized below:

Street Light Maintenance:

ZBR Recommendation Summary – Develop a street light maintenance strategy that supports multiple service providers through a competitive bidding process, places defined standards of service and performance measures into the contract, and addresses inventory costs.

Roads have developed a new service-based contracting strategy that has brought in five different companies to support the street light maintenance program. This allowed the primary service provider to focus on street light outages. Roads has also made adjustments to sidewalk and concrete repair projects to not use the street light maintenance vendors that work under a service level agreement. This will ensure that construction related street light repair work is efficient, and increased the capacity for the vendors to address other street light maintenance not associated with sidewalk repair. As a result of these changes, performance has steadily improved since 2012. While the number of service requests have increased year over year, the contract providers achieved the 30 day response targets for 2014 and 2015.

Roads updated the purchase tenders for street light equipment to encourage competitive bids from multiple vendors. This has resulted in a savings estimate of \$1.0 million dollars in material costs by the end of 2015, compared to previous years. This new procurement plan will continue to contribute to the budgeted productivity gains in Action Plan 2015-2018.

Pavement Marking:

ZBR Recommendation Summary – Maintain the present state relative to pavement marking services using Roads Business Unit staff and equipment.

A new pavement condition survey has been implemented that improves the coordination of the annual paint replacement program, including efficient scheduling that reduces waste, duplication

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of routes, and travel time. The survey also adds the on-street parking spaces to the annual maintenance schedule; historically this work was conducted on a complaint, as-needed basis.

By the end of the 2015 season, an additional 540,000 linear metres of lane lines will be completed compared to 2012, with only a minor increase of staff and equipment over the three year period. The electronic mapping project that has begun will improve the ability to monitor and track the performance of the paving program on a weekly basis. The program also reduced their total consumption of glass beads (in the paint) by 25% compared to the previous year, saving approximately \$45,000 (39,000 kg) while maintaining appropriate visibility and retro reflectivity.

Sign Manufacturing:

ZBR Recommendation Summary – Focus on production of core signs and graphics related to traffic and roadway signs, and develop a full cost recovery model for external customers.

Review equipment utilization, and establish a new work order model to better track production of signs for internal customers and any non-core work.

The Sign Shop has adopted administrative changes to better support customer service, and acquired more efficient equipment through lifecycle replacement that has reduced the production time on their core products. As a result, they have improved their manufacturing estimates even as the total production numbers have increased year over year from 2012.

A feasibility study into the expansion of sign manufacturing for other municipal districts and public sector customers was completed in 2015. The recommendation is that current market conditions facing the Sign Shop show some potential for expansion of core production units to targeted municipalities. However, based on the identified gaps for expansion that were discovered, expansion is not recommended at this time. This includes accurately recording costs, efficiently recovering costs, labour relations and strategically generating revenue. These gaps primarily reflect internal readiness, and it was suggested that expansion be re-evaluated once these gaps have been addressed and the identified risks mitigated.

A review of the equipment in the sign shop was also carried out. The review identified equipment that required maintenance or replacement and ranked the replacement requirement on a prioritized list. It also identified some equipment that is no longer used and will be put up for auction to recover costs and generate revenue.

Gravel Crushing Operations:

ZBR Recommendation Summary – Endeavour to improve efficiency, and reduce costs of the mining, crushing and stockpiling of gravel at Spyhill by implementing industry standard cost control measures. The ZBR set an expectation of \$600,000-\$800,000 in annual cost savings to be seen by 2017.

An industry standard of performance monitoring and forecasting has been implemented. Administration has also made several changes to improve supervisory oversight of the operations, and have purchased new equipment to improve efficiency such as a screendeck, feeder and programmable stacker. These changes have contributed to an 11% decrease in the

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cost to produce gravel for 2014 and 2015, compared to the 2012 baseline. This would equate to a comparative savings of approximately \$409,000 based on the estimated 2015 production numbers.

Pavement Rehabilitation:

ZBR Recommendation Summary – Endeavour to improve efficiency, and reduce unit costs, by implementing industry standard measures for cost control.

Administration has developed an improved cost tracking system for daily, weekly and monthly updates based on industry standards. The ability to break down individual costs on a project, such as material use, labour and equipment maintenance costs has also been implemented. This data will improve future evaluation and estimation of work and costs based on pavement rehabilitation type and location. This information will allow for timely adjustments to work schedules, which may enable a reduction in costs per location.

An evaluation has also been completed on trucking and loading times from the asphalt plants to the job locations, and production and quality gains have been identified. The average daily production increased by 15%, or 200 tonnes per day compared to 2012. This has allowed the program to maintain a similar cost per tonne ratio to 2012, despite increases in the costs of asphalt and labour over the past three years. These associated gains, based on the tonnage laid down in 2015, equals a savings of approximately \$1.5 million. The strategic replacement of older paving equipment, as per industry standards, has resulted in a reduction of \$556,000 in fleet maintenance costs for 2015 compared to 2012.

Traffic Management Centre (TMC):

ZBR Recommendation Summary – On-going work to support business continuity and operational efficiency, and to strengthen relationships with transportation and emergency response partners. Explore new technologies to enhance pro-active responsiveness, carry out tasks remotely, and to provide reliable traveller information.

An emergency back-up centre has been established at Roads' Spring Gardens location, and access is being arranged at the Emergency Operations Centre in partnership with the Calgary Emergency Management Agency. Supervisory coverage has been expanded to 24 hours/7 days a week to address business and operational continuity needs. Traveller information technology continues to evolve, and new information mediums are being added, such as the thirteen Dynamic Message Signs that have been installed along Deerfoot Trail and Crowchild Trail. Two more of these signs will be installed along Macleod Trail in early 2016.

The TMC partners with and provides traffic management services to many agencies such as the Alberta Motor Association, Alberta Transportation and many internal partners including the Calgary Police Service, Calgary Transit and the Calgary Emergency Management Agency.

In addition to developing partnerships, the TMC is regarded as an industry leader across Canada, with past visits from the City of Montreal, City of Regina, City of Edmonton, and delegates from Mongolia and the Netherlands as examples.

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Excavation Permits:

ZBR Recommendation Summary – Implement a strategy to increase the use of on-line applications for excavation permits, with a goal to have all permit requests done through the Roads ePermit system by the end of 2015.

Making the transition to the electronic permitting program (ePermit) will improve the efficiency of the permit process by removing multiple points of contact that can affect the accuracy and timing of the response to customers. Throughout 2014, Administration engaged the excavation industry customers regarding ePermits, and the new infrastructure protection and maintenance strategies. As a result, all excavation permits were made available through the on-line ePermit system in 2015. Administration continued to support customers through this change with workshops and reminders about the permanent switch to the ePermit process, which will replace all other ways to apply for permission by the end of 2015.

Spring Clean-Up:

ZBR Recommendation Summary – Roads, Fleet and Water Services will examine potential improvements to the Roads Spring Clean-up processes that could reduce the environmental impact and operational costs of cleaning up sand and gravel from the storm water system.

Roads conducted a pre-sweeping program in the early spring of 2015, due to favourable weather, which removed additional materials from the road before it could reach the storm water system, reducing costs for Water Services. Roads picked up 61,449 tonnes of debris in 2015, compared to 40,927 tonnes in 2014, which is an increase of approximately 50%. In addition, the 2015 Spring Clean-up program was completed two weeks ahead of schedule. Roads Spring Clean-Up cost was \$130.60 per tonne in 2015 compared to \$174.28 per tonne in 2014.

Collaboration between Roads and Water Services has resulted in tests scheduled for 2016 to develop more environmentally friendly and cost effective street sweeping methods. The project will include research into new equipment to improve debris removal, and develop success measures to evaluate the operational and environmental results of the sweeping program.

Stakeholder Engagement, Research and Communication

Administration consulted both municipal and private industry service providers to research potential key performance measures to incorporate into a best practices standard of service delivery.

A consultant was hired to support Administration with a feasibility study for the expansion of sales by the sign manufacturing shop.

Strategic Alignment

The service improvements and productivity gains achieved through the Roads ZBR helps support Council's Priorities to be a "Well-Run City" in reducing costs and being as efficient and effective as possible, and "A City that Moves" by expanding the capabilities of the Traffic Management Centre to help improve the flow of traffic on the roads.

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Social, Environmental, Economic (External)

The implementation of the ZBR recommendations will assist Roads in managing their infrastructure assets wisely, and in a cost-effective manner, while ensuring it continues to be safe and reliable for all users.

The collaboration between Roads and Water Services to determine what process or operational changes to the Snow and Ice Control program and Spring Clean-Up program could reduce the amount of gravel and sediment that enter the City's drainage and water systems.

Financial Capacity

Current and Future Operating Budget:

The recommendations of the Roads ZBR are expected to yield productivity gains to the annual operating budget of \$1.4 million to \$1.9 million dollars within three years. This amount had previously been identified as part of Roads' efficiency gain in Action Plan 2015-2018 by reducing the operating budget accordingly.

Current and Future Capital Budget:

The procurement strategy for street light materials that was reviewed as a part of the ZBR will result in a combination of Operating and Capital cost savings, with an estimate of \$1.0 million compared to the previous year's pricing.

Risk Assessment

An on-going risk to implementation of any recommendation that increases reliance on external service providers and/or contractors is that changes in the economy may affect Roads ability to realize the projected savings.

REASON(S) FOR RECOMMENDATION(S):

That the SPC on Transportation and Transit recommends that Council receive this update report for information. Ongoing efficiency and productivity gains will be discussed and presented as part of Action Plan 2015-2018.

ATTACHMENT(S)

1. ZBR Report Cards for the Five Service Areas
2. Zero Based Review for the Roads Business Unit – 2015 Update Report