

Radio Communications System Replacement

Date:	October 30, 2009
To:	Budget Committee
From:	Fire Chief and General Manager, Fire Services
Wards:	All
Reference Number:	p:\2008\ClusterB\FIR\bc0812.doc

SUMMARY

The purpose of this report is to provide an annual project status update to the Budget Committee as requested by Council through the 2008 Capital Budget process. The Chiefs of Toronto Police Service and Emergency Medical Services as well as the Steering Committee for the Radio Communication System Replacement project were consulted in preparation of this report.

The Radio Communications System Replacement Project has experienced some significant set backs in 2009. The resignation of a key technical resource from Toronto Police, the labour disruption and the lack of a Project Manager has lead to delays in the project. As a result the RFP cannot be issued in 2009.

The Steering Committee retained the services of PPI Consulting Limited to act as the Fairness consultant for the project. PPI reported favourable on the activities of the Steering Committee to date.

Specific design considerations have been identified that could potentially impact the overall cost of the project.

The disposition of Fire portable radios has also been addressed by the Steering Committee.

Financial Impact

At this time there is no change to the total Capital funds required for the project beyond what has already been approved in the 2009 Capital Budget and 2010-2014 Capital Plan.

The total project cost is currently estimated at \$70 million, with the bulk of the funds required between 2010 and 2012 (\$28.244 million in 2010, \$28.000 million in 2011, and \$13.250 million in 2012).

Expenditures in 2009 did not meet forecast, largely due to the inability to place a Project Manager and the loss of key technical resources. As a result, \$0.62 million in funding carried forward from 2008 to 2009 was fully spent but the bulk of 2009 funding will need to be carried forward into 2010. Activities in 2009 included continued training as well as required enhancements to coverage analysis databases. Minimal site preparation was started and Fairness Consultant was contracted to oversee the procurement.

As a result of unexpected delays in 2009, an adjustment of cash flow is likely for 2011 and beyond. The 2010 Recommended Capital Budget and 2011 to 2014 Recommended Capital Plan are shown below. Any further required changes to the cash flows will be reviewed as part of the 2011 budget process.

Radio Communications System Replacement (\$000s)

Spent to Date			Recommended Commitments					TOTAL
2007	2008	2009 (Projected)	2010	2011	2012	2013	2014	
26.8	411.8	67.5	28,244.0	28,000.0	13,250.0			70,000.0

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

In 2004 the Chiefs of Toronto Fire, Police and EMS forecast the upcoming requirement to replace the City's public safety voice radio system shared by all three agencies. In 2005 a consultant was commissioned to review technology direction and financial impact.

At its meeting of March 7, 2007, City Council approved the 2007 Fire Services Capital Budget and in so doing, adopted the following recommendation:

49. An initial project cost for the Radio Communication System Replacement of \$0.500 million for consultant studies be approved with cash flow commitments of \$0.250 million in 2007 and \$0.250 million in 2008 and that the Chiefs of Toronto Fire Services, Toronto Police Service and Emergency Medical Services in consultation with the Steering Committee for Radio Communication System Replacement project and Deputy City Manager and Chief Financial Officer, report to the Budget Committee by July 2007 on the project status and any emergent issues, detailed project cost and cash flows.

At its meeting of December 11, 12 and 13, 2007, City Council approved the 2008 Fire Services Capital Budget and in so doing, adopted the following recommendation:

64. the Steering Committee for the Radio Communication System Replacement project report to Budget Committee on an annual basis starting in July 2008 to update the status of the project including project management costs and infrastructure issues including the disposition of hand-held portable radios once known.

ISSUE BACKGROUND

The City's Public Safety Voice Radio system is approaching the end of its supported lifecycle. After 2012 system support will become "best effort" with no availability of replacement components. This is significant risk for the City's most critical system where any outage will impact first responders' ability to deliver services to the public.

COMMENTS

A Radio Communications Steering Committee, co-chaired by Fire, Police, and EMS, reporting to the City Manager has continued to provide project oversight. This report provides the latest information on the project and re-evaluates the budget impact included in the Capital Budget projections. The initial timelines for the completion of the project will be changed due to unexpected delays previously mentioned. Target date for release of an RFP is set for Q2 2010. It is unlikely that the project will be concluded in 2012.

The Technical Subcommittee has completed a review of system capacity as well as the preliminary coverage analysis. The capacity study reviewed the current systems performance during average peak operating conditions compared to system performance during large scale events such as Caribana and the Sunrise Propane explosion. The study supports a 25% increase in available channels. The preliminary coverage analysis has revealed that in order to maintain the required signal strength initially implemented in the existing system, a minimum of two, and potentially as many as four, additional radio tower sites are required. This is not a change in design intent it merely reflects the amount of development that has occurred in the City over the past ten years. Work is currently under way to optimize the design in order to minimize the required number of sites while still meeting the required design thresholds.

These two issues, capacity and coverage, have the potential to increase the overall project cost beyond the identified \$70 million. It is important to realize that the initial consultant's report from 2006 from which the \$70million dollar figure was derived, was based on a direct replacement of existing infrastructure and did not account for changes related to capacity or coverage. The Steering Committee remains optimistic that market pressures and the competitive process will keep the project within allocated budget but must report the potential impact to funding.

This radio infrastructure project includes costing for the replacement of Fire mobile (in-vehicle) radios and a contingency for Fire handheld radios. This is estimated to be \$7 million and also includes upgrade costs for existing radios. However there are also replacement and/or additional radios budgeted within each of the Police, Fire, and

Emergency Medical Services Capital Budgets. These radios are currently being purchased as required. The Steering Committee has approved the use of allocated funding within this project to make a one-time purchase of portable handheld radios as well as the required upgrades for Fire Services in 2010. Mobile radios (in vehicle) for Fire will be included with the infrastructure RFP and will be purchased in 2010/2011. The current annual Capital project used by Fire to procure portable radios will be discontinued. Instead, portable radio replacement has been recommended to occur in 2017 and mobile radio replacement in 2020/2021.

The Steering Committee recognizes that technology for portable devices is now changing too rapidly to allow for gradual migration between available models over several years. Since it is imperative, particularly on the Fire Ground, to deploy radios of the same model a more sound approach is to replace all radios before they reach end of life. The allocated funding will be used to replace only the older portable radios within Fire to ensure all radios are the same P25 compliant model.

This project represents a unique and effective partnership among the City's emergency services. It also represents a significant expenditure for the City. For both these reasons the proper oversight and involvement from the City Managers Office, Finance and Internal Audit is continuing.

CONTACT

Frank Pappone
Division Chief, Information and Communications Systems
fpappone@toronto.ca
416-338-9500

SIGNATURE



William A. Stewart
Fire Chief