
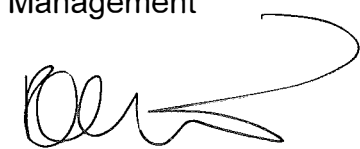




**CITY OF HAMILTON**  
**CORPORATE SERVICES DEPARTMENT**  
**and**  
**PUBLIC WORKS DEPARTMENT**  
**Energy, Fleet and Facilities Management Division**

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	July 10, 2017
<b>SUBJECT/REPORT NO:</b>	Modernizing the City of Hamilton's Live Streaming Capabilities and Experience (CM16006(a)/PW17058) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Janet Pilon (905) 546-2424, Extension 4304 Delfina Duarte (905)546-2424, Extension 6627
<b>SUBMITTED BY:</b>	Rose Caterini City Clerk City Manager's Office Rom D'Angelo, C.E.T., CFM Director, Energy, Fleet & Facilities Management Public Works
<b>SIGNATURE:</b>	 

**RECOMMENDATION**

- (a) That Council approve the awarding of the additional scope of work as identified in Provisional Item #6, "Audio System Enhancements" of the Request for Proposal C11-01-17 to Maclean Media Systems as defined in Appendix A to this report at the additional one-time cost of \$146,000 + applicable HST funded from the 2017 City Hall Facilities Operating Budget Dept ID #791501, and charged to #54935-791501;
- (b) That the General Manager, Public Works Department be authorized to negotiate, enter into and execute any required Contract and any ancillary documents required to give effect thereto with Maclean Media Systems, in a form satisfactory to the City Solicitor;
- (c) That staff be authorized to issue a new Request for Proposal for "on-demand" production services for select meetings including Council Meetings and some Committee meetings with an upset limit of \$90,000/annually funded from the City Hall Facilities Operating Budget Department ID# 791501 and that staff put forward a

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2018 operating budget enhancement of \$90,000/annually to support this service moving forward.

**EXECUTIVE SUMMARY**

In accordance with Council's April 2016 direction and Council's approved 2017 capital project of \$320,000 (\$200,000 for audio/visual equipment and \$120,000 for agenda management software, including livestreaming) a Request for Proposal (RFP) was issued for the audio/visual equipment component of the project.

The *minimum scope* of the RFP included providing all equipment necessary to enable high definition livestreaming. Additional provisional items were also included for items that could be selected at the City's discretion. One of those provisional items was for upgrades to the audio system. Maclean Media Systems was the successful proponent in the RFP process. The award for the *minimum scope* portion of the contract is effective July 1, 2017 and work is set to begin during the third week of July with a target date for completion in the first week of August, 2017.

While the minimum scope upgrades fall within the 2017 approved capital budget allocation of \$200,000, the pricing for provisional audio upgrades (microphones and ancillary systems) exceeds the approved capital budget allocation. Staff recommend replacing the audio systems at this time for the following reasons:

- a) The current audio system (including the microphones), while still operational, have become outdated and is becoming increasingly difficult to maintain due to the difficulty in the sourcing of replacement parts. This item was not included in the *minimum scope* due to concerns that the cost of the audio system would exceed the budget and further delay the entire project;
- b) Replacement of the current system will significantly improve the quality of the end product for the public. Staff constantly receives complaints from the public with respect to the quality of the audio system during the live streaming of the meetings;
- c) Upgrading the audio system now, will avoid some challenges associated with integration of an old system with the new video system components; and
- d) A competitive procurement process has been completed, thereby posing an opportunity to avoid repeating this process in the future, which also ensures that the same contractor works on the system holistically and that the two year warranty on the new video system is not voided.

In addition, while the new video system is designed to work in automated mode, meaning that the cameras will pan to the speakers based on microphone activation, staff recommends issuing a further Request for Proposal for on-demand production services whereby an operator would manage the camera switching and ensure a high quality production including the correct speaker is on camera, proper graphics (speakers names) and real time camera switching occurs during the live streaming of meetings.

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*OUR Vision: To be the best place to raise a child and age successfully.*

*OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.*

*OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.*

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***Alternatives for Consideration – See Page 6***

**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: An additional one-time cost of \$146,000 + applicable HST is recommended to be funded from the City Hall operating budget and an annual \$90,000 enhancement be made to the operating budget effective to the 2018 operating budget.

Staffing: There will be no additional staffing requirements. The project implementation phase will be managed using in-house Facilities Management expertise.

Legal: There are no legal implications.

**HISTORICAL BACKGROUND**

In January 2017 the capital budget was approved for the project consisting of \$320,000 (\$200,000 for audio/visual equipment and \$120,000 for agenda management software including live streaming).

In April 2017, a Request for Proposal ("RFP") was issued for the audio/visual equipment with minimum scope consisting of basic components required to upgrade the system to high definition video including 3 pan/tilt/zoom cameras, as well as, upgraded controllers/switches, video distribution equipment and a new presentation system. The minimum scope also included the ability for the cameras to automatically pan to the speaker based on microphone activation.

In addition, the following provisional items were included in the RFP to be selected at the City's sole discretion:

1. Additional cameras on a per unit basis as more cameras may provide better coverage;
2. Automatic Titling Feature (to provide Speakers Name on screen);
3. Pre-Council Meeting Setup – to ensure all equipment is working and set up properly;
4. On Demand Media Production – to provide an onsite operator that would switch the cameras and manage the system production for a higher quality production not achievable through the automatic mode;
5. Lighting enhancements – if required to ensure good video quality;
6. Audio enhancements including new longer neck microphones and amplifiers; and
7. Camera/Streaming system for Room 264 (audio system to be re-used).

Three proposals were received, with Maclean Media Systems being the successful proponent, meeting all of the City's criteria as a fully qualified media integrator with extensive experience in the industry since 1990 and fulfilling other similar projects including a similar installation in the Town of Markham, Richmond Hill and Caledon. In

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addition, Maclean Media Systems proposed an inventory of equipment that is robust, modular and of high quality consistent for the environment of a Council Chamber.

The minimum scope of the Contract was awarded to Maclean Media Systems effective July 1, 2017 including an additional camera and new high definition video capabilities for Room 264, at the cost of \$219,150 (\$200,000 will be funded from the 2017 Approved Capital Budget (Account #3381757507) and \$19,150.00 will be funded from the Operating Budget (Account #54935-791501).

Replacing the audio system in the Council Chamber will cost an additional \$146,000 and the solution proposed by Maclean Media includes the following built in features:

1. enhanced sound quality (echoing, noise cancellation and feedback fixes);
2. state of the art software controls to manage features quality features such as speaker's natural voice volume;
3. speaker's queuing list with touch screen control features for the mayor's dais;
4. 38 new longer gooseneck microphones;
5. microphone 5 time-out, re-queuing and in-camera isolation;
6. Councillor's & SLT touchscreen visual preview screens (of streaming feed); and
7. voting system

Some of these features were *not* requested in the Request for Proposal (such as a new voting system) however, they are inherently part of the new audio system which was the solution submitted in the request for proposal, as being the most suitable for a state of the art Council Chamber.

While the new audio/visual system is designed to function in an automated mode with the Clerks providing some basic system control such as switching to presentation mode, staff recommends procuring on demand production services that will provide on-site video switching and quality control for Council and some high profile Committee meetings. Procuring these "on demand" services will provide the City with the flexibility to manage the budget constraints and use the services only as needed.

The new audio/visual system being installed in Council Chamber consists of the integration of a number of complicated technology components that run on a combination of software and hardware. The system will need ongoing and in-time adjustments to produce a professional live stream and to take full advantage of all the features available, beyond better video quality, the quality of the overall production will be dependent on human expertise. For example:

1. While the cameras will pan to the active speaker automatically there will be some panning movement evident in the video – making the production seem amateurish – an operator would ensure higher quality switching (as opposed to panning). With 4 cameras installed switching is a key part of the production;

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2. When a speaker inadvertently moves off camera, the automated system will not follow the speakers movement but an operator would be able to make the required adjustment;
3. When speakers do not sit in their regular seats, the graphics may need to be adjusted during meetings;
4. Some systems features, such as adding multiple in screen video to the presentations works optimally only with operator intervention;
5. An operator would troubleshoot and fix minor issues such as audio adjustments; and
6. An operator would ensure that the streaming/agenda management and video feed all function optimally together including, for example, the hearing impaired devices.

This on demand service was quoted by proponents as a provisional item, however staff believe that this service can be procured more economically through a new competitive RFP process geared to organizations that provide this type of service.

**POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

Not applicable.

**RELEVANT CONSULTATION**

The RFP was issued in accordance with By-law 17-064, the Procurement Policy.

The project is a joint venture between the City Clerk's Office, Information Technology and Facilities Management.

The Public was consulted through an On-line Survey that was posted on the City's website from May 17<sup>th</sup> to June 20<sup>th</sup>, 2016. The survey focused on asking the public how important different aspects of the live streaming of Committee and Council meetings are to them, such as preferred camera angles and whether they would like to see presentations integrated into the live stream.

The City received a total of 112 responses, which are summarized in Appendix B, attached to this Report.

A Working Group, consisting of representatives from the following departments:

1. City Clerks & Records
2. Communications
3. Facilities Management
4. Information Technology
5. Procurement

Members of the Working Group were consulted in order to develop the scope of the project as well as identifying various improvements that were desired to be fixed and the preparation of the RFP;

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The Proposal Evaluation Team, worked under the guidance of the Procurement Section to evaluate the proposals and consisted of representation from the following departments:

1. City Clerk's office
2. Facilities Management
3. Information Technology

Cable 14 was consulted to determine their challenges with the current system and provided input on improvements.

**ALTERNATIVES FOR CONSIDERATION**

The alternative to replacing the audio system at this time would be to continue using the current audio system. While this is a feasible option, it will only delay the inevitable as the current system will need to be replaced at a future date, at which time parts may no longer be available for purchase due to obsolescence.

In addition, the public's experience will be improved with an enhanced audio feed that complements the new high definition video.

**ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN**

**Community Engagement & Participation**

*Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.*

**Built Environment and Infrastructure**

*Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.*

**Our People and Performance**

*Hamiltonians have a high level of trust and confidence in their City government.*

**APPENDICES AND SCHEDULES ATTACHED**

Appendix A – Provisional Item #6 – Audio System Enhancements, Audio System

Appendix B – Public Survey

Appendix C – Visual Depiction of Councillors Station

**APPENDIX A**  
**Report CM16006(a)/PW17058**

***Provisional item #6 –Audio System Enhancements:***  
***Audio System:***

- a) The existing Telvic Microphone system is functionally obsolete and difficult to acquire replacement parts for. In addition, the City wishes to avoid dead spots in the audio during streaming when all microphones are off.
- b) Provide Unit Prices for 38 new microphones (wired or wireless) to replace the existing microphones including a microphone at the presentation station.
- c) Microphones shall operate with a 5 minute timeout feature and a 3 minute warning feature before timing out. Two microphones shall have a priority over-ride of the other microphones whenever the Mayor or City Clerk is speaking.
- d) Provide a solution to avoid dead/silence audio when all microphones are in off position. Solution may include having one general background noise open microphone that acts as the default when all other microphones are off.
- e) As necessary, if different locations for microphones are proposed, Successful Proponent shall be responsible to professionally repair/restore or cover wood where old microphones are removed, so as to make the areas visually acceptable within a council chambers environment.
- f) Provide a safety over-ride feature to “kill all” audio/video streaming when meetings go into “in-camera” sessions.
- g) Provide audio speaker adjustments and control mechanism for presentations with audio such as videos embedded in the presentations. Speakers shall be clearly audible in all areas of the chambers.
- h) The selection of audio equipment shall include requirements for managing mixing, feedback control and acoustic echo cancelation.
- i) Successful Proponent shall provide and install all required equipment to ensure seamless live integration of audio with video signal without human intervention.

## RESPONSES TO THE ON LINE SURVEY

**How important are the following aspects of video production for Committee Meeting videos to you?**

**1. Multiple camera angles are used vs. a single static shot**

Slightly	11
Moderately	21
Very	31
Extremely	42
Not at all	7

**2. Ability to click on an agenda item link and it takes you to that specific spot in the video**

Slightly	8
Moderately	10
Very	36
Extremely	57
No Response	1

**3. Councillors and delegates have title cards and identifier graphics**

Slightly	8
Moderately	25
Very	36
Extremely	40
No opinion	2
No Response	1

**4. Presentations are integrated in the video vs. projected on a screen in the meeting room and recorded**

Slightly	7
Moderately	22
Very	33
Extremely	49
No opinion	1

**5. Video zooms in on whoever is speaking**

Slightly	17
Moderately	29
Very	24
Extremely	38
No opinion	2
No Response	2



**6. Ability to correspond in real-time with City staff during the meeting**

Slightly	27
Moderately	25
Very	17
Extremely	32
No opinion	10
No Response	1

**7. Videos of Committee meetings are available (live and archived)**

Slightly	1
Moderately	6
Very	18
Extremely	83
No opinion	1
No Response	3

**8. Audio only version of Committee meetings are available (live and archived)**

Slightly	29
Moderately	18
Very	15
Extremely	38
No opinion	12



