



CITY OF HAMILTON
CITY MANAGER'S OFFICE
Audit Services Division

TO:	Chair and Members Audit, Finance and Administration Committee
COMMITTEE DATE:	January 23, 2017
SUBJECT/REPORT NO:	Follow Up to Audit Report 2013-19 GPS/AVL Systems Performance Review (AUD17002) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Charles Brown CPA, CA, CPA (Illinois) 905-546-2424 x4469
SUBMITTED BY:	Charles Brown CPA, CA, CPA (Illinois) Director, Audit Services City Manager's Office
SIGNATURE:	

RECOMMENDATION

That Report AUD17002, respecting the follow up of Audit Report 2013-19, Global Positioning System (GPS) / Automatic Vehicle Location (AVL) Systems Performance Review, be received.

EXECUTIVE SUMMARY

Audit Report 2013-19 was originally issued in June 2014. Management action plans with implementation timelines were issued in January 2015. In August 2016, Audit Services conducted a follow up exercise to determine if appropriate and timely actions had been taken. The chart under the Analysis section summarizes the implementation status for each of the 12 recommendations as they apply to the individual divisions/sections of Public Works, Planning and Economic Development, and Corporate Services. Details of implementation specific to each recommendation are included in Appendix "A" to Report AUD17002.

Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS (for recommendation(s) only)

Financial: None.
Staffing: None.
Legal: None.

HISTORICAL BACKGROUND (Chronology of events)

Performance Audit Report 2013-19, GPS/AVL Systems Performance Review, was originally issued in June 2014. The report provided 12 recommendations addressing shortcomings in the effective use of the existing GPS/AVL system and identifying additional opportunities to improve the systems to manage staff and their activities.

The 2016-2018 Audit Services Work Plan included a project to conduct follow up audits on previously issued Performance Audit reports in order to determine whether action plans committed to by department management have been implemented, and the associated savings or additional revenues realized.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

None.

RELEVANT CONSULTATION

The results of the follow up were provided to management responsible for the administration of the various stakeholders as indicated after each recommendation – Public Works for Roads and Water, Planning and Economic Development for Building and Municipal Law Enforcement, and Corporate Services for Information Technology.

ANALYSIS AND RATIONALE FOR RECOMMENDATION (Include Performance Measurement/Benchmarking Data if applicable)

The report attached as Appendix “A” to Report AUD17002 contains Audit Services’ Recommendations and the Management Action Plans as originally reported in Report 2013-19 along with an added column indicating Audit Services’ comments as a result of the follow up work that was performed.

There were 12 individual recommendations which applied to several areas within Public Works, Planning and Economic Development, and Corporate Services. The follow up status for a particular recommendation varied depending on the efforts of the applicable operational area.

The Table below states each recommendation, indicates the individual divisions/sections to which it applies and provides the implementation status for each of the sections.

**SUBJECT: Follow Up to Audit Report 2013-19 GPS/AVL Systems Performance
Review (AUD17002) (City Wide) - Page 3 of 6**

	Recommendation	Applicable To	Status				
			NA	NC	I	IP	C
1.	That standardized procedures be developed by service areas utilizing the GPS/AVL systems to ensure that all supporting documentation including scheduling and subsequent data entry of work performed be developed and enforced to enable the matching of reported tasks completed to the tracking of the vehicles' travel path.	PED – Building PED – MLE PW – Roads PW – Water	✓ ✓	✓ ✓			
2.	That work/task completion data be entered into the supporting systems on an as completed daily basis to ensure reflection of current status.	PED – Building PED – MLE PW – Roads PW – Water	✓ ✓ ✓ ✓				
3.	That data be entered into the appropriate fields of the supporting systems rather than general text fields in a Comments area to enable the extraction of information for improved analysis by management.	PED - MLE		✓			
4.	That a process to regularly track the assignment of vehicles to specific individuals be developed. The ability to manage the appropriate movement of staff is predicated on the assurance that the individual that is assumed to be driving a particular vehicle is actually using the identified vehicle.	PED – Building PED – MLE PW – Roads PW – Water	✓	✓	✓	✓	
5.	That, upon completion of the above recommendations, user training be conducted to ensure that staff are aware of and comply with the new procedures.	PED – Building PED – MLE PW – Roads PW – Water	✓	✓ ✓ ✓			

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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.

**SUBJECT: Follow Up to Audit Report 2013-19 GPS/AVL Systems Performance
Review (AUD17002) (City Wide) - Page 4 of 6**

	Recommendation	Applicable To	Status				
			NA	NC	I	IP	C
6.	That the Roads Division analyse the idling exception reports provided through Interfleet to identify opportunities to reduce the amount of idling in excess of 5 minutes (especially instances in excess of 30 minutes) to potentially reduce fleet fuel costs and to ensure compliance with the City's Idling Bylaw.	PW - Roads		✓			
7.	That the ability to track idling times and locations be incorporated in the new corporate GPS/AVL system. An analysis of results obtained could lead to a decrease in the cost of fuel and enable compliance with the City of Hamilton's Idling By-law.	CS – IT					✓
8.	That the Geofence capabilities be considered. Such a function would alert a supervisor whenever a vehicle travelled outside its assigned area or the boundaries of the City of Hamilton.	CS – IT					✓
9.	That signals be implemented whenever a vehicle has not moved from a location for an extended period of time. This would provide management a tool to assess the appropriateness of the length of stay at a location based on the work that is being assigned or being performed. It may alert a supervisor to the safety issue with the driver that needs to be addressed or may identify situations in which the GPS/AVL unit has ceased to operate and requires repairs.	CS – IT					✓

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SUBJECT: Follow Up to Audit Report 2013-19 GPS/AVL Systems Performance Review (AUD17002) (City Wide) - Page 5 of 6

	Recommendation	Applicable To	Status				
			NA	NC	I	IP	C
10.	That appropriate telemetric capabilities be implemented in order that data collected be analyzed on a regular basis to improve the management of the operations or reduce costs. Telemetrics involve the electronic determination of status (e.g. plow up or down) or measurement of a quantity (e.g. amount of salt distributed over a particular area).	CS – IT					✓
11.	That the GPS/AVL data collected related to the locations of vehicles be reported on a streetview map to allow for the visualization of the tracking of a vehicle’s travel path. Such data should be readily available for the printing of mappings.	PED – Building PED – MLE PW – Roads PW – Water		✓ ✓ ✓ ✓			
12.	That integration between the AMANDA & Hansen systems and the GPS/AVL system be implemented such that the locations where work was reported as having been performed in the AMANDA & Hansen systems appear on the mappings produced.	PED – Building PED – MLE		✓ ✓			

Legend

NA = Not Applicable, NC = Not Completed, I = Initiated, IP = In Progress, C = Completed, PED = Planning and Economic Development, PW = Public Works, CS = Corporate Services, MLE = Municipal Law Enforcement, IT = Information Technology

Appendix “A” to Report AUD17002 should be examined for details of implementation by recommendation.

Audit Services conducted this follow up audit in conformity with the *International Standards for the Professional Practice of Internal Auditing*. Audit Services believes that the work performed provides a reasonable basis for the follow up comments and conclusions.

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ALTERNATIVES FOR CONSIDERATION

(Include Financial, Staffing, Legal and Policy Implications and Pros and Cons for each alternative)

Not applicable.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Our People and Performance

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

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report AUD17002.

CB:ab