Date: May 29, 2018

To: TTC Audit & Risk Management Committee

From: Auditor General

Subject: Auditor General's Report: Toronto Transit Commission – 2018 Results of
            Follow-up of Previous Audit Recommendations

The report is being forwarded to the TTC Audit and Risk Management Committee for
review and consideration, and forwarding to the next TTC Board meeting.

Original signed by Kevin Lee

Head of Commission Services

Attachment: Auditor General's Report: Toronto Transit Commission – 2018 Results of
             Follow-up of Previous Audit Recommendations

Toronto Transit Commission – 2018 Results of Follow-up of Previous Audit Recommendations

Date: May 15, 2018
To: Toronto Transit Commission Audit and Risk Management Committee
From: Auditor General
Wards: All

SUMMARY

On an annual basis, the Auditor General reviews the implementation status of outstanding audit recommendations and reports the review results to City Council through the Audit Committee.

This report provides the implementation status of recommendations contained in the following four audit reports issued to the Toronto Transit Commission (TTC):

- Review of Wheel-Trans Services – Sustaining Level and Quality of Service Requires Changes to the Program

- Review of Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration

- Review of Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance

- Audit of Materials and Procurement Department, Phase One: Improving Controls to Safeguard Inventory

Of the total 36 audit recommendations assessed in the current follow-up process, 8 recommendations have been fully implemented. For the remaining 28 recommendations, TTC staff have made significant progress towards implementing the recommended changes. These recommendations will be carried forward in the Auditor General's next follow-up review.

Additionally, the Auditor General's 2016 Continuous Controls Monitoring report pertaining to TTC Employee Overtime and Absenteeism, which contains one recommendation, was included in the current follow-up cycle. Management stated that the recommendation has not been fully implemented, and it will be carried forward to the Auditor General's next follow-up review.

RECOMMENDATIONS

The Auditor General recommends that:

1. The Toronto Transit Commission Audit and Risk Management Committee receive this report for information and forward the report to the Toronto Transit Commission Board.

FINANCIAL IMPACT

There is no financial impact resulting from the receipt of this report.

DECISION HISTORY

Table 1 outlines when the report was issued and the number of previous follow-up reviews. Implementation status needs to be considered in conjunction with when the audit report was issued, as recommendations in recently issued audit reports may need more time for management to fully implement the recommended changes.

Table 1: Report Issued Dates and the Number of Previous Follow-up Reviews

Report Title	Number of Previous Follow-Up Reviews	Dates Reported	
		TTC Audit and Risk Management Committee	TTC Board
Review of Wheel-Trans Services – Sustaining Level and Quality of Service Requires Changes to the Program	4	December 19, 2012	February 19, 2013
Review of Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration	3	February 11, 2014	February 24, 2014
Review of Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance	2	February 19, 2015	March 26, 2015
Audit of Toronto Transit Commission Materials and Procurement Department, Phase One: Improving Controls to Safeguard Inventory	0	May 25, 2016	May 31, 2016

The previous Auditor General's follow-up reports on TTC audits are available at:

http://www.toronto.ca/legdocs/mmis/2014/au/bgrd/backgroundfile-70598.pdf

http://www.toronto.ca/legdocs/mmis/2015/au/bgrd/backgroundfile-81442.pdf

http://www.toronto.ca/legdocs/mmis/2016/au/bgrd/backgroundfile-94489.pdf

https://www.toronto.ca/legdocs/mmis/2017/au/bgrd/backgroundfile-105103.pdf

As part of our continuous monitoring program initiative, the report entitled "Continuous Controls Monitoring Program—Toronto Transit Commission, Employee Overtime and Absenteeism" was presented to the TTC Audit and Risk Management Committee meeting on September 21, 2016 and to the TTC Board on October 27, 2016. This is our first follow-up review of the recommendation included in the report. The report is available at:

https://www.toronto.ca/legdocs/mmis/2016/au/bgrd/backgroundfile-97616.pdf

The Auditor General conducts an annual follow-up review to determine whether management has implemented recommendations in audit reports issued. The follow-up review is part of the Auditor General's Annual Work Plan.

The follow-up of outstanding recommendations is required by Government Auditing Standards. Following up on outstanding recommendations from previous audit reports is important as it ensures that management has taken appropriate action to implement the recommendations. The Auditor General reports to the Board of Directors and the City's Audit Committee each year on the implementation status of outstanding recommendations.

We conducted this follow-up audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

COMMENTS

The follow-up review process requires that management provide the Auditor General with a written response regarding the implementation status of each audit recommendation. Where management indicates that recommendations have been implemented, audit work is conducted by audit staff to ensure the accuracy of management's assertions. Where management indicates that recommendations have not been implemented, no audit work is performed and the audit recommendations are carried forward to the next follow-up audit. Where management indicates that recommendations are not applicable, audit staff review management's response and confirm management's assertions.

For recommendations verified as fully implemented by audit staff, no further work is conducted on those recommendations in subsequent audit follow-up cycles. Ongoing implementation and maintenance of audit recommendations, such as policy and procedure enhancements or improved controls, rely on management's continuous efforts beyond the audit follow-up process.

Table 2 outlines our current assessment results of the implementation status of recommendations in the following four audit reports and one Continuous Controls Monitoring report.

Table 2: Results of Current Follow-up Review

Report Title	Total Issued	Outstanding Recommendations from last year's follow-up	Results of Current Review	
			Fully Implemented	Partially Implemented
Review of Wheel-Trans Services – Sustaining Level and Quality of Service Requires Changes to the Program	22	6	2	4
Review of Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration	18	9	2	7
Review of Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance	21	11	1	10
Audit of Toronto Transit Commission Materials and Procurement Department, Phase One: Improving Controls to Safeguard Inventory	10	NA	3	7
Continuous Controls Monitoring Program—Toronto Transit Commission, Employee Overtime and Absenteeism	1	NA	0	1

Attachment 1 lists the fully implemented recommendations.

Attachment 2 lists recommendations partially implemented, with management comments indicating their action plans and time frames. The outstanding recommendations in Attachment 2 will be reviewed in subsequent years until they are determined to be fully implemented.

A brief summary of the 2018 follow-up results is provided below:

Review of Wheel-Trans Services – Sustaining Level and Quality of Service Requires Changes to the Program, 2012

Of the total 22 recommendations in the audit report, 16 recommendations had been assessed as fully implemented in our previous follow-up reviews. Of the remaining six recommendations assessed this year, two were determined as fully implemented, and the remaining four as partially implemented.

Among the four partially implemented recommendations, Recommendation 2 requests the TTC to develop and implement a comprehensive plan for integrating Wheel-Trans customers into the accessible conventional transit system.

Following the 2012 audit report, and in response to the new legislative requirements and growing service demand, TTC staff have undertaken significant work to develop a 10 Year Strategy to transform the delivery of Wheel-Trans services. Staff provided the Board with two reports in 2016 outlining the 10 Year Strategy and projected financial impact, and a progress update. In April 2018, TTC staff provided a report to the TTC Board outlining further updates to the Wheel-Trans 10 Year Strategy.

According to the September 2016 staff report, the implementation of the Wheel-Trans 10 Year Strategy will potentially result in approximately $310.8 million cost avoidance (net of total $47.6 million additional operating and capital costs) over 10 years. As of April 2018, the program estimate is being refined to take into consideration updated resource plans and quotes, and estimates provided by vendors and third-party providers. However, an updated cost avoidance estimate was not available in the April 2018 staff report to the TTC Board.

From May 2017 to April 2018, TTC implemented the Family of Services Pilot as part of the Wheel-Trans 10 Year Strategy. The Pilot involved volunteer customers and new conditionally eligible customers, and served to identify barriers in the transfer of customers between subway stations and bus stops. In November 2017, TTC staff developed and tested a Travel Training Program to be rolled out in 2018.

Review of Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration, 2014

The 2014 audit provided a total of 18 recommendations, of which eight recommendations had been assessed as fully implemented and one no longer applicable in previous follow-up reviews. Of the remaining nine recommendations assessed this year, two were determined as fully implemented and the remaining seven partially implemented.

Four remaining audit recommendations relate to system upgrades to support a more efficient bus maintenance, repair and internal bus rebuild process. TTC management is working on the implementation of Computer Aided Dispatch and Automatic Vehicle Location (CAD/AVL) system, and updated software rollout of the Industrial and Financial System Vehicle Work Order (IFS/VWO).

Three audit recommendations relating to warranty administration remain partially implemented. TTC staff should prioritize addressing these outstanding audit recommendations because maximizing the use of bus warranty provisions will further increase warranty recovery revenue.

Review of Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015

The Phase Two Bus Maintenance and Shops Department report included 21 audit recommendations with a focus on the management of non-revenue fleet and equipment. Ten recommendations had been assessed as fully implemented in previous follow-up reviews. Of the outstanding 11 recommendations, one was determined as fully implemented during the current follow-up cycle.

Non-revenue vehicles and equipment are essential as they are used by all revenue fleets and other TTC departments to support ongoing transit operations and capital projects. Non-Revenue Fleet also plans to adopt the CAD/AVL system to track the use of vehicles. Successful implementation of the system will provide management with key information to address the remaining audit recommendations and result in enhanced fleet management, such as more efficient maintenance scheduling.

Audit of Materials and Procurement Department, Phase One: Improving Controls to Safeguard Inventory, 2016

The 2016 audit report provided a total of 10 recommendations regarding safeguarding of inventory at TTC warehouses and stores. This is our first follow-up review of this audit report.

Of the total 10 recommendations assessed this year, three were determined as fully implemented, and the remaining seven as partially implemented. The majority of outstanding recommendations relate to improving the core parts retrieval process at TTC garages, enhancing access controls and security at TTC stores, and improving physical count practices at warehouses and stores. The implementation of these recommendations will likely result in cost savings and improved management controls.

The extent of any potential cost savings from implementing the recommendations were not yet quantifiable during the 2018 follow-up process.

In response to the audit report, Materials and Procurement staff have undertaken many steps to address the audit recommended changes and improve inventory controls. As part of our follow-up work for recommendation 4 regarding the need to improve the current core parts retrieval process, we identified specific gaps in TTC's current process. This information will assist management in further improving the core parts retrieval process, and we will be issuing a management letter to TTC staff highlighting the process gaps that need to be addressed.

Continuous Controls Monitoring Program—Toronto Transit Commission, Employee Overtime and Absenteeism, 2016

The Auditor General's Continuous Controls Monitoring Program was first initiated in 2011 for overtime and other payroll-related expenses incurred by the City. The program was expanded to TTC in 2012, and was further expanded to include monitoring of employee absenteeism relating to sick time, occupational injury and bereavement in 2014.

Our 2016 continuous controls monitoring report recommended that the TTC undertake a review of the monitoring of its overtime and absenteeism costs at the departmental and organizational levels. Management reported that this recommendation has not been fully implemented.

Management stated that overtime and absenteeism expenses continue to be monitored in a decentralized manner until the SAP system is fully integrated into the new payroll and financial systems, expected late 2018. This recommendation will be carried forward to the Auditor General's next follow-up review.

The recommendation along with management's comment and action plan are listed in Attachment 2.

We will include the results of this follow-up review in a consolidated report to the City Audit Committee in July 2018. The consolidated report will include a summary of our review of outstanding recommendations for all City Agencies and Corporations.

We express our appreciation for the co-operation and assistance we received from management and staff of the Toronto Transit Commission.

CONTACT

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SIGNATURE

Beverly Romeo-Beehler
Auditor General

ATTACHMENTS

Attachment 1: Toronto Transit Commission, Audit Recommendations – Fully Implemented

Attachment 2: Toronto Transit Commission, Audit Recommendations – Partially Implemented

TORONTO TRANSIT COMMISSION AUDIT RECOMMENDATIONS – FULLY IMPLEMENTED

Report Title: **Review of Wheel-Trans Services - Sustaining Level and Quality of Service Requires Changes to the Program**
Report Date: **12/06/2012**

Rec. No.	Recommendation
01	The Commission request the Chief Executive Officer, in consultation with the Advisory Committee on Accessible Transit, to explore various short-term options, including a free-ride program on a pilot basis, to encourage Wheel-Trans customers to use the accessible conventional transit system.
11	The Commission request the Chief Executive Officer, in consultation with the Advisory Committee on Accessible Transit, to consider adopting a more restrictive Wheel-Trans late cancellation and no-show policy after successfully implementing the four-hour cancellation allowance, and incorporating the provisions for re-consideration.

Report Title: **Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration**
Report Date: **01/28/2014**

Rec. No.	Recommendation
09	The Board request the Chief Executive Officer to take the necessary steps to enhance continuous training for Bus Maintenance and Shops Departmental staff. Such steps should include but not be limited to: a. Developing a training policy detailing clear and specific training objectives, requirements and completion timeframes for coach technicians and other job classifications where appropriate; and b. Monitoring the completion of training requirements and addressing non-compliance with training requirements.
17	The Board request the Chief Executive Officer, in preparing 2015 budget submission relating to shortening existing bus service life policy by three years, to provide clear short and long term financial impact information based on a comprehensive, accurate and objective life-cycle cost analysis.

Report Title: **Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance**
Report Date: **02/06/2015**

Rec. No.	Recommendation
03	The Board request the Chief Executive Officer to enhance the current review and approval process for non-revenue vehicle and equipment acquisitions such that the needs, purposes, and projected usage of the requested vehicles and equipment can be adequately evaluated.

Report Title: **Audit of Toronto Transit Commission Materials and Procurement Department, Phase One: Improving Controls to Safeguard Inventory**

Report Date: 05/12/2016

Rec. No.	Recommendation
01	The Board request the Chief Executive Officer to ensure goods received at Toronto Transit Commission warehouses are timely processed including stocking and updating the inventory system records to minimize loss or misplacement of inventory.
02	The Board request the Chief Executive Officer to undertake an immediate review and reconciliation of returned goods at Duncan warehouse to identify and document missing returned goods.
10	The Board request the Chief Executive Officer to establish and implement procedures for obtaining proof of receipt for non-inventory and emergency purchase items delivered to Toronto Transit Commission warehouses and stores.

TORONTO TRANSIT COMMISSION, AUDIT RECOMMENDATIONS – PARTIALLY IMPLEMENTED

Report Title: **Review of Wheel-Trans Services - Sustaining Level and Quality of Service Requires Changes to the Program**
Report Date: 12/06/2012

Rec. No.	Recommendation	Management Comments
02	The Commission request the Chief Executive Officer, in consultation with the Advisory Committee on Accessible Transit, to develop and implement a comprehensive plan for integrating Wheel-Trans customers into the accessible conventional transit system. Such an action plan should include but not be limited to: a. Identifying and addressing potential safety and service issues that can present barriers to Wheel-Trans customers in using the accessible conventional system; b. Education, communication and training programs for Wheel-Trans customers and transit passengers; and c. Customer service training to TTC staff with particular emphasis on assisting people with mobility difficulties.	In 2016, Wheel Trans presented twice to the TTC Board and received unanimous approval for its 10 Year Strategy, a comprehensive plan to adapt new eligibility in accordance with the AODA and change the service delivery model to enable customers to book trips on the conventional system with Wheel Trans support, thereby reducing the overall average trip length and making room for future customers. At the same time, this plan has forecast a cost avoidance of $300 million in operating costs over 10 years. The TTC has developed a Family of Services strategy based on intermodal trip booking for those customers who are able to use the Conventional system, and plan to integrate Wheel-Trans into the TTC's broader conventional service offerings. The plan includes development of operational processes to ensure successful handoff/connections for customers, as well as customer and operations policies to support intermodal trips for WT customers. The plan calls for an accessibility audit, already underway, of surface routes and subway stations. It also includes a strategy to educate existing and future customers through literature and engagement, with the potential for a customer travel training course to be introduced in 2018 according to demand. Finally, TTC has expanded its training related to disability issues and is in the midst of rolling out this training to its staff, with a targeted duration of two years to complete. Four Phased FOS Pilot Began in May 2017 and will be completed in April 2018. The pilot involved volunteer customers and new conditionally eligible customers, and served to identify and eliminate as many barriers as possible that exist with transfer customers to and from subway stations and bus stops. Introduced a dedicated phone number for the scheduling of Family of Services (integrated trips), with guaranteed same day service with 4 hours' notice. An extensive customer centric audit of all accessible subway stations, Wheel-Trans stops at these stations,

Rec. No.	Recommendation	Management Comments
		accessible bus stops along the pilot bus routes, and regional transfer points was completed in 2017 along with recommendations to senior management for improvements. The recommended improvements to way-finding and stop relocations will commence implementation in 2018 as Family of Services rolls out. • 333 of 350 WT Operators completed 5 hours AODA sensitivity training in 2017 • 1,182 out of 2,036 TTC Operators from Malvern, Wilson and Arrow divisions completed 8 hour AODA sensitivity training in 2017 • 18 Mental Health Work shops were created and delivered by Progress Place to 112 TTC contact centre staff and supervisors over the period of May – July 2017 • All current and new employees must complete 2 online modules as part of their mandatory training for the Contact Centre In November 2017 Wheel-Trans developed and tested with customers a Travel Training Program which will be rolled out commencing Q2 2018. Expected Completion Timeline: 2020
05	The Commission request the Chief Executive Officer, in consultation with the Advisory Committee on Accessible Transit, to consider initiating a photo identification card program to applicants eligible for Wheel-Trans services.	As Presto continues to roll out across the TTC system, Wheel Trans continues to explore farecard options with Presto to ensure a consistent payment method for our customers. An ID card could be paired with the fare payment card however the roll out is dependent on the implementation of a solution by the Presto team for Sedan trips. In addition, every Presto photo id card issued by TTC requires agreement with Metrolinx as we are changing the look of the traditional Presto card. Further there is a cost to this initiative through the production of the cards, as well as an assessment of the impact to customers to provide photos, and the cost of potentially facilitating that through the TTC's photo id centre which currently produces the Support Person Assistance Card. A cost benefit analysis will need to be produced to fully determine the benefits or disbenefits of implementing this recommendation. Expected Completion Timeline: Q4 2019
08	The Commission request the Chief	a) TTC Wheel-Trans has adjusted staffing levels to

Rec. No.	Recommendation	Management Comments
	Executive Officer to review Wheel-Trans call center operations and call response capacity. Such review should include but not be limited to: a. Shortening reservation line operating hours to allocate more staff resources to the afternoon hours; b. Enhancing internet booking capacity by removing the address change and time booking restrictions; c. Dedicating more staff resources to the priority line to ensure timely call response; d. Addressing the high absenteeism rate among call center staff; and e. Consulting 311 Toronto on ways to improve Wheel-Trans call center response capacity and reduce staff absenteeism rate.	meet call volumes and in specific, during high-load periods. Created a new 10:00am to 6:00pm shift to improve Reservations during the morning breaks beginning at 9:00am. The addition of these 2 new shifts would improve coverage during the 15min and 30min breaks for shifts beginning at 0700am. This would also ensure we have coverage on the phone at 3:00pm which is the time of our most significant shift change. b) The TTC Wheel-Trans is currently training employees on the new Telephone system that will be implemented in May 2018. Furthermore, we will be rolling out a new CRM software system, targeting an implementation date of June 2018, and new inter-modal trip booking software that will be implemented in 2019. c) TTC Wheel-Trans has dedicated staff to the priority line to ensure a timely response. d) The TTC Wheel-Trans made Attendance Management one of our key priorities in 2017. We plan to continue managing attendance closely and supporting employees in improving their attendance by offering Stress Management courses in 2018. Additionally, we have introduced the practice of using Transitional Workers to assist on the Reservations line. These additional resources should minimize the impact of absenteeism and help us meet our commitment to deliver a quality service. e) We have consulted with 311 and incorporated some of the ideas captured in our technological upgrade. We will be setting up follow up visits to 311 in 2018 to share strategies to improve contact centre practices. Expected Completion Timeline: Q4 2019
22	The Commission request the Chief Executive Officer to reduce the annual printing and mailing costs of Wheel-Trans quarterly newsletters and bulletins to customers. Consideration should also be given to allowing advertisements in the publications to generate revenue.	Based on a detailed review as well as changing circumstances, the need for the newsletter has proven to be a critical means for communicating information to our customers and therefore its use will not be eliminated. Also, efforts to pursue advertisements in publications to generate revenue were made, but with limited success. We did initially reduce the total newsletters produced annually by 1 to reduce the printing costs, however the amount remaining we intend to continue to use as the preferred means of customer contact. Based on our customer survey data, it is known that the Wheel-Trans customer is predominantly senior

Rec. No.	Recommendation	Management Comments
		(74%) as well 85% of customers have household incomes less than $50,000. Lastly, we hear frequently from our customers, as also evidenced by our high volume of phone bookings through reservations that our customers lack personal technology to be able to interact with Wheel Trans.
		During the Wheel-Trans Transformation Program, it has become apparent that the Wheel-Trans newsletter is a key medium of communication for all upcoming changes to the Wheel-Trans services as well a key way to communicate to customers about ongoing matters, helpful reminders and provided added information that can be read and reviewed at the customer's leisure. While Wheel-Trans understands the intent of the Auditor General's recommendation is to lower operational costs of delivering the Wheel-Trans service, the costs spent on the newsletter creates an opportunity for Wheel-Trans to communicate directly to all of its customers to educate, teach and inform customers on the opportunities and advancements available by travelling on the accessible conventional system and the opportunity presented by the Family of Services program to facilitate and support this travel when their abilities permit. We had originally pursued offering portions of the newsletter for sale to advertisers to mitigate costs by generating revenue however we were told by our advertising partner that due to the Wheel-Trans customer profile, advertisers do not often target this market segment and therefore there is no market for advertising on the newsletter.
		We respect however guidance provided by the Auditor General and as such will commence adding to all of our paper medium including the newsletter a comment stating that we encourage switching to electronic versions of this newsletter and ask our customers to request a copy as a matter of their preference. This commentary will be added to the Summer 2018 newsletter and continue going forward.

Report Title: Review of Toronto Transit Commission Bus Maintenance and Shops
Department, Phase One: Bus Maintenance and Warranty Administration
Report Date: 01/28/2014

Rec. No.	Recommendation	Management Comments
03	The Board request the Chief Executive Officer to ensure that bus kilometre records used for scheduling preventive maintenance inspections are accurate.	A Computer Aided Despatch and Automatic Vehicle Location" system (CAD/AVL) is being rolled out to replace the obsolete Communications and Information System (CIS) at TTC. When fully commissioned, it will provide accurate kilometer records for all TTC buses. This state-of-the-art equipment and software will also provide real-time monitoring of critical bus systems. In-service testing is scheduled for the 3rd and 4th quarter of 2017 with total fleet retrofit scheduled to complete in Q2 of 2019.
08	The Board request the Chief Executive Officer to establish standard repair times for common bus repairs, develop procedures to monitor efficiency of bus repair activities, and incorporate the standard repair times into part of technician performance evaluation.	Completion of updated software rollout to the garages is facilitating collection of data for establishing standard repair times for technicians. Sufficient data is expected to be collected from each location to start preliminary analysis by Q1 2018. A strategy will be developed with more refined data in Q4 2018. Reasonable repair times will be discussed with the Union after reviewing data from all locations with completion targeted for 2020.
10	The Board request the Chief Executive Officer to accurately assess failure rates of major internal bus rebuild parts as well as assessing the costs of rework associated with rebuild failures.	The implementation of major OEM new or rebuilt parts is manually tracked for failure analysis, to ensure recovery of any failed part from the vender. Revisions to VWO will be implemented in 2019 to provide traceability of major rebuilt parts specifically.
11	The Board request the Chief Executive Officer, in his ongoing assessment of outsourcing opportunities, to conduct a complete analysis of internal bus rebuild costs at the Duncan Shop accounting for all key and relevant direct and indirect costs.	TTC does outsource bus components currently (i.e. engines, fuel injectors, radiators, etc.), where applicable. This is a constant ongoing process and reviewed as part of the annual budget process. TTC staff is using all direct and indirect costs in Make Vs. Buy" comparison. CBA negotiations have resulted in a "No Contracting Out Clause" at this time. TTC staff is continuing to review opportunities where outsourcing component rebuild is well suited to outsourcing. This is in preparation for the next CBA negotiations in 2018.
12	The Board request the Chief Executive Officer to take immediate steps to improve the current defective parts retrieval process at bus garages including but not limited to: a. Implementing adequate controls to account for and track the return of defective parts by technicians; and	The material return process for new bus warranty using IFS is in place. The vehicle non-warranty process is currently in development with TTC IT staff to allow serial number parts tracking as part of the work order. A pilot test should be in place late 2018 and if successful the software changes to IFS, will allow new parts tracking using the vehicle maintenance system.

Rec. No.	Recommendation	Management Comments
	b. Enhancing efficiency of the parts retrieval process currently carried out by warranty staff.	
13	The Board request the Chief Executive Officer to take immediate steps to maximize the use of bus warranty provisions and increase warranty recovery revenue. Such steps should include but not be limited to: a. Identifying and addressing reasons prohibiting successful filing of warranty claims; b. Increasing warranty claim submission rate for bus defective parts and labour hours; and c. Systematically tracking and monitoring claim submission rate and warranty cost recovery for the entire bus fleet.	Reports and processes to minimize the number of new bus warranty claims denied due to "no fault found" will follow the process and system upgrades scheduled for 2017, item #12. Scheduling to be determined in 2017, in conjunction with moving the new vehicle warranty process into the Vehicle Programs Dept.
15	The Board request the Chief Executive Officer to take steps to ensure proper accounting procedures for bus warranty claims and payments. Such steps should include but not be limited to: a. Establish proper accounting procedures for bus warranty payments including setting up accounts receivable for warranty claims, implementing procedures to adjust/write off disputed claims and periodic reconciliations; b. Undertake collection of all valid outstanding claims; and c. Review accounting procedures for warranty payments for other types of TTC vehicles including subway trains and streetcars to ensure adequate financial controls are in place.	Action on items "15a" and "15b" will be enabled by process and system upgrades scheduled for 2017 in conjunction with other warranty related recommendations. Item "15c" is not linked with Bus Maintenance software. The warranty payments tracking and remuneration will be managed by the Vehicles Programs Dept. as part of SAP financial software upgrade systems.

Report Title: Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance

Report Date: 02/06/2015

Rec. No.	Recommendation	Management Comments
02	The Board request the Chief Executive Officer to consider implementing a chargeback process or other measures for non-revenue vehicle and equipment costs to help optimize use of vehicle and equipment resources by user departments and enhance accountability.	Improvements to the vehicle maintenance tracking system and a new vehicle GPS system is needed to better capture mileage and maintenance data. This data will then be used to create annual reports for distribution to the end users of the vehicles. Reports will identify the following: • Total Annual Maintenance • Total Annual Fuel Costs • Total Vehicle Purchases and Vehicle Rental Costs Improvements to the vehicle maintenance system and a pilot to install a GPS system commenced in 2015. The pilot was unsuccessful as the GPS software did not capture, transmit and report all the data in a timely manner. Action Plan & Schedule: • A second pilot is being planned with an alternate manufacturer - Clever Devices. Clever Devices is contracted to supply a CAD/AVL system for the City Buses and Streetcars. The system proposed for the Non-Revenue Fleet will be a scaled down version. A contract amendment to the City Bus/Streetcar contract was prepared for Q1-2017. The vehicle/hardware pilot was re-conducted in Q4 of 2017 and evaluated in Q1-2018. • User reports will be developed once GPS kilometer and stockroom parts tracking is available in VWO. These reports will allow costs and vehicle utilization to be shared with user departments. • Full GPS installation planned for Q4-2019 • Stockroom parts tracking pilot planned for – Q4-2018
04	The Board request the Chief Executive Officer to conduct detailed reviews of utilization levels of non-revenue vehicles and equipment to identify and minimize underutilized vehicles and equipment.	Non-Revenue vehicle utilization was reviewed as part of the New Vehicle Business Case Assessment process developed by TTC Vehicle Engineering staff which is currently in use. Pilot installation of GPS tracking equipment to monitor mileage and utilization was completed Q4-2015. However the initial pilot company's data was deemed

Rec. No.	Recommendation	Management Comments
		incomplete for vehicle tracking and therefore the pilot was unsuccessful and discontinued in early 2016. A proper analysis of vehicle utilization therefore could not be completed. Action Plan & Schedule: • Reference Recommendation #2: A second pilot is being planned with an alternate manufacturer - Clever Devices. Clever Devices is contracted to supply a CAD/AVL system for the City Buses and Streetcars. The system proposed for the Non-Revenue Fleet will be a scaled down version. A contract amendment to the City Bus/Streetcar contract was prepared for Q1-2017. The pilot was re-conducted in Q4-2017 and evaluated as a success in Q1-2018. User reports will be developed once GPS kilometer and stockroom parts tracking are available in VWO. These reports will allow costs and vehicle utilization to be shared with user departments. • Full GPS installation planned for Q4-2019 • Stockroom parts tracking pilot planned for – Q4-2018
07	The Board request the Chief Executive Officer to ensure that vehicle life cycle costs are actively monitored and analyzed as part of the non-revenue fleet management functions. A re-assessment of the current non-revenue vehicle replacement criteria should be undertaken to ensure the criteria are effective in preventing excessive maintenance and repair costs.	The TTC's replacement criteria were reviewed to ensure the vehicle lifecycle is maximized without incurring excessive maintenance costs. The TTC's replacement criteria are in sync with the City of Toronto's fleet and equipment criteria completed in Q2-2015. Upgrades to the IFS/VWO system were performed to better collect data and track lifecycle costs of city buses as part of the Phase 1 Audit recommendations. Similar upgrades will be performed to the Non-Revenue IFS/VWO system. In addition to the upgrade, process improvements will include implementing improved material inventory controls at Duncan and Lakeshore locations. Action Plan & Schedule: • Lakeshore stockroom modification to allow monitoring of parts tracking was completed Q4-2017. Lakeshore Garage stocked parts are tied to the VWO system the same as city buses. • Duncan NR stockroom is still under review for

Rec. No.	Recommendation	Management Comments
		other parts tracking options and changes to the stockroom layout, prior to changing the parts tracking process. • TTC IT staff is piloting externally supplied parts tracking on our VWO system, to capture supplied parts on work orders, by unit number which would allow for cost per km. • Duncan Stockroom modifications for internal parts tracking planned for Q1-2019 • IT pilot of external parts tracking software upgrades is planned for Q4-2018
13	The Board request the Chief Executive Officer to take steps to improve non-revenue vehicle user compliance with scheduled maintenance, including steps to address user concerns.	Monthly inspection call out reports have been improved, to identify current and future planned maintenance. The call outs aid users of upcoming pending maintenance activities, so the user can plan their work around the asset maintenance. Sample calls out sheets are available for review. More accurate maintenance scheduling will be developed with the implementation of GPS vehicle tracking. GPS mileage information is required to improve maintenance accuracy. This information needs to be automatically linked and uploaded to the IFS/VWO system. The GPS pilot installation completed in Q4-2015 was unsuccessful as identified earlier in this report. A contract amendment to the City Bus/Streetcar contract was prepared for Q1-2017. The pilot was re-conducted in Q4-2017 and evaluated in Q1-2018. Action Plan & Schedule: • Full rollout of a new Clever Devices GPS system is planned for Q4-2019
14	The Board request the Chief Executive Officer to ensure accurate and up-to-date non-revenue vehicle kilometrage data are obtained to facilitate effective preventive maintenance scheduling.	The first GPS pilot evaluation was completed Q4-2015; however the pilot was unsuccessful due to inaccurate asset GPS mapping as well as software issues which did not correctly transfer data into the TTC IFS/VWO system. Action Plan & Schedule: • Reference Recommendation #2: A second pilot was planned with an alternate manufacturer - Clever Devices. Clever Devices is contracted to supply a CAD/AVL system for the City Buses and Streetcars. The system proposed for the Non-Revenue Fleet will be a scaled down version. A

Rec. No.	Recommendation	Management Comments
		contract amendment to the City Bus/Streetcar contract was prepared for Q1-2017. The pilot was re-conducted in Q4-2017 and evaluated in Q1-2018. User reports will be developed once GPS kilometer and stockroom parts tracking are available in VWO. These reports will allow costs and vehicle utilization to be shared with user departments. • Full GPS installation planned for Q4-2019 • Stockroom parts tracking pilot planned for Q4-2018
15	The Board request the Chief Executive Officer to improve the effectiveness of the Vehicle Work Order system for non-revenue fleet management. Steps to be taken should include but not be limited to: a. Addressing existing preventive maintenance scheduling issues in the system; b. Ensuring adequate system access is provided to garage management staff; c. Re-assessing the practicality of existing data entry controls; d. Ensuring accuracy of system generated management reports; and e. Expanding the existing system reports to include reports on fleet management key performance indicators.	Upgrades to the IFS/VWO System for City Bus Garages were completed in 2016 as part of the Phase 1 Audit Recommendations. Upgrades included features to address items are noted in the above Recommendations. Similar upgrades to the Non-Revenue IFS/VWO system will be made so user report can be run for staff to better track planned maintenance. Report testing will be completed in Q2-2018. IT staff have been task with the development of a management dashboard specifically for the Non-Revenue fleet, this cannot be properly piloted until the installation is completed for the GPS system Q4-2019. Action Plan & Schedule: • Phase #1 – City Bus Garage IFS/VWO update – Completed 2016 • Phase #2 - Non-Revenue Vehicle IFS/VWO update in progress - planned Q4-2019
16	The Board request the Chief Executive Officer to develop and implement non-revenue fleet quality assurance processes to systematically monitor and detect repair quality issues.	A new Vehicle Reliability & Quality Assurance (VRQA) group was established in the Bus Maintenance Department in 2014. The VRQA introduced Reliability Centered Maintenance (RCM) in 2015 to improve bus reliability. RCM are being introduced into the Non-Revenue Vehicle fleet. The first RCM Program being introduced to NRV focuses on the electrical charging system. Key Performance Indicators (KPI) is required to measure the success of these programs. Accurate data will only be possible with the use of a GPS system. Action Plan & Schedule:

Rec. No.	Recommendation	Management Comments
		• Implementation of new GPS system and development of KPI's to track asset reliability & identify quality issues Q4 2018
17	The Board request the Chief Executive Officer to ensure adequate controls are in place at TTC garages to deter and detect ordering of non-revenue vehicle and equipment parts for non-TTC uses. Periodic reviews should be considered by TTC internal audit staff.	Staff developed a vehicle post repair parts audit to ensure vehicle parts ordered were actually applied to vehicle repairs completed. This audit SOP is posted on the TTC website in Q3-2015. Action Plan & Schedule: • Lakeshore stockroom modification to allow monitoring of parts tracking was completed Q4-2017. Lakeshore Garage stocked parts are tied to the VWO system the same as city buses. • Duncan NR stockroom is still under review for other parts tracking options and changes to the stockroom layout, prior to changing the parts tracking process. • TTC IT staff is piloting external parts tracking on our VWO system, to capture externally supplied parts on work orders, by unit number. • Duncan Stockroom modifications for internal parts tracking planned for Q1-2019 • IT pilot of external parts tracking software upgrades is planned for Q4-2018
18	The Board request the Chief Executive Officer to take steps to shorten garage service turnaround time for non-revenue fleet by addressing issues pertaining to garage capacity, availability of technicians, parts availability and maintenance scheduling.	The VWO process and vehicle turnaround time were continuously monitored throughout the year by Forepersons during manual reviews of pending work, to identify and resolve the issues of longer turnaround time for unplanned maintenance. Different steps were identified and are in the process of implementation as follows: • Timely closing of work orders and controlling work orders left open inadvertently through smart GPS devices. The 2nd pilot GPS project is now expected to be completed by Q4-2017 with full fleet rollout during 2018. • The VWO preventive maintenance schedule to consider mileage in addition to calendar date when scheduling future non-revenue asset maintenance. • Extra shifts at workshops during weekends are implemented as required, when workload demands warrant. • Use of controlled stockrooms is being

Rec. No.	Recommendation	Management Comments
		implemented at Lakeshore Garage during the fall of 2017, Duncan Shops stockroom controls are still under review.
		• Identification of alternate suppliers to secure timely parts supply will be continued in conjunction with the TTC possibly joining with the CoT, Fleet Services blanket parts supply for other agencies, once a new contract is in place.
		After implementation of some of the above steps a significant reduction in the turnaround time was observed and appreciated by the user departments as well. However due to certain limitations in current VWO system the results of improvement can't be accurately captured. With the upgrading of a non-revenue work order dashboard and the installation of GPS devices in 2019, this will allow gathering of vehicle KM and engine hours, the problem of data captured will be resolved and turnaround time can be better monitored.
		Action Plan & Schedule:
		Implementation of new GPS system and development of KPI's to track asset reliability & identify quality issues Q4 2018.
20	The Board request the Chief Executive Officer to establish a formal warranty management process for non-revenue vehicles and fleet equipment such that warranty claims are maximized.	A non-revenue warranty procedure has been developed to identify, track and recoup defective warranty components or equipment. New equipment warranty conditions and timeframes for major components will be registered into the IFS system, as part of the IFS computer system upgrades related to Recommendation #15.
		A new warranty process SOP has been posted on the NR web page completed Q4-2015.
		Action Plan & Schedule:
		• Lakeshore stockroom modification to allow monitoring of parts tracking was completed Q4-2017. Lakeshore Garage stocked parts are tied to the VWO system the same as city buses.
		• Duncan NR stockroom is still under review for other parts tracking options and changes to the stockroom layout, prior to changing the parts tracking process.
		• TTC IT staff is piloting external parts tracking on our VWO system, to capture externally supplied parts on work orders, by unit number.

Rec. No.	Recommendation	Management Comments
		• Duncan Stockroom modifications for internal parts tracking planned for Q1-2019
		• IT pilot of external parts tracking software upgrades is planned for Q4-2018

Report Title: **Audit of Toronto Transit Commission Materials and Procurement Department, Phase One: Improving Controls to Safeguard Inventory**

Report Date: 05/12/2016

Rec. No.	Recommendation	Management Comments
03	The Board request the Chief Executive Officer to take steps to ensure returned goods to warehouses are properly and timely processed for replacement or credit. Such steps should include but not be limited to: a. Storing returned goods in an organized manner so that they can be easily located; b. Providing staff with clear procedure requirements to ensure inventory analysts receive timely notifications of return requests; c. Ensuring timely processing and follow-up of outstanding returns by inventory analysts; d. Developing relevant performance measures to track and monitor completeness and timeliness of return processes.	Significant improvements and partial completion in implementing these recommendations has been achieved, as noted below: a. We consider this sub-action fully implemented as returned goods are placed on shelving/racking with associated document # attached, allowing material to be identified and easy to locate. b. We consider this sub-action fully implemented as Standard Operating Procedure (SOP) 7.4.1.2 has been created and implemented to address the procedure requirements in ensuring that material identified for returns is communicated to Inventory Analyst in a timely manner. This is a continual work in progress in an effort to identify potential areas of efficiency and improvement. c. We consider this sub-action partially implemented as a committee consisting of representatives from Controlled Stores, Inventory Management, and Purchasing was established and meets regularly in monthly intervals to ensure timely processing and follow up of outstanding returns. The focus is reducing returns pending greater than 120 days, with the goal of achieving the SOP return targets. Although exceptions will always exist that lead to increased returns processing time due to: value and complexity of some exceptional parts; necessity of thorough investigation; and the nature of having to negotiate with both internal and external personnel and vendors to complete this process. d. We consider this sub-action is fully implemented as a weekly return material report is published to track and monitor performance and completeness of the return process. As well, monthly statistical graphs are published to monitor these key performance measures.

Rec. No.	Recommendation	Management Comments
		Expected Completion Timeline: Q1 2019
04	The Board request the Chief Executive Officer to improve the current core parts retrieval process at Toronto Transit Commission garages to account for and track the return of core parts for rebuild purposes.	Significant improvements have been made in implementing this recommendation as a new SOP 7.5.6.2 addressing core management for both internal and external cores has been developed and rolled out to Controlled Stores to ensure that personnel understand the process for entering core parts into the system (IFS). As discussed with the Auditor General's Office, to achieve full implementation, M&P will focus on the following: a. Reviewing SOP 7.5.6.2 to ensure delineation of roles and responsibilities between Operations and M&P related to the core management process is clarified, communicated and acknowledged between the said parties. b. Ensuring when inventory part requests for cores are requested and authorized by Operations, product structures will be created to ensure core tags are printed in alignment with the Operation's VWO system. c. Providing further visibility by ensuring cores are received into IFS as soon as they are physically returned to the M&P storeroom. Controlled Stores is working with the IT department in developing an additional reporting capability that will identify the tracking of any cores physically returned to the M&P storeroom; whether the cores are at divisional storerooms or in transit to central stores. This will enable us to reconcile the number of cores physically returned to M&P stores at all sites. We will be able to subsequently run reports to better manage the core tracking process, and staff will have visibility of the location of cores anywhere, regardless of when there is demand for the part or not, as outlined in the SOP. Expected Completion Timeline: Q3 2019

Rec. No.	Recommendation	Management Comments
05	The Board request the Chief Executive Officer to take steps to improve access controls to safeguard inventory at all Toronto Transit Commission satellite stores including: a. Assessing the costs and benefits of converting open stores to the 24/7 model b. Increasing staff compliance with the requirement to accurately record all inventory items removed from stores, and c. Exploring other options that can improve access controls to inventory at open stores.	Significant improvements and partial completion in implementing these recommendations has been achieved, as noted below: a. We consider this sub-action fully implemented as an analysis was completed in 2017 and it was estimated that approximately 50 additional resources would be required to convert all satellite Store locations to 24/7 coverage at approximate costs of $5.8M annually to the Commission (also factors in employee benefits). This cost makes the conversion of all locations to a 24/7 coverage cost prohibitive. b. When 24/7 coverage is not an option, strip counts continue to be performed at these open locations as a secondary check to cycle counts as a mechanism to drive inventory accuracy. Targets will be continually reviewed and updated to ensure optimal compliance. Additionally, M&P will continue communicating with Operations the need to meet their obligation of properly documenting material transactions. c. We consider this sub-action fully implemented as other options to improve access controls have been explored, including: consolidated warehouse business case; inventory algorithm implementation schedule; CCTV implementation schedule; anticipated development of a barcoding system; and anticipated SAP implementation. Expected Completion Timeline: Q4 2018
06	The Board request the Chief Executive Officer to review the current state of physical security at Toronto Transit Commission inventory facilities in particular the satellite stores to ensure a reasonable level of physical security at all sites.	M&P has made significant improvements and has partially completed implementation of the CCTV cameras in satellite stores locations. To date there have been 9 locations where they have been installed and 6 are budgeted for installation in 2018 based on resources and budgets of the Security Department. Once all locations identified on the CCTV Installation Status Update are completed, as per the scheduled provided, we will consider this fully implemented. Expected Completion Timeline: Q4 2019

Rec. No.	Recommendation	Management Comments
07	The Board request the Chief Executive Officer to ensure quantity discrepancies from cycle counts at warehouses and stores are adequately reviewed and approved by supervisory staff to safeguard Toronto Transit Commission inventory. Steps to be considered include re-assessing the current dollar threshold requirement for documenting supervisory reviews and ensuring adequate investigation and documentation of significant discrepancies.	M&P agrees with this recommendation and has changed the dollar threshold to $800.00 for supervisory approval. Standard Operating Procedure (SOP 6.2.3) now states that any discrepancy over this amount ($800) needs to be investigated by the Supervisor. Expected Completion Timeline: Q1 2019
08	The Board request the Chief Executive Officer to review and improve the current physical count practice at Toronto Transit Commission stores, consisting of both cycle and strip counts, to achieve consistent and accurate physical count results. This should include a review of the merits and practicality of requiring staff to conduct daily "strip counts" at Toronto Transit Commission satellite stores.	SOP 6.3.3 for daily strip counts has been revised to incorporate the change in dollar threshold to $800.00 for supervisory approval. Strip counts will continue to be performed at non 24/7 open stores with supervisory authorization. Expected Completion Timeline: Q1 2019
09	The Board request the Chief Executive Officer to review and update retention requirements for each category of inventory records to ensure compliance with the City of Toronto By-law No. 867-1998. The updated record retention schedules should be documented and communicated to staff.	Partial compliance was achieved with inventory records being managed and maintained on the system (IFS), and packing slips for goods received being scanned and kept on the M&P shared drive as per the By-Law requirements. Staff agrees to review the full compliance of By-Law No. 867-1998 and ensure any updates are communicated to the appropriate Department for completion. Expected Completion Timeline: Q1 2019

Report Title: Continuous Controls Monitoring Program - Toronto Transit Commission, Employee Overtime and Absenteeism, 2015
Report Date: 09/21/2016

Rec. No.	Recommendation	Management Comments
01	The Board request the Chief Executive Officer to undertake a review of existing reports and ensure that effective reports for reviewing and monitoring overtime and absenteeism expenses by individual departments and the organization as a whole be developed as part of the implementation of the new financial system.	The TTC's SAP implementation of new payroll and financial systems has been delayed until approximately summer 2018 (exact date is TBD). In the meantime, existing overtime and absence reports have continued to be used for decentralized monitoring. In departments where overtime or absenteeism rates have been raised as concerning, the executive team has been implementing targeted initiatives to help address the issue. Some of the

Rec. No.	Recommendation	Management Comments
		initiatives include the hiring of additional collectors and increasing the Wheel Trans spare board, both which have proven to be effective. In addition, the Service Delivery Group established a dedicated team to focus on absenteeism and have facilitated additional interviews of and added attention on employees with concerning absence rates. This added attention given to managing attendance has led to a reduction in thousands of days of absences since the start of 2017. Although the TTC continues to face the same reporting limitations posed by the current legacy systems, the new Service Centre (including Payroll) and Human Resources senior management teams will be assessing options for a long term overtime and absenteeism strategy, and bring forth reporting requirements for the scope of the SAP Wave 1 implementation. The time frame is expected for the completion of this activity is expected to be late 2018.