TORONTO

STAFF REPORT
ACTION REQUIRED

Fleet Services Review – Detailed Implementation Plan for the Fleet Services Strategy

Date:	May 30, 2016
To:	Government Management Committee
From:	General Manager, Fleet Services Division
Wards:	All
Reference Number:	P:\2016\Internal Services\Fleet\Gm16004fleet (AFS #21959)

SUMMARY

The purpose of this report is to provide a detailed implementation plan for the Fleet Services Division, as recommended by Mercury Associates, Inc., to achieve best practices, based on future mode of operation.

This report summarizes the implementation plan to best achieve the required improvement goals. This includes strategies pertaining to organization, client service delivery, operational processes and business practices, corporate partnership, supplier management, cost, and program sustainability.

This report also recommends an alternative service delivery model to improve maintenance practices, client service delivery and availability. Over the medium term, this will facilitate fleet optimization improvements, enhance vehicle condition and resale values, and reduce vehicle downtime.

RECOMMENDATIONS

The General Manager, Fleet Services Division recommends that:

1. City Council approve the contracting out of all preventative maintenance and repairs of Non-Specialized Class 1-2 vehicles, managed in-house utilizing City contracts, including the implementation plan as described in Appendix B.

2. City Council approve the 2016 in-year Fleet Services Division staff complement changes as set out in Table 1.

3. City Council direct the General Manager, Fleet Services Division to include the 2017 implementation impacts of the alternative service delivery model, as described in Table 2, in the 2017 Operating Budget Submission for consideration, as part of the 2017 Budget Process.

Financial Impact

There are no immediate financial impacts arising from this report. As shown in Table 1, costs attributed to the 2016 complement additions will be offset by the associated reductions, resulting in no impact on the 2016 Council Approved Operating Budget and Complement for Fleet Services Division. The permanent positions to be deleted are currently vacant.

Table 1: Complement Changes including 2016 In-Year Financial Impact (Salaries and Benefits)

Position	2016 In-Year Changes	2017 Changes	Total Net Change	2016 Annualized Financial Impact
Maintenance Mechanic	(6)	(8)	(14)	($602,000)
Fuel Maintenance and Logistics	1	1	2	$79,000
Manager Contracts	1	0	1	$149,000
Customer Relationship Analyst	0	2	2	$0
Contract Coordinator	3	3	6	$245,000
Fleet Management Specialist	1	0	1	$129,000
Net Change in Complement	0	(2)	(2)	$0

For 2017, additional changes to complement and increased operational expenditures will be offset by anticipated efficiencies realized by City of Toronto Divisions and Agencies for which the Fleet Services Division manages vehicles. Details of 2017 impacts have been itemized in Table 2.

Table 2: 2017 Operating Budget Impacts

Gross Expenditures	**2017**
Upfront cost	
Salvage value of Equipment	$ (5,000)
Training & Professional Development	$ 6,000
Total One-Time Upfront Cost:	**$ 1,000**
Incremental Operating Cost	
Training & Professional Development	$ 22,000
Parts	$ 77,000
Total Incremental Operating Cost	**$ 99,000**
Incremental Operating Savings	
Service Delivery	$ (263,000)
Preventative Maintenance	$ (328,000)
Complement	$ (82,000)
Tools	$ (4,000)
Facilities	$ (16,000)
Fleet Size Optimization	$ (200,000)
Total Incremental Operating Savings	**$ (893,000)**
Net Operating (Savings) / Cost	**$ (793,000)**

As Fleet Services Division fully implements the reliability centred maintenance approach, supported by the implementation of the Fleet Services Strategy, additional City-wide savings will be realized and planned for in future years operating submissions. These future operating impacts will be reviewed each year, as part of the annual Operating Budget Process.

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

DECISION HISTORY

At its September 17, 2015 meeting, the Government Management Committee:

1. Requested the Director, Fleet Services to report to the Government Management Committee in the third Quarter of 2016 with a detailed implementation plan for the Fleet Services Strategy.

2. Requested the Director, Fleet Services to consider outsourcing as part of the detailed implementation plan for the Fleet Services Strategy.
   http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.GM6.1

ISSUE BACKGROUND

In 2014, Fleet Services Division (FSD) initiated an external review by a specialized Fleet Management Consultant - Mercury Associates Inc. (Mercury). This review, was completed in January 2015 and the results were analyzed and presented to Government Management Committee in September 2015. At the September meeting, FSD was requested to report back in 2016, with a detailed implementation plan.

The associated timeline required for these improvements is presented in Table 3.

Table 3: Improvement Goals Implementation Time Line

	2015				2016				2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Staff Development and Organization Transition																
Operational and Business Process Improvement																
Corporate Partnership and Supplier Management																
Client Service Delivery Excellence																
Program Sustainability																

COMMENTS

The FSD infrastructure and staff complement is insufficient in meeting the current requirements necessary for effective fleet operations. A key aspect of this insufficiency is FSD's inability to implement effective Reliability Centred Maintenance (Preventative Maintenance). As described in the Mercury recommendations, significant investments in capital infrastructure for maintenance facilities, tools, specialized training, and increased staff complement would be required to address these deficiencies. In addition, the construction of new maintenance facilities would have a significant lead time.

FSD is bringing forward this report earlier than scheduled, to help address an urgent capacity issue that was exacerbated by the loss of a critical maintenance facility, Ellesmere Yard, due to a fire in March 2016.

This report provides an analysis of various potential approaches to achieve the Mercury recommendations, in effort to improve service levels and performance.

A detailed implementation plan, found in Appendix B, is provided in support of the recommended approach.

The information and analysis is provided in the following sections:

1. Overview of FSD
2. Analysis of deficiencies in the current service delivery model
3. Review of alternative service delivery models for vehicle maintenance
4. Recommendation and implementation plan

1. Overview of Fleet Services Division

FSD manages 5,200 vehicles and equipment (assets) for City of Toronto divisions and agencies (clients), and distributes 14.6 million litres of fuel through 25 fuel sites across the City to these clients. FSD also provides fuel to Toronto Fire Services, Toronto Parking Authority, and Toronto Transit Commission for non-revenue vehicles, preventative maintenance for Toronto Paramedic Services, and licence renewal training for Toronto Paramedic Services, and Toronto Fire Services.

FSD manages a 2016 gross expenditure budget (including fuel) of $51.452 million and has a staffing complement of 184 positions.

FSD aims to provide its clients with responsive, flexible, efficient, and comprehensive support to aid the delivery of public programs and services. To achieve this, FSD must improve services to its clients, while demonstrating leadership and expertise in all aspects of fleet management.

FSD manages maintenance and repairs at nine different garages across the City of Toronto, as identified in Figure 1. Each of these facilities serve a diverse set of clients and vary in size, capacity and facility state of good repair, as presented in Table 4.

Figure 1: Fleet Service Division Maintenance Locations

Table 4: Maintenance Location Capacity

Maintenance Facility	Primary Clients	Facility Score (<1-4)	Facility Rating	Number of Bays	Number of staff	2015 Work Order Volume
Disco	Water, PFR, Trans	2.3	Fair	14	19	3252
Finch	Water, PFR, Trans	2.2	Fair	16	19	3141
Ingram	Water, PFR, Trans	2.5	Fair	8	7	1592
Ellesmere	SW, Water, PFR, Trans	2	Fair	26	24	5742
Bermondsey	SW	2.1	Fair	8	11	3931
Eastern	SW, Water, PFR, Trans	2.8	Fair	9	29	4009
Yonge	Parks, SW	1.8	Poor	8	3	1181
King	Trans	1.6	Poor	8	5	1092
Booth	SW, Trans, PFR	1.7	Poor	5	2	1414
Taxi	MLS	2.8	Fair	5	6	n/a
Solid Waste Haulage	SW Haulage	n/a	n/a	n/a	4	1506

a) Fleet Composition and Maintenance Statistics

Of the 5,200 assets, approximately 3,100 are on-road licensed vehicles and 1,200 are off-road vehicles. The remainder are trailers, stationary engines, generators and attachments. The breakdown by class of all 3,100 on-road licensed vehicles can be found in Table 5.

Table 5: City of Toronto Vehicle Count by Class

VEHICLE TYPE	CATEGORY CLASS	UNIT COUNT
LIGHT DUTY	CLASS1	701
LIGHT DUTY	CLASS2	1257
MEDIUM DUTY	CLASS3	95
MEDIUM DUTY	CLASS4/5	365
HEAVY DUTY	CLASS6/7	176
HEAVY DUTY	CLASS8	526
	On-Road Total	**3120**

The current FSD infrastructure and complement is not sufficient to maintain the required preventative maintenance levels for the City's assets. Over the last few years this has been exacerbated by the Division's growing customer base, combined with a fleet that is beyond the optimum age, or lowest total cost of ownership, in several classes.

Table 6 below provides a breakdown of Preventative Maintenance (PM) work order compliance by vehicle class. Typically, fleet industry PM rates are expected to be 90%, or greater. In 2015, only 65% of FSD's planned annual preventative maintenance work orders were completed, leaving 35% uncompleted.

Table 6: 2015 On-Road Vehicle Preventative Maintenance Work Order Compliance

VEHICLE TYPE	CATEGORY CLASS	UNIT COUNT	ANNUAL PM (EXPECTED)	ACTUAL PM WO's	VARIANCE	
LIGHT DUTY	CLASS1	701	1878	1252	-626	-33%
LIGHT DUTY	CLASS2	1257	4325	2718	-1607	-37%
MEDIUM DUTY	CLASS3	95	374	228	-146	-39%
MEDIUM DUTY	CLASS4/5	365	1460	943	-517	-35%
HEAVY DUTY	CLASS6/7	176	708	466	-242	-34%
HEAVY DUTY	CLASS8	526	2202	1490	-712	-32%
	On-Road Total	**3120**	**10947**	**7097**	**-3850**	**-35%**

Another important fleet industry best practice measure, prescribes a PM to unplanned repair, or (fix on fail ratio) of 70% planned and 30% unplanned (70:30). In light of the City of Toronto's diverse and non-regimented fleet, FSD recommends a more realistic target ratio of 60:40.

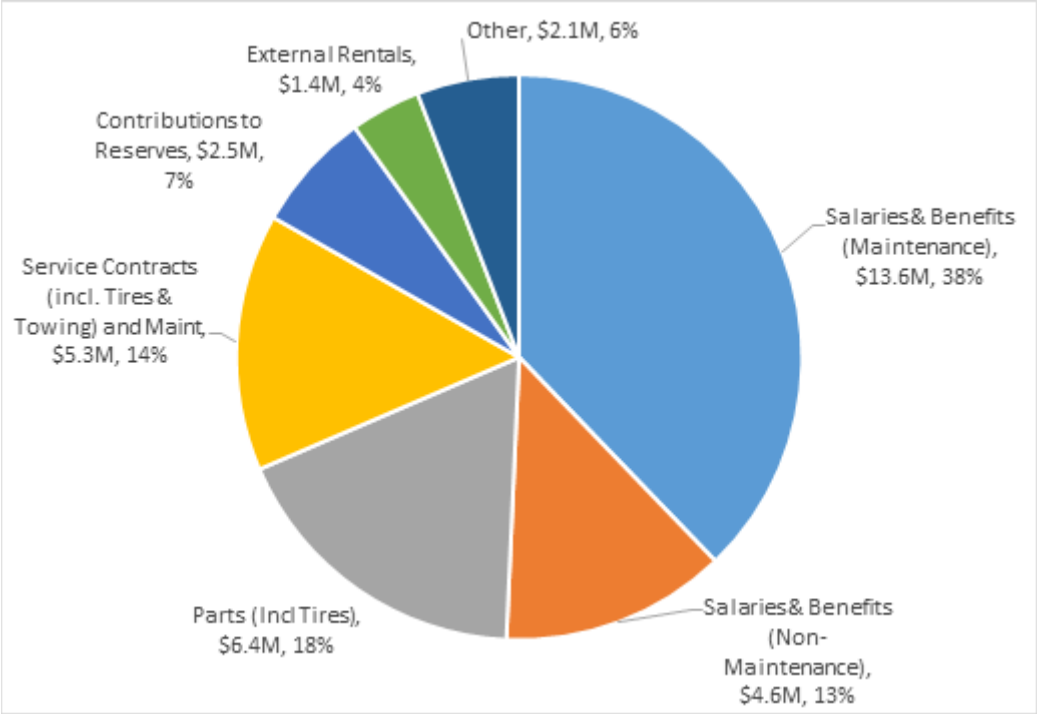
The City's current PM repair ratio is 20:80, averaged across vehicle classes as shown in Table 7. This indicates that a significant improvement is required.

Table 7: 2015 On-Road Vehicle Ratio of Preventative Maintenance to Unplanned Repair by Class

CATEGORY CLASS	PM	LABOUR HR	LABOUR COST $84/hr	PARTS COST	CONTRACT COST	TOTAL COST	COST SPLIT
CLASS 1	PM	2,124	$178,450	$31,525	$124,930	$334,905	29%
	NON-PM	4,416	$371,020	$209,979	$246,555	$827,555	71%
CLASS 2	PM	5,525	$464,089	$109,689	$361,424	$935,202	24%
	NON-PM	16,624	$1,396,639	$868,485	$682,819	$2,947,944	76%
CLASS 3	PM	504	$42,319	$7,538	$32,068	$81,926	22%
	NON-PM	1,812	$152,230	$82,734	$54,471	$289,435	78%
CLASS 4/5	PM	2,753	$231,292	$55,086	$190,381	$476,758	23%
	NON-PM	8,811	$741,444	$547,568	$306,986	$1,595,998	77%
CLASS 6/7	PM	1,514	$127,775	$40,262	$126,776	$294,813	16%
	NON-PM	7,659	$643,514	$441,872	$436,563	$1,521,949	84%
CLASS 8	PM	6,435	$541,661	$228,677	$735,697	$1,506,034	16%
	NON-PM	38,478	$3,233,023	$2,827,918	$1,699,587	$7,760,528	84%
Total On-Road	**PM**	**18,855**	**$1,585,585**	**$472,777**	**$1,571,277**	**$3,629,639**	**20%**
	NON-PM	**77,800**	**$6,537,871**	**$4,978,557**	**$3,426,981**	**$14,943,409**	**80%**

b) Current Utilization of Outsourced Service Providers

Figure 2: Fleet Services Division 2016 Budget Not Including Fuel ($35.9M)



FSD currently leverages service contracts with external service providers, budgeted at $5.3M or 14% of non-fuel expenditures for 2016. These contracts are for specialized maintenance related services such as; towing, tires, emissions testing, transmission repairs and maintenance overflow capacity.

2. Analysis of Deficiencies in the Current Service Delivery Model

Mercury Associates' (Mercury) analysis of FSD's current operation has identified some of the following issues that are impacting Service Levels:

- Inadequate Maintenance Facilities – Mercury identified a shortage of 30 bays based on current vehicle inventory. This has recently been exacerbated by the loss of 11 additional bays as a result of a March 2016 fire at Ellesmere Yard. The shops that are available are rated fair to poor in relation to the condition and FSD's operational needs. A significant investment in infrastructure over the immediate and long term would be required to address these issues.

- Diversity of current vehicle inventory – The current non-regimented fleet has a significant variety of vehicles. The City of Toronto, like many municipalities, operate a large number of distinct lines of business, some of which have very specific and specialized vehicle requirements. Public procurement practices can also impede the ability to standardize across vehicle and equipment classes. The diversity of the fleet requires a significant investment in training for mechanics, specialized tools and equipment and highly complex parts management. This

immense diversity also impacts mechanic expertise and productivity, as they are required to be versed in all aspects. The size of the City combined with the current staffing and infrastructure deficiencies hinders the ability to implement a typically more effective specialist approach.

- Lowest Total Cost of Ownership – Ineffective asset replacement planning, including Capital Reserve contributions and replacement program management are driving factors in excessive costs. Assets retained longer than their optimum age cost more money. This places additional pressures on resources due to the extra effort required for fix on fail maintenance, rather than reliability centred preventative maintenance.

- Fleet Management Information System (FMIS) optimization – Enhanced data capture and reporting is foundational to improved efficiency and resource impact reduction. Additional tools and reporting are needed to take advantage of the City's current top tier fleet management system.

- Oversized fleet and Service Level Impacts – Increased downtime as a result of the issues describe above, can result in divisions carrying additional vehicles to offset anticipated downtime, otherwise clients may find it hard to meet their established service levels. Additional vehicles can create further pressure, as there are more vehicles to maintain. This scenario also creates additional financial pressure for client divisions, as extra contributions for vehicle maintenance and capital replacement are required.

- Contract Management Improvement – To align with best practice while ensuring value for money, efficiency and adherence to the guidelines set forth in the City's various by-laws, policies and procedures, additional resources dedicated to contract management are required.

3. Review of Alternate Service Delivery Models for Vehicle Maintenance

The following four options for service delivery models for vehicle maintenance were considered:

1. Improve the current model.
2. Contract out all preventative maintenance and repairs for the entire City of Toronto Fleet, managed by an in-house contact centre utilizing City contracts.
3. Contract out all preventative maintenance and repairs of Non-Specialized Class 1-2 vehicles managed by an in-house contact centre utilizing City contracts.
4. Contract out all preventative maintenance and repairs of Non-Specialized Class 1-2 vehicles managed by an external Fleet Maintenance Management service provider.

Each of the options were analysed relative to the deficiencies in the current service delivery model, including; inadequate maintenance facilities, diversity of current vehicle inventory, lowest total cost of ownership, FMIS optimization, need for fleet rationalization, Service Level impacts, and contract management improvement. Each option was then further assessed in terms of feasibility, benefits, impact on human resources, and cost. Details of this analysis can be found in Appendix A.

4. Recommendation and Implementation Plan

FSD is recommending Option #3, to contract out all preventative maintenance and repairs of Non-Specialized Class 1-2 vehicles, managed in-house utilizing additional City contracts. As shown in Table 8, preliminary estimates indicate City-wide savings of $3.726 million by 2021. A detailed implementation plan can be found in Appendix B.

Table 8: Option 3 Phased-In Benefit over 5 years

	2017	2018	2019	2020	2021
Upfront cost					
Salvage value	**$ 5,000**	**$ -**	**$ -**	**$ -**	
Training & Professional Development	**$ (6,000)**	**$ -**	**$ -**	**$ -**	
Total One-Time Upfront Cost:	**$ (1,000)**	**$ -**	**$ -**	**$ -**	**$ -**
Incremental Operating Cost					
Training & Professional Development	$ (22,000)	$ (43,000)	$ (64,000)	$ (85,000)	$ (107,000)
Parts	$ (77,000)	$ (155,000)	$ (232,000)	$ (309,000)	$ (387,000)
Total Incremental Operating Cost	***$ (99,000)***	***$ (197,000)***	***$ (296,000)***	***$ (394,000)***	***$ (494,000)***
Incremental Operating Savings					
Service Delivery	$ 263,000	$ 526,000	$ 789,000	$ 1,053,000	$ 1,316,000
Preventative Maintenance	$ 328,000	$ 655,000	$ 983,000	$ 1,311,000	$ 1,639,000
Complement	$ 82,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000
Tools	$ 4,000	$ 8,000	$ 13,000	$ 17,000	$ 21,000
Facilities	$ 16,000	$ 32,000	$ 48,000	$ 64,000	$ 80,000
Fleet Size Optimization	$ 200,000	$ 400,000	$ 600,000	$ 800,000	$ 1,000,000
Total Incremental Operating Savings	**$ 893,000**	**$ 1,785,000**	**$2,597,000**	**$ 3,409,000**	**$ 4,220,000**
Net Operating Savings / (Cost)	**$ 793,000**	**$ 1,588,000**	**$2,301,000**	**$ 3,015,000**	**$ 3,726,000**

As a result of this plan, FSD is anticipating an improvement in vehicle turnaround time of 33% at the end of the 5 year phased in implementation. With a reduced need for internal capacity for preventative maintenance and repairs for Non-Specialized Class 1-2 vehicles, this plan provides flexibility and scalability to meet changes in demand, in terms of both repair volume and vehicle mix. In addition, as internal capacity becomes more focused on preventative maintenance and repairs for the City's heavy duty and specialized vehicles, tool and training requirements decrease and mechanics can become more efficient. The result being, fleet-wide improvements in turnaround times and repair quality, combined with financial savings and efficiencies.

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ATTACHMENTS

Attachment 1 – Appendix A: Review of Service Delivery Options and Cost Comparison
Attachment 2 – Appendix B: Detailed Implementation Plan