

Fire & Rescue Apparatus Maintenance Budget Note Report

Portland Fire & Rescue
Bureau of Internal Business Services

September 29, 2014

EXECUTIVE SUMMARY

In response to a fiscal year 2013-14 budget note, Portland Fire & Rescue (PF&R) and the CityFleet Services Division (CityFleet) of the Bureau of Internal Business Services have jointly completed a study to investigate if savings can be achieved by transferring the maintenance responsibilities for fire & rescue apparatus from PF&R to CityFleet.

After reviewing current service levels and fire & rescue apparatus maintenance costs, under existing operating logistics, both PF&R and CityFleet concur that a consolidation of apparatus maintenance operations does not generate savings. There are no financial advantages with merging operations that are in different locations where apparatus service is performed at 12th and Powell and fleet service at Kerby and Graham. In fact, transferring apparatus maintenance management and service to CityFleet will increase apparatus maintenance operating costs by approximately \$200,000 annually to the General Fund, or \$97,000 annually to the City after taking into account estimated savings to non-General-Fund bureaus. This net cost increase to the City primarily results from the need for a new position to coordinate apparatus maintenance between PF&R and CityFleet, and no decrease in PF&R's overhead costs.

While our study did not find a large-scale consolidation financially viable under the existing configuration (two sites), PF&R and CityFleet recognize that opportunities may exist for cooperation and improved efficiencies. For example, CityFleet has a computer program used for parts inventory management that may prove beneficial to PF&R. PF&R will work with CityFleet to explore this and any other opportunities to optimize overall apparatus maintenance operations.

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BACKGROUND

In response to a fiscal year (FY) 2013-14 budget note, this report reviews the current service level and costs of fire & rescue apparatus maintenance to determine if efficiencies or savings can be achieved by transferring apparatus maintenance responsibilities from Portland Fire & Rescue (PF&R) to the CityFleet Services Division (CityFleet) of the Bureau of Internal Business Services.

The FY 2013-14 budget note states:

Council directs Portland Fire & Rescue to work with CityFleet to determine whether apparatus maintenance should continue to be done by Portland Fire & Rescue, or if efficiencies or savings can be achieved through consolidation with CityFleet operations. Portland Fire & Rescue will report back to Council in the FY 2014-15 Fall Budget Monitoring Process.

Overview of PF&R Apparatus Maintenance Unit

The Apparatus Maintenance Unit is part of PF&R's Logistics Section and is responsible for the maintenance, inspection and repair of nearly 100 front-line and reserve fire & rescue apparatus, as well as a large array and volume of equipment, tools, and personal protective equipment (PPE). The comprehensive support provided by the Apparatus Maintenance Unit is critical to PF&R's 24/7 emergency response capabilities as well as firefighter safety and health.

The Unit performs preventative maintenance and repairs; outfits new apparatus; manages and oversees warranty work; and provides 24/7 over-the-phone technical support to PF&R emergency response personnel. At 2nd alarm or greater emergency events, PF&R Emergency Vehicle Technicians (EVTs) are on-site to monitor apparatus and equipment and perform repairs when necessary.

Table 1 summarizes the current fire & rescue apparatus maintained by the Apparatus Maintenance Unit.

Table 1: Fire & Rescue Apparatus Maintained by PF&R

Apparatus Type	# of Front Line Apparatus	# of Reserve and Other Apparatus
Engines (with water pumps)	28	10
Trucks (with aerial ladders)	7	5
Quints (with water pumps and aerial ladders)	2	--
Heavy Rescue	1	1
Fire Boats/Rescue Boats	4	2
Other (specialty units)	30	9
Total	72	27

Beyond the maintenance and repair of apparatus, the Apparatus Maintenance Unit is also responsible for all equipment and tools mounted or carried on apparatus. Examples of mounted equipment requiring regular maintenance and repair include water pumps and aerial ladders. Non-mounted (carried) equipment consists of both motorized and non-motorized tools, personal protective, fire suppression, and technical rescue and extrication equipment. Fire & rescue equipment and tools must be maintained and serviced at regular intervals. In order to both reduce the amount of time companies are out-of-service and achieve operational efficiencies, the Apparatus Maintenance Unit performs equipment and tool maintenance concurrent with apparatus maintenance. Contained on every apparatus are approximately 40 pieces of equipment and tools that are inspected and serviced during scheduled apparatus maintenance.

Additionally, the Apparatus Maintenance Unit is also responsible for the acquisition and replacement of all apparatus, equipment, and tools. The selection and acquisition of new apparatus and equipment are guided by several factors, such as: firefighter safety, applicable National Fire Protection Association (NFPA) standards, PF&R's emergency operations requirements, cost, and fit with PF&R's existing apparatus fleet and equipment. In addition, the Unit also trains emergency operations personnel on the proper use of all new apparatus, equipment, and tools both as they are acquired or transferred between companies.

The Apparatus Maintenance Unit currently has a total staff of nine, including one Vehicle Maintenance Supervisor II, seven certified Emergency Vehicle Technicians (EVTs), and one limited-term Vehicle Maintenance Supervisor I. All seven EVT's are cross-trained and perform both apparatus and equipment maintenance. The Vehicle Maintenance Supervisor I was converted from a permanent, budgeted position to a limited-term position in FY 2013-14 as a result of budget cuts. The limited-term position will end in June 2015. The Apparatus Maintenance Unit reports to the Logistics Deputy Chief (see Appendix A: PF&R Logistics Organization Chart).

The Apparatus Maintenance Unit is located at PF&R's Logistics Center at 1135 SE Power Boulevard, where uniform, personal protective equipment, and station supplies are stored and issued. When fire & rescue companies come for apparatus maintenance, they also replace worn uniform items, test and service equipment and tools, receive station supplies, and deal with any other logistics issues.

Overview of CityFleet Services

The CityFleet Services Division of the Bureau of Internal Business Services provides centralized fleet management and maintenance services to all City bureaus. The Division is responsible for 3,593 vehicles, including 118 PF&R vehicles and 2,875 other City of Portland vehicles. Via intergovernmental agreements, CityFleet provides fleet management and maintenance services for another 600 local government vehicles and equipment units. CityFleet has a staff of 78 (see Appendix B: CityFleet Organization Chart)

CityFleet is responsible for acquiring, maintaining, repairing, and replacing a variety of vehicle types for all City bureaus with the exception of fire & rescue apparatus. The Division operates seven maintenance facilities located throughout the city. The central maintenance garage is

located at 2835 N. Kerby Avenue and operates 24 hours a day, 5 days a week (24/5) beginning at 6:30 am Monday to 11:30 pm. Friday. Table 2 summarizes the major vehicles types maintained by CityFleet.

Table 2: CityFleet Maintained Vehicles

Vehicle Type	# of City of Portland Vehicles	# of Outside Agency Vehicles
Aerials	47	7
ATVs	25	--
Motorcycles	41	--
Police Sedans	377	25
Pumper Truck	--	2
Sedans	311	181
SUVs	152	14
Trucks	791	72
Vans	269	192
Other	980	107
Total	2,993	600

Study Approach

Staff from PF&R, CityFleet, and the Office of Management & Finance’s (OMF) Business Operations met several times in June and July 2014 to discuss the study approach. All parties agreed the major analysis steps would consist of the following:

- Review and define the current services provided by the PF&R Apparatus Maintenance Unit
- Identify potential fire & rescue apparatus maintenance services for possible transfer to CityFleet
- Estimate PF&R’s FY 2013-14 full cost of providing fire & rescue apparatus maintenance service based on SAP and PF&R’s internal Work Order System
- Project CityFleet’s full cost to provide identical or equivalent fire & rescue apparatus maintenance service using CityFleet’s FY 2013-14 interagency allocation methodology. Also, project the amount of cost decrease to CityFleet’s other customers as a result of having a larger base to allocate overhead costs.
- Compare PF&R’s cost of apparatus and equipment maintenance service to CityFleet’s cost of apparatus and equipment maintenance service
- Identify additional costs and/or savings that may result from the transfer of fire & rescue apparatus maintenance services from PF&R to CityFleet

STUDY RESULTS

Services Provided by PF&R Apparatus Maintenance Unit

The duties of the PF&R Apparatus Maintenance Unit can be categorized into five main responsibilities:

1. New apparatus technical specification development, acquisition, and outfitting
2. Regular inspection, maintenance, and repair of all fire & rescue apparatus
3. Regular inspection, maintenance, and repair of apparatus mounted equipment (water pumps and aerial ladders)
4. Regular inspection, maintenance, and repair of un-mounted, equipment (ground ladders, hoses, hydraulic rescue tools, generators, fans, thermal imaging devices)
5. Regular inspection, maintenance, repair and replacement of all self-contained breathing apparatus (SCBA); SCBA are critical personal protection equipment vital to both firefighter short-term safety and long-term health

PF&R and CityFleet agree that maintenance responsibility for fire & rescue apparatus (2) could potentially be transferred to CityFleet and should be the focus of the study. The four remaining responsibilities (1, 3, 4 and 5) should remain with PF&R since fire & rescue apparatus specifications and equipment maintenance are highly specialized functions and require in-depth fire & rescue operational knowledge. Additionally, both functions necessitate a coordinated effort of both emergency operations personnel and Logistics' staff. Retaining these functions at PF&R ensures the remaining members of the Apparatus Maintenance Unit are able to work closely with other PF&R personnel and continue the current high-quality service.

Apparatus Maintenance Service Level

Table 3 summarizes the current service level of apparatus maintenance performed by the Apparatus Maintenance Unit. It is assumed that any consolidation would result in equivalent service for the majority of service level components. For example, the Apparatus Maintenance Unit performs preventive maintenance on front-line apparatus every six months and on reserve apparatus once a year. The study assumes CityFleet would provide maintenance services at these same time intervals.

**Table 3: Current Service Level for Apparatus Maintenance
Performed by the PF&R Apparatus Maintenance Unit**

Apparatus Maintenance	Current Service Level
<p>1. Advance Planning to Ensure Company Availability</p>	<ul style="list-style-type: none"> • Front-line apparatus are the priority and must be in-service 95-97% of the time • Requires complex scheduling and coordination: <ul style="list-style-type: none"> - consults with the Bureau of Emergency Communications (BOEC) Fire Liaison and station captains - reviews operational schedules such as company inspection schedules and EMS training schedules - applies knowledge of reserve vehicle specifications and availability
<p>2. Preventive Maintenance (PM)</p>	<ul style="list-style-type: none"> • Front-line apparatus PM every 6 months • Reserve apparatus PM every 12 months • Fireboat dry-dock PM every 3 years • Open apparatus repair orders are performed during PM • After PM, each apparatus is test driven before released to companies • Apparatus PM turn-around goal is 4-7 days
<p>3. Fabrication</p>	<ul style="list-style-type: none"> • Performs custom fabrication • Collaborates with Emergency Operations Chiefs and other emergency operations personnel on new vehicle design and technical specification development
<p>4. Warranty Work and Recalls</p>	<p>Manages and oversees warranty work as needed, including:</p> <ul style="list-style-type: none"> • Warranty work performed by outside contractors or dealers • Warranty work performed in-house • Tracks and monitors all parts and labor invoices
<p>5. 24/7 Technical Support</p>	<ul style="list-style-type: none"> • 24/7 technical phone support to all PF&R emergency operations personnel
<p>6. 24/7 Fire Suppression Field Support</p>	<ul style="list-style-type: none"> • EVT's are on-site to monitor apparatus and equipment and perform necessary repairs at: <ul style="list-style-type: none"> - 2nd alarm events (if on-duty) - 3rd alarm or larger events (if called-back) - Wildland fires - State Conflagration Acts - catastrophic events and/or disaster declarations • Vehicle Maintenance Supervisor is on-site at 5th alarm emergency events, and catastrophic events and/or disaster declarations
<p>7. Studded Tire Installation & Removal</p>	<ul style="list-style-type: none"> • Studded tires are installed on all front-line and reserve apparatus, during a 2-day period in November; the studded tires are removed in a 2-day period in March.

<p>8. Customer Service & Service Complaints</p>	<ul style="list-style-type: none"> • Completes repairs and maintenance on-time as promised • Completes outfitting requests as specified without alterations, if safety concerns exist, communicate and obtain customer consent before altering customer specifications • Addresses all service/repair issues during PM within the 4-7 day return to service goal • Communicates time required to resolve complaints, issues, or repairs at the time complaint is reported • Responds to service complaints within 1 hour of report
<p>9. Emergency Vehicle Technician (EVT) Certification</p>	<ul style="list-style-type: none"> • All PF&R Mechanics are Emergency Vehicle Technician (EVT) certified • Completes annual EVT exams to maintain certification • Re-certified every 5 years
<p>10. Procurement and Inventory Control</p>	<ul style="list-style-type: none"> • Procures all goods and services • Ensures vendors meet NFPA requirements and qualifications • Maintains parts and equipment inventory for daily operational and emergency preparedness requirements • Maintains asset inventory records
<p>11. Records and Documentation</p>	<ul style="list-style-type: none"> • Completes maintenance and repair history using internal Work Order System • Documents testing requirements per NFPA requirements
<p>12. Quality Control</p>	<ul style="list-style-type: none"> • Test drives apparatus before released to stations • Assesses EVT and vendor qualifications per NFPA requirements • Completes and maintains qualifications and assessments documentation • Enforces compliance of applicable NFPA standards
<p>13. Training</p>	<ul style="list-style-type: none"> • Provides training on new apparatus, mechanical systems, equipment, and tools to fire companies and other emergency operations personnel as needed • Develops and provides training on apparatus, mechanical systems, equipment, and tools during new firefighter training

Apparatus Maintenance Service Costs

Table 4 summarizes both PF&R’s current apparatus maintenance service costs and CityFleet’s proposed apparatus maintenance service costs. These estimates reflect only the ongoing operational costs of fire & rescue apparatus maintenance, and do not include capital costs for apparatus replacement nor facility improvements.

Based on data from PF&R’s Work Order System, approximately 70% or 5 out of 7 FTE EVT’s are allocated for apparatus maintenance, while 30% or 2 FTE EVT’s perform equipment and tool maintenance. The 70% and 30% split is calculated based on the EVT’s’ aggregated hours spent on the apparatus and equipment maintenance functions, respectively. Labor cost estimates for both PF&R and CityFleet reflect the cost of approximately 5 FTE EVT’s and 1 FTE Supervisor.

As indicated in Table 4, transferring apparatus maintenance to CityFleet will not generate savings, but instead will increase the cost to General Funds by \$200,028 with a net cost increase to the City of \$97,684, after taking into account estimated savings (\$102,344) to non-General-Fund bureaus. These savings are the result of the addition of the apparatus work providing CityFleet with a larger base to allocate overhead costs. This net cost increase is mainly the result of a new PF&R position dedicated to apparatus maintenance coordination between CityFleet and PF&R and no decrease in Fire’s overhead costs.

Ensuring 24/7 readiness while minimizing both apparatus and company out-of-service time due to maintenance is central to effective and efficient apparatus maintenance operations. Transferring apparatus maintenance to CityFleet would require increased coordination in several areas including: scheduling, customer service, quality control, and issue resolution. Because regular equipment and tools maintenance would no longer occur concurrently with apparatus preventive maintenance, consolidation requires even more coordination between CityFleet, Logistics, and PF&R emergency operations personnel.

Table 4: FY 2013-14 Apparatus Maintenance Service Costs

	CityFleet ¹	PF&R ²	Additional Costs/(Savings)
Labor	\$583,617	\$610,687	
Parts	\$574,511	\$483,184	
Repairs by Outside Vendors	\$277,255	\$266,294	
Other Material & Services ³	\$113,218	\$116,604	
General Fund Overhead ⁴	\$65,041	N/A	
Subtotal ⁵	\$1,613,642	\$1,476,769	\$136,873
Other Costs/(Savings)			
CityFleet/PF&R Coordinator (1 FTE) ⁶			\$110,000
Savings to General Fund Bureaus ⁷			(\$46,845)
Savings to Non-General-Fund Bureaus ⁷			(\$102,344)
Estimated Net Cost Increase to PF&R ⁸			\$246,873
Estimated Net Cost Increase to General Fund ⁹			\$200,028
Estimated Net Cost Increase to City ¹⁰			\$97,684

Notes:

1. CityFleet estimates costs based on its FY 2013-14 interagency charge allocation methodology. This does not allocate PF&R a share of facilities costs on the assumption that the work will be performed at PF&R’s facility.

2. PF&R estimates the cost based on actual FY 2013-14 apparatus maintenance expenses in SAP and PF&R's internal Work Order System.
3. Other expenses such as shop supplies and interagency charges.
4. General Fund overhead is a cost incurred by CityFleet. A share of this is allocated to the new transferred apparatus maintenance service provided to PF&R. PF&R does not pay General Fund overhead costs directly.
5. If apparatus maintenance is transferred to CityFleet, PF&R would be charged for \$1,613,642, which is \$136,873 more than PF&R's current direct apparatus maintenance cost.
6. If apparatus maintenance is transferred to CityFleet, PF&R would need to add one new position to coordinate with CityFleet regarding apparatus maintenance. This is a new cost to PF&R.
7. With the addition of the apparatus maintenance work, CityFleet would have a larger base to allocate General Fund overhead and other fixed overhead costs. As PF&R is allocated a share of these costs, cost allocations to other bureaus would decrease. The savings distribution is as follows:

	General Fund	Other Funds	Total
General Fund Overhead	\$20,423	\$44,618	\$65,041
CityFleet Overhead and Other Shared Costs	\$26,422	\$57,726	\$84,148
Total	\$46,845	\$102,344	\$149,189

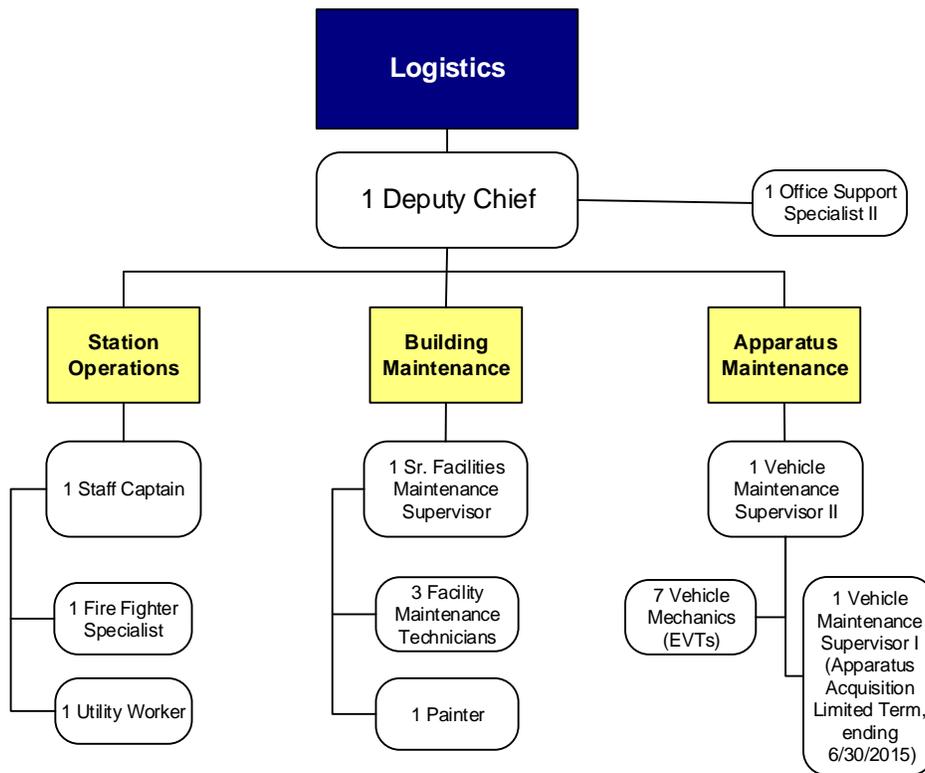
8. The net cost increase to PF&R is \$246,873 annually, which is equal to the additional cost (\$136,873) in the subtotal line (Note 5), plus the added CityFleet/PF&R Coordinator position cost (\$110,000).
9. The net cost increase to the General Fund is \$200,028 annually, which is equal to the additional cost (\$246,873) to PF&R, minus the savings (\$46,845) to the General Fund.
10. The net cost increase to the City is \$97,684 annually, which is equal to the net cost increase (\$200,028) to General Fund, minus the savings (\$102,344) to non-General-Fund bureaus.

CONCLUSION

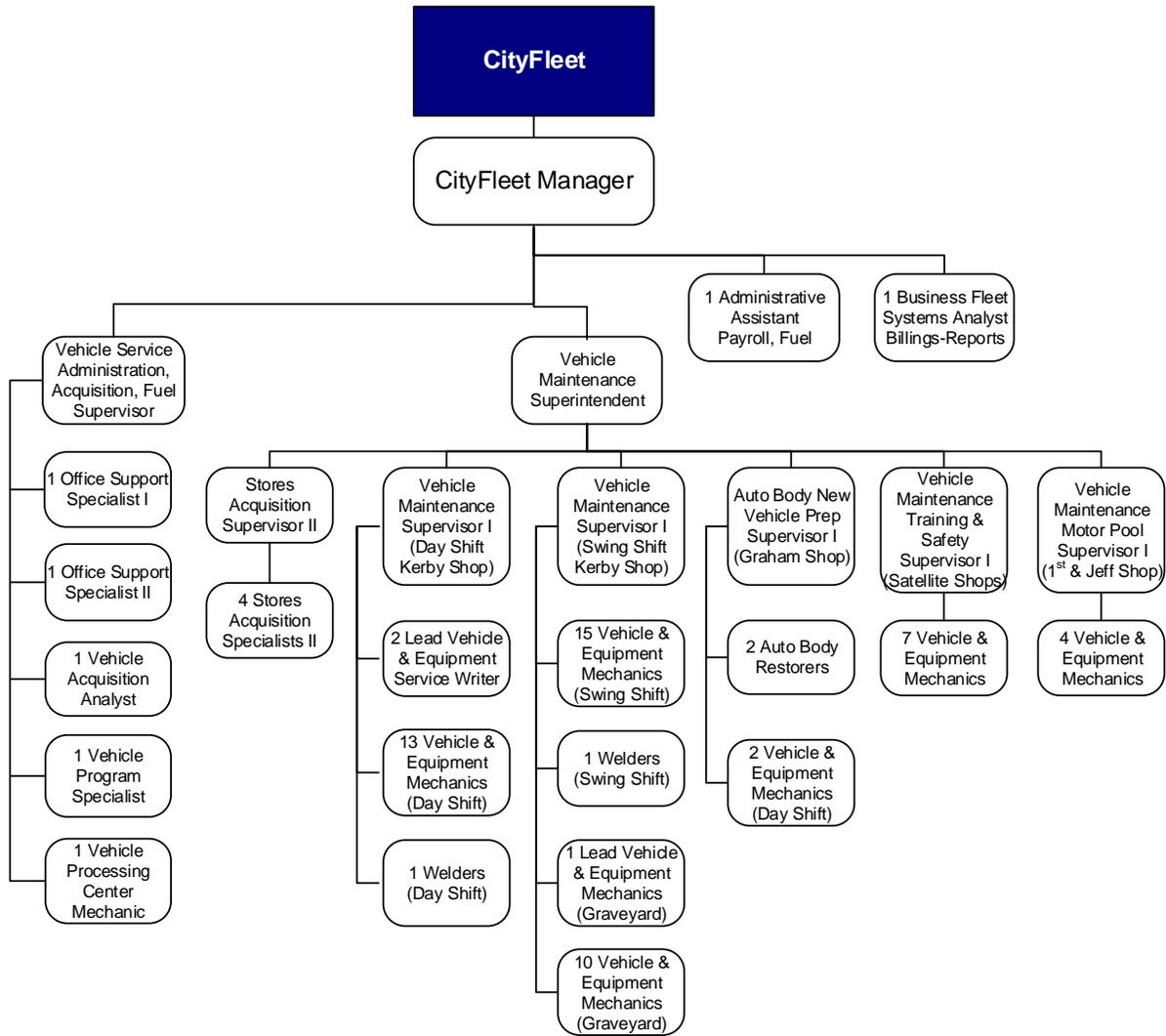
After reviewing current service levels and fire & rescue apparatus maintenance service costs, both PF&R and CityFleet concur that a consolidation of fire & rescue apparatus maintenance operations under the current configuration would neither generate savings nor create efficiencies. In fact, transferring apparatus maintenance to CityFleet will increase operating costs for apparatus maintenance by approximately \$200,000 annually to the General Fund, or \$97,000 annually to the City after taking into account estimated savings to non-General-Fund bureaus. This net cost increase to the City results mainly from the need for a new position at PF&R for increased and complex apparatus maintenance coordination between CityFleet and PF&R, and no decrease in PF&R's overhead costs.

While this study did not find a large scale consolidation to be financially viable, by completing this budget note study PF&R and CityFleet recognize that opportunities may exist for improved cooperation and efficiencies. For example, CityFleet's computer system for parts inventory management may improve recordkeeping and create efficiencies within the PF&R Apparatus Maintenance Unit. In the future, there may be financial efficiencies to be gained if a common facility was developed to perform apparatus maintenance and fleet maintenance services. PF&R and CityFleet will continue to work together to explore these opportunities and continue to optimize the efficiency of its apparatus maintenance operations.

APPENDIX A: PF&R Logistics Organization Chart



APPENDIX B: CityFleet Organization Chart



APPENDIX C: Project Team

Office of Management and Finance

Bureau of Internal Business Services/CityFleet

John Hunt	CityFleet Services Manager
Don DePiero	Vehicle Maintenance Superintendent
Donny Leader	Vehicle Administrative Supervisor

Business Operations

Aaron Beck	Business Operations Manager
Brad Stevens	Senior Financial Analyst
Nikki Bennett	Financial Analyst

Portland Fire & Rescue

Jay Guo	Senior Business Operations Manager
Marco Benetti	Logistics Deputy Chief
Michael Bartell	Vehicle Maintenance Supervisor II
Evelyn Brenes-Eayrs	Assistant Financial Analyst