



City of Richmond

Report to Committee

To: General Purposes Committee

Date: June 25, 2014

From: John Irving, P.Eng., MPA
Director, Engineering

File: 06-2050-20-F3/Vol 01

John McGowan
Fire Chief, Richmond Fire Rescue

Re: Cambie Firehall No. 3 Program Allocation

Staff Recommendation

That the Cambie Firehall No. 3 Program Allocation report from the Director, Engineering and Fire Chief, Richmond Fire Rescue, be endorsed.

John Irving, P.Eng., MPA
Director, Engineering
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John McGowan
Fire Chief
(604-303-2734)

Att: 1

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO 	

Staff Report

Origin

On July 23, 2012 Council approved construction of a new Firehall No. 3. In late 2013, a lease agreement was reached with BC Ambulance to construct Firehall No. 3 as an integrated facility, to be used jointly with Richmond Fire-Rescue.

Council approved funding of \$20.7 million to construct a new Firehall No. 3 through the 2005 - 2009 Capital Programs.

The purpose of this report is to seek Council endorsement of the proposed Firehall No. 3 program.

Background

Funding of \$20.7 million plus multi-project contingency was approved by Council over a period of several years to complete design and construction of a new Firehall No. 3. The new facility is proposed to replace the existing 4,000 ft², 2 bay facility and have an area of approximately 9,000 ft² plus several program areas that are new to Firehall No. 3 as summarized below.

• Fire Rescue/Suppression	9,000 ft ²
• Training	2,300 ft ²
• Emergency Vehicle Technician (EVT) Space	5,100 ft ²
• Fire/Ambulance Shared Space	1,600 ft ²
• BC Ambulance	<u>5,100 ft²</u>
TOTAL	23,100 ft ²

Three properties near the vicinity of No. 4 Road and Cambie Road (9620, 9660 and 9700 Cambie Road) were previously purchased to be the site for the new facility.

Award of Architectural Design and Engineering services to DGBK Architects was confirmed by Council at their March 10, 2014 meeting. Design opportunities and features of Firehall No. 3 are being closely coordinated with Firehall No. 1 design.

Confirmation of the proposed program area allocations have been achieved through a series of meetings with Project Development staff, Richmond Fire Rescue staff, BC Ambulance representatives and the consulting team over the period of March to June 2014. Design will incorporate the areas learned from the most recently constructed Firehalls No. 2, 4 and 5.

Richmond Fire Rescue, together with Project Development, also completed a best practices site review of several facilities as summarized below.

- Firehall No. 1, Saanich
- Firehall No. 14, Surrey
- Firehall No. 15, Vancouver
- North Delta Public Safety Building, Delta

- Firehalls No. 2, 4 and 5, Richmond

In addition, debriefs on Richmond’s newest firehalls (Steveston, Sea Island and Hamilton) were conducted to assist in improving both the design process and facility features of future firehalls. Several meetings were also held with internal stakeholders including Public Art, Engineering, IT, Transportation, Planning and Sustainability to identify needs and requirements.

In 2013 a Fire Rescue Parameters Report was prepared as a basis for Firehall No. 3 programming/space allocation. The Parameters report reflects Firehall No. 3 needs based on maintaining the current level of service, accounting for a future increase future increase in population, development and densification to 2031 and is consistent with previously established City and fire facility best practices design standards for programming and space allocation.

As per the City’s High Performance Building Policy, LEED Gold certification has been set as the desired building performance target for the new Firehall No. 3. The green features will maximize operational efficiency through optimizing energy performance and minimizing water usage and maintenance costs.

Analysis

Programming and space allocation has proceeded based on ensuring the current level of service.

A series of work sessions with Richmond Fire Rescue and Project Development were held to review best practices findings, learning’s from previous experience with Firehalls No. 2, 4 and 5 and project specific needs. The results of these sessions were used to move forward with planning of program space for Firehall No. 3 and identify the functional and operational requirements of the new firehall.

The following proposed program allocation for Firehall No. 3 reflects maintaining the current level of service and future needs. Should Council endorse this report, the next step is to proceed with a rezoning application and use the area allocation to develop the spatial building design, a site plan and the form and character of the building. It is anticipated that the rezoning report will be presented for Council consideration in the fall of 2014.

**Firehall No. 3 - 9620-9700 Cambie Road
(ensure current level of service)**

Facility Program - New Firehall	
Building Statistics	
Year Constructed	2016
Fire Suppression	9,000 ft ²
Apparatus Bays (2)	✓
Apparatus Support	✓
Suppression Office	✓
Health & Recovery	✓

Training	2,300 ft ²
Functional Training	✓
Emergency Vehicle Technician	5,100 ft ²
EVT Bays (2)	✓
EVT Support	✓
Shared Sace	1,60 ft ²
Corridor, Stairways & Common Area	✓
Washrooms	✓
Storage Space & Janitor Room	✓
Exercise Room	✓
BC Ambulance	5,100 ft ²
BCAS Garage (2)	✓
BCAS Crew Quarters	✓
BCS Day Spaces	✓
BCAS Building Support	✓
Building Specification	
Sustainable Ininitives	LEED Gold
Floors	Up to four storey
Apparatu Bays	Six bay facility (include EVT & BCAS)
Hose Tower	Up to four storey
Projected Costs	
Land Acquisition	\$.2 M
Soft Costs	\$4 M
Site Development	\$2.5 M
Construction	\$11 M
TOTAL	\$20.7 M
Multi Project Contingency	\$5 M
Lifecycle Costs	
Building Lifespan	50 Years
Energy Dependency	Average
Functional Space	
Fire Suppression Crew	2
Training	Multi Company
Emergency Vehicle Technician	Yes
BC Ambulance Service	Yes

As the building form and character design proceeds, it may be necessary to make small adjustments to the areas noted. Design will proceed to allow conversion of BC Ambulance lease space to Richmond Fire Rescue space with minimum effort should lease arrangements not be extended.

Alternative – Building Reduction

There is opportunity to construct a lesser quality Firehall No. 3 than the recommended option that maintains the current level of service by eliminating and/or reducing space sizes and through construction materials changes as summarized below.

- *Reduction in Training and Administration Space* – The proposed space program was established using standard size spaces common in the industry and supported by previously established City policies. Training and Administration space has been allocated based on future demand – this space can be reduced by approximately 25% but would only accommodate the current need. This reduction will prohibit the ability to accommodate additional staffing requirements.
- *Building Materials* – Firehall No. 3 is planned for construction with standard building materials, similar to other metro Vancouver and firehall projects. Lesser materials may be used as a cost savings opportunity, i.e., exterior building envelope could use less expensive wood siding as opposed to more standard materials such as metal or bricks. This is likely to reduce the facility life expectancy and increase maintenance costs.

Implementation of these changes has the potential to reduce costs in the order of 10%.

Alternative – Building Increase

There is opportunity to construct a higher quality Firehall No. 3 than proposed through expanding/adding spaces as well as using higher quality, non-standard materials as summarized below.

- *Addition of Apparatus Bay* – it is anticipated an additional apparatus bay will be required by 2041. This can be constructed now and be available for Fire Apparatus in the future with an interim use as flexible space.
- *Increase in Programmable Space* - The proposed space program was established using standard size spaces common in the industry and supported by previously established City policies. An option is to exceed the current program by making spaces larger in several areas including offices, exercise room, kitchen, eating area, alert recovery and multi-purpose room.
- *Building Materials* – Firehall No. 3 is planned for construction with standard building materials, similar to other Metro Vancouver and firehall projects. Higher quality materials may be used at an increased cost, i.e., building exterior finishes could include architecturally designed metal siding as opposed to standard finishes such as brick and metal.

Implementation of these changes that increase building quality will increase costs somewhere in the order of 20% and impact schedule.

Emergency Vehicle Technician Space

The Emergency Vehicle Technicians (EVT's) currently work out of Firehall No. 1. Staff are continuing to explore options for a permanent location, but at this time EVT's are included in the current Firehall No. 3 program.

Opportunities that are also being explored as temporary EVT space solutions include use of existing City firehall space (possibly Firehall No. 2 or 6), City owned facilities in general, City wide possibilities including leased space at YVR or from the private sector and close proximity municipalities that may have suitable space available.

Form and Character

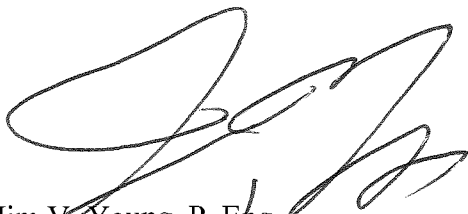
Following approval of the building program, staff will use the information to develop renderings and schematic floor plans which will be brought to Council for input and consideration for approval in the fall of 2014. A project schedule has been included as Attachment 1.

Financial Impact

There is no financial impact. Capital budgets have already been approved by Council.

Conclusion

Council approved funding to complete design and construction of a new Firehall No. 3 at the Cambie site. Architectural and engineering services have been awarded to DGBK and the work has progressed to the point where area allocations are completed. Development of Firehall No. 3 form and character will proceed following Council endorsement of programming and space allocation. An update will be presented to Council in the fall of 2014.



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Deputy Fire Chief
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JVY:jvy/mc

Attachment 1: Firehall No. 3 Project Schedule

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Firehall No. 3 - Projected Schedule	Start	Complete
Programming / Space Allocation	Mar, 2014	Jun, 2014
Council (Programming / Space Allocation)	Jul, 2014	Jul, 2014
Develop Floor Plans / Form & Character	Jul, 2014	Sept, 2014
Rezoning Application	Aug, 2014	Feb, 2015
Council (Floor plans / Form & Character)	Oct, 2014	Oct, 2014
Working Drawings	Nov, 2014	Apr, 2015
Tender	Apr, 2015	May, 2015
Construction	Mar, 2015	Oct, 2016