



**CITY OF RICHMOND**

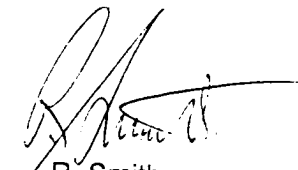
**REPORT TO COMMITTEE**

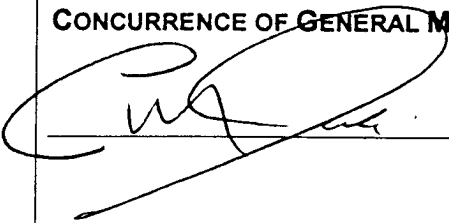
**TO:** Community Safety Committee  
**FROM:** R. Smith  
Deputy Fire Chief  
**RE:** Technical High-Angle Rope Rescue

*To Community Safety - Aug. 23, 2001*  
**DATE:** August 8, 2001  
**FILE:** 145-11  
5140-01

**STAFF RECOMMENDATION**

1. That Option 2, as described in Table 1 in the Technical High Angle Rope Rescue report, dated August 8, 2001 be endorsed.
2. That the funding required to support Option 2 be recovered from the program consortium or included in the 2002 budget submission as a proposed industry levy.

  
R. Smith  
Deputy Chief

| FOR ORIGINATING DIVISION USE ONLY      |  |  |
|--|--|--|
| ROUTED TO:                             | CONCURRENCE  | CONCURRENCE OF GENERAL MANAGER   |
| Emergency and Environmental Programs.. | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |  |
| R.C.M.P. ....                          | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |  |

## STAFF REPORT

### ORIGIN

In 2000, Council directed the Fire Chief to review the types and levels of Technical Rescue Services provided by RFR to determine if they were appropriate given the risks, costs and benefits associated with each area in Richmond. The Technical Rescue services to be reviewed include; Water-Rescue, Technical High-Angle Rope Rescue, Shipboard fire fighting, Confined space rescue and Hazardous Materials Response. This report is the second of a series that will be brought forward to Community Safety Committee and it reviews Technical High Angle Rope Rescue.

### BACKGROUND

The construction industry is obliged by Workers' Compensation Board (WCB) regulation to provide high angle rescue capability to workers. In 1991, at the request of the construction industry, the Greater Vancouver Fire Chief's Association (GVFCA), established a committee to create a proposal for the development of a high angle rope rescue training program for fire departments. The scope of the program proposal was broadened to include industries other than construction, (for example, window washers), that may also require high angle rescue.

A letter of understanding between the GVAFC, WCB, B.C. Construction Industry Health and Safety Council, Construction Labour Relations Association, and the B.C. Council of Construction Associations was signed in 1993. The Letter expresses the Terms of Agreement regarding high angle rope rescue by Greater Vancouver Fire Departments. Subsequently, a resolution of the Governors of the WCB was signed June 6, 1994 approving funding for a technical rescue "train-the-trainer" program, and provision of manuals and specialized equipment to B.C. Fire Departments.

The High Angle Rope Rescue Steering Committee was created in November 1994. The membership is comprised of:

- One employer representative of the construction industry
- One labour representative of the construction industry
- One employer representative of the Greater Vancouver Fire Chiefs Technical Rescue Committee
- One labour representative of the BC Professional Fire Fighters' Association
- WCB representative – Committee Chair
- WCB representative – Alternate Chair
- Ex-officio representation from the Justice Institute – Fire and Safety Division as well as a recording secretary

Minimum equipment packages were established by the Rope Rescue Steering Committee. An Industrial High-Angle Rope Rescue Manual, was produced through the Justice Institute of BC with input from the Greater Vancouver Fire Chiefs' Technical Rescue Committee, WCB, ROCO Canada, and the Rope Rescue Steering Committee.

A four-part, train-the-trainer program was established to provide the instructor-candidates with the necessary skills.

## ANALYSIS

Between 1994 and 1997 four Richmond fire fighters were certified as in-house training instructors. These instructors trained sixty fire fighters, (fifteen per shift), to Technical High Angle Rope Rescue Technician Level. This standard trains our fire fighters in equipment familiarization, anchoring and rigging, rappelling, victim packaging, and lowering and raising systems.

RFR currently deploys high angle rescue technicians at the Crestwood Fire Hall ( No. 7) and Shellmont Fire Hall ( No. 6). RFR uses the first responder model for a High Angle Rope Rescue incident. This model requires the closest available Fire Company, to respond to the incident to conduct a scene assessment, augmented by the Technicians from Engine 6 and Ladder 7.

The Department has responded to four service calls relating to Technical High Angle Rope Rescue between January 1, 1997 and December 31, 2000. On July 02, 1997 the Technical High Angle Rope Rescue Team responded to a construction crane operator who was in cardiac arrest. The Team performed CPR and lowered the crane operator to the ground where he was taken to hospital by ambulance. It is difficult to measure the value of this program relating to a single incident that may save a life.

A number of options have been considered. They are summarized in Table 1, (attached).

## FINANCIAL IMPACT

Richmond Fire-Rescue receives an annual allowance of \$5000 from the industry Committee. The costs to maintain two in-house instructors, training and annual equipment replacement, are projected to be \$13,000. To address the shortfall in funding, the City has two options:

- To fund the shortfall from City sources, with or without an off-setting levy against industry users of the service
- To approach the industry Committee for increased funding.

It is staff's position that approximately 10% of the costs of the service are of benefit to general City taxpayers. Consequently we should recover 90% of the program costs through one of the two noted options. The recommendation seeks Committee's support for this approach to funding the high-angle recovery service.

Additionally, The City would like to maintain two additional in house instructors at an added cost of \$1100 to the annual training budget, and a one time expense of \$20,000 for personal protective equipment.

## CONCLUSION

Incidents requiring Technical High Angle Rope Rescue will continue to occur in the City of Richmond, albeit in small numbers. The Department has a team of trained members equipped to address these incidents. Option 2 provides an appropriate Technical High Angle Rope Rescue service for our community. The current program funding mechanism requires review with a view to recovery of costs from industry or support for full funding by the city.

R. Smith  
Deputy Fire Chief

RS/hw

**Table 1**

| Option   | Pros  | Cons   |
|--|---|--|
| 1. Discontinue.  | Reduced risk to fire fighters, elimination of administration costs related to this program.   | Possible increased costs to construction industry doing business in Richmond.  |
| 2. Maintain current level of service: <ul style="list-style-type: none"> <li>• 12 trained rescue technicians per shift, (total of 48)</li> <li>• Annual cost of \$13,000</li> <li>• Response time of 7-12 minutes</li> </ul>                               | <p>The RFR Technical High-Angle Rope Rescue Team provides a good service to industry and the community at large.</p> <p>RFR receives an annual stipend of \$5000 from the JIBC for equipment replacement. The JIBC also pays the cost to maintain two in-house instructors.</p> <p>RFR has applied to the Technical Rope Rescue Committee to increase the number of in house instructors to four.</p> | <p>Operating costs exceed Committee grant by \$8,000 per year</p> <p>Rescue Teams require a one-time equipment replacement program of \$32,000. This amount is currently unfunded, and will be included in the 2002 annual budget.</p>   |
| 3. Enhanced level of service, train all fire suppression personnel. <ul style="list-style-type: none"> <li>• 56 trained rescue technicians per shift, (total of 224)</li> <li>• Annual cost of \$92,000</li> <li>• Response time of 3-5 minutes</li> </ul> | With all Engine companies trained RFR would provide an improved response time to High Angle incidents.  | <p>The cost to provide personal protective equipment for 224 fire suppression members is \$92,000.</p> <p>Higher costs to maintain training and equipment.</p>   |
| 4. Contracting out Vancouver Fire Rescue   | Capital cost savings of \$32,400 in 2002. Operating budget savings of \$8000 per year less contracting costs (variable).  | The response time for Vancouver Fire Rescue Service (VFRS) to high angle incidents in Richmond would be 30-60 minutes. VFRS indicated that they were "not enthusiastic" in entering into an agreement, however, if the details could be worked out the cost per call would be approximately \$3670. The projected call volume of 2 per year would cost \$7340. Cost of response from VFRS would be borne by the City of Richmond and may be recoverable from the customer. |