

Business Case

Fire & Emergency Services Training Centre



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Introduction & Overview

Introduction

It used to be said that a firefighter was a “jack of all trades and master of none”. As long as every firefighter had his basic training and knew a little about a trade, (i.e., one might have a construction background, another a mechanical background, etc.) that should be enough to get them through whatever came their way. Twenty five years ago a firefighter didn’t know what a hazardous material was, had ever seen a defibrillator or an air bag. They signed on to be firefighters and fighting fire was about all they did. Society’s perception of the firefighter was that of a hero, someone who put his life on the line for others.....so how could you question his ability if things didn’t go right?

Today, firefighters are still perceived to be heroes but society’s expectations regarding their level of competence and expertise are completely different. When the fire department rolls up to an incident of any kind today, whether it is a fire, a car accident, a medical emergency, a hazardous materials spill or any type of specialized rescue, they are expected to take immediate precise action to mitigate the emergency. They are expected to be knowledgeable and experienced in whatever operation they are performing and therefore it is expected that they should have a favourable outcome. In today’s society, in almost all cases, if there is not a favourable outcome there will be questions asked by the public, the coroner, the police, an insurance company, the Ministry of Labour or the Office of the Fire Marshal, to name a few.

The young men and women who are today’s firefighters also hold this perception. They signed on to be professionals. They signed on to serve the public. Specifically, they were drawn to the idea of arriving on scene of an emergency and successfully mitigating that situation.....being the hero. Therefore, just like the rest of society, they expect to be trained theoretically and practically to perform the job they are expected to do.

Overview of Current Situation

Not meeting service level expectations.....

After the recent change in fire department management, the Training Division was asked to perform a Simplified Gap Analysis to identify areas of concern, i.e. “where we are in comparison to where we should be”. The Gap Analysis, which focused primarily on the Operations Division, identified specialized training requirements as well as a need to get back to basics with a comprehensive maintenance training program. At the time the analysis was conducted, it was the practice of the RHFD to provide live fire training, as well as other specialized training exercises, only during a firefighter’s initial recruit training program. On-going maintenance training is essential to firefighter safety and job performance efficiency.

In addition, we found that there were no designated training sessions involving two or more companies. Multi-company training is essential to good inter-company coordination and operations at an emergency scene, a regular schedule of practical drills must be established. In researching best practices we found a minimum annual standard for fire department training/ drills in the areas of multi-company drills, single company drills, and nighttime drills. The drills consist of (8) single company half-day drills, (4) multi-company half-day drills, (2) single company 4 hour night time drills and (2) multi-company four hour night time drills.

The organization must have a high degree of competence to achieve the high level of performance that is expected from today's fire service. Each individual on the team must have the necessary capabilities, knowledge, practical experience and specialized skills to perform assigned tasks, not only on the fire ground but in everything we do.

Change in business requirements.....

The changes in our business and the subsequent affects were well illustrated in a recent article written by Harry R. Carter, Ph.D., MIFireE, an internationally recognized municipal fire protection consultant:

“We should all be proud of the continuing reduction in the number of fires. The increased emphasis on the delivery of fire prevention and code enforcement services has had the desired effect. The number of fires is down. However, my research indicates that we have not experienced a commensurate percentage decrease in the number of firefighters who are dying... firefighters are still dying in numbers that are greater than the decline in fires would lead you to expect. Why is that?”

“I am going to suggest that our training of firefighters is not all that it could be.....since we are all seeing less actual fire duty, we must ensure that our personnel receive training that prepares them.....how can you expect people to operate well under pressure of a fireground scenario if they have not experienced heat and smoke recently?”

“In the first place, there are just not enough training centres to handle the user population that needs them. In the second place, far too many people fail to recognize the need for periodic refresher training within a live fire environment.”

As you can see from the data below, the number of fires is declining nationally, however the number of fires in Richmond Hill continue to climb as the community ages.

Number of Fires in Richmond Hill

Occupancies	2000	2001	2002	2003
Assembly	7	7	4	3
Business	2	0	3	3
Industrial	9	7	7	5
Institutional	0	2	0	0
Mercantile	7	0	5	5
Residential	40	55	48	42
Vehicles	36	27	46	41
Other	31	41	32	50
Totals	132	139	145	149

Number of Fires In Ontario

Occupancies	2000	2001	2002	2003
Assembly	528	525	574	622
Business	217	210	236	235
Industrial	806	776	788	804
Institutional	132	146	121	129
Mercantile	314	342	347	332
Residential	6631	6641	6866	6801
Vehicle	5541	5978	5344	5028
Other	2901	3211	2119	2268
Totals	17070	17829	16395	16219

Industry standards and legislated requirements.....

Our Gap Analysis and subsequent SWOT Analysis identified that the organization must work towards meeting industry standards and legislated requirements. The fire department management team has taken steps to meet these standards and requirements where possible; however, we have recognized that our ability to do so is severely limited without access to an adequate training facility within the Town.

Ministry of Labour

The Ministry of Labour, through the Ontario Fire Service Section 21 Advisory Committee, develops guidelines to advise and make recommendations on matters relating to the occupational health and safety of all firefighters in the Province of Ontario. These guidelines have become "accepted practice" and, thus, the standard for firefighter protection in Ontario. Ministry of Labour Inspectors will refer to these guidance notes when carrying out their enforcement duties under the Occupational Health and Safety Act and Regulations. In March 2001, the Section 21 Committee issued Guidance Note 27 entitled "Training Requirements" which addressed the Ministry's expectations regarding firefighter training requirements:

Under the requirements of Section 25(2)(h) of the Occupational Health and Safety Act and more specifically under Section 25(2)(a) the employer is responsible to:

Provide information, instruction and supervision to a worker to protect the health or safety of the worker;

In order to meet the requirements of this section, it is incumbent upon employers to ensure that firefighters are trained to safely perform to a defined level of response as determined by the employer. Safety proficiency is a function of training, experience, internal review of performance and ongoing training based on deficiencies identified by internal review.

National Fire Protection Association (NFPA)

The National Fire Protection Association is an international fire service standards setting body. Their mission is to "reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training, and education". NFPA standards address all aspects of the fire industry from sprinkler and fire alarms to public fire protection including over 80 fire and emergency service codes and standards. The NFPA, through the development of *NFPA 1500, Standard on Fire Department Occupational Safety and Health Program*, has established minimum training and education requirements for the fire service:

- 5.1.1 *The fire department shall establish and maintain a training and education program with a goal of preventing occupational deaths, injuries, and illnesses.***
- 5.1.2 *The fire department shall provide training and education for all department members commensurate with the duties and functions that they are expected to perform.***
- 5.3.2 *The fire department shall develop a reoccurring proficiency cycle with the goal of preventing skill degradation and potential for injury and death of members.***
- 5.3.3 *The fire department shall develop and maintain a system to monitor and measure training progress and activities of its members.***
- 5.3.4 *The fire department shall provide an annual skills check to verify minimum professional qualifications of its members.***
- 5.3.6 *Members shall practice assigned skill sets on a regular basis but not less than annually.***

Lack of Adequate Training Facilities

In addition to a lack of training, just as critical is the fact that there are no fire training centres in York Region. Regional Fire Departments are forced to send staff to fire training centres outside of the Region to conduct live fire and other specialized training, at significant costs. These specialized training exercises are fundamental to the survival of our firefighters, likened to police weapons training. Although most police officers have never had occasion to draw their weapon, it is mandated that they receive annual training in weapons and defence tactics.

Coroner's Inquest Recommendations

The Jury at the recent Coroner's Inquest into the death of a City of Barrie firefighter in 2002 identified the need for similar training requirements in the fire service and therefore issued the following recommendations:

- 1. *"That more live fire training centres be created throughout the province of Ontario."***
- 2. *"That more live fire training exercises in the form of realistic scenarios be provided for all suppression personnel as often as possible."***

Similarly, but in the interest of public safety rather than just firefighter safety, the Coroner's Inquest into a 1998 Oakville, Ontario fire that took the lives of four people, supported the need to conduct practical training in all areas of firefighting. The Jury recommended the following:

"Fire Departments have ready access to fire training academies and provide continuous training in emergency operations and incident command, including simulator and live fire scenarios."

Fire Underwriter's Survey

Each Canadian City is rated by the insurance industry on a graded scale. These grades help insurers calculate the insurance premiums to be charged to taxpayers on both commercial and residential properties. Since the development of the initial grading system in 1916, the insurance industry has conducted public fire defence surveys in municipalities across Canada. These municipal surveys are conducted by the Fire Underwriters Survey (FUS). Municipalities are evaluated on an average 10-year cycle, or more frequently if major changes in protection have occurred (amalgamation, improvement or deterioration).

The Town of Richmond Hill is currently undergoing an assessment by the Fire Underwriters Survey. The last survey was conducted in 1990. The following is an excerpt from the FUS report currently being prepared regarding the Richmond Hill assessment:

"We strongly recommend that the Town construct a fire service training centre. We believe that only hands-on training actually prepares firefighters properly for events in the field. The centre should be constructed to enable firefighters to practice using smoke and heat conditions as close as possible to those that would be encountered in the field. Areas for auto extrication and flammable liquid fires, and a drafting pit, among others should also be provided....We would prefer it to be located within the Town to enable training to take place without the companies being sent out of the Town. A regional centre, constructed in conjunction with other municipalities, would suffice provided that crews would be able to leave the Town to use it without sacrificing fire protection levels."

The fire service is continually evolving and the types of emergencies that we are called to respond to are more complex than ever. It is therefore expected that training is a daily, ongoing responsibility which goes hand in hand with research and development of new programs, procedures and the pursuit of best practices.

Project Description

This section proposes that all of the business problems, weaknesses and threats outlined in the previous section can be mitigated by creating a Fire & Emergency Services Training Centre in Richmond Hill. This training centre would be the key to our fire department, neighbouring fire departments, other emergency services, government agencies, community colleges and private training companies, meeting business needs.

Project Goal

To provide an adequate Fire & Emergency Training Centre within the Town of Richmond Hill to ensure the continuous up-grading of all fire personnel in the latest techniques of fire fighting, fire prevention, public fire safety education and control of emergency situations.

Project Objectives

The objective of the proposed training centre is to serve several functions. Obviously, first and foremost, the facility would be used to train personnel of the Richmond Hill Fire Department in the latest techniques of fire fighting, fire prevention, public fire safety education and control of emergency situations. However, it is the intent that the project be developed to address the needs of other internal stakeholders as well as external stakeholders.

There are training requirements in almost every Town department as well as those that span the Corporation. It is intended that this facility be designed to meet all of the Corporation's training requirements. In addition, as detailed later in this document, we have received written expressions of interest from several external stakeholders. Due to the lack of an adequate Fire & Emergency Services Training Centre in York Region, these external stakeholders have an immediate need to share such a facility.

Scope

It is proposed that the Training Centre would include two main components: i) a multifaceted, adaptable practical training facility and ii) classrooms and offices to facilitate training and research as well as providing room for static displays and presentations.

The practical training component of the facility would encompass a multi-storey side split building and site that would permit multiple usage by industry and fire personnel. Initially the facility would house a number of different installations pertinent to training required by the Fire Department and related agencies and industries. The facility would also allow sufficient space for any future installations that may be necessary due to changing requirements.

The facility is intended to be diverse in nature, able to provide a learning environment for both theoretical and practical lessons.



The focal point of the facility would be the smoke tower and burn house. Here, valuable, hands-on experience would be gained. Advances in firefighting equipment and protective clothing in recent years allow modern firefighters to move further into burning structures and stay in them for longer. While this generally allows firefighters to carry out their tasks with greater efficiency, it also makes it essential for them to have a greater understanding of fire behaviour and development patterns, particularly in regards to modern fire occurrences such as flashover and backdraft.

The increasing amounts of plastics and synthetic materials used in the construction and contents of buildings do not burn cleanly, but generate large volumes of thick, dark, toxic smoke containing high levels of fuel which can ignite given the right conditions. This auto ignition can create a wave of flame that radiates downwards, causing the contents of a room to burst into flame with devastating effects. This flashover behaviour is a normal phase in the development of almost all compartment fires and can reach temperatures up to 1100 degrees Celsius. With modern fire phenomenon such as this, firefighters need realistic training methods to recognize the stages of fire development and maintain safety and efficiency on the job.

All of the practical training components, but specifically the smoke tower and burn building, should be designed to meet NFPA 1402, *Guide to Building Fire Service Training Centres*. In addition, all live fire training on the site would be performed to NFPA 1403, *Standard on Live Fire Training Evolutions*. Therefore, the live fire training program would give firefighters the chance to witness the development of fires in realistic but controlled conditions and to experiment with firefighting methods to ensure the highest level of firefighter safety, efficiency and community protection.

Surrounding the smoke tower and burn building would be a number of strategically placed, practical and diverse installations. These would include both fire specific installations as well as installations that would meet other industry requirements, such as an auto extrication pad and technical rescue cell.



The facility's technical rescue cell would incorporate training props that would allow firefighters to train in a diversity of rescue scenarios including vertical, trench, confined space, and urban search and rescue. The confined space and trench rescue props are used to educate students in breathing apparatus use, confined space manoeuvring and rescue and in shoring and recovery techniques. The vertical rescue tower is used for rescue training and elevated hose operations. National and international search and rescue procedures and training methods would be evaluated in the development of these training programs and facilities.



A similar emphasis would be placed on the design of the classroom space in the Training Centre. The requirements of other internal and external stakeholders would also be met by providing spacious and secure training rooms which are accessible 24 hours a day, 365 days a year. These rooms would include the requisite multimedia electronics for interactive training and research as well as room for professional presentations.

Stakeholders

It is conceivable that the Training Centre would accommodate and serve a wide range of user groups. These include community college pre-service training programs, regional training schools sponsored by the Ontario Fire College, the Municipal Health & Safety Association and the York Region Training Officers Association, other York Region fire services, York Regional Police, York Region EMS, industry, private training companies as well as community groups and school children taking educational tours etc., etc.

Richmond Hill Fire Department

The primary internal stakeholder is the Richmond Hill Fire Department. The facility would be used to train personnel in the latest techniques of fire fighting, auto extrication/vehicle rescue, confined space rescue, trench rescue, high angle/rope rescue, urban search and rescue, ice/water rescue, hazardous materials response, CBRN terrorism response (chemical, biological, radiological and nuclear), driver training, fire prevention and public fire safety education. This facility would allow the fire department to provide training and education for all department members commensurate with the duties and functions that they are expected to perform.

Other Internal Departments

All departments of the Town require training. The type and frequency of training is obviously dependant on the nature of their business. Internal departments could make use of the classroom and meeting areas for theoretical training in areas such as professional development and health & safety related courses. In addition, practical training exercises such as trench and confined space rescue could be facilitated for the Engineering & Public Works Department as well fire extinguisher training for all staff.

Seneca College

Seneca College, like many community colleges, offers a certificate program in firefighting in accordance with approved curriculum jointly developed by the Ontario Fire Marshall (OFM) and the Ontario Association of Fire Chiefs (O AFC). There are many candidates applying for firefighter positions with full-time Fire Departments in Ontario. The selection/hiring process is very competitive for candidates. The Ontario Association of Fire Chiefs (O AFC) and the Ontario Fire Marshall identified a need to hire new firefighters from a pool of candidates who not only have the theory but who also have demonstrated basic firefighting skills. The O AFC and the OFM have developed a new program that promotes partnerships with community colleges and fire departments. It is the intent of the O AFC/O FM that this program will be a minimum requirement for firefighter recruitments in the province.

Currently, Seneca College does not have its own practical fire training facility. Therefore, all classroom theoretical studies are conducted at the Finch Campus and all practical training is performed off site at several fire training facilities. The opportunity to provide all training and education for their program at one location is very attractive to Seneca. It would increase their business efficiency while at the same time make their program more marketable.

Seneca has expressed an interest in entering into a partnership with the Richmond Hill Fire Department (see Appendix A). The intent is to deliver a full-time and part-time pre-service education and training program at the proposed Fire & Emergency Services Training Centre. This project would provide an opportunity for the Seneca to form a dynamic, collaborative partnership that would best meet the needs of their business, their students and the fire service.

Ontario Fire College



Located in Gravenhurst and in operation since 1949, the Ontario Fire College's primary responsibility is to develop and deliver academically sound educational/training programs to meet the needs of fire departments in Ontario. The main objective of the Ontario Fire College programs and courses is to assist all firefighters to become the best-trained and most professional firefighters in the province. The OFC offers training and education programs which are based on the Ontario Fire Service Standards.

The Ontario Fire College continues to implement strategic initiatives to make high quality education and training accessible and available to fire service personnel. Due to the location of the OFC, one of their strategic initiatives is to provide off-campus delivery of OFC courses in partnership with other fire services.

The OFC has also expressed an interest in entering into a partnership with the Richmond Hill Fire Department (see Appendix B). The intent is to deliver OFC courses at a proposed Fire & Emergency Services Training Centre in Richmond Hill.

Municipal Health & Safety Association of Ontario

In partnership with the Ministry of Labour and funded by the WSIB, the MHSA provides training programs, products and services to municipal employer's and workers in Ontario. Specifically, the MHSA offers various programs for the fire services in Ontario such as Agricultural Machinery Rescue, Propane and Hydrocarbon training, Confined Space Rescue and Trench Rescue training. In 2004, the Richmond Hill Fire Department hosted the MHSA's pilot program for Trench Rescue Technician training. Participants from fire departments across Ontario attended this first of its kind program in the Province.

The MHSA has also expressed an interest in using a proposed Fire & Emergency Services Training Centre in Richmond Hill to facilitate their programs (see Appendix C).

York Region Fire Departments

At the York Region Fire Chiefs Association meeting held on September 15, 2004, staff inquired as to the current practice of other fire departments in the Region to meet their training needs, specifically live fire training, and would there be an interest in using a proposed Fire & Emergency Services Training Centre in Richmond Hill.

Markham Fire Department	Rent Toronto fire training centre (\$2500/day) annually to facilitate live fire training for all staff. Budget \$65-70,000 annually for rental of facility. Also incur overtime and incidental costs of mileage, meals, etc.
Vaughan Fire Department	Currently only provide live fire training to recruits and volunteers.
Central York Fire Department (Newmarket & Aurora)	Rent fire training centres in Cambridge, the Ontario Fire College and Base Borden to facilitate live fire training (budget not provided).
King Township Fire Department	Send 30 volunteer firefighters per year to Base Borden for live fire training. Budget \$5000 for rental of facility. Also incur incidental costs of transportation and meals.
Georgina Fire Department	Only currently provide flashover simulator training.
Whitchurch-Stouffville Fire Department	Currently exploring options to facilitate live fire training.
East Gwillimbury Fire Department	Occasionally have houses donated to fire department for search & rescue and live fire training.

All fire departments expressed some level of interest in using the proposed Fire & Emergency Services Training Centre. However, the fire departments shown above that currently send their firefighters outside of York Region for training showed a keen interest in such a proposal.

York Regional Police

York Regional Police have recently presented a report to the Police Services Board identifying their need for a Training Centre as well. In discussions with the York Regional Police Chief, he has expressed an interest in exploring shared use and/or partnership opportunities if TRH Council approves the recommendations in this business case.

York Region Emergency Medical Services (EMS)

Although we have not had discussions with York EMS, it is conceivable that they too may have a need for classroom space and a driver training area.

York Region Training Officers Association

The York Region Training Officers Association is made up of Training Officers from all of the York Region fire departments, full-time and volunteer. Every year the York Region Training Officers Association provides training opportunities for firefighters of York Region (mainly volunteer firefighters) to enhance their firefighting skills. These training programs are provided at the Ontario Fire College on weekends and are limited to two weekends a year and 20 registrants per weekend course.

The York Region Training Officers Association understand first hand the need for a Fire & Emergency Services Training Centre in the Region and have also expressed an interest in using the proposed Training Centre to facilitate their programs.

Industry

Many large industries have their own Industrial Fire Brigades trained in basic firefighting and emergency response techniques. These brigades are made up of employees who volunteer for these positions. The premise is that the internal fire brigade may be able to suppress a fire or mitigate an emergency before the arrival of the local fire department thus reducing the fire loss or down time of the company. These fire brigades also require training and education for all members commensurate with the duties and functions that they are expected to perform.

In addition, industries and institutions have a requirement to train personnel in CPR, First Aid, the use and maintenance of fire extinguishers, etc.

Private Training Companies

There are many private training companies, specific to specialized rescue techniques that contract their services to fire departments, industries and firefighters seeking to improve their skills. These companies have also expressed great interest in using a proposed Fire & Emergency Services Training Centre in Richmond Hill (see Appendix D & E).

Community Groups

It is conceivable that community groups could utilize the classroom space in the Training Centre for meetings and events after hours. In addition, many groups request tours of our facilities, especially elementary schools. The opportunity to watch the fire department perform a training exercise in any of the disciplines mentioned above would have a far greater educational benefit than merely touring a fire station.

Strategic Alignment

The purpose of this section is to identify how the proposal in this business case aligns with the Town's Strategic Plan. Below are the specific goals and objectives of the Strategic Plan that this project will help achieve:

Goal: *Enhancing and Expanding Our Economic Opportunities*

Objective: *Promote Richmond Hill as a preferred business location.*

This project will assist in marketing Richmond Hill as a preferred business location. Through partnering we will capitalize on the development of Richmond Hill as a connected community.

Goal: *Demonstrating Innovative and Responsible Municipal Management*

Objective: *Create a climate that promotes and values innovation.*

As the only Fire & Emergency Services Training Centre in York Region, this project would prove to be an innovative success showcasing Richmond Hill as a leader in emergency services training.

Objective: *Improve the effective and efficient delivery of quality municipal services.*

This project would ensure appropriate training resources are in place to continually improve the effective and efficient delivery of quality municipal services. This project would enable the fire department to provide the necessary training to support program delivery.

Objective: *Become the municipal employer of choice.*

Providing an adequate training program for firefighters to maintain and enhance their skills emphasizes a management philosophy that demonstrates employees are valued.

Objective: *Encourage strategic partnerships.*

Due to the overwhelming need for a Fire & Emergency Services Training Centre in York Region, many significant stakeholders have already identified their desire to enter into partnership or shared use agreements with the Town on this project.

Goal: *Enhancing Our Healthy and Safe Community*

Objective: *Encourage health and wellness attitudes.*

This project will provide adequate training facilities to ensure continuous up-grading of the Town's firefighters to ensure their health and safety.

Objective: *Enhance community safety.*

This project will improve the ability of the Town's firefighters to protect the community. In addition, this project will promote and enhance cooperative programs with police, fire and ambulance.

Comparative Analysis

The purpose for writing the Comparative Analysis Section is to provide the reader with an understanding of what other organizations have done or are doing to address similar types of problems. The reader can use this section to compare the proposed business case direction to that of other organizations and industry trends.

There are at least 15 known Fire Training Centres in the Province of Ontario plus the Ontario Fire College. These centres include; Brampton, Mississauga, Burlington, Oakville, Kitchener/Waterloo, Cambridge, Niagara Falls, Fort Erie, St. Catharines, Blythe, Oshawa, Sudbury, Thunder Bay, Toronto and Base Borden.

Many of the municipalities with Training Centres have invested monies over extended periods of time as capital budgets would allow in response to the growing needs of their specific fire training requirements. As their facilities have expanded and become more sophisticated, municipal fire services have tended to lean towards a “revenue generation” model in which they would lease out their facilities to neighbouring municipalities. This in part is due to the need to buy additional equipment or otherwise utilize incoming funds to renovate or upgrade their current Training Centres.

Oakville Training Campus for Emergency Excellence



In June of 2001, the Town of Oakville unveiled its new Training Campus for Emergency Excellence as a result of recommendations contained in a consultant's report regarding a Fire Department Master Plan. Trow Consulting Engineers Ltd. provided the following:

“There is no substitute for “hands-on” training experience. With the decreasing number of actual fires being attended, the need for “hands-on” experience is greater than ever. In addition, the new responsibilities being taken up by the Fire Services require continuous upgrading in non-fire responses as well.”

Stemming from a “build it - and they will come” philosophy, the Oakville Fire Department embarked upon a municipal capital investment program coupled with partnerships with local industry for “gifts in kind”. This relationship provided many opportunities for the Oakville Fire Department to develop a 7 acre site that encompasses a fire station, a main training centre including classrooms and offices, a burn tower and multiple specialty rescue venues such as confined space, high angle rescue, hazardous materials, water/ice rescue, trench rescue, etc. The centre was developed on municipal lands that are shared with the Municipal Works and Transit Departments.

With creation of this truly functional facility, Oakville has been able to attract lease and/or payback agreements with a number of rescue training and fire pre-service entry level school programs. These entities have agreed to lease the facility and/or donate “gifts in kind” that become owned and utilized by the Oakville Campus for Emergency Excellence. To this end, the users can utilize the facility with the credits that they have achieved for donation of major capital items to the centre. To date, the Fire Department utilizes the facility for approximately 100 days per year, with the remainder of the calendar year leased to other agencies, specialty rescue companies or firefighter pre-service entry level program institutions.

Although recognized as a one of the leading models for training centres to follow, Oakville staff do admit that a lesson learned would have been to concentrate on making their existing classrooms larger in proportion. As a result, they have acquired the donation of portable classrooms as corrective measures.

Below is a schedule of Oakville Fire's facilities rental pricing, not including incidentals:

TRAINING GROUNDS, TOWERS AND SPECIAL PROPS	
Burn Building	\$ 800 per day
Clean up	\$ 300 per day
Special Operations Simulators (High Angle, Confined Space, Trench Rescue, Rail Car, etc.)	\$ 300 per day
All Live Fire and Special Operations Training require an Oakville Fire Department Incident Safety Officer	\$ 100/hour
Classroom - Large	\$ 350 per day
Classroom - Small	\$ 250 per day
All rentals are subject to a "facility use fee"	\$ 5 per person

Kitchener/Waterloo Training Centre

The Kitchener Fire Department, in conjunction with several fire departments in the Region of Waterloo, established a regional training centre that is utilized by fire, police and EMS services.

The Kitchener Fire Department invested nearly 2 million dollars in this venture. The centre is owned and operated by the Region of Waterloo. As such, the Region employs a full time facilities manager and covers all operating costs.

Kitchener Fire Department uses the facility at no cost due to its municipal investment of the initial 2 million dollars. As such, they are allotted calendar days in the schedule in conjunction with other ancillary organizations.

This centre spans across nearly 40 acres of regional land. Partnerships with the University of Waterloo have resulted in the provision of a university lab and burn research facility on site. This includes the construction and development of an air monitoring station. These projects continue to be funded by the university as part of their university program.

The centre is said to have continuing success as more "users" tend to come forward yearly and continue to demonstrate long term interest in scheduled leased use of the centre.

The positioning of the property in a central location of the Region is also stated as a huge plus as it tends to provide central training opportunities for all areas of the Region of Kitchener/Waterloo.

Alertech - Academy of Leading Emergency Response Technologies

Located in Sudbury, the Alertech Centre is a public municipal and private industry not for profit corporation. Controlled by volunteer board members, the academy is able to arrange and book out most of the days of the calendar year in an equitable fashion. Through these lease agreements the venture is proving to pay for itself in short order. With a capital investment of \$250, 000 dollars from municipal and private sectors (Falconbridge Corporation) over 5 years, the Alertech Academy was established. The Academy includes training classrooms and dormitory features (31 overnight rooms), gymnasium and fitness centre with the added feature of a metal burn tower and flashover unit.

The facility provides "rent back" provisions for the initial investors and continues to provide rental agreements for "user fees" for external participants. A pre-service entry level firefighter program (Cambrian College) does operate out of this facility.

Oshawa Fire Department Training Centre

The Oshawa Fire Department has had a training centre in existence for the past 30 years. The centre is believed to be a municipally funded project.

The facility, including the aging block burn tower, is scheduled for replacement in the next couple of years. The project is slated to become a regional training centre, with the Region of Durham becoming the principal owner. The cost of this restructure is estimated at approximately 3-4 million dollars.

It is proposed that the Oshawa Fire Department will invest in this centre and host the training centre. It is anticipated that with the possible investment of lands and capital monies, that the Oshawa Fire Department will not incur user fees for the use of this facility. However, surrounding municipalities (if not opting to invest capital funds) will be subject to user fees.

The current centre is utilized by the Oshawa Fire Department approximately 100 days of the year. Durham College facilitates its pre-service firefighter program at this facility on an average of 2 days per week.

Fort Erie Fire Department

The Fort Erie Fire Department operates its own training centre in a region that is coupled with other training centres in close proximity (Niagara Falls and St. Catharines). The municipality of Fort Erie felt it incumbent to invest nearly 500,000 dollars in the creation of a training centre that includes a 4 storey block burn building, classrooms, drafting pit, auto extrication yard and other venues. One of the primary reasons for this investment was to ensure the safety and competence of the firefighters in Fort Erie.

Toronto Fire Department

Through the amalgamation of the former 6 metro cities, the new Toronto Fire Department inherited the Fire Training Centres in Scarborough, Etobicoke, North York and the old city of Toronto. Toronto Fire uses these centres to train their new recruits and conduct maintenance training for their 3300 firefighters. In addition, Toronto has established partnerships and shared use agreements with community colleges, other government agencies, private training companies, community groups, etc. They employ a Marketing Officer who promotes partnership opportunities.

Below is a schedule of Toronto Fire's facilities rental pricing, not including incidentals:

TRAINING GROUNDS, TOWERS AND SPECIAL PROPS	
Tower Only – Search and Rescue Scenarios	\$ 500 per day
Training Grounds and Tower (No Fire or Smoke)	\$1,000 per day
Training Grounds and Tower (Using Smoke and/or Class A Fires)	\$2,000 per day
Propane Burn House (TFA) (Lakeshore Academy)	\$2,500 per day
Exterior Propane Props - Railway Car, Flange, Automobile (Lakeshore Academy)	\$ 750 each/day
TFA Indoor Tower (No Burns or Smoke) (Lakeshore Academy)	\$ 600 per day
Special Operations Simulators (High Rise, Confined Space, Trench Rescue, Rescue House, Subway Station, Subway Car)	\$ 750 per day
All Live Fire and Special Operations Training require a TFS paid duty coordinator	\$ 70/hour
Apparatus bay floor for rehab and or instruction.	\$ 250 per day
Classroom Rentals	
1 - 15 people – Full day/Half day	\$ 250/\$200
15 - 30 people – Full day/Half day	\$ 400/\$300
30 - 50 People – Full day/Half day	\$ 600/\$400
50 – 200 - Full day/Half day	\$1,200/\$900

Generally speaking there are only two alternatives available to address the problems identified in Section 1. Either we move to create a Fire & Emergency Services Training Centre in the Town or we send our firefighters outside the Region for their training. In most business cases, the option of “do nothing” or “status quo” is examined but we do not believe that this option addresses the problems previously identified and therefore it is not a viable option.

We believe that the creation of a Fire & Emergency Services Training Centre in the Town of Richmond Hill is the best alternative for the following reasons:

Unrestricted Use of Facility/Control of Facility

Obviously, the Department who owns the training facility is in the best position to meet their training needs. The facility is designed to meet the needs of the host Department and therefore they are most familiar with its use and capabilities. In speaking to our neighbours we learned that the best laid plans for training schedules are at the mercy of the Department who owns the training facility. Obviously, their training needs come first and they may see it necessary to cancel pre-booked days. This proves frustrating for fire departments that have no choice but to buy services. This problem is compounded by the lack of adequate training facilities in the GTA. Some Fire Departments have seen it necessary to travel long distances to meet their training needs.

Multi-Company Training Opportunities

As identified earlier in the document, it is recommended (and in some jurisdictions required) that fire departments train as they would operate on the emergency scene. For most serious incidents, either fire or rescues, the fire department responds with two or more apparatus and must operate as a team to effectively mitigate the situation. The best way to prepare for these serious incidents is multi-company training exercises. This philosophy is also true regarding the ability to operate effectively with police and ambulance. After 9/11 there has been an increased awareness and requirement for inter-operability between fire, police and ambulance. Again, multi-agency training is required to improve the efficiency of this inter-operability. In all cases these opportunities are not available if training is conducted outside of the Region.

Costs

There are significant costs associated with sending firefighters out of the Region to obtain required training. These costs will be examined in the next section but include the cost of renting the facility, cost of paying overtime to all firefighters (if training is not in Richmond Hill they are unable to train while on duty), mileage and other incidental costs.

Logistics

To have our firefighters attend training outside of the Region they must attend when they are off duty. This usually results in “make up days” at an increased cost to the Corporation. In addition, as stated above, some fire departments in the Region must send their staff as far as Cambridge or Gravenhurst to meet their training requirements. The logistics of organizing and carrying out annual training for over 120 staff under these circumstances is problematic and restrictive.

Obvious Need in the Region

As identified previously in this document, there are no Fire & Emergency Services Training Centres in the Region. Therefore, fire services, community colleges, industry and other agencies in the Region are forced to go outside of the Region to obtain required training. This need is made obvious by the desire of several stakeholders to enter into partnerships or shared use agreements.

Partnership & Shared Use Opportunities

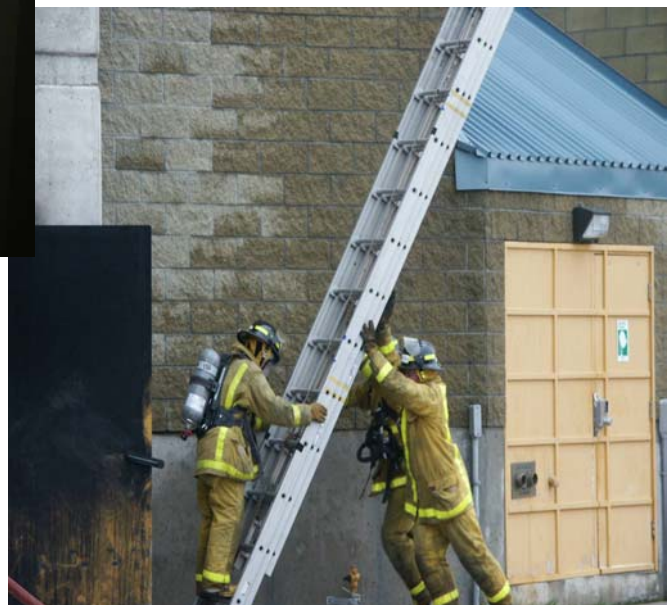
Several stakeholders have expressed, in writing, their desire to enter into partnership or shared use agreements if this project is completed. These opportunities have the potential of offsetting some or all of the cost of the project. In addition, the proposed needs of other internal stakeholders stated earlier can only be met if the Training Centre is located in the Town.

Strategic Alignment

Many of the goals and objectives identified to align with this project in Section 3 are only relevant if the Training Centre is built by and located in the Town. See Section 3.

Becoming a Leader in the Industry

Due to the lack of such a facility in the Region and a documented need for more such facilities in the Province, creating a Fire & Emergency Services Training Centre in Richmond Hill would distinguish the Town as a leader in the industry, the Region and the Province and help promote Richmond Hill as a preferred business location.



Project Risk Assessment

This section identifies risks that may be related to the project. In reviewing the project details and analyzing comparative data, it is believed that there only exists one substantial risk to the project reaching its objectives. Due to the great need for a Fire & Emergency Services Training Centre in York Region, including the immediate need for such a facility for community colleges and other large external stakeholders, there is a risk that it will become too busy to meet the needs of the primary stakeholders. It is believed that an appropriate risk mitigation strategy in this case would be that “Shared Use Agreements” be explored rather than “Partnerships” that would see external stakeholders commit start up funds which would entitle them to shared governance rights. One of the most significant benefits to owning such a facility is the advantage of control to ensure the owner’s needs are met first.

The other risk identified through this process was not related to completion of the project but rather to remaining “status quo”. We suggest that, for reasons identified earlier in this document, there is great risk to the health and safety of the firefighters and to the ability of the fire department to meet expected service levels if one of the alternatives in this business case is not implemented. Therefore, an appropriate risk mitigation strategy in this case is to ensure one of the alternatives identified in this business case is implemented.



Cost/Benefit Analysis

Quantitative Analysis – Financial Cost & Benefit:

This Quantitative Analysis is based on costs realized during the design and construction of the Oakville Fire Training Centre plus approximately 10% to account for any increase in construction costs since 2001. This analysis also assumes that, like Oakville and other fire training centres, we will enter into shared use agreements with various stakeholders as identified earlier in this document. It should be noted that costs associated with Alternatives 1 & 2 are capital start-up costs as the necessary Training Division staff, etc., are already in place.

Due to the opportunity at the Hydro Building, this option will be addressed separately because of the significant savings available due to the fact that the Town owns the land and the structure for classrooms and offices already exists.

Alternative 1 – Fire & Emergency Services Training Centre located at the Hydro Building:

Quantitative Analysis

Benefits:			
Revenue			
	Training Ground \$1000/day x 100 days	(\$100,000)	
	Seneca classroom/office lease	(\$50,000)	
			(\$150,000)
Costs:			
Training Grounds			
	Demolition & Clean-up	\$5500	
	Pond	\$49,500	
	Infrastructure Services	\$39,000	
	Electrical Services	\$23,000	
	General Requirements	\$13,000	
	Contingency & Allowances	\$15,000	
			\$150,000
Burn Building/ Smoke Tower			
	Shell	\$355,000	
	Interior	\$120,000	
	General Requirements	\$39,000	
	Site Works	\$25,000	
	Contingency & Allowances	\$15,000	
			\$617,000
Training Centre			
	Renovations	\$250,000	
	Furnishings & Equipment	\$65,000	
	Permits & Fees	\$50,000	
			\$365,000
		Total	\$1,127,000

The second alternative assumes that land must be purchased for the development of the Training Centre and there are no structures on the land.

Alternative 2 – Fire & Emergency Services Training Centre located somewhere in the Town.

Quantitative Analysis

Benefits:			
Revenue			
	Training ground \$1000/day x 100 days	(\$100,000)	
	Seneca classroom/office lease	(\$50,000)	
			(\$150,000)
Costs:			
Land			
	5 acres	\$2,250,000	\$2,250,000
Training Grounds			
	Demolition & Clean-up	\$5500	
	Security Fence	\$10,000	
	Pond	\$49,500	
	Roadway, Asphalt, Curbs	\$150,000	
	Earth Moving & Planting	\$20,000	
	Infrastructure Services	\$39,000	
	Electrical Services	\$23,000	
	General Requirements	\$13,000	
	Contingency & Allowances	\$20,000	
			\$330,000
Burn Building/ Smoke Tower			
	Shell	\$355,000	
	Interior	\$120,000	
	Services	\$63,000	
	General Requirements	\$39,000	
	Site Works	\$25,000	
	Contingency & Allowances	\$15,000	
			\$617,000
Training Centre			
	Shell	\$275,000	
	Interiors	\$175,000	
	Services	\$200,000	
	General Requirements	\$75,000	
	Site Work	\$100,000	
	Contingency & Allowances	\$30,000	
	Furnishings & Equipment	\$65,000	
	Permits & Fees	\$100,000	
			\$1,020,000
		Total	\$4,217,000

The third alternative assumes that the fire department sends every firefighter to Toronto for live fire training annually. Further, this alternative assumes that designated team leaders will require annual specialized operations training in the areas of confined space rescue, trench rescue and CBRN response. These team leaders will then provide annual maintenance training to their teams. As part of this alternative it is assumed that the fire department will be able to find adequate areas in the Town to perform high angle/rope rescue, ice/water rescue, auto extrication and hazardous materials response training.

Alternative 3 – Live Fire & Specialized Training provided at Toronto Fire Training Centres:

Estimated Operating Costs – No Quantifiable Benefits

Training Facility Rental			
	Live Fire Training		
	15 days x \$2000 per day	\$30,000	
	Paid Duty Coordinator \$70/hour	\$8400	
	Kitchen	\$750	
	Clean-up	\$3000	
			\$42,150
	Special Operations Training		
	10 x \$750 per day	\$7500	
	Paid Duty Coordinator \$70/hour	\$5600	
			\$13,100
		Sub-Total	\$55,250
Personnel Costs			
	Overtime – Live Fire		
	Platoon Chiefs	\$2469	
	Captains	\$12,730	
	Firefighters	\$45,590	
			\$60,789
	Overtime – Special Ops Training		
	Captains	\$3182	
	Firefighters	\$2849	
			\$6031
	Mileage	\$6800	
			\$6800
		Sub-Total	\$73,620
		Total	\$128,870

For the purposes of the comparing the three alternatives we have assumed that all costs are in 2004 dollars. Further, it is assumed that the expected life of the project, before substantial repairs or renovations, is 25 years. Therefore, for the Quantitative Cost/Benefit Comparison below the capital start up costs are shown as an annual cost spread across the life of the project. For example, the annual cost for Alternative 1 would be $\$1,127,000/25 = \$45,080$ per year.

Although we do not believe it is necessary at this time to extrapolate the analysis across the life of the project, it should be noted that facility rental and overtime costs are expected to increase significantly over the life of this project. Therefore, the benefits identified in Alternatives 1 & 2 will increase favourably as the costs in Alternative 3 increase unfavourably.

Quantitative Cost/Benefit Comparison

Summary of Quantitative Cost/Benefit	Alternative 1	Alternative 2	Alternative 3
Present Value of Total Benefits per Year:	\$(150,000)	\$(150,000)	\$0
Present Value of Total Costs per Year:	\$45,080	\$168,680	\$128,870
Net Present Value of Project per Year:	\$(104,920)	\$18,680	\$128,870

Conclusion & Recommendations

Conclusion

In conclusion we believe that this document has shown that there is a solid business case to create a Fire & Emergency Services Training Centre in the Town of Richmond Hill. The cost/benefit analysis has shown that both alternatives regarding a “made in Richmond Hill model” can be financially viable from a business perspective while meeting the needs of all internal stakeholders.

Recommendations

Therefore, it is recommended:

1. That Council support in principle the development of a Fire & Emergency Services Training Centre in the Town of Richmond Hill.
2. That staff explore the feasibility of locating a Fire & Emergency Services Training Centre at the Hydro Building and report back.
3. That if the Hydro Building proves not to be a feasible location for a Fire & Emergency Services Training Centre, that staff report back with alternative opportunities.