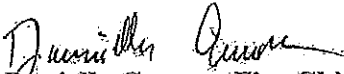




MEMORANDUM

Delray Beach Fire-Rescue Department



| | | |
|----------|--|------------------|
| TO: | Donald Cooper, City Manager | DATE: 12/18/2015 |
| FROM: |  Danielle Connor, Fire Chief | |
| SUBJECT: | Fire Training Center Justification | |

Training forms the foundation of all fire department performance. As with most occupations that may involve saving lives, training is of paramount importance. As firefighters however, we are faced with a variety of potentially deadly situations that simply cannot be duplicated using computer simulations or tabletop exercises. Fire Executives must create an atmosphere where firefighters can practice and maintain proficiency at their craft. Training of firefighters under realistic conditions is critical for efficient and effective performance of technical firefighting skills on the fire ground and for firefighter safety. In a nutshell, fire department training improves firefighter safety. The ever-changing technologies in fire suppression techniques require that firefighters be knowledgeable, trained, and experienced.

As stated by the National Fire Protection Association (1997), a proper environment for obtaining and maintaining this knowledge, skills and abilities through training is extremely important. NFPA standards state that training facilities provide for and enhance the community's well-being through better firefighting, fire protection, and fire prevention. The immediate benefits of a training center within our municipal boundaries would include:

- Enhanced training for FD personnel
 - More frequent training
 - Better quality of training
 - Recruit-orientation training
 - Officer Development training
 - Driver Engineer continuing education and training
 - Multi-company drills
 - Roof ventilation
 - Search-and-rescue
 - Forcible entry
 - Interior ventilation
 - Wind-driven fire evolutions
- Financial
 - Revenue Generating
 - Rental of the tower to other agencies

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- Course offerings to fire personnel
 - Reduction of fuel and wear/tear costs associated with apparatus travelling to out-of-area training centers
 - Reduction of overtime costs

Within Delray Beach Fire-Rescue, the current Level of Service (LOS) includes one Division Chief of Training and one Training Captain, and no designated training facility. Together, they coordinate all of the various training for the 147 sworn members of the department. While once the training in the fire service industry was minimal or consisted of practicing flowing water through hose lines, the philosophy of training in a post-9/11 world is significantly different. Our departmental training is inclusive of fire, EMS, Hazardous Materials, Technical Rescue (rope rescue, confined space, elevated rescue, etc.), terrorism preparedness, and administrative policy review. The training is a combination of didactic, practical, and online methodologies. Department policy (Volume I, Chapter 2, Section 21 "Work Schedule") requires all personnel to complete 20 hours per month of training. The current LOS is inadequate to meet the training demands of the department.

The department has never had a training center or designated training site to utilize. Instead, we have found areas around the City to practice our trade. The Training Division has arranged for training to take place in abandoned/condemned buildings that we can set fire to then conduct search and rescue evolutions and hose line attack simulations. Some of the problems with this approach are that these opportunities are few and far between, inconsistent, and the neighbors of these properties are not appreciative of the apparatus, equipment, personnel, and perhaps most notably, the smoke being in their vicinity for a week at a time. Another major fault in relying on the use of abandoned buildings is that rarely are they available when we need them, and they do not afford the department the opportunity to remediate and repeat training modules. We have also rented training towers at local fire academies for the purpose of getting legitimate fire ground training. The skills of a firefighter must be constantly practiced so that they are second nature in an emergency. The training that is available through the use of simulators, training towers, and smoke rooms is essential to ensure a trained and qualified department. Over the years, we have utilized and rented the training towers at Broward Fire Academy in Davie, Palm Beach State College in Lake Worth, and the Coral Springs Fire Academy. While this training has proven to be well-received, the behind-the-scenes logistics of having units travel such distances for training, and back-filling our fire stations with overtime personnel, is challenging to say the least. The distances from our Fire Headquarters to each of the respective centers is as follows:

| | | |
|----------------------------|---|------------|
| Broward Fire Academy | 2600 SW 71 Terrace, Davie, FL 33314 | 34.2 miles |
| Coral Springs Fire Academy | 4180 NW 120 Avenue, Coral Springs, FL 33065 | 24.2 miles |
| Palm Beach State College | 4200 Congress Avenue, Lake Worth, FL 33461 | 12.2 miles |

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The rental cost to utilize one of these training towers averages \$900 per day. In order to provide the training to all three shifts, it is necessary to rent the tower for three consecutive days (\$2700/week). This training should be conducted at least once monthly (\$32,400/year). When training at the tower, we typically have the crews train as a station, which is typically how they would interact at a fire. Also, we send two stations at a time. Prospectively, to minimize delayed response times caused by a shortage of units and for overall firefighter safety, we can backfill the vacant stations with overtime personnel. The cost of overtime would be \$3780 per day (10 people x 9 hours x \$42/hr). On a weekly basis, this would amount to \$11,340, and annually this would total \$136,080. Together with the training facility expenses, the total cost to rent a tower once monthly would be in the area of \$168,480.

Both our call volume and number of special events have increased substantially in recent years (20.4% increase in calls from 2008-2013; see below graph), but the training requirement has not changed. Whatever number of service calls are received, we must maintain our commitment to training.

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-----------------------|---------|---------|---------|---------|---------|---------|
| Calls | 11,132 | 11,543 | 12,020 | 12,464 | 13,171 | 13,406 |
| Training Hours | 28,434 | 32,330 | 32,526 | 42,558 | 40,315 | 34,258 |

The Fire Department presently has 26 employees in the DROP, meaning that they will terminate their employment within the next five years through retirement. This number is in addition to the 18 vacancies the department presently has. All told, this translates to a minimum of 44 employees that will need to be hired and trained in the next five years. Having a training facility and tower would greatly enhance the quality and quantity of available training. Hiring 44 employees entails multiple orientations and history has shown that the development of the skills of new hires is crucial. A training tower would enable us to create a variety of realistic scenarios that they will possibly face as their careers progress.

Within the fire service industry, there are companies that produce training towers and burn buildings that are prefabricated. The price for the specifications for the tower we would like to purchase is approximately \$750,000, and has a life expectancy in excess of 30 years. At this cost and life expectancy, the projected training costs would be reduced to \$25,000/year, which is well below the projected costs of \$168,480 per year, as outlined above. From a different perspective, the projected costs using our current training model over 30 years at \$168,480 per year would be \$5,054,400. The investment in the training center of \$750,000 would become a positive ROI after 4 ½ years, and would result in projected savings of over \$4,000,000 over the expected 30 year life of the facility.

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An additional benefit of a training center is the potential effect on the City's Insurance Services Office (ISO) rating. Presently, the City has a rating of "2" on a 1-20 scale, with "1" being the highest possible score. An ISO representative was onsite on 11/4/15 for our assessment, and an update on our score is expected in the next 3-4 months. Historically, Delray Beach Fire-Rescue has scored proportionally lower on the training portion of the ISO rating system than on other portions of the evaluation. The ISO classification of the fire department is directly related to the fire insurance premiums for the City's residents, homeowners and business owners. In recent years, ISO has made changes to the scoring methodology that affect the overall point structure. For example, a maximum of 35 points are granted for a qualified training center. The construction of the training facility must be in compliance with *NFPA 1402, Guide to Building Fire Service Training Centers*, and all records must be maintained in accordance with the general criteria of *NFPA 1401, Recommended Practice for Fire Service Training Reports and Records*. In order to achieve the maximum points for a training facility, three specific criteria must be met:

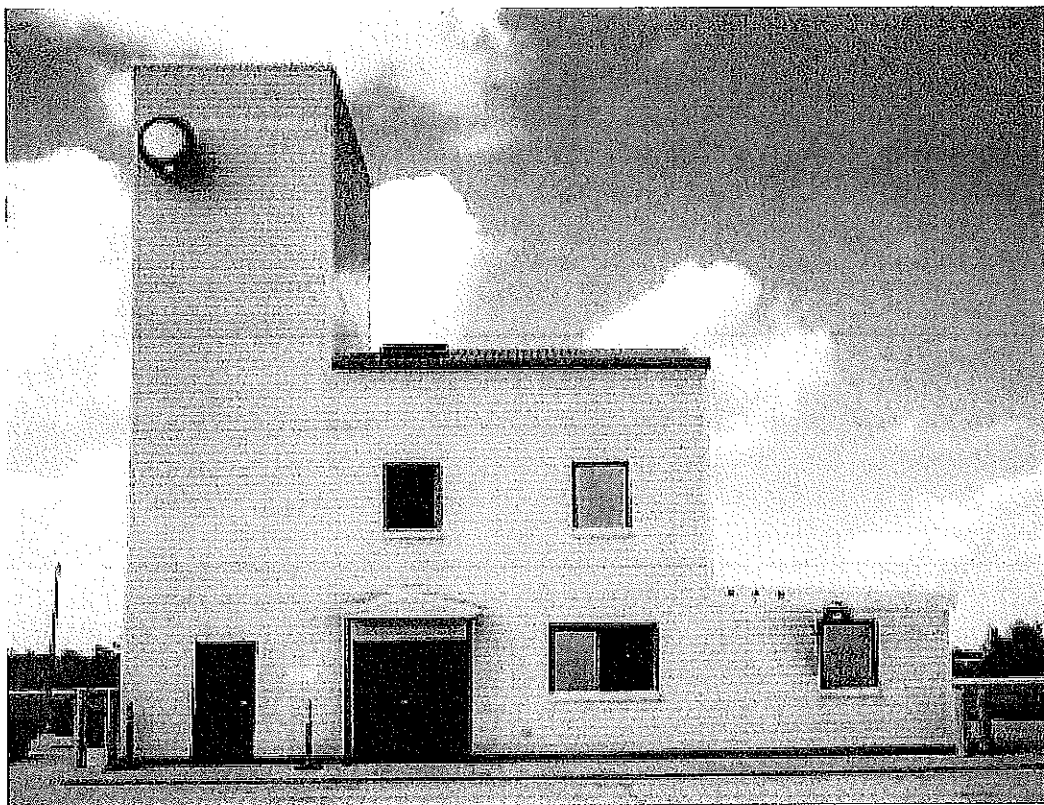
1. Live fire training structure including smoke room (17 points)
2. Drill tower at least 3 stories in height (10 points)
3. Training area at least 2.0 acres in size (8 points)

The ISO cites *NFPA 1403, Standard on Live Fire Training Evolutions* and *NFPA 1410, Standard on Training for Initial Emergency Scene Operations* as qualifiers for maximizing points for training. Simply put, a prescribed amount (18 hours per person) of "live" training must take place each year, and a certain amount of this training must take place on a training ground with a training tower. We have not been able to gain any of these points because we do not have a tower and the little training we have done at a tower does not qualify.

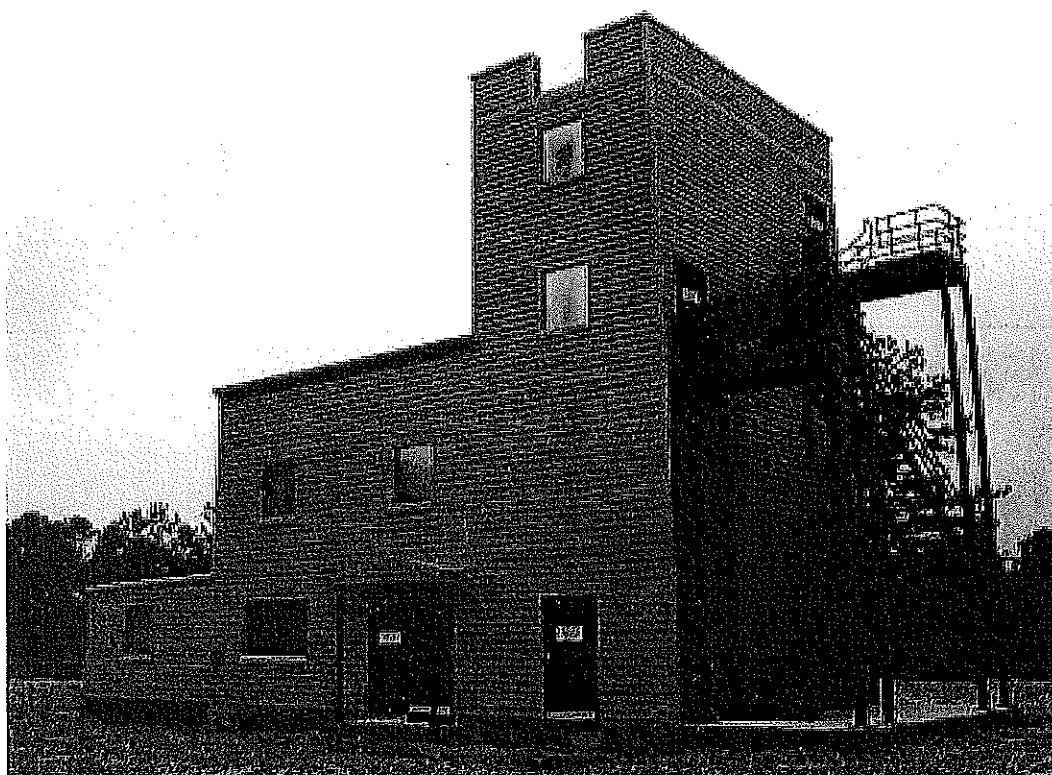
Additionally, a training facility would enhance our training by affording us the opportunity to train any day at any time. Both probationary and promotion-eligible employees would have ample resources to practice and train. Certification as a training center by the State of Florida Fire Marshal's Office would enable us to host fire and EMS industry related courses and charge accordingly, allowing for a fiscal return on this investment.

CC: David Scott, Assistant City Manager
Jack Warner, Chief Financial Officer
Randal Krejcarek, Environmental Services Director
John Morgan, Environmental Services
Victor Williams, Assistant Chief

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Orlando Aviation Authority: Orlando, FL



U.S. Army Fort Benning, Fort Benning, GA

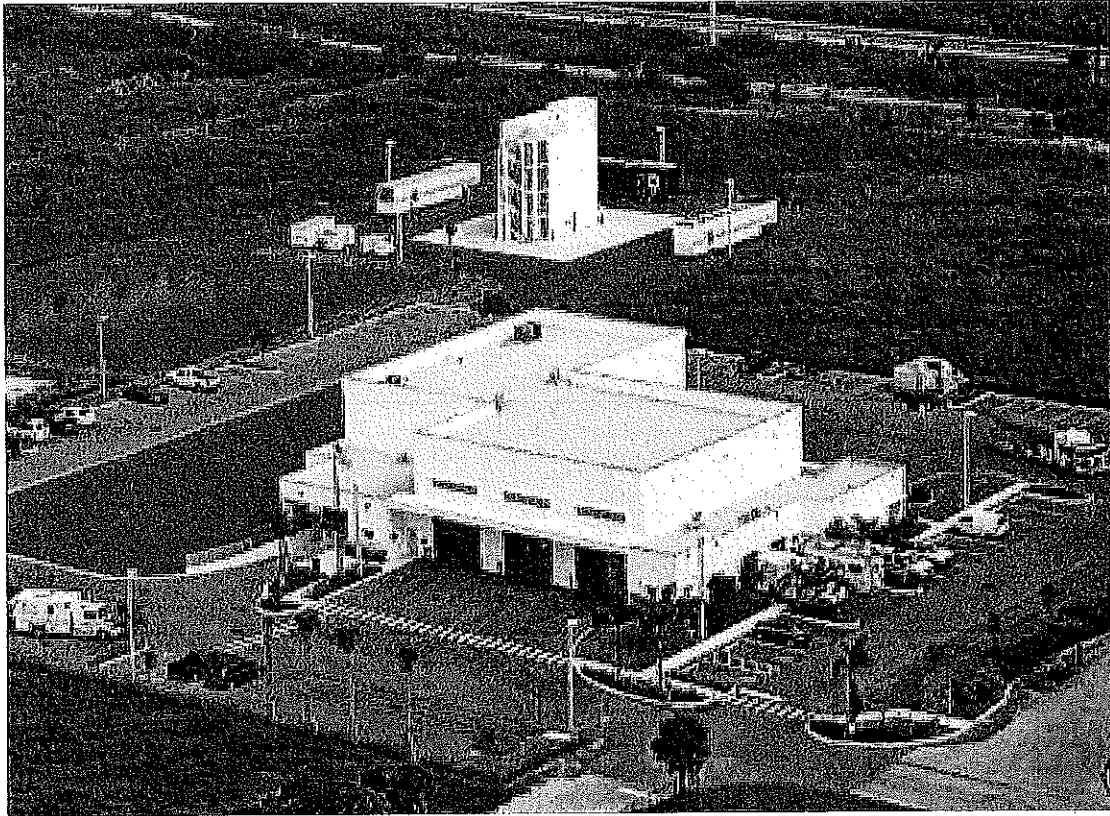
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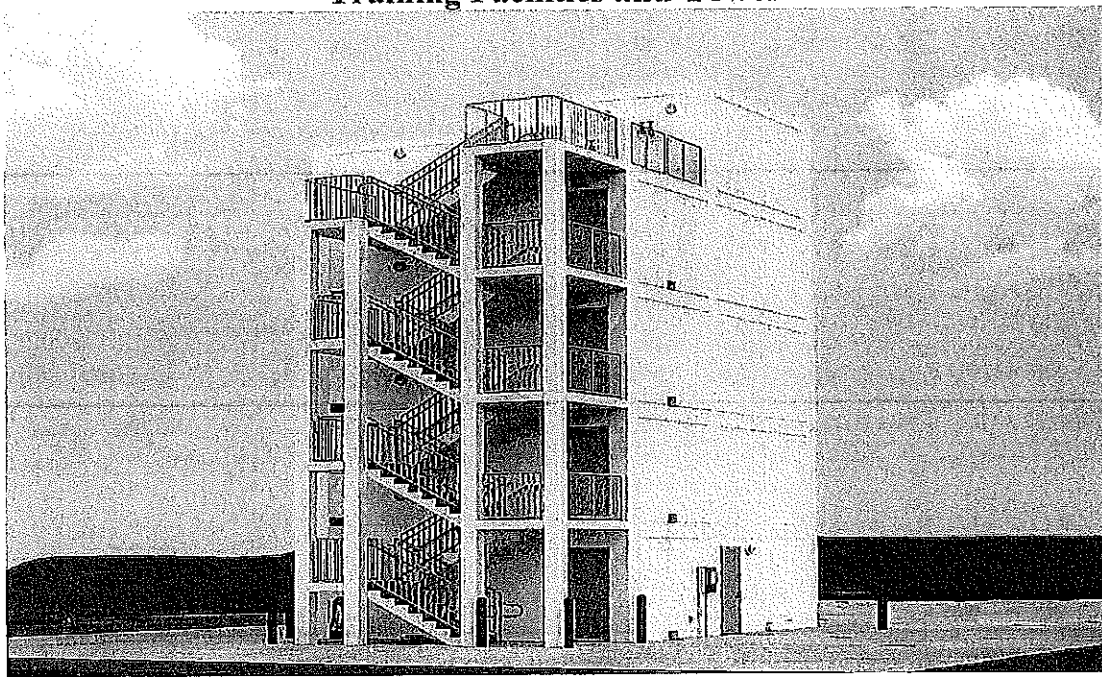
**Palm Beach County Fire-Rescue
Training Facility and Tower**



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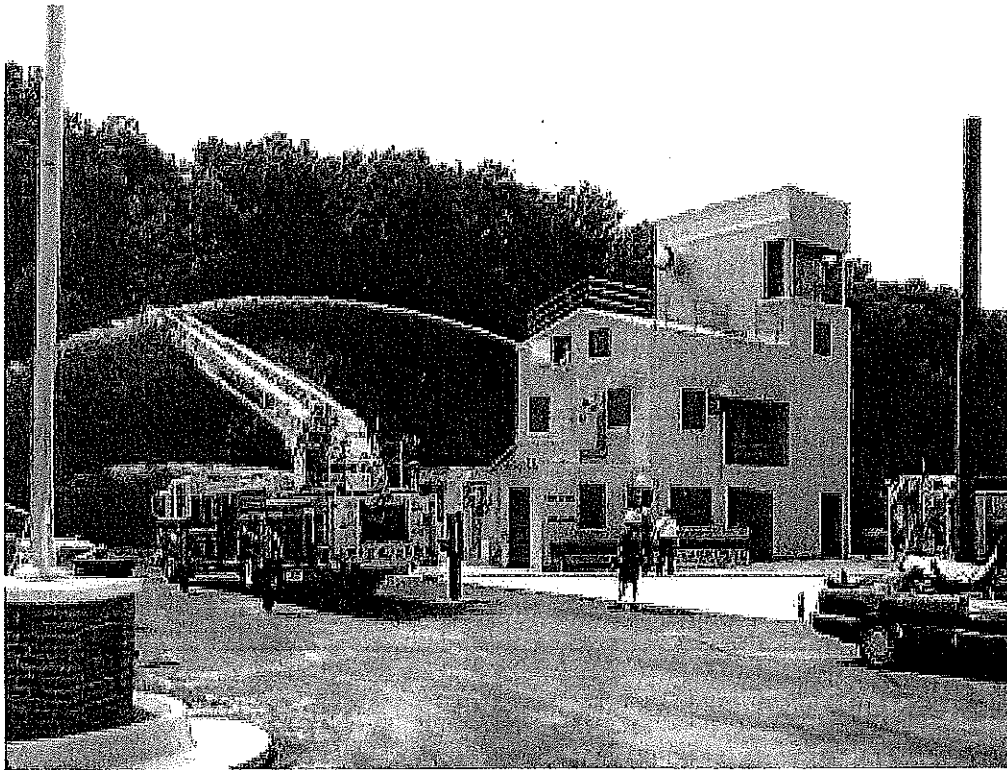


**Boca Raton Fire-Rescue Services
Training Facilities and Tower**



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Proposed Delray Beach Fire-Rescue Training Tower



Fairfax Volunteer Fire-Rescue: Fairfax, VA



Odessa Fire College: Odessa, TX

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