

# B SHIFTER

Spring 2013  
Volume 3, Issue 1



The Hazard-Zone Quarterly



# **Volume 3, Issue 1**

**Spring 2013**





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★ Blue Star Items Complement & Support the Blue Card Hazard-Zone Incident Command Training & Certification Program.



# Mahalo, Maui.

**The Maui County Fire Department describes what it's like to work in paradise. Plus, a focus on all kinds of safety.**

BY ALAN V. BRUNACINI

**A**loha, B-Shifters. Welcome to the Spring 2013 issue of our hazard-zone quarterly. As some of you might know, the Maui County Fire Department (MCFD) is a member of the Blue Card family. We are very proud of this fact—and not just because I finally have the perfect outfit for the occasion. In this issue's department profile titled, **Greetings from Maui**, Battalion Chief Amos Lonokailua-Hewett gives us a brief look at how MCFD provides service to four islands and manages the challenges of their environment. Thanks to MCFD for sharing a little bit about how they work.

I spend a lot of time traveling—meeting and learning from new people as well as old friends. There's a lot of discussion within the fire service about making positive changes to the ways we do things. It isn't surprising that many of these adjustments focus on keeping ourselves safe while remaining effective when it counts. This issue of B SHIFTER includes a lot of content about safety—in the traditional and non-traditional sense.

In **A Team-Based Approach to Self-Survival Training**, Ops Chief Pat Dale with the Olympia (Wash.) Fire Department explains how his cash-strapped department paid for the IAFF's Fire Ground Survival Program. This excellent program helps individuals learn how to self-rescue should they find themselves in a bad situation. It is, however, a large investment. Chief Dale describes how Olympia worked with its neighbor to make the course a reality.

It seems the news is flooded with violent, tragic events. Although it is our job (and our natural inclination) to enter these volatile scenes to render aid, we must do so smartly and strategically. In his column, **Managing a Fire Company—Response Under Fire**, Chris Stewart explains how we can apply our standard hazard-zone systems to these violent situations in order to stay safe.

On-the-job injuries are a costly and frequent occurrence. In **Functional Fitness**, Connie Tillmans, an exercise physiologist and certified athletic trainer, describes the Functional Movement Screen, a physical assessment that considers the *quality* of our movement as a means to predict and prevent injury. As Connie explains, one Southern California fire department noted a drastic reduction in certain types of injuries (and the related costs) after implementing FMS.

Thanks for tuning in to B SHIFTER. If you have any comments or questions, please email us at [editorial@bshifter.com](mailto:editorial@bshifter.com). **BS**



Click the play button above to launch Big Al's video greeting.



Push play to hear Bruno discuss this year's Hazard-Zone conference at Notre Dame.

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# Pension Tension

**Ours is a very dangerous business. Shouldn't our pensions reflect the risks we take?**

BY NICK BRUNACINI

**L**ong ago, there was a small village that was protected by several fire companies. As time passed, more and more people moved to the hills and dales that bordered this village to find their fortune. This led to the creation of more fire companies to protect these new suburban villages. Eventually, the magistrates of these villages held a summit to combine all of their villages into a single super village. This required merging the separate fire companies into one large fire department, which was a challenging task. Each of these fire companies worked different schedules, used different buckets and hoses, wore different brightly colored costumes, had their own rank structure and earned different benefits packages. The exalted chiefs of each tactical tribe came together to standardize uniforms, tools and apparatus. The last thing they did was change the work schedule from 24 hours on, 24 hours off by adding another watch. The newly formed B Shift became the middle child where each of the formerly independent fire companies dumped their undesirables.

During these early days, firefighters worked two to three jobs to support their clans because emergency response was a selfless, low-paying gig. Our ancient ones did it for the love of a respectable and classy career, access to underground bagpipe music and tumblers of strong malt beverage enjoyed after beating back the red devil. Eventually, the combination of low pay, no benefits and long hours spent working under the heels of autocrats spawned the formation of a firefighter's union.

The front-burner issue for the Grand Fleagle of the newly formed firefighter's union quickly became pay parity with the local constables and the formation of a 20-year pension system. Twenty years of eating the products of combustion seasoned with the law of heat flow left many firefighters grizzled and afflicted with cancers and other career- and/or life-ending maladies. Exposure to the daily hazards they faced put many firefighters in their grave before they became eligible to collect Social Security. Thanks to cancer and other insidious diseases, a great number of firefighter line-of-duty deaths occur *after* a firefighter retires. Firefighters needed an early retirement plan that put them out to pasture before they were too sick and broken to protect the community from disaster.

Some community leaders have always been quick to point out that people from all walks of life die from cancer—an argument they use when asked to provide some type of work-related compensation or medical retirement for sick and dying firefighters. While it is certainly true that non-firefighters



ILLUSTRATION BY POONEY PICKERING

die from cancer, medical science has proven that exposure to carcinogens has a direct correlation to cancer rates. The fact that coal miners, high school chemistry teachers, chimney sweeps and firefighters experience much higher cancer rates than the rest of the population seems to bear this out. Much of the research countering firefighter cancer rates from occupational exposure comes from Tobacco Institute scientists. Our union leadership suffered many defeats at the hands of these jackals, but our boys were quick to learn. They determined the surest way to achieve our goals was to fight fire with fire.

Our newly commissioned unions sent emissaries to the state house to meet with the lords of the land. In a backroom meeting, the union's Sergeant of Arms placed a brown paper bag containing \$25,000 in gold doubloons within the desk drawer of a certain state senator, thus ensuring firefighters would have a 20-year state pension by the end of the current legislative session. During this era, a bought politician was true to his word. The resulting pension required each member to contribute 7.65 percent of their gross pay to the pension, which their employer would match. Now every firefighter, cop and judge (go figure) earned a 20-year retirement at half their yearly gross pay. We paid into our pensions exactly the same way a worker pays into Social Security, a 401k or any other kind of retirement plan.

When the shit hits the fan, we are the first to respond and the last to leave. It has been this way for almost 300 years. The fire service is one of the oldest American institutions, pre-dating the U.S. Marines, the Federal Reserve and the Declaration of Independence. The founding fathers founded us to respond to any crisis that threatens the community. No one wants harm to befall others. We don't wish for structure fires, natural disasters, heart attacks, diabetic emergencies or trauma associated with auto accidents and other mayhem. The problem is these incidents occur on a daily basis. Firefighters have become the default first responders who are summoned to the scene of these emergencies. Because we place ourselves between the populace and whatever threatens it, fire departments continue to be part of the tapestry of the community.

**O**ur unions used the legislative process to move our cause forward. This is the American way. This has become increasingly difficult when you consider that through the years, more and more firefighters have moved away from the communities we work in. Sometimes we have been priced out of the neighborhood, other times it's because we are mercenaries, going off to work in parts of the town where cab drivers and pizza-delivery boys refuse to enter. Whatever the reason, it's pretty tough to vote on local issues that affect you when you aren't a resident of the community.

When the bankers blew up the economy, the community turned into a rabid mob. They did not want solutions; only blood would quench their thirst. Many local politicians used public-safety and teacher benefits as a shield. Many of these same politicians were put in office by our unions and are the same public servants who negotiated and agreed to these benefits packages in the first place. Now they act as if we are thieves in the night who looted the treasury. When forced to actually make pension payments, they scream, "Firefighters, cops and teachers are the welfare mothers of the new millennium!" This demonstrates they are as trustworthy as any other garden-variety snitch. Meanwhile, the executive and legislative branches offer up parlor tricks as a solution. I'm not an economist, but the **new trillion-dollar coin** tells the whole sordid tale. If we believe paper money is real currency, then I suppose a small piece of shiny metal may as well be worth more than all the ships on the ocean.

When the bankers blew up the economy, the community turned into a rabid mob. Many local politicians used public safety & teacher benefits as a shield.



Most of the pension funds currently in trouble are upside down because the municipality didn't make their required contributions. Despite all of the gloom and doom, the truth of the matter is most public-safety pensions are financially sound. Facts always take a backseat to lunacy. [Click here to read a fact sheet put out by the National Association of State Retirement Administrators.](#) This may come as a shock, but municipalities that had trouble keeping up with their pension payments prior to the economic meltdown of 2007 continue to have financial problems. They would have been smarter to invest in the mummified fingers of long-dead popes.

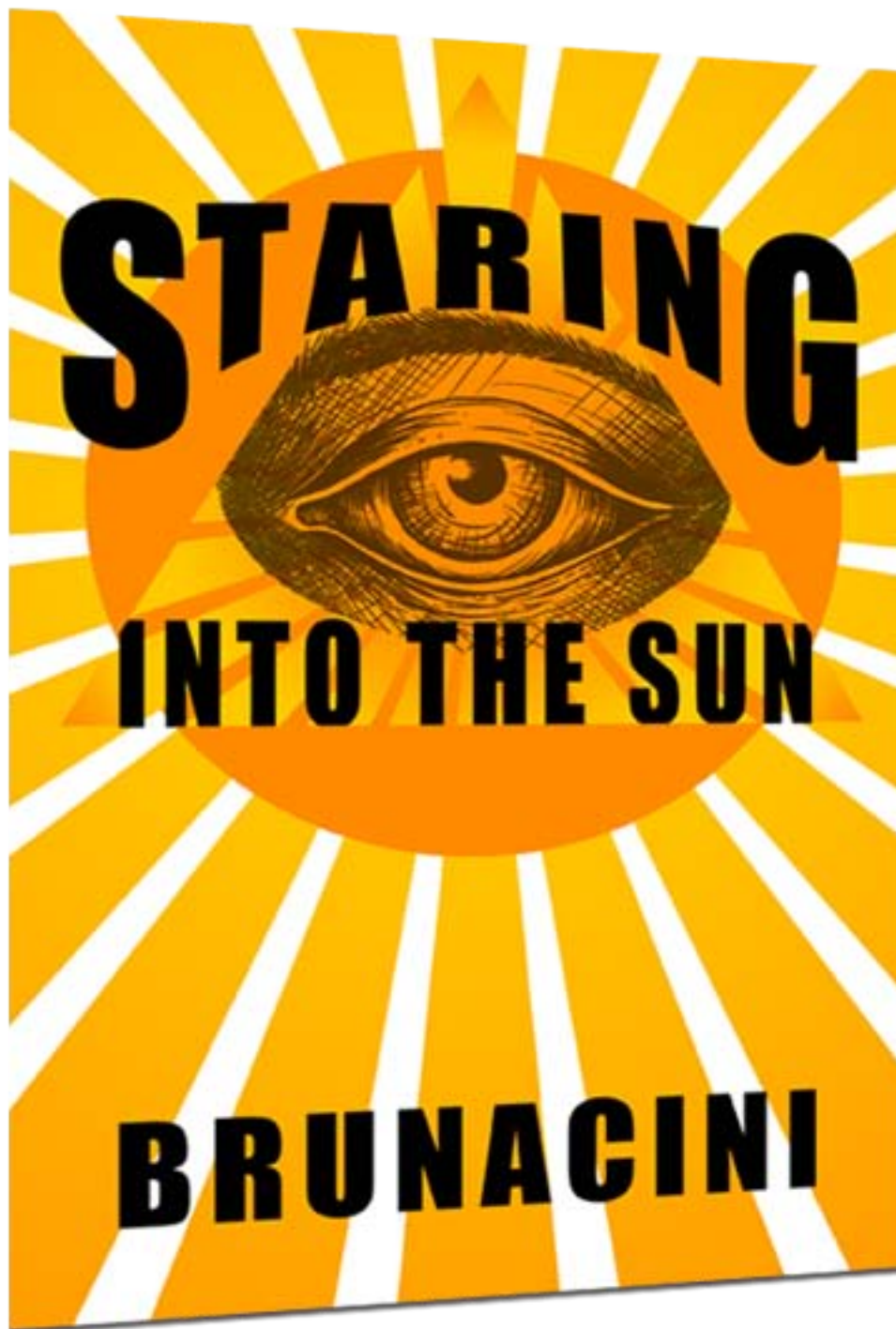
The 24-hour news cycle has provided every fruitcake their own show. It has gone from frightening to flat out silly when listening to the far right. They drone on incessantly about eliminating all taxes, building more prisons, closing the borders, arming teachers with automatic weapons and forcing women to have rape babies. Banks now operate with complete impunity. After being caught loaning money to terrorist nations, they shrug and dare us to do anything about it in fear it will trigger a worldwide depression. The most profitable U.S. companies can park billions of dollars in offshore accounts to avoid paying taxes. Thank God the U.S. Congress continues to devote its time and attention investigating athletes who use performance-enhancing drugs.

I don't think you can separate the fire department from the community. My former department took a major financial hit as a result of the 2007 recession. Our local voted unanimously to take a series of pay cuts and furloughs to stave off layoffs. This is the same thing we did 20 years earlier after another group of criminals created the savings-and-loan crisis and crashed the real-estate market, sending the county into a recession. It shouldn't come as a surprise that firefighters gave up a little to save a lot. **BS**

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*Nick Brunacini joined the Phoenix Fire Department (PFD) in 1980. He served seven years as a firefighter on different engine companies before promoting to captain and working nine years on a ladder company. Nick served as a battalion chief for five years and in 2001, he was promoted to shift commander. He then spent the next five years developing and teaching the Blue Card curriculum at the PFD's Command Training Center. His last assignment with the PFD was South Shift commander; he retired from the department in 2009. Nick is the author of "B-Shifter—A Firefighter's Memoir." He is also the co-author of "Command Safety."*



**Staring into the Sun** is a collection of popular articles previously published in a fire-service trade journal & on the B Shifter Website.

**Praise for Nick Brunacini's first book, B-Shifter:**

"...This book best describes the sane and not so sane inmates of an asylum I can proudly call my own. The stories are the same but only the names and community change. I could not put this book down but had to in order not to finish it to soon...This is finally the one you have to buy!"

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# The Bigger They Are, The Harder They Fall

**Working in smaller buildings adjacent to larger burn structures can have dire consequences.**

BY VINCENT DUNN

**S**everal years ago, I got a call from a firefighter. “Chief, you have to come see the fire we had last night,” he said. “A wall collapsed and went right through the roof of an adjoining building and almost killed a guy.” The next day, I visited the scene of the fire in upper Manhattan.

After photographing the collapse area, I spoke to the firefighters who had operated on scene. They explained how the fire spread throughout five stories of a tenement because frozen hydrants had delayed the water supply. Fire engulfed all floors—front to rear. When firefighters started using outside streams, a sector officer was assigned to Exposure D’s roof. Once in place, the sector officer notified the incident commander (IC) that the tenement’s rear wall was starting to lean and could collapse. All firefighters were withdrawn from the burning building, and the IC ordered a defensive attack using master streams. Firefighters then entered Exposure D to locate and evacuate occupants. An officer assigned to search the exposure building, a small brownstone about 20 feet from the fire building, discovered an elderly man in a rear bedroom. Although there was little chance that fire could spread to this smaller structure, he ordered the man to leave the building. The firefighter recalled feeling overly cautious as he had the man leave his warm bedroom and go out into the cold night. However, the fire building’s rear wall eventually collapsed outward at a 90-degree angle. Falling like a tree in a monolithic section, most of it thundered down into the backyard. However, part of the wall hit the roof of the smaller building. It smashed the roof and dropped several tons of bricks on the old man’s bed. Had the gentleman been allowed to stay in his bedroom, he certainly would have been killed.

This incident got me thinking about what happens when bigger buildings fall on top of smaller ones. As the following stories illustrate, not only do we have to consider collapse dangers while working in or around fire buildings, but while working in and around smaller exposures as well.

## Heavy-Timber Warehouse Smashes Tenement

In 1946, FDNY Lieutenant Joseph Popper was 11 years old and living in a tenement with his family in New York City. One evening, young Popper went to bed shortly after dinner. The last thing he remembers about that night is the sound of sirens in the distance as he drifted off to sleep. He didn’t know it at the time, but a fire was raging next door at a six-story, heavy-timber building that housed the Knickerbocker Ice Company. The fire went to a fifth alarm and burned uncontrollably for several hours. The roof eventually collapsed, pushing out a massive, 3’ thick wall toward the adjacent tenement, crushing the entire rear section. (See Image 1.) The collapse killed 37 people, including Joe Popper’s entire family—his mother, father, sister and brother. Joe remained trapped



PHOTO: FDNY WNYF MAGAZINE

**Image 1: Responders search the debris following the 1946 collapse of the Knickerbocker Ice Company warehouse, which crushed a nearby tenement.**

in the rubble for nine hours before firefighter John Kinnick rescued him during search-and-rescue operations. Joseph became a New York City firefighter in 1960, promoted to lieutenant in 1974 and wrote about his experience in the FDNY training magazine "WNYF" in 1978.

### **Vacant Building Crushes Attached One-Story Structure**

In 1980, FDNY Lieutenant Robert Dolney was on the scene of a fully involved fire in a vacant, three-story, wood-frame building. The building was attached to a one-story structure. Lt. Dolney and a firefighter assigned to his engine were operating a hoseline from the adjacent structure into the fire building through a door between the two. The wooden fire structure suddenly failed, and all four sides fell simultaneously in an inward-outward type collapse. The rear wall collapsed on top of the adjoining one-story building, where Lt. Dolney and the firefighter were working. (See Image 2.) It crushed the entire building, killing Lt. Dolney and breaking his partner's back.



PHOTO COURTESY VINCENT DUINN

**Image 2:** In 1980, an FDNY firefighter was killed when a burning three-story, wood-frame structure suddenly collapsed, flattening the adjoining one-story building he was working in.

### **Twin Towers Collapse on Top of Hotel**

Before the World Trade Center collapsed on Sept. 11, 2001, Lieutenant Robert Nagel and Engine Company 58 arrived on scene and were ordered to search and evacuate people from the 22-story Marriott hotel adjacent to the burning towers. When the Twin Towers collapsed, they fell on top of the hotel and crushed it. Lt. Nagel became trapped in the collapse and died. (See Image 3.)

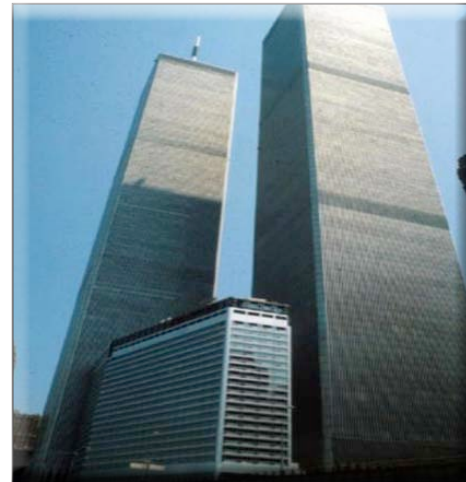


PHOTO COURTESY VINCENT DUINN

**Image 3:** A New York firefighter died while searching a 22-story hotel adjacent to the Twin Towers when the burning high-rises collapsed onto the smaller structure.

### **Brick Wall Topples Nearby Exposure**

On April 9, 2012, Philadelphia Fire Department Lieutenant Robert Neary and Firefighter Dan Sweeney were searching a one-story building next to a burning, four-story, heavy-timber warehouse. Without warning, a brick wall that had been left freestanding after the other walls and floors failed collapsed on top of the building the firefighters were searching, killing them. (See Image 4.)

### **Warehouse Crushed Occupied Row House During Demolition**

In the mid-1990s, Philadelphia Battalion Chief Robert Burns photographed the demolition of a vacant, five-story, heavy-timber warehouse. The Philadelphia Fire Department ordered the occupants of the two-story row houses across the street from the warehouse to evacuate due to the possibility of collapse. As they suspected, the demolition caused the doomed structure's front wall to collapse on top of the two-story dwelling, destroying it. Because the fire department had evacuated the residences, there were no injuries. (See Images 5, 6 and 7, pg. 12.)



PHOTO MIKE BRESNAN PHILADELPHIA FIRE DEPARTMENT

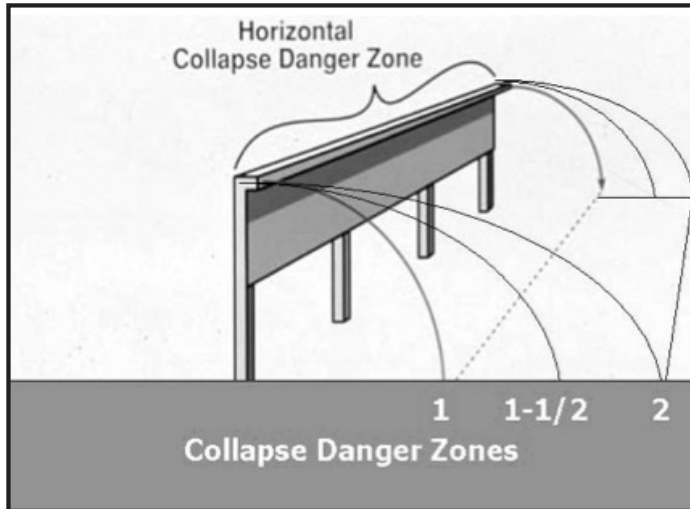
**Image 4:** Two Philadelphia firefighters were killed when part of a four-story, heavy-timber building collapsed on an adjacent structure, burying the firefighters inside. The yellow arrows indicate the wall that collapsed.

### **Lessons Learned**

Although it's rare for a big building to collapse on a smaller adjacent building, these case studies prove that it can happen with dire consequences. The lessons learned from these tragedies might seem obvious to some, but they must be restated to ensure the safety of all responders.

- An incident commander must establish a collapse danger zone

any time a collapse risk is present. Firefighters should not be allowed to operate inside the collapse zone. Usually, a collapse zone is calculated as a distance equal to the height of any wall that could potentially collapse; however there are situations that can make a wall fall at a distance greater than its height. For example, if there is an internal explosion, the wall might fall farther outward. In another example, if a truss's sloping-hip roof rafter is imbedded in the wall, the rafters can push the wall out a greater distance than its height should the roof collapse. Mansard roofs have sloping rafters embedded in the top of a masonry enclosure wall that can push the wall out farther if the roof fails.



- In addition to keeping streets and sidewalks clear, ICs should be proactive and must evacuate smaller buildings nearby before there is a danger of a taller building collapsing. ICs should not allow firefighters to search or operate inside smaller unoccupied buildings if they are located within a designated collapse zone. Firefighters operating inside smaller nearby buildings are not shielded from falling objects or collapsing walls. Roof beams will not protect occupants or firefighters should a taller building collapse upon a shorter one. Experience has shown that a weight falling from a height creates a peak impact force that will collapse any roof it falls upon. **BS**

 [Click here!](#) Questions or comments for Vincent Dunn? Join the discussion at **B SHIFTER's** new forums.



Chief Vincent Dunn, FDNY (ret.), is a 40-year veteran. He is the author of "Collapse of Burning Buildings" (Fire Engineering, Revised 2010); "Safety and Survival on the Fireground" (Fire Engineering, 1992); "Command and Control of Fires and Emergencies" (Fire Engineering, 2000); and his most recent textbook "Strategy of Firefighting" (Fire Engineering 2007). He can be contacted at [vincentdunn@earthlink.net](mailto:vincentdunn@earthlink.net) or 800.231.3388. Visit him online at [www.vincentdunn.com](http://www.vincentdunn.com).



PHOTOS ROBERT BURNS PHILADELPHIA FIRE DEPARTMENT



Images 5, 6, 7: During a planned demolition, a vacant, five-story, heavy-timber warehouse flattened the two-story row house across the street. No one was injured because forward-thinking firefighters vacated the occupancy prior to demolition.

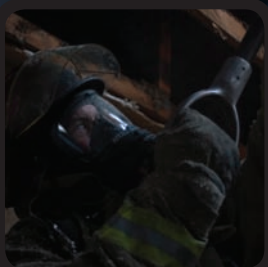




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# Best Practices for Training

**What are your best practices? In this issue, B SHIFTER asks readers to share their tips for top-notch training.**

**BY FOREST REEDER**

**I**ndustry (or Wikipedia) defines a best practice as “a method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark.” In addition, a best practice can become even better as improvements are discovered. Some consider the term *best practice* a business buzzword used to describe the process of developing a standard way for multiple organizations to do things. The fireground environment might not seem like a good place to apply best practices, as there are so many variables that come into play, and each fire response is different. Some things, however, should be best practices, and the Blue Card Hazard-Zone Management system is based on establishing a best practice that focuses on standard conditions, standard actions and standard outcomes. The tactical piece of deployment has best practices for line selection, ladder positions, search patterns and fire attack. Each department will have to establish their own best practices (maybe you’ll even call it an SOP) and then train and reinforce their application and enforce their use during operations.

In this column, we will ask for your input on best practices for a two specific and important aspects of fire-service training. Our goal is to tap into our readers’ experiences in order to share simple, easy-to-use tips that can help all of us deliver our training message. In past issues, you have demonstrated great expertise and understanding regarding the role of the instructor. We have challenged you to come up with solutions to more than 20 training-related scenarios. Those served as the introduction to this process, and the best-practices discussion takes us another step forward. You have selected answers to the scenarios and are already applying your best practices to handle difficult, awkward and intense situations. As you complete these scenarios, they help develop your best practices. When you share them, you help make all of us even better at handling these situations. Once your best-practices model is developed, like anything else, you will have to use them, practice them and then perfect them using your own teaching style.

When developing best practices, you will have to work through some variables, such as the audience and the learning environment. Because each student or member of your company has different values and learning styles, you’ll often find yourself adapting your best practices frequently even when delivering the same material. You will have to become a master at reading students’ body language and interpreting their interactions with you and each other. These cues will help you engage a best practice when handling a specific challenge in the teaching process. For example, if a member starts to become disengaged in the training session, how do you re-engage them in learning? The solution to challenges like these become your best practices, and you’ll be a better instructor once your toolbox starts to fill up with these newly acquired tools.

This issue we will start with the beginning and the end by discussing best



**We want to know: What are your best practices for training? How do you engage students, deliver information and ensure they can retain and apply it?**



practices for starting and ending a drill/class/training/course. Some wildcards may emerge as you think through these areas of a presentation. In the next issue, we will work between these two lines to cover the “training in progress” parts. Let’s get started!

### **Best Practices for Starting a Training Session**

The start of a drill or training session incorporates one of the most crucial steps: preparation. You probably remember from your Instructor I training the four-step teaching method: 1) Preparation; 2) Presentation; 3) Application; 4) Evaluation. In the preparation step, you get the student ready to learn by introducing the subject and trying to engage the students’ interest. (To learn more about the prep step, read “That First Step Is a Doozy” pg. 14, B SHIFTER, Summer 2012.) If we want to go beyond the by-the-book definition of the preparation step, we need to identify specific examples of things to say or examples to use. Here are some general examples (i.e. preparation best practices) that you can apply to almost any type of training session:

- Start with a scenario that shows the relevance of the course objectives; often the objectives part of an introduction causes students to disconnect. Try to tie an objective to a scenario. For example, when discussing the objectives for a blood-borne pathogens lesson, you can say that you are going to discuss what happens if a member gets exposed to blood during an extrication.
- Use a case study. Firefighters are always interested in how class content applies to them.
- Make it relevant to your community or response area. For example, you can begin a class on fire attack by using a photo of a structure the students will recognize or by discussing a recent fire in your community.
- Use a bit of humor; sometimes a funny video, joke or typical firehouse razzing will ease the tension in the room.
- Have a welcoming and generally enthusiastic demeanor; welcome as many members by name as you can or introduce yourself to the students as they come into the training.
- Ask general questions about the subject matter; test the water a bit to see what your students know about the topic.
- Use outcome-based statements instead of saying objectives; I’ve recently become a fan of replacing the word objectives with “outcomes” and/or “expectations.” I think it sets a good, positive tone about what you expect from the session and what you want them to take away from the training.
- Ask students what they think the class is going to be about.
- Tell them what you’re going to tell them.
- Use an ice-breaker loosely based on the content to get them talking about it.

### **Best Practices for Ending a Training Session**

As a training session comes to a close, don’t just shut it down and send students on their way. Use the end of the training session as another teaching moment. You have to reinforce information passed along during the drill/class and provide follow-up direction for the next class. Almost every research study done on retaining and applying new or reinforced information says that we begin to forget it almost immediately—unless we work to reinforce it through on-the-job practice or follow-up training. In fitness, the cool down allows the body to return to a near-normal state. It allows us to stretch out muscles that are fatigued and begin the recovery phase of exercise. When training is coming to an end, we are in a sense “cooling down” the brain, which is best done gradually and without a sudden stop. This may sound pretty black and white, but this might be difficult as many times your students will be packing up the books or putting away gear as you are trying to tie up any loose ends and recapture the session’s expectations. At a set of recent instructor continuing-education classes, the more than 100 instructors in attendance offered these great tips for ending a training session:



- Ask each participant what they learned, and don't let them repeat something that someone else has said.
- Ask for at least one "take-away" from the class.
- Review the main points very clearly.
- Ask for one final demonstration by someone who has done really well.
- Tell them what you told them (summarize).
- Review class objectives/desired outcomes to ensure all understood what was covered.
- Ask lots of questions about the material covered.
- Find out how students plan to use the information on the job or in their career.
- Reinforce the positive outcomes—don't send students on their way on a bad note.
- Point out the outcomes and describe how they improved. Focusing on any improvements you observed as the instructor is a basic motivating technique that ends a drill on a positive and reinforcing note. For example, the instructor can say something like, "You improved your donning time from :45 seconds to :35 seconds by working on your mechanics" or "The entire evolution ended with no members running out of air before exiting the simulator." Adult learners do like to hear how they did, especially if they did well (they may never admit that fact though), and an instructor should use this as a good motivator.
- Ask how you can improve the training the next time.
- Be open to questions and follow-up before you wrap up.
- Thank them for participating and welcome them back for more training in the future.

### Conclusion

Some common themes for both the beginning and end of training should be evident. We place a lot of emphasis on involving and engaging the class members. This is good, but keep in mind you must control the pace and amount of student involvement. It will take extra time to engage members at the start of class and to end on a positive note. Keep that in mind when developing your objectives and lesson plan. Remember, every minute matters in training. We have to use our time wisely to ensure the new information sticks.

Now that you have a place to start, tell us your favorite best practices for the front and back end of class, and also be willing to share things that have not worked. **You can help us with the next issue simply by emailing your ideas at [editor@bshifter.com](mailto:editor@bshifter.com).** In the next edition, we'll review your feedback. We will also discuss the best practices for conducting hands-on training for new material, and also reinforcing skills that members already can perform. You'll see some interesting ideas on ways to make hands-on training count.

**BS**



*Forest Reeder began his fire-service career in 1978 and currently serves as a division chief of Training & Safety with the Des Plaines (Ill.) Fire Department. Forest writes the weekly drill feature at [www.firefighterclosecalls.com](http://www.firefighterclosecalls.com) and [www.fireengineering.com](http://www.fireengineering.com), and was a contributing author of "Fire Service Instructor, Principles and Practices," published by Jones and Bartlett. Forest was awarded the ISFSI's George Post Instructor of the Year at FDIC in 2008.*

**W**e want to hear from you! What are your best practices for starting and ending fire-service training? Please email us at [editorial@bshifter.com](mailto:editorial@bshifter.com) and describe your best practices in 300 words or fewer. Explain what you do, how you do it and how you know it's working. If we publish your answer, you will receive a free T shirt. Deadline for submissions is June 30, 2013.



Chief Alan Brunacini Presents

# No-Brainer Management

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# Beyond the Call of Doodie

**Sometimes being nice is very dirty work.**

BY B SHIFTER STAFF

**I**n this issue, our friends from Australia share the dirty details of a call that put their customer-service skills to the test. It's obvious that no one *wants* to encounter a situation like the one described below, but doing the right (nice) thing isn't always pleasant. Kudos to Superintendent Rick Parkes and the members of his crew for reaching out to a citizen whom others had forgotten.

## A Fecal Matter

Back in 1998 when I was a station commander (the equivalent of a captain in the United States) at Newtown Fire Station in Sydney, Australia, I attended a structure fire with a back-up station. Upon arrival, we found light smoke issuing from a boarding house bedsitter (a one-room apartment).

After an initial size up, I immediately deployed my fire-attack crew of two firefighters to the level-one bedsitter. The fire was a mattress alight, and it generated the usual quantity of smoke.

When the smoke began to ventilate, I noticed scrawl on the walls, which turned out to be feces, stating that "all Viet Cong and gooks were ?/!\*&^%\$#@." I saw a figure sitting in the far corner of the small room, so I went over to investigate.

I found a withered, middle-aged man—alive and well with walking sticks—sitting naked with the bucket of feces he had used for wall-writing purposes. I asked him if he was OK and had my crew try to move him outside; he politely refused. I tried to talk him into leaving, but he politely refused again. I next asked him what had happened and what was going on.

He stated that he was a Vietnam veteran of our Special Air Service (your equivalent would be Navy Seals). He said he was crippled from many helicopter and parachute missions, that he hated VC and gooks (hence the wall painting), and he had set the place on fire as he could not get better accommodation or help from our Department of Community Services.

I requested the attendance of our Salvation Army chaplain, who arrived shortly thereafter. The man would still not leave, so we cleaned up the place a little and returned to our fire station.

The next day I contacted the chaplain, who informed me that he had made investigations with the Department of Veterans Affairs, which confirmed the man's statements. They were going to contact his family and have him removed to better accommodation in a week or two.

At this time I instructed my crew to gather up some mops, buckets, disinfectant, etc., as well as a spare mattress, pillows, sheets and blankets. We stopped at the supermarket for food and went down to the boarding house. We scrubbed the place clean—walls included—installed the bedding and groceries and chatted with the man for a while. He was extremely appreciative and brought to tears by our concern and help. He apologized for inconveniencing us. We replied with a smile and let him know it was all just part of the service.



Click the play button to launch Bruno's video response to this issue's submission.



One member of the fire-attack crew in this story started working for me again as an instructor about a year ago, and it was pleasing for me to overhear him reminiscing about this job to his fellow instructors at morning tea recently. This story has also stuck in my mind over the years, and I use it as an example during training programs I now supervise to illustrate the potential we all have to be nice in our job.

Superintendent Rick Parkes  
Manager, Command Leadership & Management Section  
Fire & Rescue New South Wales  
Australia

### **Bruno's Response**

**T**his story is a perfect example of initially delivering standard core service and then extending added value based on the situation's human needs. We have defined NICE service as being patient, respectful, kind and considerate. In this story, these words and concepts come to life in a real way. I can't think of a better example of adding value than washing human poop off the wall, making the customer's bed and providing chow for dinner. This story, like most similar stories, is created by an engaged, empowered boss along with his positive and resourceful troops to use their resources to extend "Wow!" service.

Another dimension of truly being nice involves caring for someone who is at a distinct disadvantage—a disadvantage being expressed in a very eccentric and unusual way. Many times that way is really beyond the caregiver's frame of reference. In this case, the old soldier is acting pretty nutty, and it would be easy and certainly convenient for the officer to pack up his company, go back to the station and forget about the old guy; in this case, our company gathers the stuff to help him and (notably) extends their personal efforts to directly assist someone who most people and systems would summarily write off. The firefighters delivered service based on his situation—service was not based on a judgment fueled by what they might have thought the customer deserved or how he behaved.

Delivering such exceptional service gets entered into the folklore of that department and is reflected in one of his former company members recounting the story over a decade later using that very positive response as a model of excellent customer service. Such stories use actual experiences to describe what it looks like to take care of people who need help. **BS**

Are you nice? Tell us about it! Please e-mail a brief description of your positive service-delivery experience to [editorial@bshifter.com](mailto:editorial@bshifter.com). Please write BE NICE in the subject line. Deadline is June 30, 2013.

Please include your mailing address with your submission, and we will send your company a set of nifty BE NICE helmet stickers. **BS**

# Greetings from Maui!

Say "aloha" to the Maui County Fire Department. Beaches, big surf, volcanoes & valleys make its response area one of the most beautiful & perilous in the United States.

By Amos Lonokailua-Hewett

MCFD personnel face demanding response situations that require intense cross-training and flexibility.

PHOTO MARK POKINI



PHOTO MARK POKINI



PHOTO COURTESY MCFD

**A**loha. As one can imagine, Maui County in Hawai'i is a very special place to live. The weather is beautiful year-round, with partly cloudy skies, temperatures averaging 84 degrees and tropic winds blowing from the northeast. The island is an outdoor person's dream. We have mountains to hike, rivers to swim and waves to surf. You can charter a boat to fish in the ocean, ride a bicycle down a volcano or fly down a zip line across a valley. All of these outdoor activities present risks, and Maui County Fire Department (MCFD) responders are tasked with developing and assessing response plans that minimize or mitigate those risks.

## Resource & Response Challenges

MCFD serves four islands; Maui, the largest, measures 728 square miles. The other islands are Moloka'i, Lana'i and Kaho'olawe. Only Maui, Moloka'i and Lana'i are populated, with a total population of about 155,000 residents. However, more than 2 million tourists visit Maui County every year, with the summer months attracting the most visitors. Our response area includes Mt. Haleakala, with elevations of up to 10,000 feet at its peak, miles of shoreline and various channels between islands. We have some pretty intense response expectations: On any given shift, personnel might be required to go offensive on a house fire, chase a flank on a brush fire, rappel down cliffs, hang out of a helicopter and Jet Ski in 20-foot surf. It is difficult to be proficient in all aspects of our emergency response, especially when there's an ocean between the islands in our response area that can stand between a hazard zone and the needed resources.

Despite our diverse and widespread response area, our resources are fairly limited. We have 303 uniformed personnel and nine support staff. We have 14 stations (10 on Maui, three on Moloka'i and one on Lana'i); 18 companies (14 engines, two quints, one rescue, one hazmat); and two battalions. Our fleet also includes five water tenders and four mini-trucks. We also have two brush trucks for wildland fire response, which makes up most of our fire response. (See "Island Interface," pg. 22.)

To address the rescue challenges Maui County's environment presents, we have three rescue boats, four Jet Skis and one helicopter used for surf rescue, water search and rescue, and mountain/cliff search and rescue. Our minimum staffing is four personnel per company. If a significant fire or emergency event occurs on any of the islands within the county, additional resources will either boat or fly over to assist. (See "Island Hopping," right.) MCFD has only one company dedicated to technical rescue, Rescue 10, which is stationed on the island of Maui. This company responds to all four islands when necessary, usually by helicopter. Rescue 10 also serves as one of our fireground support companies at building fires and is typically dispatched with the first alarm. Our one dedicated hazmat unit, Hazmat 10, is also stationed on Maui and also serves as a fireground support company. Since any significant emergency depletes our resources quickly, we utilize call-back crews and fire administration personnel as our next line of defense.

## Training

Because each station must be fairly self-sufficient, training is very important in our world. Our training plan has three elements: initial certification, continuing education and professional development.

We are a Pro Board organization, and our initial certifications align with appropriate NFPA standards. Continuing education delivered via quarterly drills helps maintain minimum skills for driver operator, suppression, technical rescue and hazmat. We also have training programs, organized in a cadre system, that are managed by a program director. As part of our professional development component, we offer officer-development certifications annually. These cadres coordinate with the department's training bureau to deliver approved curriculum. Programs include EMR, vehicle extrication, surf rescue, rope rescue, dive rescue, confined-space rescue, fireground operations, fire apparatus driver/operator, FGS/RIT, hazmat, ICS, and wildland. We use hands-on applications as well as online educational deliveries.

Our department is also heavy into all-hazards incident management team (AHIMT) training, delivering position-specific training on a regular basis. All of our officers have completed ICS 300 and 400, which is the foundation of the AHIMT development. Our organization

## Island Hopping

A response area that spans Maui, Moloka'i, Lana'i and Kaho'olawe presents some logistical challenges—especially when personnel or resources on one island are needed on another. Although ferries travel between the islands throughout the day, travel times can take up to 2.5 hours, depending on the specific ferry and the conditions within the channels. To make sure its personnel and resources can get where they need to be, the Maui County Fire Department sometimes uses its rescue boats for transport. In addition, the department contracts with a local helicopter company to provide air support for wildland firefighting. When they fly from Maui to other islands to help with wildland response, they often take personnel with them. There are also planes that transport personnel when necessary.



PHOTOS KIMBERLEY K MULLEN



MCFD's training facility has multiple training props to prepare responders in a realistic manner.



cooperates with the other county organizations to train a team that can deploy to big events locally and abroad. For the most part, our training facilities provide realistic training opportunities. We have multiple training props for all firefighter tasks. Our 1,800-square-foot, single-story burn prop is made out of Conex boxes. It has a 900-square-foot combustible flat roof on top, which allows us to ventilate over fires and coordinate fire attacks in a realistic way.

Event though we do have a training facility available, our department faces the additional challenge of flying and boating personnel to Maui for training. There is an obvious logistical piece that we must manage carefully to meet training levels, and with that come travel and overtime costs. We are always looking for practical solutions that increase training efficacy and limit expenses.

### A Portable Training Solution

One of the ways MCFD manages its multi-island training challenge is with the Blue Card Command Program, which includes a 50-hour online course based on the "Fire Command" curriculum package. After completing the 50-hour online program, students can participate in Blue Card's evaluation/testing phase: a three-day simulation lab. Many Blue Card students complete the sim-lab portion at Command Training Centers (CTC) situated throughout the continental United States. However, one of the unique aspects of the program—and one that makes Blue Card ideal for a department like ours—is the CTC in a Box. This is basically a cache of laptops loaded with the simulations necessary to complete the three-day evaluation sequence. The CTC in a Box allows us to bring training from Maui to our members on Moloka'i and Lana'i—the two other inhabited islands we serve.

We exercise our Blue Card command and control skills on a quarterly basis. Annually, we complete a live-fire, real-time multi-company response in order to exercise our command and control capabilities from the fast-attack position. It is the culminating event of all our suppression training within that year. This training allows us to practice the transition from a fast-attacking IC to a strategically positioned IC.

In October 2012, we got a real-life opportunity to put our Blue Card training to the test. Only half of our officers had completed the three-day certification when we got toned out to a large, two-story commercial building with a working fire on the second floor of the Delta Side. The building sat between two heavily occupied, two-story condominiums. The call came in at approximately 0600 hours on a weekend.

The alarm was quickly upgraded. In our system, this means six engines, two trucks, one rescue, one hazmat, two response chiefs, and administration positions were dispatched, exhausting about 95 percent of our response force on that island. I was called out from my home approximately 50 minutes from the fire. As I drove to the scene, I listened to the radio communications. I had never heard our people speak with such calm and clarity. When I arrived, the organization seemed in control. The initial strategy was offensive with coordinated vertical ventilation and attack lines to the second floor for fire control. The battalion chief for that shift, Capt. Kelan Puaa, was on temporary assignment. After he arrived on scene, he switched the strategy to defensive as the fire had taken hold of the attic. Prior to the Blue Card training, our members

## Island Interface

Even paradise gets its share of wildfires.

Although Maui can be quite humid, it's not immune to wildfire activity. The south and west sides of the island—the sides most popular among tourists—burn the most frequently. These fires burn in the Kiawe trees and light brush, traveling on the strong, swirling winds and wreaking havoc on county fire resources. These fires travel hot and fast, typically running into highways, where they prevent tourists from getting to the airport and prevent locals from getting to work.



PHOTO COURTESY MCFD

would have been unsure of this decision. It was fortunate that Captain Puaa had just completed his Blue Card certification prior to this call. He organized the building into divisions and assigned division supervisors (something else we would have been unsure of previously). As the incident progressed, more companies arrived on scene. Only half had received their Blue Card training. You could hear a significant difference in communications between those who had completed the training and those who had not. This gap would soon catch up with us. We employed multiple operational channels to minimize radio chatter. That went sideways quickly; we lost track of resources and assignments. At that point, we were defensive, so all resources were positioned outside and beyond the collapse zone. Still, we were disconnected throughout portions of the incident, and trying to account for our resources was difficult. We did manage to get things under control, and the fire did go out. The support functions within the command post were great, which allowed us to transition command well. However, the difference between the Blue Card personnel and those who had not received their training was pretty clear.

The moral of the story is that the Blue Card system made our department better. Its positive effects are numerous and appear at many levels. It has had a huge impact on our department at many different levels—from the old school officers down to the rookies just out of recruit school. The standardized perspective, communications, and actions have simplified things for everyone, including our officers. Decisions are clearer, and unnecessary communications have been minimized. Coordination and accountability are improved.

We first considered a program like Blue Card not only because it allowed us to bring training to all our members, but because I could see the system would deliver great training impact in a relatively short time for a good price. Although this program is new to our system, it has merged well into our existing training program. We have certified all of our company officers and battalion chiefs. Our driver operators/acting officers have completed the online course and currently are completing the officer certification. Our department is still in transition, but the future looks bright, and we now have a good foundation to build upon. We are considering a fixed CTC in the near future so we can host certification labs for other counties within the state of Hawaii. **BS**



*Amos Lonokailua-Hewett is a newly promoted battalion chief with 19 years in the fire service, all with the County of Maui. His last assignment was with the training bureau for 3.5 years, where he trained and certified new recruits. He is the lead instructor for fireground operations and Blue Card command and control training for the department. He has spent time as a captain on a Ladder 3, which also commands a rescue boat. Amos is lead for the Research and Development Committee in the department, as well as works on various projects to include SOP development and apparatus standardization.*



PHOTO RICHARD APANA

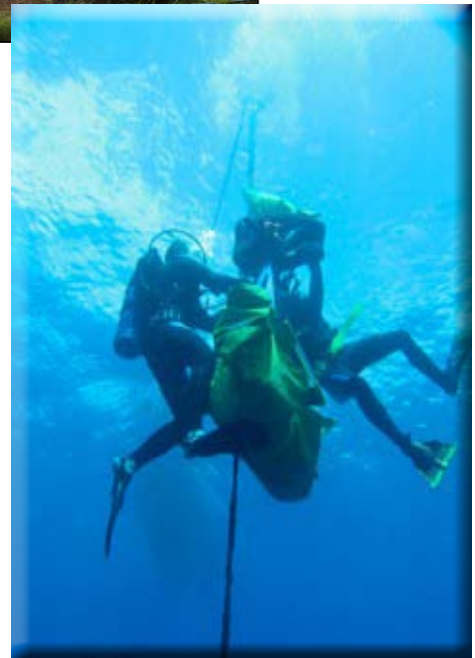


PHOTO KEVIN McAFEE

**Azure-blue waters and surreal mountains sometimes serve as picturesque backdrops for trouble. MCFD responders not only know and respect the terrain, they are thoroughly prepared to work in any environment.**

**[Click here!](#) Questions or comments for about this article? Join the discussion at the **B SHIFTER** forums.**

# A Team-Based Approach to Self-Survival Training

Learn how one department worked with its neighbor to fund & staff the IAFF's Fireground Survival Program.

BY PAT DALE



PHOTOS JANET JENSEN

**A**s the operations chief of the Olympia (Wash.) Fire Department, I understand that any of my firefighters could run out of air and/or become lost, disoriented, injured or trapped during interior fireground operations. With this in mind, I want to do everything I can to prepare my firefighters and my department for the unthinkable mayday situation.

One of the things that can help us prepare is the International Association of Firefighters (IAFF) Fire Ground Survival (FGS) Program, which provides mayday-prevention and incident-operations training. The program delivers situational-awareness education to individuals and departments to help them prevent and prepare for maydays. Taught by IAFF FGS-certified instructors, the program utilizes NIOSH reports, incident-management techniques, hands-on training and best practices for self-survival.

As invaluable as this program is, its implementation can prove challenging for smaller departments like mine, or others with limited resources. In this article, I will briefly describe the FGS program, outline some of the obstacles to implementing the program and describe how my department used teamwork to overcome these challenges.



## Core Components

The IAFF FGS Program has a five-part curriculum that covers the following:

- Preventing the mayday;
- Being ready for the mayday;
- Self-survival procedures;
- Self-survival skills; and
- Firefighter expectations of command.

The FGS program offers the following courses, most of which are required:

1. IAFF FGS Online Awareness Course—This online training program is free of charge to IAFF affiliate organizations and is the prerequisite to any of the next levels of certification.
2. IAFF FGS Train-the-Trainer Course—IAFF master instructors certify department members to teach others. To participate in the course, members must: complete the Online Awareness Course; be a firefighter or be employed by a fire department and involved in a fire-service training program; have one year of teaching experience; demonstrate the ability to teach from prepared materials; and be certified to the NFPA Instructor I level or equivalent. IAFF-affiliated fire departments can schedule a four-day FGS Train-the-Trainer Course through the IAFF Occupational Health, Safety and Medicine Division. The fee for the course is \$45,000 for up to 30 students.
3. IAFF FGS Operations Course—There are two delivery options:
  - a. Direct Delivery. This option is hosted by a fire department for its own members after they have completed the Online Awareness Course. This option provides six IAFF master instructors for three days (24 hours) of instruction. The fixed fee is \$35,000 for up to 30 students. Departments can purchase props from the IAFF for \$12,000, or they can build their own using IAFF specs.
  - b. Indirect Delivery. This option is available to fire departments that have completed the Train the Trainer course. The department utilizes its own IAFF-Certified FGS instructors and, when needed, FGS assistant instructors (see below) to deliver course material to members who have completed the Online Awareness Course. The department must purchase props through the IAFF or build them according to the IAFF's specs. IAFF branded signage is required as well.
4. IAFF FGS Train-the-Assistant Instructor Course—During the Train-the-Trainer Course, selected department members are trained to assist the FGS-certified instructors in training members of their own department. There is a \$200 fee per member. **Note: For complete details of the certification process and fees, visit [www.iaff.org](http://www.iaff.org)**

## Challenges

As you can imagine, the program might be cost-prohibitive for smaller departments or even larger departments that have suffered serious funding cuts. Many department training budgets have been slashed to keep fire stations open and engines rolling. However, I personally see the FGS program as an investment in safety rather than an expense. I completed the FGS Train-the-Trainer Course, and it exceeded my expectations. The curriculum is some of the best I have encountered, bolstered with contemporary fire-science data and NIOSH case studies.

Aside from cost, another challenge departments with limited resources might encounter is staffing. In my experience, it takes significant resources



The IAFF's Fire Ground Survival Program incorporates hands-on training as well as classroom instruction, which helps make the curriculum pertinent and dynamic.

to deliver any new training program, and the FGS program is no exception. Simply convincing a department's administration to adopt and pay for a new program takes a lot of time and legwork. You'll need someone to develop and submit the proposal to department decision-makers. If it gets approved, you will need staff to develop (and eventually revise) a detailed plan for the training process, and you'll need someone to create department guidelines or policies to complement the program. This takes a lot of personnel hours that many departments can't spare.

The final (and biggest) challenge is a logistical one. The FGS program has specific host-site specs, required for safety and standardization, which few departments can meet. The program requires a training structure/facility (e.g., training building, training tower) with the following:

- Three or more floors with windows on each floor where ladders can be positioned;
- Three or more rooms no less than 10 feet x 10 feet. Rooms must have furnishings that can be moved from room to room. Rooms must be able to be darkened;
- Anchoring points must be available on each floor for securing belay systems;
- Two or more entrances /exits to structure; and
- Electrical sources must be available.

In addition, the program requires a large area where multiple skills can occur without interfering with each other—an area measuring 100 feet x 100 feet or more is recommended. It also requires training grounds, training equipment, medical and logistical facilities, equipment and PPE. Air and rehab support must be available at all times during hands-on training.

The FGS program also requires a space for housing the props associated with the survival skills and techniques training. This space must be out of the elements (either indoors or under a shelter) and it should be close to a classroom facility.

**Overcoming Obstacles the Olympia (Wash.) Way**

In 2012, an executive board member of the Washington State Council of Fire Fighters asked me about hosting the IAFF FGS Program in Olympia. He had previously approached the larger metro fire departments in Washington State, but even they could not accommodate the program due to facility, funding or staffing constraints. Operating alone, my department could not have participated in the FGS program either—we simply didn't have the budget.

We did, however, have a great facility. In 2008, the gracious citizens of Olympia passed a fire-department bond, which included a new training center. The performance-based training facility—named the Mark Noble Regional Fire Training Center (MNRFTC) after late Olympia firefighter Mark Noble—was completed in early 2012.

Personnel for the FGS program would have been difficult for us as a singular department, but we had already tackled this difficulty as well, thanks to our new facility. Staffing the MNRFTC with our department's limited numbers would have been impossible, so we approached our neighbor, Lacey (Wash.) Fire District 3, about merging our training staff with its training team. We named this regional training division the Capital Metro Fire Training, and it provides training to approximately 180 members from both departments.

**A Perfect Fit**

**FGS Program Aligns with Existing Department Training**

Part of my job as operations chief is to run my department's training center. Under the direction of the fire chief, I developed the following approach:

1. We utilize a regional perspective to ensure cost recovery and provide a format for sustainability.
2. We use known/recognized curriculums associated with respected fire-training programs. Initially, we focused on three of them:
  - a) Command training via the Blue Card Command Certification Program;
  - b) Live-fire training utilizing The Nozzle Forward training program as applying Blue Card's training in context; and
  - c) Truck company operations training (yet to be developed).
3. We utilize train-the-trainer formats whenever possible.
4. We employ a philosophy of connecting strategic, tactical and task levels whenever possible.

The IAFF FGS Program fit perfectly with our approach to training, specifically:

1. It allowed us to work with a neighboring department—and others within our state and beyond;
2. It's a tangible curriculum associated with a known fire training program and a known entity;
3. It allows us to take advantage of the FGS's train-the-trainer format; and
4. The training strives to connect the strategic, tactical and task level training whenever possible.

—PAT DALE, OLYMPIA (WASH.) FIRE DEPARTMENT

With training staff in place, the only hurdle that remained was the \$45,000 necessary to fund the FGS Train-the-Trainer Course. The Capital Metro Training venture provided a platform to initiate financial discussions with Lacey Fire District 3. By using a combination of operating and capital budgets from both Olympia and Lacey, we were able to raise most of the required \$45,000. We chose members from the Olympia Fire Department and Lacey Fire District 3 to attend the Train-the-Trainer class. This totaled 16 of the 30 maximum for the course. To further offset costs, we worked with the IAFF to invite members from both regional and out-of-state departments to attend our train-the-trainer. By the time the class was held in October 2012, the class was full. A combination of overtime at Olympia and Lacey, plus a newly implemented comp-time policy at Olympia, allowed us to compensate members for any off-duty time spent taking the class.

The IAFF FGS Program is the fourth training program implemented at the MNRFTC. Currently, Capital Metro Training is delivering the IAFF FGS program to in-service companies of the Olympia and Lacey Fire District 3 fire departments. Our certified IAFF FGS instructors are training our companies in strict accordance to the IAFF FGS curriculum, including the instructor to student ratio of 1:5. We plan to continue this throughout 2013 in order to certify our incumbent workforce. Once our instructors have gained experience teaching the course to all of our members, we will offer the training to the region.

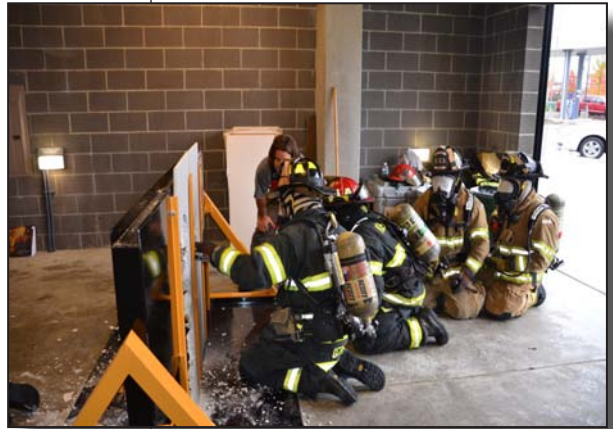
### Conclusion

I have more than 30 years of experience, and the FGS training reminded me of just how dangerous our profession is. We're talking about understanding and applying techniques to beat your way through a wall in the hope of finding a more survivable environment. With the information I've gained from the FGS program, I have concluded my previous training on rapid intervention, or "outside-in" rescue, has serious limitations. I'm now convinced that the best chance a firefighter has to survive a mayday situation is self-rescue. It's imperative that our members know how to save themselves. **BS**

 [Click here!](#) Start or join a discussion about this article at **B SHIFTER's** new forums.



*Pate Dale is the assistant chief of operations for the Olympia (Wash.) Fire Department. He has more than 30 years of fire service experience in numerous disciplines, including fire suppression, EMS, hazmat, training and management. Dale currently serves as an IMT Type 3 incident commander for Homeland Security Region 3.*



To ensure consistency and quality, the IAFF Fire Ground Survival program requires specific structures, facilities and equipment. The necessary props can be purchased from the IAFF or built to its specs.



# Functional Fitness

Can a new screening tool help fire departments predict & prevent injury?

By Connie Tillmans



PHOTO: ERNEST PRIMBIG STOCK PHOTOGRAPHY

I recently spent 15 months working in an outpatient physical-therapy clinic. During that time, I worked with many injured firefighters. On one particular day, I overheard one of them remark, “Brunacini used to say the fire department takes better care of its trucks than its people.” It is unfortunate, but the fire service is not alone in its frustration regarding injured personnel. Although athletic teams and industries might utilize pre-participation physicals and performance testing, neither of these appears capable of assessing human durability or predicting injury.<sup>1</sup> To augment these types of tests, fitness and medical professionals are now beginning to assert that a qualitative movement standard may be the missing variable.<sup>2</sup> How fast you can run a 40-yard dash or how much weight you can squat are measures of performance and can provide us only *quantitative* information. The piece that might be missing is the ability to rate and rank movement quality independent of fitness and performance. It has become apparent that we must recognize the difference between movement *capacity* and *movement competency*.<sup>3</sup>

The Optimum Performance Pyramid shown in **Image 1** illustrates the idea that functional movement patterns are necessary to support movement capacity and specialization.<sup>4</sup> Research findings indicate that taking movement quality into consideration could be the key to reducing the rate and severity of injury.<sup>5,6,7</sup> The Functional Movement Screen (FMS) offers the fire service the opportunity to take a giant step forward in protecting its personnel and its budgets.

### FMS: The Missing SOP?

The idea that a screening tool can have predictive value is not new. Blood pressure and blood work can indicate when an individual is at risk for a heart attack or stroke, even when the individual is asymptomatic. Blood-pressure and blood-lipid measurements allow a physician to intervene before a life-threatening event occurs. FMS was designed with the same idea in mind: Identify those who are at risk of injury and implement corrective strategies. This group of seven tests exposes mobility and stability deficiencies, painful patterns, and differences between the right and left sides, which allows them to be addressed before problems arise.<sup>8</sup> **(Please click the paperclip at left to view the seven tests that make up FMS.)** Fundamental and higher-level movement patterns are assessed, with correction of the fundamental movement patterns taking precedence over the higher-level patterns. Established criteria allow the tester to objectively score each pattern, with 21 being a perfect total score.<sup>9</sup> Although this group of tests was developed with high-school athletes in mind, its ability to identify individuals at risk has been examined in other settings, including the NFL.

Initial findings within the NFL indicated that players who scored 14 or below were 2.2 times more likely to be injured and that players who presented with asymmetries were 1.8 times more likely to be injured.<sup>10</sup> NFL research also revealed that if a player had an FMS score of 14 or less, the probability of a time-loss injury increased from 15 percent to more than 50 percent.<sup>11</sup> Much like the NFL, the fire service invests in training, maintaining and protecting their personnel and they, too, have begun to investigate the effectiveness of FMS utilization.

In 2007, Peate et al. published a study that involved 433 firefighters. One of its purposes was to examine the effectiveness of interventions that were based on FMS data. Once screened, firefighters participated in a multifaceted program that included exercises designed to improve flexibility and core strength. During a 12-month period, time loss due to injury was reduced by 62 percent, and the total number of injuries was reduced by 42 percent.<sup>12</sup> Also in 2007, Captain Michael A. Contreras of the Orange County Fire Authority (OCFA) compiled data following the implementation of a comprehensive wellness program, which included FMS.

In 2002, Captain Contreras began to develop a wellness program that placed an emphasis on annual physicals, fitness assessments, proper training in regard to workouts, and education. An overall reduction in worker's compensation was noted. However, in 2006 Captain Contreras sought to further lower injury-related costs, and that is when FMS was introduced. Data collection began in 2002 with 786 firefighters. The overall worker's compensation cost being generated at that time was just under \$8

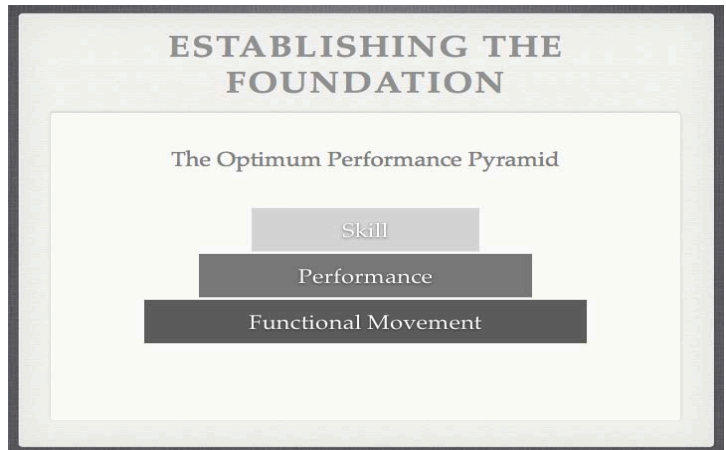


Image 1

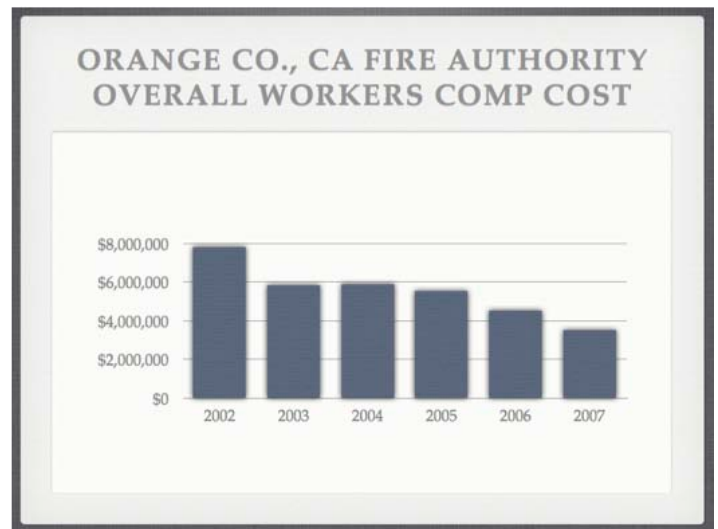


Image 2: A Southern California fire department noted marked reduction in worker's compensation costs after introducing a wellness program that incorporated FMS.

million. In 2007, Captain Contreras completed his data collection. By that point, the number of personnel had risen to 828 firefighters, however worker's compensation had fallen to just below \$4 million. (See Image 2.) Injury cost per employee dropped from about \$10,000 to under \$5,000, as did cost per injury, falling from approximately \$22,500 to around \$7,500.<sup>13</sup> These findings primarily reflect the effectiveness of a multifaceted wellness program. Captain Contreras would continue to investigate the components of an effective wellness program, this time focusing his attention on FMS.

As wellness and fitness coordinator, and later as academy coordinator, Captain Contreras remained concerned with the toll that injuries were taking on OCFAs personnel and system. As academy coordinator, he continued to investigate how FMS could decrease the rate of injury, increase individual work capacity, and protect not only fire-service personnel, but also the department's budget. He screened a total of 112 recruits who participated in academies 33–36 and incorporated corrective exercises into their physical training. The data revealed that recruits who scored 14 or below were three times more likely to become injured. When tower times were compared, the 14 and below recruits also demonstrated a decreased work capacity when compared to recruits who scored 15 or higher. Following the academy, all recruits were then monitored within the system for two to three and a half years, depending upon when they had completed their training.<sup>14</sup>

Recruits were broken into two groups: those who scored 14 and below and those who scored 15 and above.

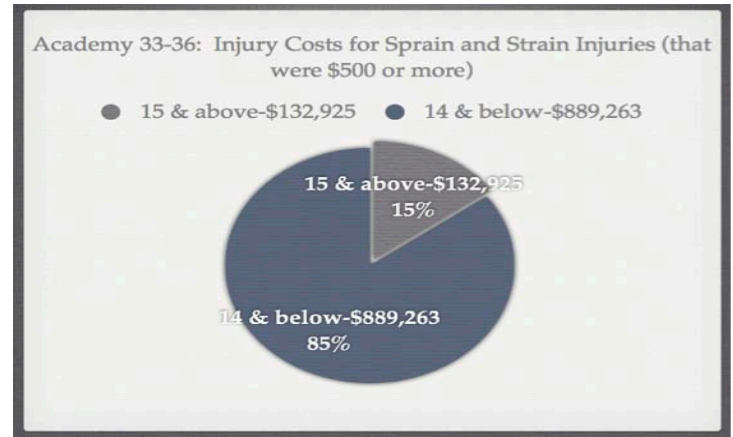


Image 3

Recruits	FMS™ Score	
	14 or less	15 or more
113 Recruits		
Number	53	59
Percentage	47%	53%

Criteria were established for the medical claims. The claims analyzed were those that could be classified as sprain/strain injuries and exceeded \$500 in cost. A total of 43 claims were analyzed, with a distribution as follows:

Recruits	Recruits Involved in Injuries Analyzed	
	14 or less	15 or more
113 Recruits		
Number	31 / 53	12 / 59
Percentage	58%	20%

As the data shows, 58 percent of the 14 and under group reported injuries that met the claim criteria, while only 20 percent of the 15 and over group generated these types of claims. The differences between these two groups became even more apparent when the actual claim costs were examined.<sup>15</sup>

While the 15 and over group (59 recruits) was slightly larger than the 14 and under group (53 recruits), the 14 and under group generated more than



six times the worker's compensation cost when compared to the 15 and over group. (See Image 3.) Upon further analysis of the claims, it was also noted that the injuries sustained by the 14 and under group had a higher average cost. While 45 percent of the claims reported by the 14 and under group fell into the \$10,000–\$350,000 range, 67 percent of the injuries reported by the 15 and over group cost less than \$5,000. What these ranges seem to indicate is that not only was the overall cost for the 15 and over group less, but also that the injuries sustained by the 15 and over group were less severe (if based on cost.) Taking it all one step further, average claim costs were then calculated. Consistent with all of the previous findings, the average claim cost for a recruit within the 14 and under group (\$28,685) was substantially larger than the average claim cost for a recruit who scored 15 or higher (\$11,077.)<sup>16</sup> (See Image 4.)

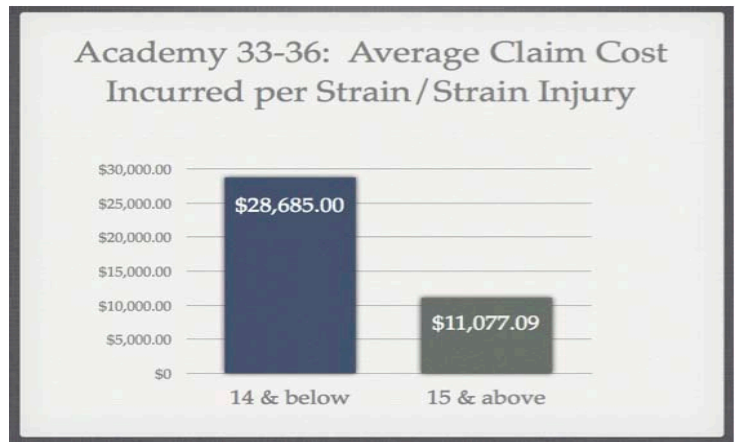


Image 4

The existing data regarding FMS and the fire service is extraordinarily compelling. Consistent with the NFL data, a score of 14 or below within the fire service appears to be a significant predictor of injury. The ability to identify the individuals at risk generates an opportunity to intervene. Successful intervention not only benefits the individual firefighter, but also department budgets. What becomes apparent in Captain Contreras' data is that small groups of firefighters with poor movement patterns have the ability to greatly impact department budgets. However, when FMS is included as a component of a comprehensive wellness program, it becomes possible to identify those at risk. Once identified, poor movement patterns can be addressed, which reduces the individual risk and can lead to increased work capacity and a decrease in unfunded liability.

As a clinician, I have had the opportunity to work with injured firefighters. It is a demanding profession and the risks are inherent, but the available data indicates that firefighters with better movement patterns are injured less frequently and less severely. If FMS is utilized to help decrease the rate and severity of injury, it could play a significant role in helping firefighters make it to the end of their careers with less disability and pain. By combining performance testing with FMS, a more complete assessment of human function has been created.<sup>17</sup> The opportunity for a paradigm shift is at hand. What currently exists is an occupation with one of the highest rates of injury trying to manage within a climate of shrinking budgets. The good news is that an evidence-based solution exists. With its ability to gauge movement quality and predict injury, FMS is a standard operating procedure capable of sparing firefighters and city budgets unnecessary harm. **BS**

To learn more about the Functional Movement Screen, go to: [functionalmovement.com](http://functionalmovement.com) and [graycookmovement.com](http://graycookmovement.com).



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rehabilitation and several years as a consultant to Disney. She believes in taking an evidence-based approach to medicine and would like to continue to evolve as an orthopedic preventive medicine specialist. Connie's interest in developing injury-prevention programming for the fire service is the direct result of time spent with firefighters in outpatient rehabilitation, the mounting research indicating the effectiveness of FMS, and Captain Contreras' groundbreaking utilization of this approach in Orange County, Calif.

The author would like to thank Alan Brunacini for the opportunity to present this information and Boe Garry for introducing her to Alan Brunacini. She would also like to thank Lee Burton, Gray Cook, Mike Contreras, Kyle Kiesel, Julia Galbus, and Michelle Garrido Sutton for their input, guidance and support. Finally, the author would like to extend her eternal gratitude to the staff at the Apple Store in Scottsdale, Ariz., for their unfailing patience and genius. Connie can be reached at [connie.tillmans@gmail.com](mailto:connie.tillmans@gmail.com).

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# Response Under Fire

**Bulletproof your response to violent incidents by adapting tried-and-true hazard-zone systems.**

BY CHRIS STEWART

**T**he American Fire Service has seen an increase in large-scale violent incidents. We have bad guys killing people on mass scales. These events are no longer isolated in the “rough” areas of our cities or communities. They can occur anywhere—schools, businesses and places of worship.

Recently, my department responded to a violent incident in a three-story office building. A man had become angry with an attorney after things didn't go his way. He went to his car, retrieved two guns and began shooting in the office. Upon dispatch, we were aware that we had patients with multiple gunshot wounds, but we had no idea where the bad guy was. The dispatch information indicated we should stage our units for PD, as is our standard operating procedure for this type of active violent event. The first-arriving company officer (IC No. 1) had all of the responding units stage in a safe location, which was also advantageous for operational purposes. He was able to make contact with a PD supervisor just outside of the hazard zone who had established a safe corridor and work area with heavy force protection. He provided patient information, allowing IC No. 1 to assign appropriate units to the treatment sector. They made entrance together, treated, extricated and then transported all the patients. IC No. 1 was able to clearly communicate the conditions and plan to the first-arriving battalion chief (IC No. 2), who was able to communicate with the PD supervisor directly, allowing for necessary information sharing. Once the patients were gone, the fire units left the hazard zone, and the police continued their hunt for the bad guy.

Without a well-coordinated, well-communicated plan, this event could have spiraled out of control, leading to firefighter injuries or worse. It is time to address violent incidents and adapt our fireground operating systems to these events to ensure crew safety and public confidence in our response.

## Strategic Decision-Making

Since the beginning of my career, I have been taught that all fireground operations should be managed utilizing our strategic decision-making model within a standard, well-practiced incident-command system. In order to improve my ability to manage risk on non-fire scenes, I have had to adapt this highly effective decision-making matrix for any type of incident. It's simply not enough to rely on gut instinct. Our safety depends on our ability to define the possible hazards and to have a well-communicated and practiced response to them.

This decision-making model includes the incident's critical factors; position in the risk-management plan; strategy; incident action plan; and the continual review/revision based on actions and conditions. This cyclical process continues until all tactical benchmarks are met. On the fireground, the tactical benchmarks are all clear, under control and loss stopped. What if we applied



PHOTO: LOREN RODGERS/BIG STOCK PHOTOGRAPHY

Firefighters are responding to a growing number of violent events. In some cases, fire-rescue personnel are the bad guys' target. Applying our standard hazard-zone systems to these incidents can keep us safe while we work to help others.

this model to all incidents and, specifically, known violent incidents? I find it works beautifully.

### **Critical Incident Factors**

Identifying the critical factors on any incident scene is imperative to understanding the event and responding appropriately. We typically define this process as our size-up. What should a violent incident's size-up include? First, dispatch should provide at least a clue to the nature of the violence (guns, knives, explosives) and rapidly update information as it becomes available. I think a standard pessimistic (vs. cynical) approach based on the initial information is necessary. A standard set of critical factors for these types of incidents should include:

- Nature of violent incident;
- Location of incident and/or patients;
- Number of patients;
- Whether there is a history with this address and/or person;
- Based on the dispatch or my interpreted information, should we stage until the police department has rendered it safe? (In my department, many of our dispatches automatically require staging until the police have rendered the scene safe);
- Are the police on scene yet?
- Can I communicate directly with the police department either face to face or on the radio?
- If the entire scene is not safe, can the police department provide a safe corridor or work area to begin triage and treatment?
- If scene is totally unsafe, can the police department bring the injured patients to a safe treatment area?

Our up front information is rarely perfect. These situations evolve rapidly, and you should assume the information you initially receive will change. It is important to approach these incidents slowly and cautiously. Over committing too early can really put you and your crew in a bad position. Based on your size-up, you should balance your actions with a sound risk-management plan.

### **Risk-Management Plan**

It is critical that we base our actions on a sound risk-management plan. The standard risk-management plan we use on the fireground works perfectly for these incidents.

- ✓ We will risk a lot, in a calculated manner, to save savable lives.
- ✓ We will risk a little for savable property.
- ✓ We will risk nothing for what is already lost.

If we apply this plan to violent incidents, our chances to have a predictable, safe outcome for our firefighters increases significantly. For example, if my crew and I can enter a violent hazard zone with appropriate police protection in order to treat and extricate an injured person as part of a well-communicated plan, we will. I am not the least bit interested in getting shot, stabbed or assaulted, but I am willing take a *calculated* risk as a part of my job.

My crew and I will not be lured into a dangerous or uncontrollable situation to save nothing or something that is clearly lost. When you choose to stay back at these times, bystanders might verbally assault you. I am willing to get my ass kicked in this manner to keep my crew safe. I liken it to our Code 3 driving rules. As my former fire chief once said, "If you don't make it to the call, you can't do your job." If I can't keep my crew safe entering the scene, there is no way I can give anybody good care.

### Strategy

We don't often have strategy discussions in relation to non-fire incidents, but choosing our operational posture is important no matter the situation. Our strategy should define our actions based on our location and proximity to the hazard.

The terms offensive and defensive are very familiar to any company officer who has been semi-conscious during the past decade. An offensive strategy at violent incidents means entering the hazard zone to treat or extricate victims based on the assumption of the critical factors and the risk-management plan. This strategy involves communication with the police department, incident command (if a stationary IC or IC No. 2 is present) and other crews operating on the same scene. This is done by considering the same elements we consider when entering a structure fire, including how we are getting in, maintaining an effective exit plan and consistently evaluating the conditions. This means controlling the conditions within our power or leaving when we can't control them. Communication is critical for accountability, and it ensures that subsequent-arriving units understand the plan.

A defensive strategy at these incidents is defined by taking a posture outside of the hazard zone to stage until the scene is deemed safe, or to establish a triage, treatment and transportation system ready to accept patients removed from the hazard zone. This strategy is usually taken when we have prolonged violent incidents or during episodes that are so volatile that the police department is unable to ensure safe areas or corridors for our efforts. In this situation, our presence in the hazard zone may be detrimental to police activity, or we simply might not be able to plan for our safety or retreat. Again, if we become part of the violence, we are not able to do our job.

I have seen many incidents that have required a change in strategy based on the conditions and actions of either bad guys or the police department. In these cases, just as in the traditional fireground scenario, it is critical to recognize changing conditions. Once recognized, we must clearly communicate the change and verify an accountability process to ensure all of the companies have heard the change and retreated appropriately. This doesn't mean pulling our dresses over our heads and running away. It means removing ourselves to a safe area and being ready to do our job from this position.

### Incident Action Plan

These incidents are very fluid and dynamic. As such, they require each department to follow their own procedures and best practices consistently. The incident action plan (IAP) must be safe, well communicated and consistently evaluated against the conditions and the effectiveness of the actions. This requires an acting incident commander (IC). Whether that person is the captain/lieutenant/field general working in the hazard zone or a command officer sitting in a chief wagon, they must manage the plan simultaneously with the work to ensure firefighter welfare.

As in fire incident command, if the conditions and actions don't match, or if the situation is not improving, a new approach is required. This new approach must consider both firefighter safety and the effectiveness of the work. Communicating any changes to the IAP ensures that all units are working safely and within the same plan.

### Conclusion

For years, company officers in our rougher first-due areas have practiced a higher level of risk management with regard to non-fire responses. We have traditionally assigned this skill area to the street smarts and experience acquired when working in dangerous environments. We have taught our



crews to remain self-aware, and we have watched out for each other on these calls. These unwritten behaviors have been successful up to now. However, the level of risk, uncertain nature and frequency of these events require a more definitive approach.

Applying our standard decision-making model is an effective way to handle known violent incidents upon dispatch. I'm not sure really what the solution is when someone stages an event specifically to attack firefighters. It is imperative we remain aware of our surroundings; when things smell bad, they usually are. We can use these gut feelings to keep each other alive.

There are certain issues that need a serious tone. Firefighter safety is not a joke. Let's remember, however, we are B-Shifters. Let's be serious with a smile. As the great prophet and legendary anchorman Ron Burgundy once said, "I'm proud of you fellas. You all kept your head on a swivel, and that's what you gotta do when you find yourself in a vicious cock fight!" **BS**

 [\*\*Click here! Visit B SHIFTER's new forums to discuss your opinions with other company officers.\*\*](#)



*Chris Stewart began working for the Phoenix Fire Department (PFD) in 1991. He became a firefighter in 1993, and has spent the majority of his career working on busy engine companies. In 2000, he became the company officer of an engine company. Chris has served as a recruit training officer at the PFD training academy. He has developed multiple procedures and training for the PFD including high-rise operation, air management and bulk fuel storage facilities. He is currently assigned to Battalion 3 on B Shift. Chris was fortunate enough to marry his high-school sweetheart and is proud to have two sons who take after their mother.*

# Blue Card Vocab Primer

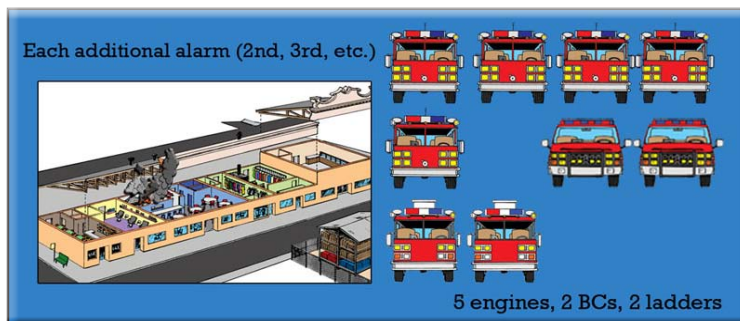
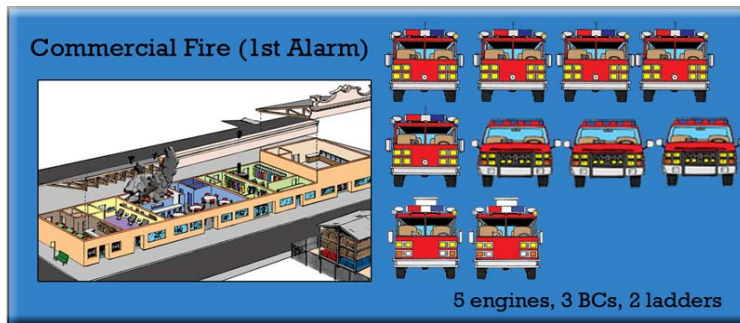
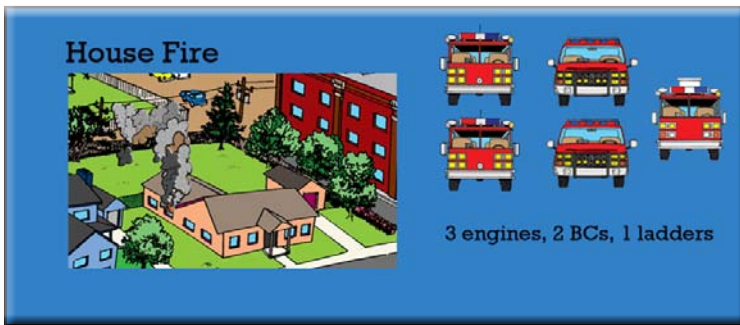
**Definitive answers to your Blue Card terminology questions.**

BY NICK BRUNACINI

One of the recurring Blue Card requests we receive is for a Rosetta Stone of sorts, something that translates and describes the Blue Card deployment terminology. Real-world tactical scenarios provide the most basic and fundamental example of these terms. To this end, we will use a different scenarios to demonstrate the nuts and bolts of a Blue Card firefight.

## Level 1 Staging

Structure fires require multiple units to complete the tactical priorities for the incident and to maintain a safe tactical reserve. While staffing and resource levels vary by department, Blue Card recommends the following resource levels:



In the residential example shown below, Engine 1 was the first company to the scene of a house fire. When E1's officer took command of the incident, it automatically activated Level 1 staging procedures. Level 1 staging SOPs have the initial-arriving engine and ladder companies responding directly to the scene, along with the initial-arriving battalion chief. All other responding units must stage short of the scene to await an assignment from the incident commander (IC) prior to going to work.



At this point in our scenario, Engine 1 and Ladder 1 are operating at the scene. Engine 2 is staged at the west end of the block. Engine 3 is staged north-east of the incident scene. The initial-arriving battalion chief has not arrived yet.

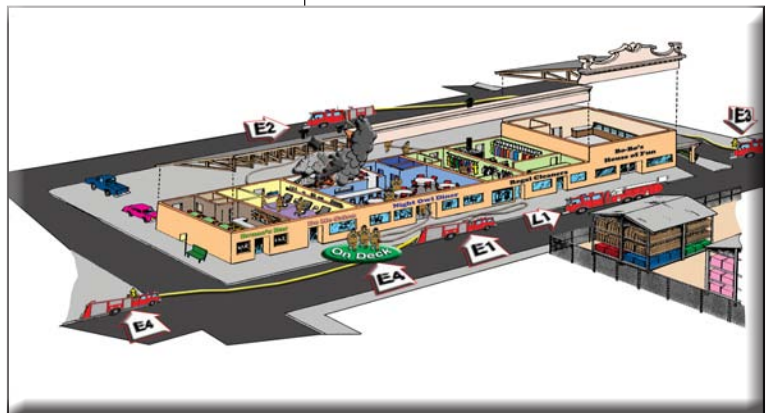
When Level 1 staging, engine companies should not pass their last water option, and ladder companies should not pass their last point of access to the structure. The intent of Level 1 staging procedures is to prevent later-arriving units from committing themselves to the incident operation outside of the IC's incident action plan (IAP). The only way the strategic level of the incident organization can manage the accountability for these later-arriving units is by purposefully assigning each unit to the incident operation.

Companies stage in their direction in relation to the incident scene. For example, consider this radio report for Level 1 staging units: "Engine 2 is staged west." The IC should acknowledge staging reports in the following fashion: "Command copies. Engine 2 is staged west." There is no need for the Dispatch to parrot back Level 1 staging reports.

### On Deck

There are major challenges associated with managing attack positions. These include air management, the standard company work cycle, sustaining the attack and maintaining a tactical reserve. The on-deck piece of the three-deep deployment model has a positive effect on all of these attack position management requirements.

Let's use the diner fire at right as an example. The initial attack position was established in Alpha. Engine 1 has advanced an attack line to the seat of the diner fire. Ladder 1 was the initial-arriving ladder company. They are checking the roof over the restaurant for fire extension and securing the utilities. The second-arriving engine company established the second attack position on the Charlie Side of the structure. Engine 2 advanced an attack line into the Delta exposure, the dry cleaner, to initiate a primary search





and to open up the ceiling to stop horizontal fire spread through the attic. Engine 3 advanced an attack line from the Charlie attack position into the Bravo Side exposure, the beauty salon, to initiate a primary search and to open up the ceiling to stop horizontal fire spread through the attic. At this point in the operation, all key tactical areas are covered.

The IC has assigned Engine 4 to assume “on deck” in Alpha. E4 will use E1 as their accountability location. The crew of E4 will stage on the Alpha Side of the building. The crew reports to the on-deck assignment ready to work. E4’s crew should bring their own hand tools (axes, pikes, irons, etc.). Any required attack lines will be secured from E1. On-deck units can be used in four different ways (in no particular order):

1. **To relieve existing crews**—In our example, E1 was the first unit committed to an interior position, and they will need to be relieved first. They are also operating in the area with the most active hazards. Using an on-deck deployment model allows exiting crews to have a face-to-face with their relief company. It also takes full advantage of face-to-face communications within the attack position.

2. **To serve as a rapid intervention crew (RIC)**—Rapid intervention is a capability. We run into serious operational problems when we try to make it a separate piece of the incident operation. The vast majority of firefighter maydays are resolved by crews who were assigned and in position prior to the mayday. Using on-deck crews to serve as a RIC allows us to use the existing incident organization and communications system. It also places rapid intervention capability anywhere the IC assigns on-deck crews.

3. **To reinforce existing positions within the attack position**—In our example, we have crews operating in three occupancies within the structure (Alpha, Bravo and Delta). Placing E4 on deck in Alpha positions them where they can quickly reinforce any of these three positions.

4. **To cover another position within the attack position**—Using our example, if the IC receives reports that the fire has extended beyond the Bravo position (E3’s assigned area) or the Delta position (E2’s assigned area), E4 can quickly be assigned to cover critical cutoff points/positions.



The IC’s on-deck assignment should go as follows:

“Command to Engine 4. Spot your apparatus on E2’s hydrant and have your crew go on deck in Alpha. E1 will be your accountability location.”

“E4 copies. Spot on E2’s hydrant and go on deck in Alpha. E1 is my accountability location.”

Because on-deck companies provide rapid intervention/tactical reserve for each attack position, they should bring the RIC bag/tools with them to the on-deck location. It is critical to note that in the event of a firefighter mayday, on-deck crews do not automatically deploy into the hazard zone. The IC must order them

to take action. In many instances, working crews may solve the mayday emergency. Flooding the area with additional crews may actually fragment and compromise the rescue effort.

On-deck crews should position themselves in the “warm zone” of their assigned area. This places a ready-to-work tactical reserve in the attack position. When a crew is assigned to an on-deck position, only the IC or their warm-zone tactical boss can order them to go to work. If on-deck crews must take immediate action (due to a known rescue or an urgent safety situation), they must notify the IC or be ordered into action by the warm zone tactical boss.



## Level 2 Staging

Level 2 staging is used for resources dispatched beyond the first-alarm assignment. These later-arriving resources should respond to a centralized staging location that is close enough to the incident to allow quick response, yet not so close that they inhibit access to the scene. Additional alarms should be dispatched on a logistics radio channel to reduce radio traffic on the tactical channel.

When requesting additional alarms, the IC should identify the location of the Level 2 staging area. The officer of the first unit to arrive at Level 2 staging should assume staging officer responsibility. The staging officer should maintain an inventory of all Level 2 Staging resources. Command should assign all units in Level 1 Staging prior to assigning units from Level 2 Staging unless a specific resource in Level 2 Staging is required.

Command should provide the staging officer with a minimum number of resources to maintain in Level 2 staging. When resources reduce to this minimum, the staging officer should notify command so they can decide if more resources are necessary.

In our example pictured at right, three engines and two ladder companies are standing by in Level 2 staging (to the right of the incident scene).




### Assignment by the IC


The IC bases assignments on the IAP. The IAP is developed after a size-up of the critical factors (conducted after arriving to the scene). In the case of structure fires, the initial size-up includes:

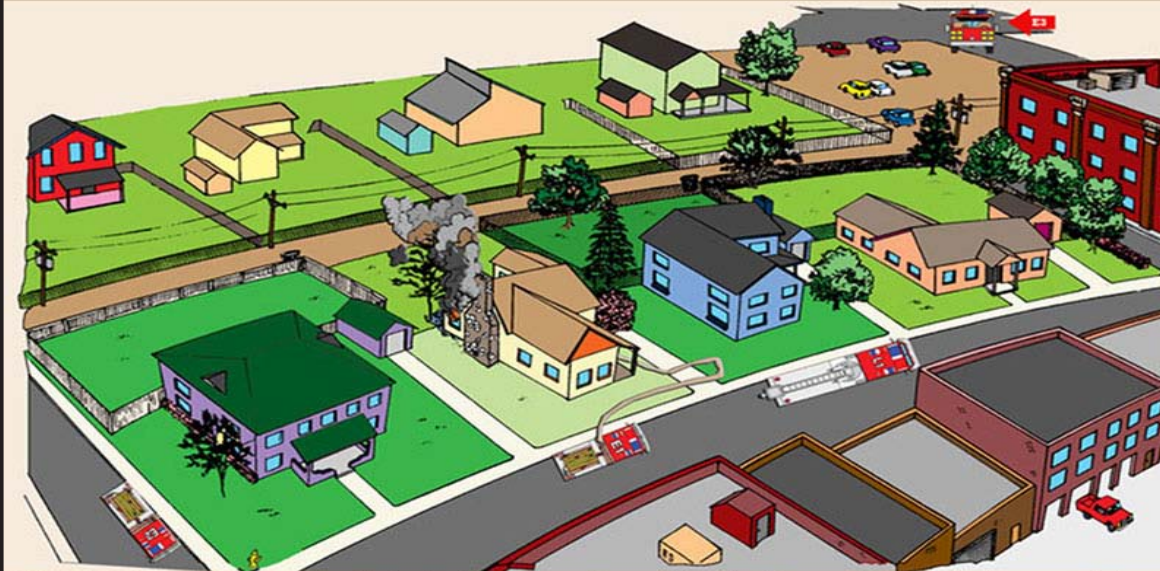
1. Type of occupancy;
2. Size and shape of the structure; and
3. Obvious conditions

#### Assignment Example 1 of 3—House fire. Initial IC sees/sizes up & reports:



“Engine 1 is on the scene of a small, single-level house with a working fire showing from the Bravo Side. 360 shows the house is one level. I am advancing an attack line through the Alpha Side for search, rescue and fire control. E1 is Alpha side accountability. We will be operating in the offensive strategy. Engine 1 will be Main Street Command.”





The initial size-up indicates a small, single-story house with a working fire. Because the IC took a few seconds to actually conduct a size-up, they were able to formulate the following incident action plan:

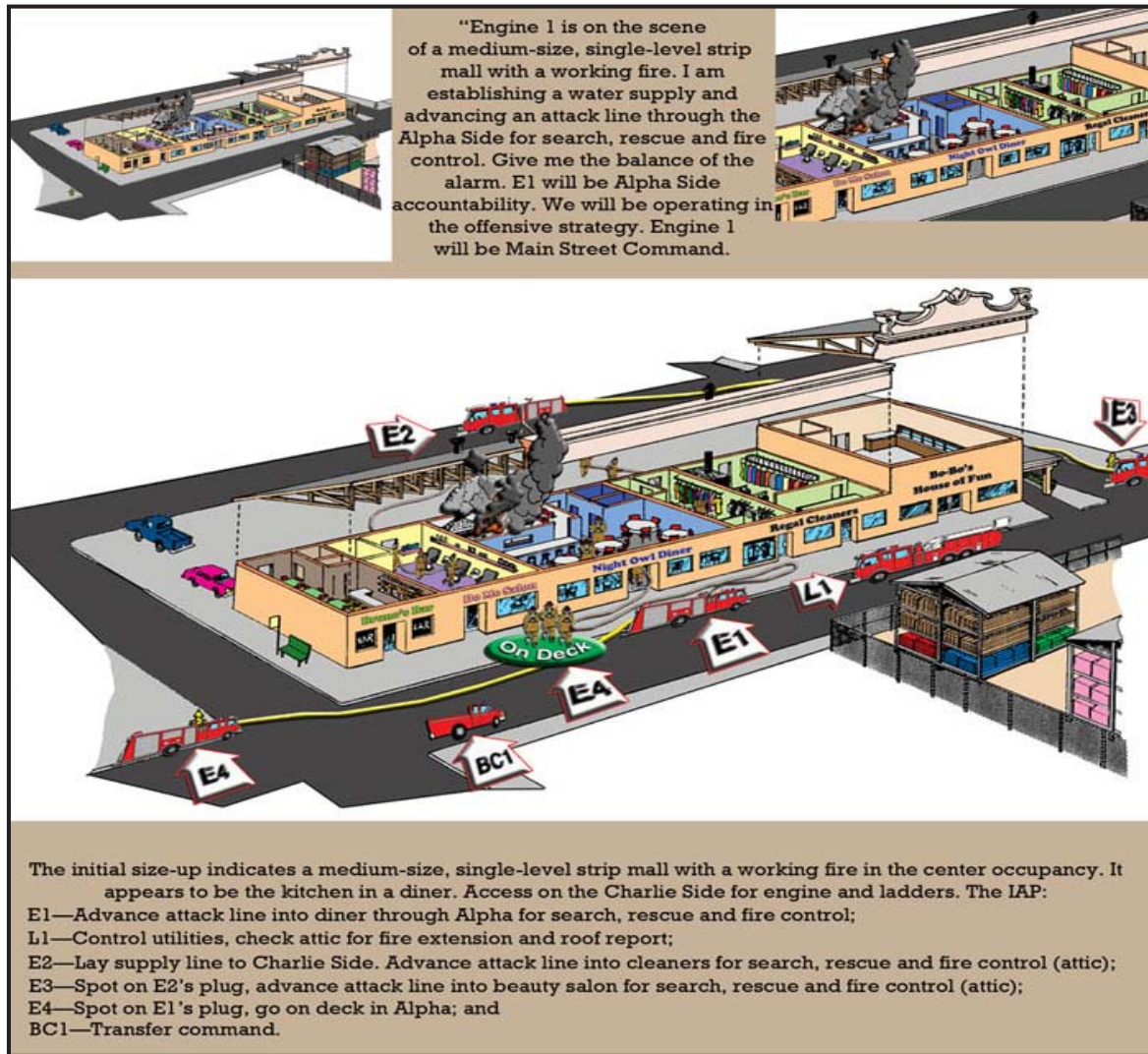
E1—Advance attack line through Alpha for search, rescue and fire control;  
 L1—Control utilities, horizontal ventilation;  
 E2—Assist E1 with establishing water supply and search remainder of house; and  
 E3—On deck in Alpha.

Because E2 and E3 Level 1 staged, the IC can assign them according to the plan (as opposed to having them self-deploy/freelance and disrupt the plan).

Command Training continued on pg. 43



## Assignment Example 2 of 3—Fire in a strip mall. Initial IC sees/sizes up & Reports:



“Engine 1 is on the scene of a medium-size, single-level strip mall with a working fire. I am establishing a water supply and advancing an attack line through the Alpha Side for search, rescue and fire control. Give me the balance of the alarm. E1 will be Alpha Side accountability. We will be operating in the offensive strategy. Engine 1 will be Main Street Command.

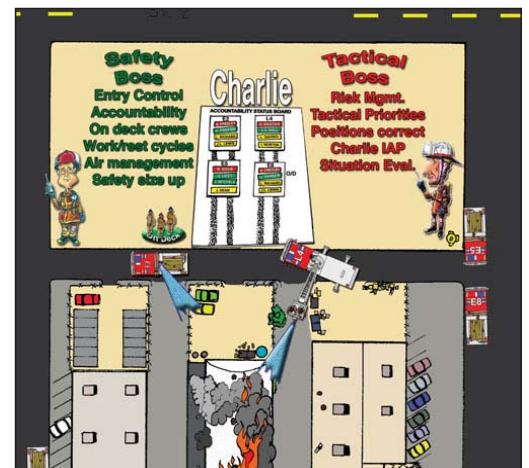
The initial size-up indicates a medium-size, single-level strip mall with a working fire in the center occupancy. It appears to be the kitchen in a diner. Access on the Charlie Side for engine and ladders. The IAP:

- E1—Advance attack line into diner through Alpha for search, rescue and fire control;
- L1—Control utilities, check attic for fire extension and roof report;
- E2—Lay supply line to Charlie Side. Advance attack line into cleaners for search, rescue and fire control (attic);
- E3—Spot on E2’s plug, advance attack line into beauty salon for search, rescue and fire control (attic);
- E4—Spot on E1’s plug, go on deck in Alpha; and
- BC1—Transfer command.

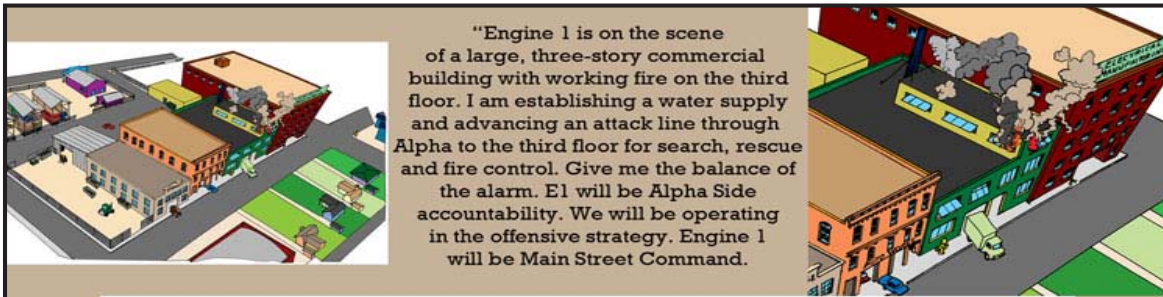
### Warm-Zone Tactical Bosses

We use the term warm-zone tactical boss to describe officers who manage the tactical level of the incident organization. While these warm-zone supervisors can briefly size up interior conditions, they do not manage from the inside of the building. In larger fire departments, warm-zone bosses are typically later-arriving chiefs or safety officers. Rank and terminology (e.g. sectors, divisions or groups—referred to as SDGs in the Blue Card online program) are secondary to the tactical boss’s ability to control and manage the task-level companies assigned to them.

The tactical boss is responsible for managing the ongoing operation in their assigned area (Charlie, in our example). This requires matching the tactics to the level of risk. In this example, large, exterior master-stream application (greater than 500 gpm) is the proper tactic for the defensive strategy. The tactical boss is also responsible for cycling task-level companies in a manner that sustains the operation all the way to the end. “Charlie” must connect the IC’s IAP with the completion of the tactical priorities for the Charlie attack position. Connecting the proper actions to the current and forecasted conditions paves the way for safe task-level working conditions. Accountability hardware is a tactical-level tool. In this example, the battalion chief’s partner assumes safety-officer responsibility for the Charlie attack position. This responsibility is focused on managing entry control, the work-rest cycles of assigned companies and tactical-level air management.



Assignment Example 3 of 3—Fire in a commercial structure. Initial IC sees/sizes up & Reports:



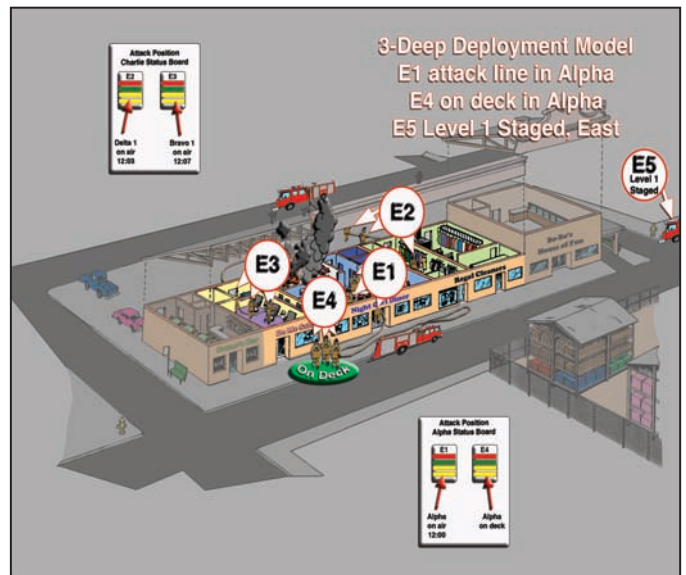
The initial size-up indicates a large, three-story commercial building with a working fire on the third floor.

Bravo and Charlie are immediately adjoining, separated by masonry walls. Third floor is partial. IAP:

- E1—Advance attack line through Alpha to front stairs. Work your way to the third floor;
- L1—Bucket up, report on conditions, second-floor roof and access to third floor;
- E2—Lay to Charlie Side, advance attack line to rear stairs. Work way to third floor;
- E3—Supply line to L1. Crew goes on deck Alpha;
- E4—Spot on E2’s plug. Go on deck in Charlie; and
- BC1—Transfer command.

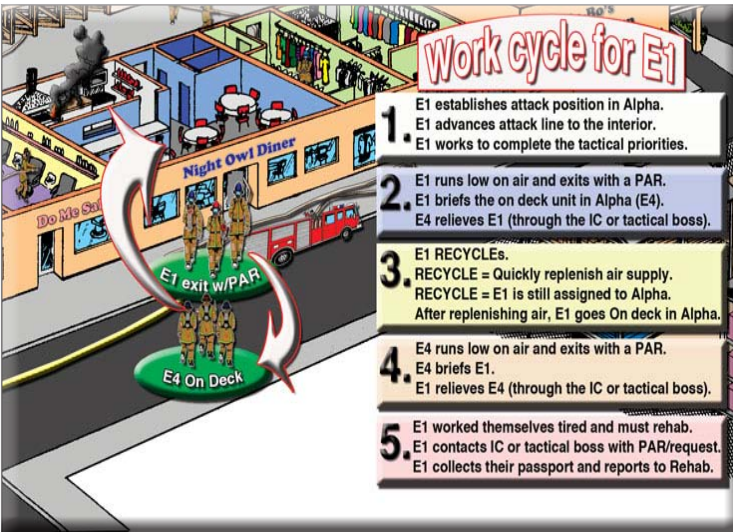
**Three-Deep Deployment Model**

The three-deep deployment model provides command with a staffing solution that allows for an uninterrupted work cycle within each attack position. This deployment model fits, supports and reinforces both the incident organization and hazard-zone communications. In the pictured example, 1) E1 is conducting an interior attack while 2) E4 is standing by in an on-deck position in Alpha’s warm zone. E5 in Level 1 Staging 3) represents the third level of the three-deep model.



Command Training continued on pg. 45





### Standard Company Work Cycle

Companies have very predicable work cycles. The standard company work cycle is directly tied to the amount of time an SCBA air cylinder will last (typically 14–15 minutes). Using a three-deep deployment model allows the IC to place on-deck companies in all the key positions quickly. This puts ready-to-go resources in the right places before they are actually needed. Staffing attack positions in this manner facilitates safe and effective air management and supports a round-trip-ticket for those on the task level. **BS**



**Click here! Start or join a discussion about this article at B SHIFTER's new forums.**



Nick Brunacini joined the Phoenix Fire Department (PFD) in 1980. He served seven years as a firefighter before promoting to captain and working nine years on a ladder company. Nick served as a battalion chief for five years and in 2001, he was promoted to shift commander. He then spent

the next five years developing and teaching the Blue Card curriculum at the PFD's Command Training Center. His last assignment with the PFD was South Shift commander; he retired from the department in 2009. Nick is the author of "B-Shifter—A Firefighter's Memoir." He is also the co-author of "Command Safety."



# When & Where Do You Put the Wet Stuff?

**This issue's interactive column asks readers to share their department's water-application policies.**

BY BLUE CARD STAFF

**D**uring the last several years, NIST and UL have conducted quite a bit of fire research, much of which demonstrates that today's fuel loads burn a lot hotter and faster than the traditional Class A fuel loads of yesteryear. Today's lightweight construction materials and building systems do not hold up to fire as well as legacy-style construction. This information has generated quite a discussion within our service.

We are approaching a time when there isn't a universally correct answer to the question, "When and where do you initiate water application?" Older systems with lots of resources and buildings built prior to World War II probably use a set of tactics that are contraindicated for communities with lots of lightweight construction. Departments that staff their companies with three or fewer firefighters might control structure fires faster by making initial fire attacks with exterior master streams.

The whole point of obtaining this new information is putting it to use at the scene of structure fires. This information is pretty useless unless we do something with it.

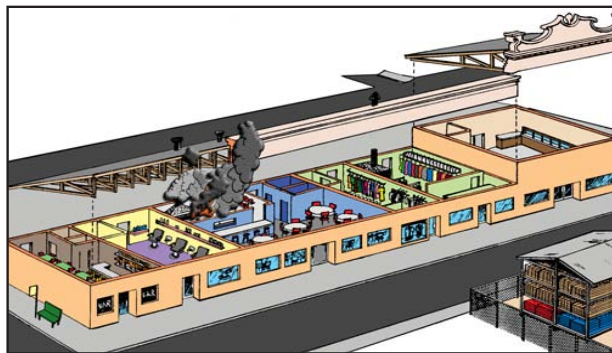
To that end, this month's "The Drilldown" is designed for you, the reader, to share your department's policies and practices regarding when and where firefighters actually apply water to the fire (inside or outside).

We will use the three scenarios from this issue's "**Command Training**" article on pg. 38 to generate your input regarding what size line you would use for your initial attack, as well as where you will begin your initial water application. Click on the hydrant below to launch the polls. **BS**

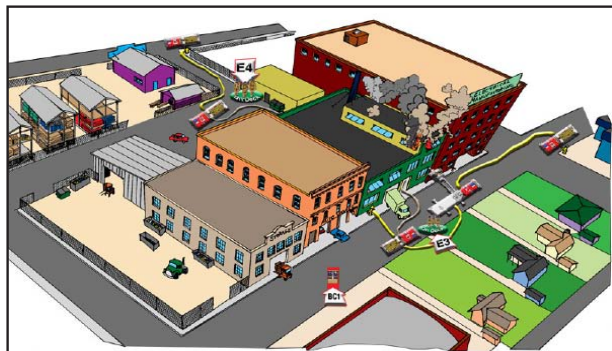
**Click the hydrant to participate in this issue's interactive poll.**



**Residential**



**Strip Mall**



**Commercial**

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# Blue Card SOPs

**Free! Download the complete set of Blue Card SOPs.**

**T**he scheduled function of command for this issue is Organization. However, we are going to change things up with this installment. The attached PDF contains a complete set of SOPs for the Blue Card program. These SOPs are designed around the eight functions of command. These functions provide the framework for the 50-hour Blue Card online program.

The functions of command are:

1. Deployment
2. Assume, Confirm & Position Command
3. Situation Evaluation
4. Strategy & Incident Action Planning
5. Communications
6. Organization
7. Review & Revision
8. Continue, Support & Terminate Command



These SOPs align and connect with the cognitive requirements of the Hazard Zone Management Standard the State of Minnesota successfully accredited through the International Fire Service Accreditation Congress (IFSAC). Several other authorities having jurisdiction are in the process of adopting this standard through IFSAC for their state.

NOTE: In future issues, we will replace this article with working drafts of each chapter of the 3rd edition of "Fire Command." We have added a section to our forums that will allow you to comment on the Hazard Zone Standard, the Blue Card SOPs and the "Fire Command" text. **BS**



Click the paperclip above to open the Blue Card SOPs.

Click the paperclip above to open the Hazard-Zone Management Standard.



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A Boy, His Dog & His 1952 L-Model Mack

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# The Mental Mayday

**Sometimes it's the heady stuff that knocks us down. In these cases, self-rescue isn't always the best solution.**

BY JOHNNY PETERS

**F**irefighter Tony Villa died March 18, 2005, by his own hand. I found out about it by phone from Al, a firefighter I had worked with while assigned as chauffeur on Ambulance 25. I was at home when I got the call. I was glad to hear from Al—I had just transferred to a better life, driving Engine 46 on the B Shift. The same engine Tony and I had worked on together as firefighters. Al asked me if I had known Tony when he was at 46s, and I told him of course. I was expecting to hear that Tony was on overtime and telling terrible stories about me. When I assured Al that nothing Tony was saying was true, he gave me the news.

Tony was physically unstoppable. After a line-of-duty death in 2001, a reporter came by our station to ask about fire-department staffing. At the time, we were riding with three firefighters on the ladders and engines, and Captain Jenkins decided to show the reporter how much equipment we had to carry up the stairs in order to impress upon the public just how important it was to have a minimum of four firefighters on each heavy apparatus.

***“Since psychological injury is a hazard of the job ... approach it like any other hazard.”***

For some reason, Captain Jenkins chose Tony Villa, the human tug boat, for the demonstration. While the reporter interviewed Captain Jenkins, Tony put on his bunker gear. Then he decided to see just how much of the highrise pack he could carry and still move around. The answer was all of it. So while Captain Jenkins spoke about the crippling burden, Tony marched back and forth behind him, easily carrying the entire load. Tony was the same way on the fireground. There was nothing he could not break, and he did not tire; he was a juggernaut.

Because there had been no recent critical incident prior to his suicide, people might be tempted to dismiss it as unrelated to his profession. If he had suffered cancer, a bad back or a heart attack, people would not be so quick to dismiss it as unrelated to his firefighting career. We accept the long-term physical effects of our job, even when they are ultimately traced to things like stress. Purely psychological injuries, however, are not so widely accepted.

There's a veritable cult built around acute injuries suffered in the line of duty. We have medals and ribbons celebrating those moments when we expose ourselves to abnormally ridiculous dangers, and there's even an award for getting yourself seriously injured.

And if you die, a complex ritual is set in motion, with ceremonies that spill outside the confines of our tribe and into the public. People who would normally attempt vehicular manslaughter rather than let you merge into free-way traffic—thus making themselves temporarily a critical millisecond slower—will actually pull off the road as the procession passes. This is a level of respect normally reserved for Jesus, dead 19th-century politicians or the Super Bowl. It is a reaction not entirely unwarranted. The one truly irreplaceable thing in

this world is your life. Once it's gone, there's no restoring it or finding a reasonable facsimile. Lay aside your life, and it's gone forever.

Injury and death are the natural consequences of our decision to expose ourselves to extreme heat, toxic chemicals, freeway traffic, angry dogs, angry citizens and blood-borne pathogens—the world in its primary pursuit of trying to make us all dead. The things people encounter through misfortune, we seek out intentionally and with great vigor.

It's acknowledged that some of these things are an Immediate Danger to Life and Health (the heat, the dogs, the traffic), while others (the toxic chemicals) are more patient, content to inspire our cells to rebel, make a mess of the place and replicate indiscriminately.

Responding to these events, we also expose ourselves to scenes of terrible human suffering and loss. They do not occur on a respectable schedule, so we also expose ourselves to sleep deprivation, a torture employed by all the best spy agencies. We repeatedly and intentionally activate the fight-or-flight instinct—consistently choosing the fight option. This has real, measurable effects on our bodies, which produce chemicals to deal with the situations. This is all very real, very physical and comes with a cost.

The brain is a chemical engine, and our profession does a real number on it. It's a powerful machine, in charge of absorbing and processing the information around us. It can devise a means to harness the power of nuclear energy, or the perfect dimensions of the Halligan (but not whether it is superior to have a pinned or solid one). It can convince you that your neighbor's dog is commanding you to kill people. It's nothing to be trifled with, and injury to its function is clearly a hazard of the job—as firefighters, we basically crouch beside the brain and poke it like an anthill. This is why departments employ staff psychologists, and it's why we have critical incident stress teams.

Since psychological injury is a hazard of the job, it makes sense if we approach it like any other hazard. We minimize the threat of hazards through training, recognition, and, if we succumb to the hazard, rescue. This shift in perspective, putting mental and psychological injuries on par with the physical ones, does not mean we must start handing out Purple Brain medals. I think there are enough awards, enough ceremonies, enough reasons to play dress up.

I only want this shift in perspective to cause us to treat stress and suicide like the other hazards of our job. When firefighters are feeling depressed, overwhelmed or suicidal, they should look at it the same way they would if they were trapped or lost in a fire. In other words, they should call a mayday.

No, let me be more clear: If you are feeling depressed, overwhelmed or suicidal, you should look at it the same way you would if you were trapped or lost in a fire. In other words, you should call a mayday.

It might not be easy. It might feel embarrassing to have to call for help. But remember, we are looking at this as a job hazard. Would you really forgo calling a mayday in a burning building because you felt embarrassed for needing help? Isn't that what we do, help people in need? In the process, we sometimes end up needing help ourselves. We're lucky people need help, because if they didn't, we'd all be working honest, boring day jobs. Fantasize all you want, but there are damned few warehouses in need of piano players—you probably wouldn't make the cut. When people need us, we're here

## Calling for Help

Whether you seek professional help or just talk to a buddy, help is closer than you think.

So how do you call a mental mayday? It may be as simple as talking with a friend or coworker about a recent call. If your department has a critical incident stress team, the members of that team are a good place to start. If you feel you need to talk about an incident, there's a good chance others who made the scene feel the same way. Even if they won't admit it. Even if they complain. We all have our coping mechanisms.

You are in the best position to determine what sort of help you need, from an informal chat with a fellow firefighter willing to listen, all the way up to a visit with a psychologist. But as general boundaries: If you're irritable, maybe snapping at family members for trivial matters, it might be time to talk about your day. Or maybe just take a nap. However, if you're detailing a plan to hurt yourself, I believe it's time to call in experts. Think of psychologists like members of technical rescue, hazmat or any other special operations group in the fire service, if it helps.

You don't have to do it alone, is my point. Moreover, you shouldn't do it alone. Don't freelance. There are people who want to help; they're just waiting for the opportunity. This is who we are.



for them. When it's a firefighter in need, the same thing goes. When it's you in need, the same thing goes.

And how would you feel if a firefighter did that to you? What if I was trapped, but didn't call a mayday? Wouldn't you be pissed? Wouldn't you wonder why I didn't trust you enough to ask you to come and save me? Yeah, my professional pride might take a little hit if I need help getting out of a tight situation, but I like to think I could fall back on another type of pride, the one we go on and on about, and that's the pride we have in the Brotherhood (I'd love to be more gender neutral, here, but "siblinghood" just doesn't sound very poetic, and "sisterhood" sounds like a Whoopi Goldberg movie). We know that when we call for help, someone (probably several someones) will come for us.

Because of the bonds of our profession, rescuing a fellow firefighter beats rescuing anyone else on this planet, whether on the fireground or off. We want to help; it's in our nature. And when you are in need, you have no right to prevent that moment by staying silent. What a wonderful opportunity to give a fellow firefighter. **BS**



[Click here! Visit B SHIFTER's saucy new forums!](#)



*Johnny Peters is a captain with the Houston Fire Department, and one of maybe five members who actually live in Houston. He is capable of hiding in an open locker for several minutes in order to frighten a co-worker coming out of the bathroom, but only uses his power for good.*

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# Reunited & It Feels So Good

**After 25 painful years of separation, the Oceanside (Calif.) Fire Department reclaims the Mack it couldn't forget.**

INFORMATION PROVIDED BY STU SPRUNG PHOTOS COURTESY OCEANSIDE FIRE DEPARTMENT

**T**he pretty 1952 Mack 95 Model you see here has a long history of service. The Oceanside (Calif.) Fire Department purchased the rig new, and it served the city for 30 action-packed years before it was taken out of service in 1980. Shortly after its retirement, the engine, dubbed F4, was auctioned off to a collector. He drive the old steed 45 mph from Oceanside to his farm in Oregon. There, he parked it in a barn, covered it with tarp and had little to do with it aside from the occasional jaunt. The Mack remained in that barn for 25 years—a sad, sedentary end unbefitting a beautiful workhorse that had seen so much action.

In 2005, fate stepped in. Rumors suggested the old Mack was up for bid on eBay. In fact, it had already been bid on and won. When the buyer failed to deliver payment on time, now-retired OFD Capt. Bruce Kassebaum mounted an effort to have the Oceanside Firefighters Association (OFA) bring the Mack home. The vehicle's current owner loved the idea of returning the engine to its native department, so he sold it to OFA at a discounted price of \$5,000.

*Continued on pg. 55*



The Oceanside Fire Department's 1952 Mack 95 Model has been restored to its original glory thanks to the efforts of many past and present Oceanside firefighters.



Above: Important elements of the restoration include the trademark bell and Mack bulldog.

Left: Back in the Mack's glory days, two lucky Oceanside firefighters posed with that year's Miss Fire Prevention in front of the rig. Readers: You may insert your own witty comments about the random abdominal palpation here.





Top: The rig looks a bit embarrassed here. At one point in time, the Mack engine was painted white. They called her the White Whale.

Bottom: One of the first things OFD did when they reclaimed the rig was strip the remains of white paint to reveal its true colors.



The Oceanside Firefighters Association funded the restoration project, but donations and volunteers helped get the job done.

**D**o you have a gorgeous restored emergency vehicle? Tell us about it! Please e-mail us a brief write-up that describes how you acquired the vehicle, what you've done to restore it and its original and current specs. We need several before and after pictures to help tell the story, so please include jpgs. Send your submissions to [editorial@bshifter.com](mailto:editorial@bshifter.com), writing "Rear Axle" in the subject line.



Above: The Mack 95 Model, shown right in the picture above, remained in service for 30 years. Dubbed F4, the vehicle responded to some of the region's most significant fires.

Below: The restored rig shows off in a local parade.



**S**oon after, former members of OFD arranged for a flatbed truck to retrieve the long-gone engine. When they first laid eyes on it, some wondered if they had wasted their money. All that barn time had taken its toll; the Mack was in bad shape. Rust, deteriorating rubber and general disrepair were the minor offenses. Major felonies included a rusting, flaking chrome grill and a missing trademark fire bell.

Weaker men would have walked away from such a project, but members of the OFD knew this legendary rig had endured some of the department's most significant fires to date. In 1970, the Mack helped save the lives of several firefighters, pumping water in deplorable conditions to protect them from the encroaching Laguna Fire. For that reason alone, the Mack was owed a restoration. (Really, it was the least they could do. At a tragic point in its history—not long after its life-saving performance during the Laguna Fire—the city manager had it painted white. *White*.)

Today, the 1952 Mack 95 Model looks brand new. Shiny chrome and cherry red paint serve as the perfect backdrop for that trademark bell and stout bulldog. It will continue to serve the City of Oceanside for fire prevention week and in parades, tours, memorials and funerals. **There's much more to this Mack's story than we can't tell here. To learn more, click this link.**