



CHIEF'S FILE CABINET

Ronny J. Coleman

What Has Happened to Company Inspections

The following quote was taken from the life of a old time firefighter.

"It is very much to their advantage for firemen to be familiar with the construction of buildings when fighting fire in them, so as to know the manner in which fire will travel and spread unseen between beam, between floors, behind lath and plaster, through pipe holes, belt holes, in recesses and other hollow spaces, up dumb-waiters, elevators, air and light shafts, up stairways, across hanging ceilings through cornices, etc., and know how to quickly get at the fire.

It is also very much to the advantage of firemen when fighting fire in a smoke charged building, if they know the interior plan and construction, where the stairway, halls, elevators, entrances and exits t all parts are located, and also the contents of the building. All firemen should familiarize themselves with every building within the district where they respond to fire on the first alarm, and every company should have in place drawings and a description of each building and its contents.

Fire in buildings of various construction, locations and conditions must be fought according to the circumstances of each case and no and no set rules can be made as to the placing of hose lines or companies.

Firemen should be familiar with the handling and operation of the various auxiliary fire appliance and systems which are placed on buildings or elsewhere an also to know the general location of the boilers, engine room, pumps, shut-off valve or water supply to pumps, stand pipes, tanks, hose, automatic sprinkler system, dry pipe system, perforated pipe system, hose line system, and all other fire appliance such as liquid extinguishers, chemical powder, sand boxes, hooks, axes, etc.

Can you tell by reading those quote how long ago they were stated? If you picked last week or last year, you are way off. In actuality they are from about 100 years old. That series of quotes comes from *First Lesson in Firefighting, Captain Joseph Quinn, New York Fire Department*. He was the among the first officers of the Fire Department of New York to publish a textbook on firefighting operations. Quinn clearly recognized the relationship between the building fire problem and the role of the firefighter.

As I visit fire departments around the country, however, I am noticing a disconnect between that responsibility and the actual program activity of fire agencies. More and more I am hearing from fire departments that they are discontinuing the use of sending fire company personnel out to look at



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buildings. In the good old days we called that the company inspection program. I am not exactly sure what the modern slang is by some folks but reality is that it was a program to put firefighters in the very buildings that they may have to go in and combat a fire under very difficult conditions.

My introduction to company inspection doesn't go back as far as Captain Quinn but a rather lengthy period nonetheless. We introduced company inspections in the Costa Mesa Fire Department in the 1960's. Our primary reason for doing it was not to relieve the fire prevention bureau of any inspection responsibilities – although that was clearly one of the accomplishments. The real reason was to make sure that we were able to sustain the quality of fire protection being built into buildings through an annual maintenance inspection and our desire was to improve the knowledge of the firefighter on what was on the inside of the building.

In other articles, I have made statements that understanding building construction and fire behavior is to a firefighter what understanding anatomy and physiology is to a doctor. I truly believe that no one is an effective fire ground officer unless they have a clear understanding on how fire migrates within the existing building component. Moreover, I do not believe that a person can be a safe firefighter unless they have a better than average understanding of those concepts.

But, you will notice that I use an EMS analogy. Perhaps that is one of the things we ought to be talking about. More and more fire departments are devoting more and more of their time, effort and energy into emergency medical services. It begs the question from a standpoint of being combat firefighters. Has EMS overwhelmed us?

In reality I am not really talking about the incidents themselves. The fact is that a significant number of EMS calls are not as time consuming as one or two major structure fires. Unless one runs into a mass casualty incident comparing the time spent on scene from a common ordinary medical aid in comparison to a structure fire is not a comparable comparison.

However, the amount of training it takes to keep our EMS levels of service up and the logistical aspects of running an EMS program are eating away into the productivity of firefighting capacity. I know this argument will generate a little bit of reaction out of our EMS qualified personnel. And, in that capacity I am not saying that we shouldn't be in the EMS business. To the contrary, I think that the fire department is the most equitably distributed public resource capacity in the local government and that we obviously belong in the first line of defense on emergency medical incidents.

The argument that I would like to make that is concurrent with that is that we shouldn't be throwing out the baby with the bath water. While the number of fires has continued to decrease due to effective fire prevention codes during building construction there is a harsh reality. That is that sooner or later big buildings are going to catch fire and firefighters are going to be expected to go inside of them and put



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their lives on the line. In my opinion having knowledge of what is inside of buildings is absolutely essential for firefighter safety. We endanger every single firefighter we order to go inside a building that is doing so with a minimum knowledge of the structure.

So what is a poor fire chief to do? Should you give up on company inspections or should you take a more pragmatic look at them? It is this fire chief's contention that we ought to be looking at them from a much more pragmatic point of view and finding ways of incorporating company inspection work into the already busy schedule of fire companies without it being burdensome and being randomly managed.

In the first place let's define workload. What needs to be inspected? If you are like most fire departments you have an inventory of various types of occupancies that generate the need for fire code enforcement. On the one hand you have extremely complicated sophisticated occupancies like hazardous materials and perhaps even high-rise buildings. The other end of the spectrum the single-family dwellings in which it is unlikely you are going to get on the inside anyway. The first step in managing a company inspection program is to take a real hard look at what is out there on the street and define that workload. How many businesses, industries and complexes deserve to have a firefighter on the inside looking around periodically?

In conducting risk assessment of many communities I have discovered that there is no real guideline for this number. It would be simple to state that there are perhaps fifty inspectable occupancies for every thousand population – but that runs into problems when you go into cities that are heavily industrialized or are resource centers for an entire county. On the other end of the spectrum you do have some communities, often called bedroom communities that have a very low inventory of buildings that require that an inspection be conducted.

Regardless of the inventory the fire department should have some knowledge of what is the total workload. Then, of course, most fire departments have somebody assigned to fire prevention. The primary reason for having someone in fire prevention is to provide technical expertise on those occupancies that have particularly complex requirements. Therefore, you have to take away from some of that inventory those occupancies that require specific and technical inspections by a member of the bureau. However, these should not be removed entirely from the inventory of the fire suppression forces area of interest.

In the good old days we used to call those buildings target hazards. Today, they are called high-risk occupancies. The next step in analyzing this would be to take a look at the first in districts of fire suppression companies and determine physically where these occupancies are located. My personal preference is to use GIS to achieve this purpose. Once addresses have been identified for inspectable occupancies they can clearly be "pinned" on a map so that there can be some kind of a spatial display of what is the distribution and concentration of fire prevention activity.



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It is not uncommon for that distribution and concentration to be inequitable among fire companies. We used to joke in one department I worked at about headquarters fire station had all the work load and the outlying stations had all the leisure time. This step involved not only identifying the location of these buildings but also placing them into some degree of a matrix regarding complexity. By complexity I am referring to the fact that a small building is easier to look at than a large building. And a large building that is a life safety risk is more complicated than a large building that is not a life safety risk. The technique that has been employed by some fire departments is to do a fire prevention index so that you not only look at the workload of the department from a standpoint of addresses but also complexity.

The third step in this process is to then divide those company inspection activities up into three separate shifts for workload. If this sounds a little bit like a mathematical game it is. It consists of taking a look at the total workload and dividing it equitably among the three shifts. If you followed the theme of the previous paragraph for example, conducting a fire inspection of a high-rise building may have a workload index of ten as compared to a barbershop, which would have a workload index of one.

The next step is to calendar those buildings over a period of time that is reasonable and practical. It is my opinion that most buildings do not have to be visited on an annual basis. Granted there are some occupancies that do require almost constant reviews such as hazardous materials locations. There are some that have an annual cycle sort of built in such as schools. However, the idea is that a twenty-four month cycle divided amongst the occupancies then provides the company officer in an individual fire company with a reasonable expectation of a workload that can be accomplished.

This may seem like a quantum leap but those departments that are really doing effective deployment analysis are not beginning to understand that there are certain times of the day, there are certain days of the week, there are even certain times of the year in which their workload for emergency response is almost predictable. It follows then that in analyzing the availability of fire companies to do company inspection work, one should not attempt to program fieldwork at the same time that a heavy emergency response workload is likely. We are certainly not to the point of being able to predict specific events but a little bit of analysis of deployment data can certainly contribute to long range planning and management of a company inspection program.

The steps that I just outlined to you I have actually seen administered in fire departments before. The total number of inspectable occupancies that are then assigned to the company are not overwhelming nor are they unachievable. They are not only accomplishable but they contribute to the fire and life safety of the community and improve the possibility of a firefighter being able to do his or her job with a minimum amount of danger.



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If a fire chief 100 years ago was intelligent enough to figure out that having a safer building means being a safer firefighting agency then it is not unreasonable for us to follow suit in the new millennia.