

ISSUE

29

SPRING 2018

Lodging Engineer

1st Person



**Interview with
Plamen Dimov**

**White Lodging Services
Regional Director
of Engineering**

Featuring

*Understanding Hotel Fire Alarm Systems
Tips for Identifying Reliable Work Utility Vehicles
Is It Time For Exposure Sprinkler Protection?
Enduring Day-To-Day Stress In Our Careers*



6

>>INSIDE>>SPRING 2018 1st Person Interview with Plamen Dimov

White Lodging Services' regional engineering director, Plamen Dimov, discusses his role and duties managing 35 select and full-service hotel properties. Coming to America as an immigrant Plamen's first position in a hotel was working in laundry. Now after 15 years in the industry he discusses why he loves his job and America.



page 12

Beyond Brochures: Seven Insider Tips for Identifying Reliable Work Utility Vehicles

Wondering how to get the most out of payload capacity or utility vehicle customization? Steve Bledsoe, global strategic accounts manager with Club Car, offers several tips for selecting your next utility vehicle or fleet of vehicles. Learn the advantages and disadvantages of selecting steel frame construction versus aluminum or when to choose electric over gasoline engines.

page 16

Understanding Fire Alarm Systems for the Hotel Industry

This article is the second in a series by Coffman Engineers for Lodging Engineer on fire protection topics applied to hotel and lodging properties. The article connects basic requirements of system design to on-going inspection and testing efforts. Additionally, it provides answers on several subjects that generate "Frequently Asked Questions" regarding fire alarm systems.



page 26

Is it time for exposure sprinkler protection?


Are passive fire protection systems addressing the type of building construction, proximity to flammable vegetation, and accessibility to roads and water sources enough protection for today's hotels and restaurants? Tom Daly returns to the pages of Lodging Engineer discussing the threat of wild-land fires and other recent fire sources emanating from the exterior and burning in.



page 29

We all endure day-to-day stress extraordinaire in our careers

Tim Arwood returns with an extraordinary article on how to deal with stress. From the stress of receiving an emergency call from the night auditor to finding a parking space for his Batmobile to de-stressing in the beautiful Appalachian Mountains, this article is a must read for any hotel engineer.



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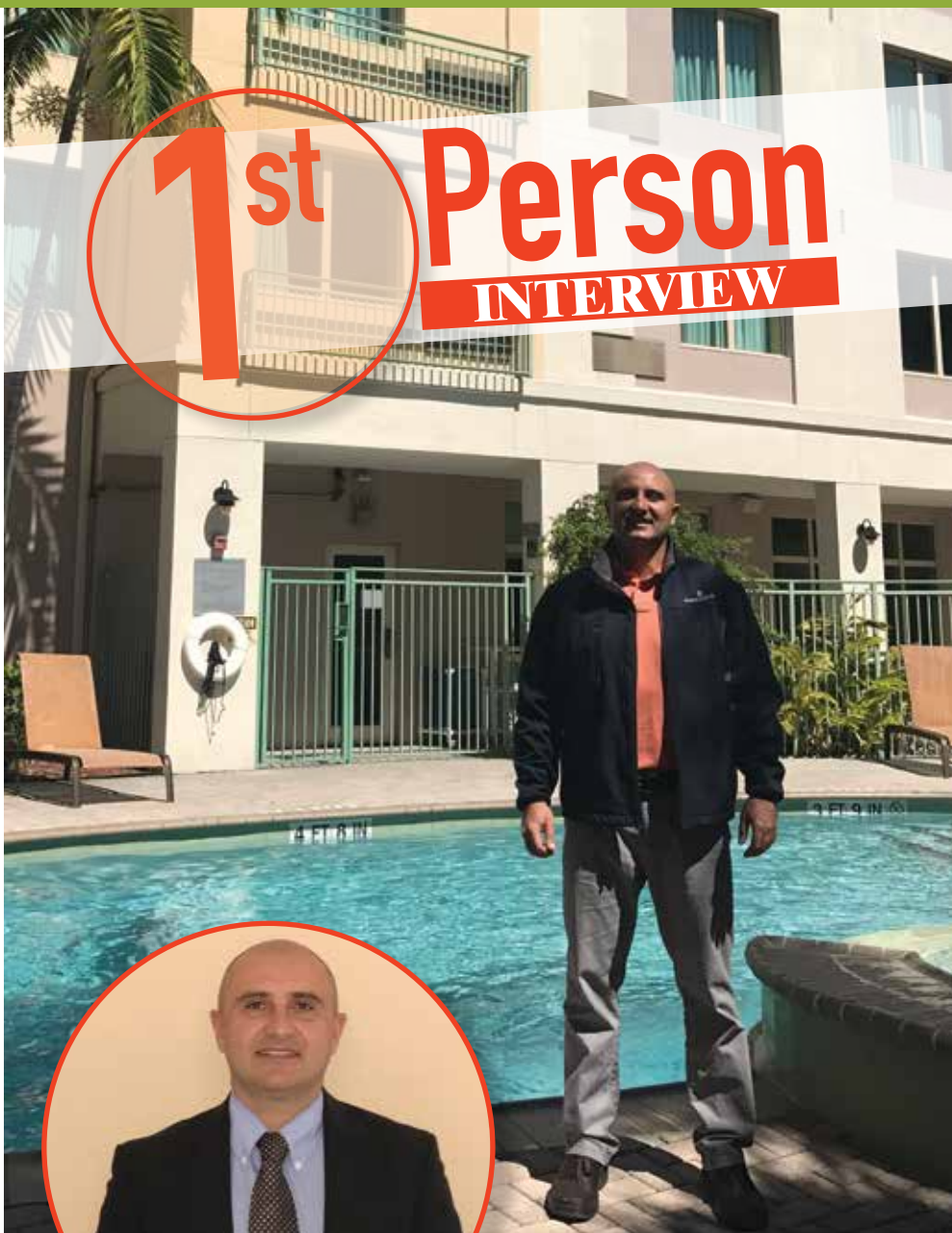


SHUTTLE™



LSV 800

1st Person INTERVIEW



Plamen Dimov

Regional Director of Engineering,
White Lodging Services

by Amanda Strouse

It is a pleasure to talk with you, Plamen. You currently support 35 of White Lodging's properties, which must be a very busy and important position. What makes your story special and truly inspiring is that you're an immigrant from Bulgaria who visited the United States, fell in love with it and decided to spend your life here. Can you tell me about how and why you came over here?

I came here in June 2002 for six months to work and travel. I had a contract with the staffing agency and I ended up at the Courtyard Pontiac in Pontiac, Michigan, and started in laundry there. But I was speaking the language before I got into the U.S. I learned the language by myself in Bulgaria, because I wanted to come to the U.S. to explore more opportunities. When I got here, it was very difficult. It was a little bit after communism ended in Bulgaria, in '89. It was about 13 years later. Basically, no money was available back then. I came here to explore the opportunities. I really wanted to see what America was about. I always read about it and that's why I decided to learn the language. I knew that if you worked hard and if you have good discipline and stamina, you can achieve anything in this country. That's why I decided to stay. It was extremely, extremely tough. I had two hotel jobs: laundry and banquet setup. I understood how you can have a pretty good life here if you're consistent, disciplined, organized and a little bit smart with things. So, after the first few weeks, I told the other Bulgarian kids, I was as 24 at that time, "I'm really living the life here. I don't see myself living anywhere else but here." They were really shocked. Because it was really hard, the lifestyle was a lot worse than what we had in Bulgaria, because I didn't have money or a car. And in Michigan with no car, it's like you're missing a leg. So, it was tough to live, but I knew in a few years I'd be out of that and I'd be doing more interesting things. I actually applied to college in Michigan and they accepted me.

How was living in Bulgaria different from living in the U.S.?

I lived 24 years in Bulgaria, and most of the time I worked for my father's farm. We had a bunch of land to grow fruits and vegetables, wheat and barley. I only had the opportunity to work for someone else for one year. I got a master's degree in engineering, from the Technical University of Varna. The government paid for my degree and that was great. I did my internship at a facility that makes containerships. We manufactured big containerships that

the world and deliver goods to different countries. My master's degree was mechanics on these ships. Once I graduated, I did six to seven months of an internship and I didn't like it all. The country is very small. Like the size of Michigan. So, the opportunities are very limited. Now it's very different, since we joined the European Union in '06, things are very different. But back in '02, it was still like living under communism. Thirteen years had passed, but it still wasn't like what Western Europe is. So, working there was not an option for me, because I always had a dream to come to the U.S. or New Zealand or Canada or somewhere on the other side of the ocean and explore more opportunities. Under communism, it was very different. Everyone has the same salary, whether you're a lawyer or hotel GM or housekeeper, which created a lot of happiness, because there's no competition and everyone's supposed to be happy and have no worries. But at the same time, if you really want to excel in anything and do better than most people around you, it's impossible. So, you live in this artificial society where everyone watches the same TV and drives the same cars (there were only two types of TVs and two types of cars) and everyone is equal - it was not for a person like me. I would not see myself living in a post-communistic society and living a life I was looking forward to living.

Was it your choice to work in a hotel when you first visited the U.S.?

We had these work agreements with the staffing agency, so we knew we'd be working in Michigan and in a hotel somewhere, but I didn't know the details of the job. I basically went to the Courtyard, I walked in and the GM was relieved I could speak English pretty good. The GM said they need help with laundry, so I said I could do laundry, and I stayed there for a couple of months, washing, drying and folding linens, and it was great. I fixed a couple of things. I understand mechanics and I understand how things can be fixed. Then the GM wanted me to join the maintenance department as a maintenance tech and help the Chief Engineer. That GM is now the COO of White Lodging's suburban hotels.

How and when did you begin your employment with WLS and what was your job?

I went to the community college and got an associate's degree in business administration. I kept working in the hotels as a maintenance technician. I was a maintenance

tech for probably two years and then we opened a hotel, Residence Inn by Marriott, in Novi, Michigan, and a year after we opened, I became the chief engineer of it and that was my first management job. I believe it was in 2005.

What did you learn while being chief engineer that was valuable or that you took into your position now?

What I was really impressed by was customer service how it revolves all around the customer and how every job is connected to the performance of the hotel, which is judged ultimately by the customer. So, I was very impressed by that. What I learned in the engineering world was how to identify the problems.

“Usually, the problems get identified to you by the guests. It's very easy to find out what is wrong by listening to what the guests are saying or what they're writing.”

I learned once you listen to the guests and understand what the issues are, you then basically devise a plan on how to fix that and implement it. Either by getting the parts and doing it yourself, or if it's too big, involve the GM and get funding for a vendor to do the job. And that's helped me greatly in my career. It's really simple, but a lot of people dance around the problems and then if you don't fix one problem on time, it becomes a bigger problem next year and that problem causes other smaller problems around it and it gets out of hand and is difficult to manage. So just focus on the issues and get them removed from day-to-day operations.

Since you started working with WLS, what changes have you seen in laundry systems and machines, as well as strategies to lower laundry costs?

Foremost: efficiency. The new machines use much less water and they also use much bigger g-force when they extract. So basically, they rotate faster and the clothes come out much dryer, so your drying times are greatly diminished. The other big improvement is on the chemical side. We used to use chemicals using hot water. Hot water dilutes chemicals, so you go through a lot more chemicals. Other companies have made chemicals that work with cold water only, so that's helped us save money on chemicals. These are the two biggest improvements that I've seen.

Now I'd like to switch gears and learn about your job and some of the issues that you and your team experience. Could you describe your typical day, as well as daily routines that you have to stay organized, focused and get tasks accomplished?

The typical day involves emails from 35 general



Photo Courtesy of UniMac

managers. They all have issues that they hear about from their guests. The issues are bigger than the engineering department, which a lot of our hotels have two or three people in their engineering departments. Those issues get escalated to me, in hopes of creating a plan to fix the issue, find the right vendor to fix it. I get the proposals for the job from the right vendors, propose it to the owners and show them why it's going to work, how much it's going to cost, how it will affect operations and what the ROI will be. Most of the time, I receive funding from that particular owner and then, between the staff and GM, we figure out when to schedule and execute the job. Also, twice a year I have to visit each one of those 35 hotels and do an inspection top to bottom. I look at their struggles and find a way to help them fix the problems they have. I'm also involved with renovations and openings. In my region, I have three hotel openings this year and I believe I have two renovations. I'm a supportive structure between the owners and our GMs and I help resolve problems on a daily basis with these 35 hotels. And, these projects can come from the ownership group or the GMs who are operating the hotels.

Would you talk about some of the challenges of being that link?

Everyone thinks they're right. It's important to recognize and show the owner from the get-go what the expectations of the plan are. Each vendor will only perform as well as you have them perform. If you stay on top of them, they will see that you take pride in what you manage and what you have, and they'll understand they can't cut corners. It's about showing the vendor that you care and you will not let them do whatever they want and cut corners to cut costs. The biggest challenge for me is to fix hotel issues fast or faster, because everyone wants their issue fixed yesterday. It takes a great deal of planning, understanding the problem, then finding the solution. This country is developing very fast, which I'm always amazed by, so to find a good vendor that will do the right job for the right price is very challenging. Of course, if you do good homework then you can get a good price. If you accomplish a few good projects, then you gain the trust from the owner.

Who do you report to and what is significant about that person's position?

I report to David Abraham, he's Vice President of Engineering and Facilities for White Lodging. He supports me on the corporate level. I'm out on Monday and come back Thursday night, sometimes Friday, from one of those 35 hotels. His role is very important because he provides guidance on daily basis with big projects. He is instrumental in drawing that line of where our efforts need to stop and the owner needs to engage a consultant of their own.

How many people do you manage and what are some of the different positions that you oversee?

My biggest touch points I have is with directors of engineers, the chief engineers and the maintenance managers. I would say I'm closely connected with those people, but I don't manage them. I don't really deal a lot with the maintenance techs, even though, when I visit the properties, I always meet with them and tell them I'm here. We do inspections together. But on a daily and weekly basis, I deal with the leaders in the engineering departments.

Tell us about your management style, including how you keep your team on track, challenged and engaged.

It's very difficult to engage people when you don't know them very well. My management style is that I'm very hands-on. In the engineering world, most of the engineers hear people say,



"Fix this, fix that, do this, do that," and very few people do it. So, my way to create engagement with engineering departments is to go there and ask them, "Show me the three biggest problems you haven't been able to solve the last six months," and usually that's my first visit. They show those to me and then I do everything possible to fix it on the spot. Sometimes it takes four to seven hours. I get the tools, open the piece of equipment, then I get the parts and show them how to install it. When they see that you're ready to get dirty and you understand what you're talking about and you can fix their issues, they will follow you. At the end of the day, they're looking forward to meeting someone who can make their day better. Who knows why problems have not been fixed. Lack of money, lack of leadership, lack of vendors showing up on time, etc.

"My approach is to fix the issues, show people that I care and be hands-on while you're visiting that property. And they start engaging in the process and they start responding to my emails and phone calls much faster. Because they see someone who eventually solved their issues and their day to day work life will be better."

Let's face it, engineering departments in a perfect world, they should do preventative maintenance, but instead of that, they get smashed with leaks on the roof, leaks on the exterior elevations on the buildings, broken pipes, heaters that are 20 years old - you fix one and you have another. I get good engagement from the GMs and from the engineering department. And I



found this is the key to being successful in this job. It's not about paperwork and showing them what's wrong - it's about fixing the big issues for them.

How do you compel your team members to solve problems, be inquisitive and search for solutions?

I've been a maintenance tech and no one should be excluded from a solution. Ask everyone, "What do you think the issues are and how do you think they should be fixed?" And if you have a vendor, anyone that you work with that provides a proposal, bring them in. Everyone's opinion matters. This is a learning tool for them to understand how to solve issues down the road. It's a learning curve and if they're not part of it, they won't necessarily grow in this business.

I could still be doing maintenance today if I didn't look for solutions and look for development. Everything is possible in this country.

"There's nothing that's impossible and everything can be fixed. Once you have that attitude, just listen. It would be completely unwise for me to not listen to the people who are faced with the problem on a daily basis."

While in your current position, have you had to learn any important lessons the hard way? What happened and what were they?

At first, I grew up in this career by fixing things myself and with my team in a certain hotel. I would take on projects that usually the chiefs won't do - they would call a vendor. I would take on that challenge to fix things that people don't fix or they can't fix. I left White Lodging to run a private island for some time, so that's a monster undertaking. I lived there for five weeks, then I would go to Miami, stay two weeks, then go back for five weeks. I had almost 70 people staffed over there, because you're on a remote island, you don't have vendors. You're a 35-minute boat ride from the next island and 900 miles from Miami. The reason I went there was because I wanted to fix a lot of things. I tried to do too much on my own. It was so much work that you could not possibly get it done. It's just an unbelievable amount of work. You're like a mayor - you do everything. It's so challenging, I was losing so much weight. I realized I can't do everything with the people I had there and myself. I realized I needed to fly some people over to help. Over there I hit a wall where I couldn't do it anymore the way I was used to doing it. It was a good learning experience, because when you have the 35 hotels, I can fix a few things with my hands, teach them things and learn, but also find vendors. On a bigger scale, it's a lot more important to find the right vendor for the right job.

How did you get the job to run a private island?

After we opened the hotel in Miami Beach, I accepted to be the regional director of engineering

of the hotel and the island. On the island, we were building homes for celebrities. We would build the homes and provide the infrastructure and provide water, power, then we would build small houses around the island that would be kind of part of a hotel. And we would rent the houses to people who would want to stay with us. Some people would buy the houses and they would show up for a month in a year, and the rest of the time we would maintain it or rent it out for them.

I understand that five of WLS's hotels in southern Florida were affected by Hurricane Irma in September of 2017. Can you tell me what your role was in preparing the hotels for the hurricane and then offering them assistance afterward?

The biggest, most important thing is making sure that the generator works and has fuel. White Lodging has a policy where we sign contracts with approved vendors to maintain every generator we have in our hotels. With that being said, a vendor will only perform as well as you make them. So, I went to all the hotels with the chief engineers, we started all the generators individually to make sure they worked. And we actually found out two of them did not work. They worked, but they would overheat and shut down. One of them was hooked up to the natural gas city line. Usually the bigger the hotel, the bigger the generator and the diesel engine is the only option. Natural gas will only go to a smaller size hotel, not a hotel of 200 rooms or more. So, our hotels would have these generators with 800 gallons of diesel, which would give you 3 days of power, depending on the consumption. I happen to have a lot of knowledge from that, because on the island, we would make power by using 11 diesel engines. That was 20% of my job to make sure my power plant worked. So, we went around and tested the generators, two of them failed. We contacted the companies that we had, they said they were so backlogged with other customers doing the same thing we were. So, we had to tell them that they would lose the contract if they didn't help us. Some helped us, some didn't. Some of the hotels we built, some we acquired, and they each came with their own generator maintenance contract. It makes sense to have only one company service our hotels. In our case we had several companies. So, we found



“This line of work is not a sprint, it’s a marathon. To really achieve long-term results, you have to perform at a certain level every day. Be very disciplined over what you do on a daily basis.”



How do you handle furniture (both wood and leather touch-up) repairs?

Furniture is huge for us, because furniture is one of the items that doesn't get replaced during the first two renovations. Furniture we count on it for at least 10 years. We have 90% occupancy day in and day out, so it's very difficult to make furniture good looking. We employ Mohawk Finish Products to keep furniture standards high. At least one person in every hotel has to go to Mohawk's training and buy the kit. The kit is a very good tool to fix pretty much every issue, from a pen mark on furniture, to a piece of corner missing. Mohawk is only for wood. What we do with leather is clean it. If it's really worn or cut or damaged, we call a company that will reupholster the piece.

Does WLS encourage the engineer partnering with their GM on capital projects?

Yes, definitely, it's a must. The chief engineer, myself and the GM all have to be on the same page in regards to the capital projects for the following year.

With spring coming, what are some of the projects, tasks or events you are getting ready for?

The biggest one is cooling towers. All of the hotels that have water cooled chillers have cooling towers. So, this time of the year, we are cleaning and sanitizing all the cooling towers to prepare for the heat in the summer months. We also try to do the service on the chillers, the cleaning of the tubes, the oil change, all the work needs to be done now so that you can have a worry-free summer. Also, this time of year we get our landscaping company to go over the landscaping program. We have a contract with the landscapers to make sure that they get the mulch, the flowers and the irrigation working for the summer months. We also do the PTAC cleaning. Since the weather is lingering around 30-65 degrees, we get those PTACs cleaned so it's not a huge impact. We wouldn't do that in south Florida. But it's a good time for the northern hotels to do the PTAC cleaning now.

What advice would you like to give to younger or less experienced engineers who hope for a job like yours one day?

Be disciplined. At the end of the day, I think discipline and ownership at your workplace will take you where you want to be. Every morning, I always have a post-it note with three to six things that I must do that day. I don't allow any of those items to be going into the next day, unless I have an emergency. Don't procrastinate and create your days. Because if you don't create your days, if you don't know exactly what you're going to be doing today, somebody else will create your day for you. If you're going around without purpose, people will fill in your day and you'll never have the time to do what you really want to do. Establish a communication procedure with all the managers. Instead of them calling you with 10 different issues every day, establish an email, radio, text or whatever system or software you use to communicate. Prioritize and strategize. Stay focused on what you want to accomplish every day and establish clear communication between your department and others. ***

one vendor that we told if they helped us, we will give them a bunch of maintenance contracts. That is how we fixed the situation. Two hotels didn't have power for six consecutive days. I had purchased about 70 gallons of diesel that I had in my garage, so I was doing diesel delivery with my SUV. It was very useful, when the GMs saw the five-gallon storage tanks in my car, they would be so happy. After that was the cleanup. We had to spend hundreds of thousands of dollars to do cleanup in our hotels. Landscaping cleanup. We had humidity issues and we had humidifiers, carpet cleaning equipment, blowers and we had to manage those. Because, of course, they want to use every machine they have so they can give you a bill for half a million dollars, so we had to tell them what we didn't need and had to manage the disaster responders after the storm.

Do your properties' engineers watch for energy peak demands or anomalies?

Our engineers take gas, water, and electric meter readings every morning so they will see the difference from today to yesterday and the day before that. That is basically the gist of what they do as far as meters. They are also big proponents of the housekeepers keeping the temperature at 72. We have installed energy management systems in some of our hotels that help with demand. As far as anomalies, we employ a company that looks over our electric gas and water consumption. When something happens, they raise the red flag and we look into it.

Beyond Brochures:

Seven Insider Tips for Identifying Reliable Work Utility Vehicles



STEVE BLEDSOE

GLOBAL STRATEGIC ACCOUNTS
MANAGER WITH CLUB CAR,
SHARES HIS TIPS ON HOW TO
IDENTIFY RELIABLE
PURPOSE-BUILT WORK
UTILITY VEHICLES THAT
PERFORM LIKE PICKUP TRUCKS
AT A FRACTION OF THE COST.



Reliability is a key consideration when buying fleets for resorts, but identifying truly reliable vehicles is not a simple task. All manufacturers claim to build dependable vehicles that will handle the 24-7 demands of resort operations.

In truth, utility vehicles are not created equally.

Strong utility vehicle industry forecasts have brought new overseas manufacturers and untried models into the market, with build quality and access to service and parts running the gamut from awful to awesome.

This makes it more complex than ever for you to select reliable vehicles you can depend on day after day ... year after year.

Even so, many resorts don't take the time to adequately examine the vehicle's individual components and verify -- or debunk -- sales claims in order to make educated purchases.

These tips will help decision makers identify true work utility vehicles and build a hardy, dependable fleet.

"The cars we used before switching to Club Car began rusting almost instantly in Bermuda's wet and salty environment. But the Club Car vehicles are built on rustproof aluminum frames that can withstand the salt, fertilizer and water on our site."

***Buddy Fleming, General Manager
The Golf Villas Residence Club at Rosewood Tuckers Point in Bermuda***

1 Consider your environment. The chemicals, fertilizers and salt found on resorts are corrosive to steel. Yet many utility vehicles are built on steel frames. The manufacturers of these vehicles may position this as a strength; however, steel frames rust around the water, chemicals and salt often found on resorts.

This is true even of powder-coated steel frames because the powder coating is easily scratched and generally not applied to the underside of the frame. This allows rust to get a foothold, spread and destroy your investment.

Look for work utility and transport vehicles with standard rustproof, corrosion-resistant aluminum frames. When well designed, these vehicles resist impact as well as or better than steel frames. And they are lighter than steel frames, so they use less energy and extend the range on electric models.



Club Car

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With generic work utility vehicles, your crews may waste hours jerry-rigging accessories, searching for equipment and making round trips to staging areas. Our new Fit-to-Task Vehicles help prevent that. Each is carefully engineered with the accessories required for a specific task set.

The Carryall 500 Facilities-Engineering Vehicle has a dual steel side-access tool box with locking latches and rear tailgate, a dual ladder rack with tie downs, 2-inch receiver hitch, electric bed lift and more.

The Carryall 700 Housekeeping Vehicle's spacious L-shaped housekeeping box with LED lights carries a full-sized vacuum cleaner, brooms, mops and more. Drawers hold small items, and shelves carry towels, linens and cleaning supplies.

The Carryall 700 Food Service Vehicle features a lockable van box with racks for 68 trays or sheet pans, a rack for 10 shelves, a food warmer box shelf, space for glass racks and more.

Build your Carryall work utility vehicle today. Visit build.clubcar.com/carryall?nahle.



2 Don't play around with your budget. Many utility vehicles are built for weekend fun but sold as work vehicles. They don't have the build quality for demanding worksites.

These vehicles generally feature solid suspension systems designed for speed - some as dangerously high as 60 mph. They are not designed for load carrying, so they carry less weight than vehicles built for work.

Look for cars with independent suspension systems with dual shocks that keep the tires in vertical orientation over bumps for even tire wear. Avoid vehicles with solid suspension systems and a single shock. They deliver a bumpy ride and don't distribute weight evenly.

3 Become a power player. Make sure gasoline vehicles are driven by automotive-style single-cylinder overhead cam engines with electronic fuel injection (EFI). When compared to carbureted engines and engines with less sophisticated EFI systems, single-cylinder overhead cam engines deliver more horsepower and torque for hill climbing. They also feature automatic chokes, start easily in cold weather, don't require high altitude jets and use considerably less gasoline.

With fewer moving parts and splash lubrication systems, these engines require significantly less preventive maintenance than competitive vehicles. And they allow for maintenance from the top down, so technicians don't have to go under the car to service them.

Check the clutches and steering as well. Self-compensating and self-cleaning clutches don't require regular maintenance or disassembly. Clutches that do not self-compensate or self-clean increase downtime, decrease performance and shorten the life of the parts.

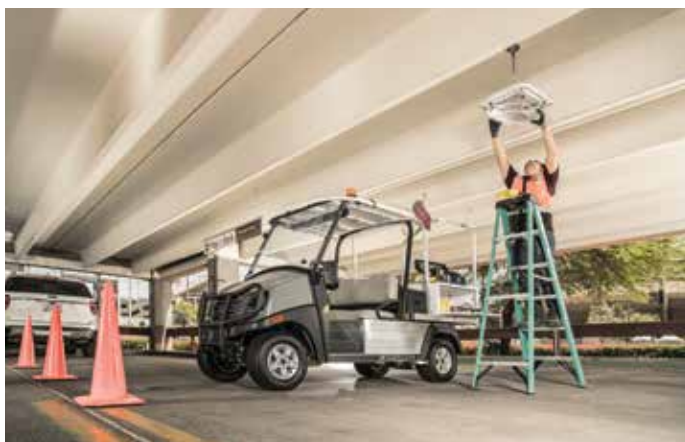
4 Get smart about sustainability. The power and performance of electric vehicles ranges far and wide.

Those with 48-volt battery packs and 500-amp controllers are the most powerful of the standard offerings. Most models have 350- or 400-amp controllers that don't carry or tow as much weight.

For example, a mid-sized vehicle manufactured by a major brand with a 400-amp controller and a 48-volt battery pack has both a bed load and towing capacity of just 600 lbs. (272 kg).

A comparable vehicle with a 48-volt battery pack but a more robust 500-amp controller delivers a bed load capacity of 800 lbs. (362.8 kg), 200 pounds more than the vehicle above. And its towing capacity is 1,500 lbs. (680.3 kg), two and a half times as much. This slashes travel time, boosts productivity and may result in longer vehicle life.

Further, the 500-amp controller features controlled downhill ability plus zero-speed detect to prevent roll away. The vehicle with the 400-amp controller may freewheel in descent.



Some vehicles feature DC motor controllers; others, AC. AC controllers are noted for acceleration and speed on hills, but they lose low-end torque. If you stop on a hill with a full load, you may have problems getting the vehicle started again. DC motor controllers produce all available torque at low RPM, so they pull heavy loads.

Make sure the vehicles come standard with smart on-board chargers with reel retractors. These systems issue fault alerts that prevent common user errors and allow for opportunity charging around your property.

5 Don't box yourself in. Bed boxes on many utility vehicles are made of heavy steel that rust or of plastic that cannot be repaired if broken. Look for aluminum bed boxes with replaceable sides and rears. Make sure the boxes feature strong linings like those found in pickup trucks. These linings protect the bed and dampen noise. Also, look for a box that accommodates a bed-based attachment system. Some of these systems feature tool and equipment holders that carry gear both inside and outside the bed. These free bed space, protect equipment and reduce round trips.

6 Carefully review the warranty. Be sure to review the warranty on your vehicle and clarify any questions you may have. Some manufacturers cover engines for twice as long as others. That alone can save you more than a thousand dollars on a single vehicle. On electric vehicles, check the coverage on the controller and charger as well as the battery pack. Again, there can be big differences.

7 Add versatility with accessories and customization. Work with a manufacturer that offers a wide range of commercial-grade accessories that can increase versatility, speed productivity and even reduce your fleet size. Many manufacturers stock primarily recreational accessories.

Also look for a manufacturer with an active Custom Solutions Department. That lets you go beyond the standard offerings and have vehicles customized to meet your unique needs.

Some manufacturers even offer lines of task-specific vehicles, specifically configured for jobs such as housekeeping, food and room service, bell service, security, facilities engineering, ground maintenance and other tasks.

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Understanding Fire Alarm Systems for the Hotel Industry



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Fire alarm systems are one of the principal life safety and property protection features of a hotel. Depending on system design and on-going maintenance, these systems are capable of providing a number of functions including detection of a fire incident, provisions of warnings to guest and staff, and the alerting of emergency forces.

Most individuals who stay at a hotel property don't think much about the fire alarm system unless it is activated by an actual or unwanted alarm event. Actual fire events are rare. Guests may notice a manual fire alarm box near stairwell exits or casually glance at the smoke alarm or smoke detector within their guestroom but, put literally, the fire alarm is just not on the average guest's "radar screen".

Hotel engineers, on the other hand must understand many aspects of these systems including the basis of design, operation and inspection, testing & maintenance requirements.



The basic operation of all fire alarm systems is simple. Initiating devices such as smoke or heat detectors, manual pull stations or water-flow switches connected to fire suppression systems provide a signal to a Fire Alarm Control Unit or FACU. The FACU in turn provides notification to building occupants through audible and visual devices. In most cases, signals are also provided to important building systems associated with occupant safety.



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Design and Approval of a Fire Alarm System

Every fire alarm system is comprised of input devices, notification appliances and output control functions uniquely configured for the property in which the system is installed. Determining how your fire alarm system is designed to function begins with locating the Record Drawings associated with the system.

In the United States fire alarm systems are designed, installed, and maintained to the requirements of the National Fire Alarm and Signaling Code, better known as NFPA 72. At the Design Phase, Shop Drawings are developed prior to the installation of a new system for review and approval typically by the local fire marshal or building department. Collectively, these organizations are referenced as the Authority Having Jurisdiction or AHJ. System design must also typically meet the technical requirements of a hotel organization's unique Brand Standards.

the Sequence of Operations. The Sequence of Operations, in narrative or matrix format (See Figure 1 below for an example matrix), provides a description of actions or "Outputs" to be followed based on system "Inputs".

Inputs, for example from a smoke detector, manual pull station, waterflow switch or similar device reflecting a fire condition, should be indicated as resulting in a **Fire Alarm** signal. **Supervisory Signals** are typically designated to monitor the condition of important equipment such as sprinkler control valves. Trouble Signals monitor the integrity of system circuits, devices and appliances.

Verification of the Sequence of Operations is required to be completed at the time of initial system acceptance testing. Often it may not be checked again until the system is modified and then it is generally limited to the affected parts of the fire alarm system modification. Emergency control functions of a fire alarm system are required to be tested annually as part of the Sequence of Operations. This

"Regular inspection and testing of a fire alarm system must comply with the requirements of NFPA 72."

On completion of system installation, NFPA 72 requires the contractor to deliver an accurate As-Built (or Record) Drawing set to the owner. This drawing set is based on the original shop drawings but updated during installation of the system. The contractor must also deliver a Certificate of Completion summarizing details of the installation, testing and approvals, where required by the local AHJ or by the hotel's Brand Standards. It is vital that you maintain this "As-Built" record of the fire alarm system at your property. NFPA 72 has helped make this possible by now requiring a document storage cabinet for all new fire alarm system installations. If this record set is not readily available, review the drawing archive at your hotel!

The Sequence of Operations

An essential part of your drawing package is the

would include any fire alarm system control relays that are interfaced with other equipment or systems. required to be tested annually as part of the Sequence of Operations. This would include any fire alarm system control relays that are interfaced with other equipment or systems.

Inspection, Testing & Maintenance

Regular inspection and testing of a fire alarm system must comply with the requirements of NFPA 72. In certain cases, local jurisdictions and hotelier brand standards may impose requirements that exceed those of NFPA. At a minimum, annual inspections should be performed by a qualified contractor; hotel engineers should be fully engaged in the testing process to ensure that testing is comprehensive and not simply limited to fire alarm devices.

Note: See Hi-resolution PDF Version in "Lodging Engineer / Past Issues"

Note: See Hi-resolution
PDF Version in "Lodging
Engineer / Past Issues"

System Outputs

System Inputs

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Example Fire Alarm Input/Output Matrix

Source NFPA 72, 2016 edition

The strict requirements of NFPA 72 stop at the fire-alarm system control relays connected to building systems such as vertical transport and HVAC controls. Nevertheless, it is vital when contracting with a fire alarm system service provider that the scope of inspection fully verifies desired functions.

Verification of emergency control functions, i.e. “outputs” of the system requires reference to the Sequence of Operations. If your service provider performing the annual testing and maintenance of your fire alarm system was not the system installer and/or significant time has lapsed since installation, without reference to the Sequence of Operations, testing of the fire alarm system may be incomplete.

Examples of output functions requiring verification include:

- Release of magnetically held open doors.
- Open or close of smoke dampers.
- Start or stop of fans and other mechanical systems.
- Elevator recall functions..
- Related emergency control functions unique to the hotel

Hotel engineers should maintain a checklist of these basic operations, hopefully correlated to the approved Sequence of Operations, and ensure functionality of the systems during the annual inspection and testing process.

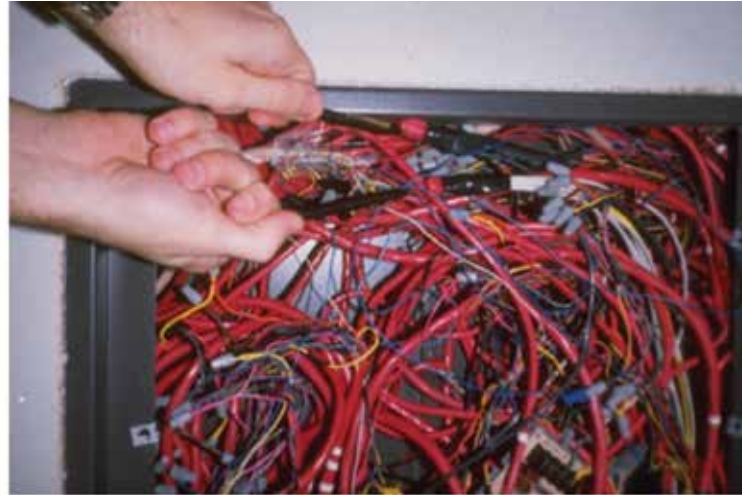
Another basic operation of the fire alarm system is the transmission of signals to a central station or directly to the fire department. When verifying the Sequence of Operations, ensure that proper signals are transmitted to the central station. Information regarding individuals that are to be notified of alarms should be updated periodically.

A regularly overlooked, but highly important operational function of a fire alarm system is the maintenance of correct time and date. Time and date functions are used to record system events into historical logs that are kept within the internal memory of the fire alarm control unit and / or printed out on a system printer attached to the fire alarm control unit.

The importance of the accuracy of the time and date cannot be overstated; accurate emergency event timelines, system troubleshooting and access history to the FACU depend on accurate time and date settings. The accuracy of these records is imperative when reviewed during a litigation process.

Inspection of all fire protection and alarm systems is in-reality a daily function; if a protective device or system is impaired, the situation should be remedied. Corrective action should be taken within a reasonable period. Serious issues should be corrected as soon as practical and not delayed to the next planned inspection/testing activity.

Engage hotel staff, especially the housekeeping staff, to be alert for damaged or missing equipment, damaged fire doors or breaches in fire rated walls and ceilings.



Poor Fire Alarm Wiring

Fire Alarms FAQs

How do Fire Alarm Systems become obsolete?

All modern fire alarm systems are dependent on micro-processor based technology to perform their complicated functions. Improvements to processor capacity and speed bring changes over time and to the availability of spare parts. However, unlike consumer products that are changed out over the course of a few years, fire alarm systems, if maintained in good condition, should experience a lifecycle of up to 20-25 years.

Explain Low Frequency Notification.

Beginning in 2014, new or upgraded fire alarm systems providing coverage for sleeping areas in hotels are generally required to provide an alarm frequency at significantly lower signal frequency, i.e. at 520 Hz. Previous signals were in the range of 3,000 Hz. NFPA 72 does not require existing systems to be upgraded; however, an activity such as a significant property renovation may trigger the requirement.



Fire Alarm Speaker

Are delays allowed in the generation of a fire alarm signal based on activation of a smoke detector?

NFPA 72 recognizes two methods to verify alarm signals in a hotel: Alarm Verification and Positive Alarm Sequence. Both methods are applicable to smoke detectors and other automatic fire detectors only and cannot be used together. Application of either method typically requires approval from the AHJ. The answers provided assume up-to-date capability of the fire alarm system.



Smoke Detector

Describe Alarm Verification.

Alarm Verification is a fire alarm system function enabled at a FACU provided with the feature. It can be used when conditions or occupant activities are expected to cause nuisance alarms in an area protected by smoke detectors. A delay of up to 90 seconds can be programmed into the fire alarm system as a general feature, or selectively by smoke detector. The detection unit will verify if the presence of smoke / particles of combustion continue to exist for the prescribed time duration. If the time duration is reached and products of combustion remain detected, the detector will alarm.

If smoke / particles of combustion are no longer present, the smoke detector will not activate. The fire alarm control unit will not display any change in status during the verification process. No user interface is required once the feature is activated. The Alarm Verification feature is of beneficial use in areas where steam from cooking or cleaning equipment may be present, in elevator lobbies

where smoking may be permitted, and in parking garages where exhaust fumes may be present near the elevators.

What is Positive Alarm Sequence?

Positive Alarm Sequence is an automatic sequence that results in an alarm signal, even when manually delayed for investigation, unless the fire alarm system is reset. To function properly, the use of Positive Alarm Sequence functions requires trained personnel to respond to the fire alarm control unit and acknowledge the alarm event from an automatic fire detector, within 15 seconds of annunciation. If the signal is not acknowledged within 15 seconds, notification signals in accordance with the hotel's evacuation or relocation plan will be automatically activated. Once the alarm signal is acknowledged, trained personnel may have up to 180 seconds to investigate the scene and evaluate the alarm condition. NOTE: Maximum time setting of the sequence is dependent on the approval of the AHJ.

“Once the alarm signal is acknowledged, trained personnel may have up to 180 seconds to investigate the scene and evaluate the alarm condition.”

Should trained personnel determine that the condition is an unwanted alarm event, they may reset the fire alarm system. Should a second alarm signal come in from a different automatic fire detector during the evaluation window, the fire alarm system will automatically activate and conclude the investigation period.

If any other type of fire alarm initiating device is actuated on a system that is utilizing the Positive Alarm Sequence feature, the fire alarm system and its normal functions shall operate without delay. This would include activation of a manual fire alarm box (pull station) or water flow switch activation from the fire protection sprinkler system.

The Positive Alarm Sequence feature should only be used in those facilities with sufficient, trained personnel to carry out the evaluation process. A minimum of two trained individuals should be provided. One individual should always be located at the fire alarm control unit with at least one other individual performing the investigation of the alarm event. Procedures for employing the evaluation process should be documented and made part of the hotel's safety plan. As with any other safety procedure, response to an event should be practiced by the individuals responsible for performing the associated functions. Due to the limited time sequence of Positive Alarm Sequence, the trained individuals responsible for responding to the condition should be equipped with the necessary means to be in constant contact with one another.

What are the Capabilities of Intelligent Smoke Detectors?

Your fire alarm system may be provided with a feature to determine when a smoke detection device is getting dirty and potentially ready to initiate an unwanted alarm event. If your property has an addressable fire alarm system that has been installed within the past 15 – 20 years, there is a high probability that the fire alarm control unit can let you know when smoke detectors may be nearing the alarm activation threshold or need cleaning.

Review your system's Operation and Maintenance manual to determine if this feature is available and the way to generate a report. Reports may cover smoke detector sensitivity, dirty device thresholds, and related information depending on the FACU manufacturer.

Diagnostic reports of smoke detector condition can be useful to minimize unwanted smoke detector activation. Routine preventative maintenance of smoke detectors can reduce unwanted or nuisance alarms. These features can also minimize costly testing for the calibration and sensitivity of smoke detectors.

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Diagnostic reports of smoke detector condition can be useful to minimize unwanted smoke detector activation. Routine preventative maintenance of smoke detectors can reduce unwanted or nuisance alarms. These features can also minimize costly testing for the calibration and sensitivity of smoke detectors.

Describe How Bypass Function Keys Work.

With larger fire alarm systems manufactured by SimplexGrinnell/JCI, Notifier, Siemens Edwards, and others, the fire alarm control unit may have provisions for customized control buttons often referenced as "Bypass Switches". With caution, these switches may be used to temporarily disable certain system functions that would occur during an alarm event or control panel activation.

Bypass switch arrangements should only be configured with access based on password protected access and use should create either a trouble or supervisory signal at the FACU.



Example of By-Pass Switches

Common uses for bypass switches are: disable elevator recall operations, disable occupant notification, disable signals from transmitting to a supervising station (Central Station) and fan and damper control override.

Use of bypass switches should be strictly limited to routine testing and maintenance of the fire alarm and other fire protection systems. When in use, the FACU should be supervised by a trained individual to re-enable system function should an alarm event occur.

The bypass function should not be used to address an inconvenience or system malfunction. A disabled fire alarm system puts the building and the occupants at risk.

Additional Resources

National Fire Protection Association: NFPA is a source of information on fire protection issues in general and to obtain copies of NFPA 72 and its associated handbook.

Fire Department: Contact your local fire department or building official to cover unique local requirements.

Fire Alarm System Manufacturer: Each manufacturer maintains on-line resources covering their product line and legacy equipment.

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Byron L. Briesse, P.E.



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1. *"I've been an engineering manager for over 14 years, 10 in limited service and the last 4 in full service at the Marriott Renaissance Plantation. For a while I've been searching for a certification designed specifically to enhance my knowledge and competency in hotel engineering. My supervisor recommended the CCE certification from NAHLE and I must tell you this course hits all areas and key points from what you need to know to keep your facility maintained and running efficiently to being compliant with most city, state and federal codes and regulations. It's an all around great self-study course for the hotel Chief Engineer and DOE, and to this day I keep my study guide on my shelf as a reference if ever needed. I am also honored to be the first person to be designated CDOE (Certified Director of Engineer) from NAHLE and a proud member."*

Certified Chief Engineer (CCE) – Select Service Hotels

2. In my opinion the course was very informative because it covered very important themes focused on the system or the equipment we work with everyday at the hotel. Everything was explained with basic examples and simple words.
3. I think that the course benefits every Chief Engineer that takes it and also the company. Because it helps them do their work more organized and it helps understand the functions of each system they work with.
4. As a Reference source the Book was informative. There were nuggets of information in each section. The high points were the HVAC chapter and the Building Design and Construction chapters.
5. The information was presented good and was easy to understand. The online tracking was easy to get to and follow along with. The program overall was very good but I would maybe have liked to see a section for finance and include more general HVAC'S knowledge (heat pump's and chiller's).
6. *I think the program it's great, it definitely was a reinforcement in some areas that I was familiar with and a great learning experience in others that didn't have much knowledge. Very straight forward, seems to me that whoever put this course together must to have been in the field.*



Is It Time For Exposure Sprinkler Protection?



THOMAS DALY

THE HOSPITALITY SECURITY CONSULTING GROUP, LLC

What do a mountain top restaurant in Vail, Co., a high-rise hotel in downtown Dubai and a low-rise hotel in the wildland-urban interface in Santa Rosa, CA., have in common? All three of these fully sprinklered facilities were destroyed by fire. Those atypical fires burned from the outside in. None of those facilities had, at the time, any protection from a fire starting at the exterior.

Two Elk Lodge Restaurant Fire

The Two Elk Lodge restaurant sits atop the 11,000 ft high Vail Mountain in the White River National Forest in Colorado and is the major eating establishment for Vail Resort's skiing customers. The then one-story, about 15K sq. ft, restaurant was of heavy timber (Type IV) construction¹ using large diameter hewn trees as the structural columns soaring some 30 ft high in the seating area and massive solid and laminated wood beams for supporting members. The restaurant had a wet-pipe monitored sprinkler system plus fixed fire extinguishing systems for the kitchen equipment. The restaurant was only accessible using unimproved service roads, generally only with tracked vehicles during snow season.

Just prior to the ski season on October 19, 1998, in the early hours of the morning, domestic terrorists (members of the Earth Liberation Front²) using flammable liquids, set fire to the exterior of the restaurant. Initial responding fire units were from the Town of Avon followed later by the Town of Vail units. The service road was partially snow covered and the distance and circuitous running route contributed to the 45-minute response time³. As a result, responding units did little more than mop up duties due to the access challenges and extended response time. The ensuing fire completely destroyed the building and several other mountaintop structures in a series of simultaneous arson fires, see photo below.

Address Hotel Fire - Dubai

The 63 story Address Hotel is located in downtown Dubai and was newly constructed and opened in 2008. On New Years' Eve 2015, at about 10:30 pm, as revelers awaited fireworks, a fire started and enveloped the hotel's exterior combustible cladding. The resulting inferno raced up the exterior of the hotel resulting in a massive loss, albeit with no reported loss of life.

The hotel had a wet-pipe sprinkler system, fire alarm system and adequate exits but had no exterior protection from a fire of this type. Similar fires in high-rise buildings involving combustible exterior cladding has resulted in multiple loss of life, see, for example, the June 4, 2017 Grenfell Towers fire in London, UK⁴.



Two Elk Lodge restaurant
Vail, CO. October 19, 1998

Photo courtesy of the Vail Fire Department

¹ See NFPA 220 Standard on Types of Building Construction, Chap. 4 for definitions and structural requirements. • ² See <http://www.cnn.com/TECH/science/9810/22/vail.fire.02/> for details.

³ From an interview with then Town of Avon Fire Chief Charles Moore • ⁴ See https://en.wikipedia.org/wiki/Grenfell_Tower_fire, for details of this fire.

Address Hotel Dubai
December 31, 2015

Photo from CNN



about 10:30 pm, as revelers awaited fireworks, a fire started and enveloped the hotel's exterior combustible cladding. The resulting inferno raced up the exterior of the hotel resulting in a massive loss, albeit with no reported loss of life.

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The Tubbs Fire – Sonoma County, CA

On October 8, 2017 at about 9:45pm PDT a wind-driven wild-fire (dubbed the Tubbs fire) started on Tubbs Lane in Calistoga, CA just northeast of Santa Rosa, CA, (Sonoma County), reportedly from downed power lines, in the wildland-urban interface. Within four hours the fire exploded in trees and brush and swept down the mountain side pushed by 60 mph peak winds into Santa Rosa proper, some twelve miles from the

point of origin. This area of Sonoma County is in a 'High Hazard' wildland fire zone⁵.

The three-story ordinary (Type III)⁶ constructed Hilton Sonoma Wine Country hotel was destroyed along with the adjacent Fountaingrove Inn in Santa Rosa.

Saved for an impaired sprinkler system, fully sprinklered buildings rarely suffer such extraordinary fire losses. Nonetheless, NFPA 13 Standard for the Installation of Sprinkler Systems and the building/fire codes requiring same for certain occupancies, assume fires will start within such buildings and a properly maintained sprinkler system will, at worst, contain such interior fires until the arrival of firefighting forces.

NFPA 13 allows for, but does not routinely require, exposure sprinklers⁷ and neither the International Building Code nor the NFPA Building Code generally require exposure sprinklers, although if an exterior projection from a building exceeds 4 ft., an exterior sprinkler is required and certain other exterior balconies/patios may require⁸ exterior sprinklers⁹.

So, is it time to consider requiring exposure sprinkler protection for hotels and other buildings otherwise requiring a sprinkler system, if those buildings are located in the wildland-urban interface 'High' or 'Extreme' wildfire zones¹⁰? How about for those hotels using combustible exterior cladding?

To their credit Vail Associates and their design team in the re-building of the same Two Elk restaurant atop Vail Mountain in 1999, added closely-

⁵ See http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_statewide, for a description of Wildland Fire Hazard Zones in California. • ⁶ Op. cit., NFPA 220

⁷ See NFPA 13 Standard for the Installation of Sprinkler Systems, Sections 7.7, 8.3.4.3, and 11.3 for installation criteria for exposure sprinkler protection • ⁸ Ibid., NFPA 13, Sec. 8.15.7

⁹ See, for example, the International Building Code Sec. 903.3.1.2.1 • ¹⁰ See the International Wildland Urban Interface Code Appendices for an explanation of fire hazard severity zones.



“Those who cannot remember the past are condemned to repeat it.”

George Santayana

spaced sidewall sprinklers along the entire exterior of the restaurant under the roof eaves to thwart either another arson fire or a wildland fire exposure.

It is too early to determine whether the two Santa Rosa hotels will be rebuilt and, if so, whether they will consider exposure sprinkler protection as a component of their sprinkler system design. Exposure sprinklers are not code required (yet) so the decision to add them is one each hotel owner would have to consider. The cost to do so in a newly constructed building is minimal and is a prudent risk management decision.

This series of wildfires in late 2017 in both northern and southern California were epic and unprecedented. The lodging industry should heed the ‘lessons learned’ about the power, speed and scope of the wildfire threat to hotels located in the wildland urban interface.



Thomas Daly is the retired Vice President Loss Prevention for Hilton Hotels Corporation, now Hilton Worldwide, and currently serves as the building and fire code consultant to the American Hotel & Lodging Association.



We All Endure Day-to-Day Stress Extraordinaire In Our Careers



by TIM ARWOOD

I instructed him to not come in contact with water and place danger tape around the area. This was the longest 35 minute drive of my life and my electrician, whom I also called from the road, arrived seconds after I was on the scene. It was his job to determine if the water in the plant room might be electrified; there were several high voltages breakers and a transformer now under water.

We all endure stress extraordinaire day-to-day in our careers, how do we live with that and manage our health, mind, body and soul? Well for everyone it is different, we are all complex beings but at the bottom of it all is handling the extreme. I have graciously been invited by NAHLE's President Bob Elliott to write a column from time to time and I plan to write a short series of the most serious events on the job, days that indeed prove our worth. In each installment I will offer up Engineering Challenges I have experienced ranging from hurricane Charley in a Downtown Disney™ Hotel to a wonderful night when several unfortunate homeless people looking for shelter from the elements broke a 3 inch PVC line flooding my below ground chiller room in the bottom of my parking garage. First, I will give a description of the event and then I will give you the way I handled the stress. As I said everyone is wired differently and relaxation and defusing stress can be an evening in a pub, a night at the cinema, fishing or my favorite, a trip. Whether it is a weekend getaway or in extremely stressful times a full blown vacation of glaciers and volcanoes in Iceland. Maybe along the way you might decide to checkout one of these locations to unwind from the daily grind someday. Well let's start with the Challenge!

What a war story it is. I was home sleeping in the middle of the night and then that unmistakable sound of the cell phone ringing out from the nightstand woke me from my slumber. Picking up the phone, I groggily answered wiping the sleep from my eyes. The night audit manager in a panic explained that there was no air conditioning in the building at full house in the middle of summer. So it was off to the Batmobile and on my way in.



"The night audit manager in a panic explained that there was no air conditioning in the building at full house in the middle of summer."

Next, a second call came through we had lost all of the outdoor lighting along with part of the parking garage lights on the lower levels. Still in route I called my trusted assistant, Mike Thompson, and asked him to come in. Mike lived nearby and arrived within 15 minutes. Upon his arrival he called me and said, "Tim it's really bad, a 3 inch PVC line feeding the water softener that feeds the cooling towers broke. I turned off the shut off valve, but there's five feet of water in the chiller room."



As a precaution the electrician shut down all main breakers feeding the garage and plantroom from the switchgear room and then he and the rest of us stood by for four and a half hours while a pump truck removed water at thousands of gallons per trip. Finally at about 9 AM the water was down to only a few inches and we ventured in, finding the dual sump pumps in the floor still running, simply over whelmed by the deluge and couldn't hope to have caught up for days. Next our chiller mechanic arrived to evaluate the situation, while the electrician was going through all the breaker equipment. As it turns out, all four condenser pumps and all four chill water pumps were no longer viable. Without replacements we would continue to go without A/C at full house and a convention in house, my GM was suprisingly calm considering the importance of our convention guests and yes, by now, two dozen rooms not associated with the group had already



checked out with refunds. We needed parts ASAP. Oh, I haven't yet revealed this little tidbit of pertinent information; it was Saturday morning and parts might not be attainable. We could run one chiller with working chill water and a condenser pump. Our chiller mechanic found a condenser pump, but was having no luck finding the correct chiller pump. I called my sales person and in less than an hour Phil Keller pulled in with the pump in his SUV.

There was no other mechanic to assist with the heavy lifting and installation, so Phil fresh from a family event in shorts and T-shirt sufficed. Impossibly we were up and running by 1PM. Investigating the area in daylight we found soap, tooth brushes, and a makeshift bed that had been fabricated behind the softener. Security's log indicated he had startled several homeless people and they had climbed through the close configuration of piping. Their escape had broken the 3 inch PVC line. This was the limit of my endurance after a long hot Florida summer, so to mend body and soul it was time to relax in a natural setting.

I thought to myself, what's this strange sound, no there was no traffic, trains or sirens to be heard. It was birds and the sound of water moving across smooth stones in the brook. Yes, it was the peace and

quiet of a place that even my cell phone could not be reached. It was October and I was four miles up a steep gravel road standing in front of a Classic log cabin on the side of a mountain. Oh and what's that other sound I heard, it was the wind whistling through the autumn leaves in the treetops above me. Completely "OFF-the-GRID" for a week - I don't think I could even be seen from a satellite in the deep cover of the forest - the sun hardly touched the carpet of leaves beneath my feet. We strolled that day along a trail that passed many other cabins (each very private) that were mostly getaways for those who like to escape from Atlanta on the weekends & holidays. Here nestled in the foothills of the Appalachian Mountain Range, and on the route of the Appalachian Foothills Parkway; Ellijay, in Gilmer County Georgia, is a paradise of forests, rivers, historic ambience and Old Southern charm.

The cabin was beautifully appointed, rustic with all the comforts of modern technology and a fully-equipped a kitchen, two fireplaces, antique furnishings, phone, Satellite TV, Washer & Dryer, central air and heat, and





a gas grill. Also, there was a monstrous second story porch with a fireplace and a six-person hot tub! The Cabin had 3 floors total, and could sleep up to 8 guests for less than \$200 per night!

A couple of hours away a trip through some very beautiful scenery took us to Helen Georgia. We were lost for a bit and stopped at a local gas station. The lady at the counter told us the best route. We were going according to the GPS, but she explained we would be going over Blood Mountain, and it would be full of tourists on weekends and not as pretty as the other route. Her recommendation was awesome for viewing the sites. At our destination we saw the Chattahoochee River that flows gently through Helen, a re-creation of a Bavarian Alpine village complete with cobblestone streets. Once a lumber town, Helen now has more than 200 specialty and import shops offering everything from candle making and glass blowing to cuckoo clocks and quilts.

Dining options range from traditional German fare to traditional southern, but we went with a German restaurant on the river with a wonderful view. Another getaway is Unicoi State Park with lots of trails for hiking and biking as well as swimming and boating on Unicoi Lake. Stop for a wine tasting at Habersham Winery or at the Nora Mill Granary for some "Georgia Ice-Cream," otherwise known as grits! Recreation is in abundance with mountain biking, fly-fishing, golfing, horseback riding, hiking, as well as tubing and boating. Attractions include the Live Tarantulas Gallery, Charlemagne's Kingdom, Scarlet's Secret, the Black Forest Bear Park, the Russell-Brasstown Scenic Byway and area waterfalls just to name a few.

We had a terrific time, the stress melted away and I returned to work invigorated and ready for the next extreme work challenges....bring it on!!!



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