



1ST PERSON INTERVIEW

**Stan Hannibal,
CEOE, CFM, FMA**

**Senior Director of
Corporate Engineering
and Renovations
White Lodging Hotels
Austin, Texas**

[Read More on Page 6](#)



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FEATURES

- As I See It
- 1ST Person with Stan Hannibal
- No More Mr. Fix It
- Time to Upgrade: Lamp Legislation
- The Myths of PTAC Units
- Certified Pool Operator
- Parking Structures Maintenance
- Carbon Monoxide Alarms for Hotels
- A Maintenance Creed



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CONTENTS

4 AS I SEE IT – *Robert Elliott* talks about the importance of continuing education and professional development for hotel engineers. The article stresses the importance of approaching asset management from a team perspective and empowering the hotel engineer, today's front-line asset manager, with "institutional" knowledge.

6 1ST PERSON – *Stan Hannibal* is Senior Director of Corporate Engineering for White Lodging Hotels. Stan talks about his responsibilities at White Lodging, the challenges of managing millions of dollars in renovations, and the importance education and training has played in his personal career.

9 NO MORE MR. FIX IT – *Richard Manzolina* discusses the emerging role of today's engineer. Yesterday's engineer was most concerned with what had been accomplished. Today's engineer is equally concerned with *how* we accomplish our tasks, *how* we interface with peers, owners and vendors, and *how* we maintain pace with technology.

12 TIME TO UPGRADE: LAMP LEGISLATION AND THE LODGING INDUSTRY – *Brian Vedder* discusses the Department of Energy's new regulatory requirements for hotel compliance. The new regulations focus on reducing energy consumption associated with inefficient lighting.

17 THE MYTHS OF PTAC UNITS – *David Odom and Norm Nelson* return to Lodging Engineer and answer that important business question most often associated with guestroom temperature control for select service properties; "How do you make a hotel guest room comfortable for the least cost?"

18 CERTIFIED POOL OPERATOR: GET IT, EXPLORE IT AND USE IT – *Manny Mercado, CCE* discusses the importance of becoming a CPO. Most state health departments require a certified operator for operating a public pool.

20 PARKING STRUCTURE MAINTENANCE – *NAHLE* provides an excerpt from the CCE program study guide on parking structures and maintenance. Rigid and flexible pavements are discussed as well as EPA concerns.

22 CARBON MONOXIDE ALARMS FOR HOTELS: AN UPDATE – *Tom Daly* provides an update on carbon monoxide detector requirements being added to the International Code Council's 2012 editions of the International Building Code (IBC) and International Fire Code (IFC). State regulators could adopt very costly code provisions that are already under review.

24 MAINTENANCE CREED – *Stan Hannibal* shares with us his perspective on how one of the industry's most commonly used acronyms actually got started and what it stands for. Stan provides the 11 most important reasons why we have maintenance in hotels.

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AS I SEE IT

Robert Elliott, CCE
President NAHLE
Publisher Lodging Engineer



NAHLE, the National Association of Hotel & Lodging Engineers, is proud to be publishing our 11th edition of Lodging Engineer. I especially want to thank all the engineers who have shared their knowledge and experiences with our readers. So here's a brief shout-out for their contributions. I'll try and mention everyone, but forgive me

if I leave anyone out – Manny Mercado, Tim Arwood, Todd Isbell, Art Attaway, Fred Hueston, August Craanen, David Odom, Norm Nelson, Richard Manzolina, and Thomas Daly. I especially want to thank Penny and all the folks at Grainger and the American Hotel & Lodging Educational Institute.

I recently read a job description for a Chief Engineer position by a leading hotel management company. Among others, the job description said, "The Chief Engineer is expected to have direct involvement with guests and team members. This is a hands on position that requires active, vigorous leadership.

SPECIFIC RESPONSIBILITIES:

Number 1 - Ensure assets are maintained to achieve maximum useful life in terms of serviceability and appearance.

The number one priority is to ensure the property's assets are properly maintained. More and more hotel companies and engineers themselves are recognizing that today's real asset manager is the property's front-line Chief Engineer. Hotel management companies spend many necessary hours going over building system information and life-cycle costs, but these individuals are not at the property on a daily basis making decisions day-in

and day-out. If you are the Director of Engineering or the Chief Engineer of a hotel you know what I am talking about. So maybe it's time you get a little more support recognizing that the fact that you are one of corporate's most important assets. As your company's day-to-day front-line asset manager, you are continually faced with decision-making requiring a fundamental knowledge of engineering principles and building systems. Every day you manage of variety of different people, equipment, inventory, projects and building systems, all within prescribed budgets, differing time constraints, various federal, state, and local laws, regulations, and building codes. And, each of these facets of hotel engineering comes with high expectations from both the guest, your community and corporate as well as your staff. Your decisions are often second only to corporate branding when it comes to creating your guest's first impression.

This same company job description listed the number three job responsibility as, "Ensure aggressive guest first approach among team members and provide a friendly guest contact experience." These day-to-day decisions and interactions of a property's chief engineer can have a profound affect on the owner's bottom line.

So how does today's lodging engineer meet these expectations and how can they become a better asset manager? The quickest path is to increase one's knowledge from direct study and recognized certification programs. The most direct path, though more time consuming, is through hands on experience gained throughout a career in hotel engineering and building maintenance. However, the most effective path for professional development combines experience and knowledge with a third element, a team oriented approach of support coming from both corporate (top-down) and your staff (bottom-up). Here I am talking about asset management accomplished from a team oriented approach. As this issue's 1st Person so aptly states, "Unless everyone in your organization is working towards the same goal or objective, you will not get there."

With today's Internet, access to information seems unlimited, but it's not always so easy to sort through it all and apply your

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findings directly to your workplace needs. How does one make sense of it all and convert this vast array of information into usable knowledge that you can call your own? You can go it alone or you can use the team approach of both learning from and sharing with your peers. NAHLE's number one objective is to be a trusted member of your team. When it comes to your continuing professional development, NAHLE has developed a program that enables you to remain competitive and meet the demands and expectations of today's new breed of combination hotel engineer/asset manager.

NAHLE's primary focus is to provide a forum for the exchange of information and job experience among hotel engineers (peer to peer) and between you and the vendors and technicians that support your properties. We do this through a variety of venues including our quarterly magazine (*Lodging Engineer*), our monthly eNewsletter, our website (www.nahle.org) which is hopefully completing a major overhaul, educational webinars (Philips Lighting – October 25), educational luncheons (GE/Grainger) and our Certified Chief Engineer (CCE) program (NAHLE/AHLEI). Perhaps most importantly, our content is written by engineers for engineers.

In the past four years, NAHLE's has developed a very focused curriculum for our Certified Chief Engineer (CCE) program capturing years of 'institutional knowledge' and experience. We have combined this with a review of fundamental core engineering principals. Our program is administered under a partnership with the world's leader in hospitality training and education, the American Hotel & Lodging Educational Institute. We believe that the engineer that successfully completes our CCE program is uniquely positioned to become tomorrow's most informed front-line asset manager. Empowered with more knowledge, you – the hotel engineer, are better equipped to make informed decisions and more effectively manage your property's assets.

If you like what we are doing here at the National Association of Hotel & Lodging Engineers, please give some serious thought to supporting us by joining the association. Our success is dependent upon you getting involved. And, if your company won't do it for you, empower yourself and enroll in our Certified Chief Engineer program. And, don't stop your professional development with only one certification. Later in this issue, Manny Mercado, a recent CCE grad, speaks about the importance of gaining your Certified Pool Operator's (CPO) designation as well.

I hope you enjoy the issue.
Bob Elliott

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Study Guide*

Robert F. Elliott





1ST PERSON AN INTERVIEW WITH

Stan Hannibal, CEOE, CFM, FMA
Senior Director of Corporate Engineering and Renovations
White Lodging Hotels in Austin, Texas

Stan, I just want to say it is a real pleasure to interview you for Lodging Engineer. You and I have had an opportunity to speak on numerous occasions, but you are our first corporate engineer for our 1st Person. I know that you made some significant contributions to NAHLE's Certified Chief Engineering program as one who contributed to its chapters. I am excited to say that we are printing your "Maintenance Creed" in its entirety for our readers, but first let's talk about you and your rise through the ranks of hotel engineering. What do you currently do for White Lodging?

White Lodging is a hotel management company and I handle project management, training, and new hotel acquisition property improvement plans or what is commonly referred to as PIPs. In the last 5 years in this position, I have overseen over \$50,000,000 in renovations, and managed to completion \$30,000,000 in capital expenditure projects of various size and scale.

And before this, what did you do?

Prior to my current position, I was the Regional Director of Engineering for the Texas area for White Lodging. And, before coming to White Lodging, I worked for Marriott International for over 16 years in various capacities including Regional Engineer, Regional Project Manager, and Director of Engineering.

So where did it all start for you?

I was born in Hampton, Virginia, and grew up in many different places while my father served in the Air Force. As an

Air Force dependent, I had the opportunity to live in California, South Carolina, Alabama, Philippines, Hawaii, Texas, and Delaware, graduating from Dover High School in 1981. After high school, I immediately joined the workforce. My career got underway 25 years ago working as a service technician in the food service industry. Over the past 18 years, my education, training, and experience have led to my current position in the hospitality industry.

Tell me a little about your days with Marriott.

For Marriott I worked as Director of Facilities in Somerset, New Jersey, and Elmhurst, New York, before becoming both the Regional Project Manager out of Dallas, Texas, and the Director of Engineering in Houston, Texas, from 1997 to 1999. I was later transferred to the Chicago Mar-

riott where I was the Director of Engineering for four years. And, after moving the family back to Houston, I was promoted to Regional Engineer for the Marriott South Central region. This required me to commute from Houston to Dallas.

Stan, I mentioned you authoring some chapters for our "Hotel Engineering" study guide and text. You are also actively involved in continuing education and professional development. I personally believe that knowledge coupled with experience and people skills are perhaps three of the most important aspects of a hotel engineer's professional development. Missing any one of these three components can be the difference between success and failure. Would you share you thoughts on this?

I taught a facility management class at New York University in 1997 and this was just

Urban Restaurant - An American Grill





Maintenance is Priority One at White Lodging

the start of many training opportunities. As you know, I contributed to NAHLE's Certified Chief Engineer (CCE) program. This CCE text is geared to be an excellent study guide to either learn hotel engineering and management or supplement the seasoned vet. It doesn't matter whether you're a DOE for a high rise or a Chief Engineer at a select service property, there is always something new that one learns that makes them a better engineer or a better asset manager. I have earned certifications in Facility Management, Communications, Indoor Air Quality, and Pool Operations, to name a few. I am proud to say that I am currently pursuing my Bachelor's degree in Business Management from the University of Phoenix with a graduation date of December

2013. I am also a member of NAHLE, IFMA, BOMI, and the Association of Black Engineers.

Stan, on behalf of Lodging Engineers and our readers, I want to thank you for taking time out of your busy schedule to talk with us. I am publishing your "Maintenance Creed" in this issue. Your background is certainly very impressive, but over the years I learned behind every good man is his better half. So tell me, who really taught you all about hotel engineering?

Did I mention that my wife, Katherine, works for Marriott as an Engineering Supervisor for the Austin Renaissance Hotel?

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Oscar Wilde once said, “Experience is simply the name we give our mistakes.” Simple yet utterly profound, this quote applies as much to a child learning to ride a bike, as to those of us trying to run our hotels. So with two decades worth of mistakes masqueraded as *experience*, my goal for this article is to offer you, my fellow facility managers, some unsolicited advice in helping manage your facilities in this era of multiple bosses and highly limited resources.

THIS AIN'T YOUR FATHER'S BUILDING...

My first free nugget is this; despite your preconceived notions, you are not running a building. You are managing a *physical asset* that provides your sales team the ability to sell guests an experience, and by extension provides a return on investment for your owners. Buildings can, to a great extent, be “run” on autopilot, and there are more than a few building automation systems out there that would be happy to do this for you. Buildings are structures that keep the weather out and keep the inside warm and safe. Conversely, your *physical asset* is the sum total of not just the tangible building and its systems, but the intangible value brought by a *well maintained* building with *fiscally efficient* engineering operations. Productive and well trained personnel, orderly and current maintenance agreements, and fluid repair procedures don't just sound good on paper, they add value to an asset. So after twenty years and countless interactions with asset managers, I can assure you

that, from a building owner's perspective, a well-oiled engineering operation adds value to a hotel. And if you're the one adding value, you will quickly find yourself in the enviable position of being listened to. Not just heard, but listened to...by your Hotel Manager, your GM, and your asset manager alike.

ROUND ONE... BRAINSTORMING

So now that you have their attention, what should you say? Well, before you say anything remember that when you want something for your building, you have to ask yourself one question: “Does the thing I want add value to the asset, or more specifically, does it enhance my ability to run a fiscally efficient operation?” Whether it be a new chiller, an added staff position, or rebidding a maintenance contract, the answer to this question has to be an honest yes, and once more, it has to be measurable. Because if you can't sell this idea to your superiors and be able to demonstrate the benefit, then there's no compelling reason to give you the resources you need to bring your idea to fruition.

For example, let's say you have a dish machine that has way outlived its useful life. You know it needs to be replaced and every year you try to get in the budget. And while everyone seems to agree it needs replacing, inevitably the project gets shelved in favor of some other project...and you get stuck trying to breathe life in to this all but dead machine for yet another year. But the problem may not be the budget or the choice of project, but rather in the way you are selling it.

ROUND TWO... THE SALES PITCH

Okay, you are ready to pitch your new idea, or in this case, a new dish machine. Before you say anything remember this... your audience has to believe you are an expert in whatever it is you are saying, and you need to be able to communicate this expertise in their language. In this example, it's not that you need to be an expert in dish machines, but you *do* need to be an expert in all matters relative to the need to replace your specific dish machine. So when you go to the budget meeting, arm yourself with plenty of data to support your cause. In this case, consider the following:

- *Know the historical maintenance costs* of the existing unit, going back at least three years. Include contract repairs, parts, and time spent by your own staff making repairs.
- *Calculate the impact of down time.* When the machine is down, is a smaller machine used, or are stewards forced to do hand washing? These extra labor costs are real, and will help your case.
- *Be able to speak to the impact on operations other than just Engineering.* Plan to discuss the impact on kitchen or restaurant staff, on small ware inventories, or the inability to properly sanitize

without the high heat capacity of the dish machine.

- *Do your homework* on the new machine. Consider a unit that has proven reliable elsewhere in your facility, or at sister properties. If warranted, pick a machine that you already have in use elsewhere on site, negating the need to keep a duplicate inventory of repair parts. Compare manufacturer's warranties, and determine anticipated savings based on repairs covered by warranty.
- Given all the above, *calculate a simple payback* for the project, defined as:

$$\frac{\text{The turnkey cost of the new machine}}{\text{The annual cost of repairs and downtime}} = \text{Payback (in years)}$$

- *Know your senior leadership's typical threshold for acceptable payback periods.* If the property is looking to be sold or funding is scarce, anything with a one year or longer pay back will likely be a tough sell. Conversely, if your owners favor projects that maximize long term value versus short term cash flow, then you may find projects with 3+ year paybacks palatable.

LABOR SAVINGS...REALLY?

Before including any labor savings in your payback analysis, consider a quote from a former GM of mine: "If you ever tell me there's a labor savings on a project, give me a picture of the person you plan to fire. If I see them, I'll fire you!" What his comments lacked in tact was more than made up for in substance, and I never forgot the underlying message. So while you and your team will surely spend less time dealing with breakdowns once a new dish machine is installed, be very weary of including any "labor

maybe, on a good day, spending 5% of their time on "big picture" stuff. The problem with this strategy is simple...if you do not view your operation from a macro point of view, looking for system wide savings and improvement opportunities, nobody will. Worse still, eventually somebody else will. I know, I know, it makes sense but is easier said than done. Today's engineers are expected to accomplish more with less and often it is just faster and easier to do the job yourself then to send the junior man to do it only to eventually have to do it

As I share with my team regularly, the Director's job is not to fix things...that's their job. Instead, my job is to provide them with the resources they need to do their job.

savings" in your payback analysis, unless you plan on literally reducing labor expense as a result of the project. Instead, a better way to represent the anticipated "labor savings" would be to discuss a specific plan for how you intend to use the displaced labor. i.e. "... the man hours not spent on dish machine repairs will be dedicated to catching up on kitchen equipment PM, filter replacement, etc."

SEEING THE FOREST FOR THE TREES

Let's take a step back now and look at the senior engineer's role as whole. Too often in my experience, engineers see themselves, by choice or by necessity, as glorified line employees who churn through every day putting fires out and

yourself anyway. But faster and easier is not the same as better. And this strategy is clearly self-perpetuating, keeping you trapped in a cycle of firefighting. Instead, consider the role of the Director or Chief to be not one of a *doer*, but rather one of a *facilitator*. As I share with my team regularly, the Director's job is not to fix things...that's their job. Instead, my job is to provide them with the resources they need to do their jobs, both tangible and intangible resources. Maybe they need tools or supplies, or training, a pat on the back or a kick in the butt. Whatever your team needs, your role is to provide resources and remove obstacles so that your team can flourish. And with their success and ability to work on their own will come time

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for you to focus on the big picture items. As the old saying goes, feed a man a fish and you feed him for a day; teach him to fish and you feed him for a lifetime.

VFD's? That same mechanical contractor you already call for emergency service can surely help. Need staff training on flushometer replacements? Get your

with technology are arguably of equal importance. It is not enough to simply put the fires out. To be successful, today's savvy engineer recognizes his or her role as asset managers in their own right, as stewards of the facility they have been entrusted with maintaining, and as facilitators for adding value to their properties.

The good news is, you don't need to fish alone. There are scores of reputable vendors, suppliers, and contractors who are willing to assist you, for free, with training for your staff or doing the legwork for projects you would likely want to pursue.

The good news is, you don't need to fish alone. There are scores of reputable vendors, suppliers, and contractors who are willing to assist you, for free, with training for your staff or doing the legwork for projects you would likely want to pursue. Your sister properties, corporate office and ownership company may also be resources. Again, there's no reason to reinvent the wheel here. If you have a project and know what to do, but just haven't had the time to test products, research rebates, get bids, etc., etc., then let someone else do the heavy lifting. Want to do a lighting retrofit, get your bulb supplier involved. Looking to install

plumbing supplier to have the manufacturer's rep do free training on site. And if you happen to be in a deregulated energy market, get your energy supplier on the phone. Often, they can not only do all the legwork for an energy reduction project, than can even finance it! Now that should make for a smooth sales pitch come time for your next budget meeting.

IN CLOSING...

In the past, it can be argued that *what* an engineer accomplished was of paramount importance. Today, *how* we accomplish our tasks, *how* we interface with peers, owners and vendors, and *how* we maintain pace

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TIME TO UPGRADE LAMP LEGISLATION AND THE LODGING INDUSTRY

Brian Vedder
Product Manager, Philips Lighting

This year has seen some big changes for lighting. Beginning on January 1, 2012, new government standards require light bulbs, or lamps, to be 28% more efficient than existing lamps. As a result, one of the most commonly used lamps—the 100W incandescent—was effectively eliminated.

Much was made over the demise of the 100W bulb, but many may not be aware that A-shape lamps aren't the only light sources affected. The provisions set forth in the Energy Independence and Security Act of 2007 (EISA), a bipartisan effort that aims to reduce energy consumption associated with inefficient lighting, also impacts other lamp types frequently used in hospitality settings. These include PAR, BPAR, ER, BR and R type lamps, as well as A-shape lamps ranging from 40W to 150W. The legislation also impacts general service linear fluorescent (GSFL) products, often used in back-of-house applications.

What does this mean for hospitality business owners and managers? It can mean reduced costs and more efficient lighting. Thanks in part to EISA, lamp manufacturers such as Philips Lighting have introduced new energy-efficient products to replace the lamps that have been phased out by the legislation. These halogen IR, CFLi and LED lamps can be used to

replace the PAR lamps and A-type lamps commonly used in front-of-house spaces¹. Typical spaces may include lobbies and reception areas, restaurant and retail spaces, conference rooms and other event rooms, and guest rooms, public spaces and circulation areas.

To determine which lamp is right for you, consider the application. For example, an upscale hotel lobby with high quality materials and finishes will require a lamp with excellent light and color quality, whereas multiuse spaces such as conference rooms or ballrooms may require a lamp that dims. Whatever your lighting objectives are, there is a lamp that meets both your needs and the new regulations. What follows is a look at how three incandescent replacement technologies—IR halogen, CFLi and LED—stack up in terms of maintenance, cost, energy efficiency, light quality and dimming.



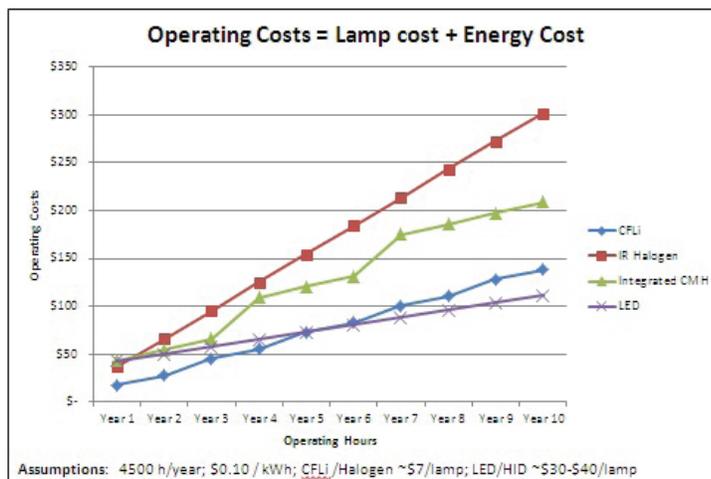
Halogen PAR

Halogen IR

A type of incandescent, halogen contains a halogen gas mixture (such as krypton and xenon) that increases the lamp's lifetime and luminous efficacy, or lumens per watt. IR halogen lamps, in particular, feature a special reflective coating that recycles infrared energy and redirects it to produce more visible light using less wattage.

IR halogen lamps offer many benefits similar to standard incandescent lamps. Like common incandescents, they produce warm light with high red saturation that renders skin tones well. Most IR halogen lamps have

a correlated color temperature, or CCT, in the 2,800K to 3,100K range. This means that they produce white light with red and orange wavelengths that appears "warmer" and is similar to



light from a standard incandescent. They also have a comparable color rendering index, or CRI, which indicates how well they render colors versus a standard black body radiator. Typically, IR halogen lamps have a CRI of 98 or greater. (A 90-plus CRI is considered to be excellent.) In addition, halogen lamps have a relatively low first cost and are fully dimmable.

Not surprisingly, halogen lamps also share some of the same disadvantages as standard incandescent lamps. While an IR coating can double to triple the life of a halogen lamp, halogen IR lamps still have a relatively short rated average life compared to CFLi and LED lamps. Also, they use more energy than CFLi's and LEDs.

Given these factors, IR halogen lamps are best for applications where dimming, initial cost and color

“Halogen lamps are best for applications where dimming, initial cost and color rendering are most important.”

rendering are most important. It is not an ideal solution for applications requiring lights to be on 24 hours per day. IR halogen PAR lamps are ideal for restaurant and retail lighting, which require a combination of excellent color rendering and dimming for ambiance and accenting. Track and accent lighting, notably for art illumination, are other good uses. Because dimming increases lamp life, they are especially useful in dimming applications, as well as in places where frequent on/off switching occurs, since frequent switching can lower the life of self-ballasted lamps, such as CFLs.

CFLi Lamp



CFLi

Integrated compact fluorescent lamps (CFLi) are increasingly popular in hospitality settings. Early CFLi's gave the technology a reputation for long warm-up times, greenish-hued light and flickering;

however, current high-quality CFLi's have eliminated most of these concerns. Notably, CFLi lamps are now available in a range of color temperatures as low as 2,700K, similar to incandescent lamps.

Why are so many people now willing to give CFLi's a second try? Their relatively low price point, long life and energy efficiency are major selling points. In addition, many manufacturers now offer a range of screw-base compact fluorescents, including reflector lamps, which are direct replacements for incandescents. CFLi lamps may cost slightly more than

their halogen and incandescent counterparts; however, according to the ENERGY STAR's consumer website, Energy Star certified CFLi's can use “75% less energy, produce 75% less heat, and lasts up to 10 times longer².” Also, several manufacturers now make CFLi's that are dimmable down to 10%. Be sure to check lamp packaging for dimming compatibility, since not all CFLs are compatible with all dimmers. The best way to be sure is to test the lamps in your specific application.

CFLi lamps are lacking, however, where halogens excel. Most CFLi lamps have CRIs in the 80 range, which means that they have good but not excellent color rendering properties. What's more, unlike halogen lamps, which turn on instantly, many CFLs can take a few seconds to achieve full brightness, and frequent on-off switching will affect lifetime. In addition, because of their mercury content CFLi lamps must be properly disposed of through a recycling service, which can involve added costs for the facility owner or operator.

CFLi lamps are best for applications where initial costs and low energy and maintenance costs are prime objectives, but where light quality and full-range dimmability aren't as important. CFLi twistlers are an excellent choice for guest rooms due to their energy-savings properties, relative low cost and long life. However, since the life of these lamps may be compromised by frequent on-off switching, they are not recommended for guest rooms with occupancy sensors. Additionally, due to their lack of “punch,” or a strong focused beam, they are not well suited for accent applications. They are also ideal for general ambient

¹ For more information on replacement lamps for back-of-house spaces, sign up for our upcoming webinar: <https://attendee.gotowebinar.com/register/7060084353515001600>.

² <http://energystar.supportportal.com/ics/support/kbanswer.asp?deptID=23018&task=knowledge&questionID=23694>



LED Family of Lamps

lighting in circulation areas or public spaces, particularly those that require even illumination.

LEDs

LED technology has been around since the 1960s, but it wasn't viable for general illumination until recently. LED is a light-emitting diode. In an LED lamp, LEDs are combined with an optical system that focuses the light, a driver that regulates the LED over time and enables dimmability, and a heat sink for thermal management.

LED lighting has come a long way since its initial uses for signals and signage. It now exceeds most other white, general illumination light sources in terms of energy efficiency and lifetime, and it rivals these sources in light output and color quality. LED screw-base replacement

lamps are currently available in multiple shapes and sizes, as well as in a spectrum of white light colors, from 2,700K to 6,000K.

Compared to other incandescent replacement options, LED lamps can offer the most cost saving potential, thanks to their very low power consumption and long rated average life. For example, Philips PAR30 LED lamp uses only 12 watts and has a rat-

ed average life of 45,000 hours³ compared to a traditional halogen PAR30 lamp, which uses 75 watts and has a rated average life⁴ of 3,000 hours. In terms of light quality, LED lamps offer a CRI greater than 90, which indicates

exceptional color rendering properties. They are also typically dimmable with most common dimming systems. Be sure to check the lamp manufacturer's packaging for dimming compatibility. The biggest drawback to LED lamp adoption is often their initial cost, which can be higher than halogen or CFLi. To offset these initial costs, local utilities may offer rebate programs that cover a portion of the initial cost. Moreover, building owners and managers must take total cost of ownership into account when evaluating LED lighting. With their long life and minimal maintenance requirements, LEDs can reduce energy and maintenance costs over their life and ultimately have a low total cost of ownership.

Because of their long life, LEDs are ideal for applications where maintenance is an issue. This includes spaces with extra high ceilings, such as lobbies, atriums and ballrooms, where a lift is required to service the lighting. Since they are available in multiple colors and sizes, they are also ideal for applications where design flexibility is needed.

Far from limiting your choices, the new lamp legislation is opening the door for even more lighting options. So whether you are changing your facility's entire lighting system or just changing a bulb, make sure to evaluate all of your op-

“Because of their long life, LEDs are ideal for applications where maintenance is an issue.”

tions and seek help from a professional lighting auditor if needed. ***For more information on the new legislation and its impact on your business, please join us on October 25 at 11AM EST for a comprehensive webinar.***

³LED rated average life based on engineering testing and probability analysis

⁴Halogen Rated Average Life (RAL) is the length of operation (in hours) at which point an average of 50% of the lamps will still be operational and 50% will not.

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UPCOMING INDUSTRY EVENTS

NAHLE continues to plan educational Webinars for 2012. Our webinars will be available over the Internet directly to your desk or even your cell phone. Our webinars are sponsored by industry and are free to all registrants, however, seating is limited.

**PHILIPS LIGHTING - WEBINAR
REGISTER by CLICKING HERE.
OCTOBER 25, 2012 - 11 AM EST**

Do It Now! New legislation for PAR 40W to 205W lamps (PAR20, PAR30, PAR38) & linear fluorescent (T8 & T12) lamps kicked in on July 12, 2012. Many of the standard halogens and linear fluorescent lamps widely used in the hotel segment will not meet this new standard. Have you made the required modifications? During this session a leading industry expert involved in the transition will provide an overview of the incandescent reflector and linear fluorescent legislation, review affected lamps and discuss replacement options. Additionally, the impact of Rare Earth Oxide (REOs) trends on linear fluorescent supply will be discussed. This is an excellent opportunity to review the new requirements to verify your hotel(s) are ready and in compliance. www.philips.com/legislation

LIBERTY BUILDING FORENSIC GROUP (LBFG) will be presenting an Internet webinar primarily aimed at select-service properties.

Learn the basics about PTAC units, common problem areas and, knowing what you will have just learned, “what will you do different when you go to work on Monday?” LBFG will also discuss how to recognize mildew, mold and moisture in existing properties and what you can and cannot fix. – TBD - more info coming soon.

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THE MYTHS OF PTAC UNITS

David Odom
Liberty Building Forensics Group
Norm Nelson
CH2M Hill

The low cost and simplicity of packaged terminal air conditioning (PTAC) units are two of its most appealing features. You design and install these simple systems and then let the guests decide what temperature they want the room to be. If good temperature control and low initial cost were the sole expectations for PTAC units then they are the perfect solution for economy and mid-priced hotels. When everything goes right PTAC units provide a seemingly elegant solution to an important business question in the hotel industry: “How do you make a hotel guest room comfortable for the least cost?”

In reality, low cost and good temperature control are not the sole expectations for PTAC units. The problems arise because PTAC units are also expected to accomplish three other very important, albeit more subtle, functions for the guest rooms:

- 1) Proper dehumidification,
- 2) Proper outside air ventilation, and
- 3) Proper pressurization for the guest rooms versus outdoors (at least in warm, humid climates).

It's these three important functions where the “myth” part becomes important and is the cause of many PTAC-related moisture and mold problems over the past 20 years. Whether or not hotels achieve these three criteria using PTAC's is not just a matter of meeting building codes or industry good practices—these factors are unknown to guests as long as they are comfortable. What's much more important is that these myths are often the cause of increased mold problems, objectionable odors in the guest rooms, and elevated moisture conditions that can

jeopardize the integrity of the facility and can be the source of guest complaints.

Surprisingly, with tens of thousands of hotels using guestroom PTAC's the evidence that this equipment is properly ventilating, pressurizing, and dehumidifying guestrooms is almost non-existent. Hoteliers, designers, and contractors don't ask for proof that the equipment achieves these criteria, consequently no one is forced to document that the equipment actually achieves these goals. Most of the evidence that designers, contractors and owners rely on comes from statements in the manufacturer's literature and on their technical instinct. The other evidence that does exist is not a sound body of data, but is primarily the absence of guest complaints and the lack of significant problems in many hotels. Thus, the myths are perpetuated.

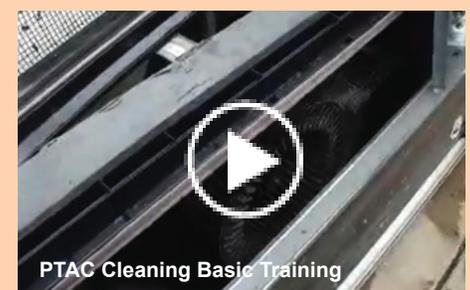
Despite the widespread use of these apparently simple systems, the margin of difference between a problem hotel and a well-functioning hotel is often very thin. What a number of building experts know is that when you accurately measure ventilation, pressurization, and dehumidification of hotels with PTAC's many of them do not meet minimum requirements necessary to meet building codes, prevent problems, or avoid guest complaints. The factors that tip the scales between a problem and a well performing hotel are numerous and often interrelated. Even more important is that these “tipping point” factors are largely unknown in the hotel industry—again mostly because the myths supersede the absence of technically sound cause-and-effect information.

NAHLE conducted a cursory Internet search looking for information or 'evidence' supporting testing or other background information regarding the selection, production and/or installation of PTAC units in hotels. Various building codes and nationally promulgated standards as well as individual corporate 'brand' standards also impact PTAC selection and usage in hotels. NAHLE does not support any specific brand or the views of any specific information provided in the adjoining article or videos.

Feature & Benefits of an LG PTAC System



LG PTAC





GET IT, EXPLORE IT AND USE IT

Manny Mercado, CCE, CPO

Many if not all chief engineers should have it. A majority of states require that a property must have a CPO on property if your property has a pool. Many states allow a regional engineer that oversees a few properties to post their CPO certificate at each of these properties and have the property's staff test the pools at these locations. To save on cost in training, usually the fee is about \$300 for a 2-day course that covers the rules and regulations set by the National Swimming Pool Foundation and adopted by state and local jurisdictions.

Let me clear things up. This idea in savings is not all that good. It is like me giving my driver license to others and not knowing what they are doing on the road until I see points in the mail demanding payment for passing red lights and/or hit and runs. So, before you post any of your licenses, do it for yourself only and don't share it, because at the end they only look for you when it comes to violations. It is best that each property send one individual out to get CPO certified, it lasts for 5 years. Many CPO class fees cover support throughout your 5-year certification.

At my last hotel I had the health department threaten to suspend my license because the engineer I had on site for the weekend messed up on the treatment of the pool. Guest's clothes were changing colors and their fake gold was turning into white gold (though still fake). That is how quick you can lose your license. Water chemistry is a simple science that can flip by not following instructions given. This is why I don't think it is a

good idea to post your license everywhere. For us chiefs out there, dig into your budget and give another engineer the chance to take on a new responsibility as a CPO. Get him certified. For the engineering staff, make it a goal this year to get certified even if the property you are at doesn't have the extra budget do it on your own. It will pay off if you are looking to advance in your career in this profession.

When I started as maintenance, 2 years later I became chief and was handed over our pool which had an outside vendor taking care of it. Back then we needed lifeguards and when the law changed that's when I had to get certified. So what do I do with a pool, I wondered? I learned quick, before the vendors contract expired. I got certified and then it all started, the rollercoaster of the pool turning from clear to green then to neon green then clear again. The first few weeks was an experience, then I caught on. Also what you should know is that you are CPO certified and you are responsible (YES YOU). So what do you do, when the pool is out of whack (chemicals)? You close the pool. If the visitors are not in compliance with pool rules you close the pool. If the capacity (THE AMOUNT OF BATHERS ALLOWED FOR YOUR SIZED POOL) is maxed out you close the pool. You are responsible for the health and safety of all who enter the pool area. Remember

the health department can pop up anytime they want, usually if someone complains. The only thing they need to say to them is "it is unsanitary." That's when the health official puts on their iron man suit and get there within a flash. Guess what they do? They check everything from the pool operations manual to testing the pool themselves and yes, the good old pool log. Plus they make note on who is the CPO for the site and file a report. And, if they can't find the files or the testing doesn't turn out right, they can close your pool.



The [pooloperationmanagement.com](http://www.pooloperationmanagement.com) is the one I always used for local training. They train throughout many states. If you are having trouble balancing out the pool chemicals go here for the cure www.poolcalculator.com. You will know what chemicals to add and recover real quickly. Thanks and good luck.

Here is a useful link to find your state's pool and spa code requirements provided by the National Swimming Pool Foundation; http://nspf.org/en/Resources/News_StateCodes.aspx.



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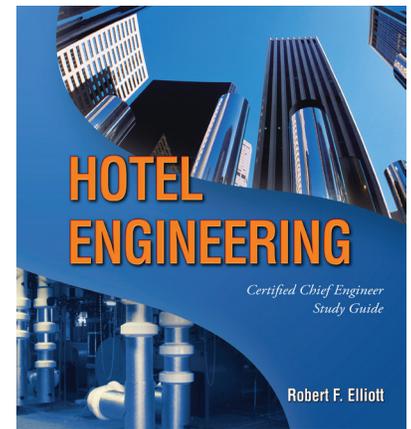


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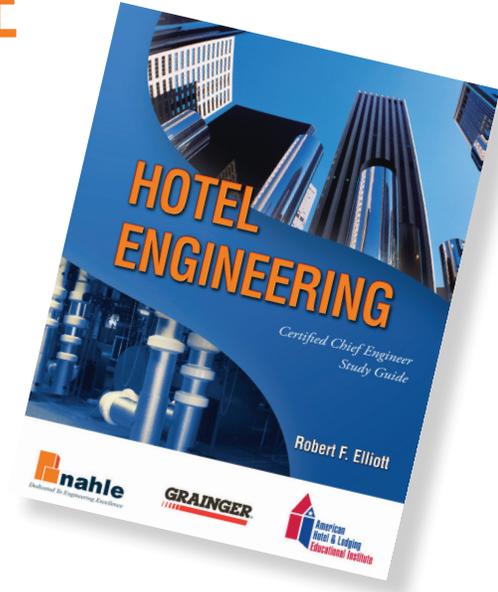
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PARKING STRUCTURES MAINTENANCE

The following is an excerpt from “Hotel Engineering” NAHLE’s textbook and study guide for the Certified Chief Engineer designation.



Responsibility for maintaining a parking facility can be retained by the property owner or manager or can be contracted to the parking operator. Often responsibilities are shared. Maintenance responsibilities should be clearly identified in any lease or management contract.

Typically, a parking operator is responsible for daily cleaning and upkeep of the facility, including sweeping the parking decks in a garage with a riding sweeper. All accessible windows, parking equipment, traffic signs and mirrors, furniture, and so on should be kept clean. Paint should be kept fresh looking, and all stairwells and elevators should be well lit, clean, and odor-free. Lights should all be in working order.

The property owner is responsible for maintaining the structural integrity of building components, including parking decks, columns, ceilings, roofing, ramps, stairwells, and elevator shafts. Any capi-

tal expenditures - such as a new lighting system, extensive painting, or concrete repairs - are also typically the responsibility of the owner.

“Corrosion is the biggest threat to parking structures and rigid paving.”

Indoor parking facilities require less parking and driving-surface-area maintenance than do outdoor facilities, because the indoor surfaces are constructed of more substantial materials and are exposed less to the destructive elements of the weather. Rigid pavement surfaces, both indoor and outdoor, require less frequent repair than do flexible surfaces. Corrosion is the biggest threat to parking structures and rigid paving. Significant sums of money have been spent to repair reinforced concrete ramps and floors damaged by chloride deicers.

Chloride from ice-melting salts, migrating downward through reinforced concrete slabs, will attack the concrete reinforcing bars of a structure and cause corrosion. Corroding steel expands with sufficient pressure to crack the concrete. Left unchecked, the concrete will deteriorate and fail. To protect against this problem, parking structures should be constructed with reinforcing bars coated with a green epoxy plastic. Concrete ramps and decks should have a minimum of 2.5 in. of concrete over the reinforcing bars.

Preventive treatments against corrosion are always cost-effective. High-traffic areas, especially entrance ramps, should be washed down immediately after the winter season to remove the chlorides left from deicers. Silane (silicone hydride) surface sealers should be applied to reinforced concrete pavement every 3 to 5 years, depending on the traffic flow within the garage. Cracks in reinforced concrete decks in a parking garage must be repaired immediately. Rust stains indicate reinforcing-bar corrosion and should be monitored.

Flexible pavements may require frequent repair of cracking and buckling caused by

new wearing surface, and generally enhance the appearance of asphalt paving.

“Rust stains in reinforced concrete decks indicate rebar corrosion and should be monitored.”

summer and winter temperature differences. In areas where frequent freezing and thawing cycles occur, moisture in pavement cracks becomes a powerful force to further destroy the paving. Prompt filling of cracks with a suitable bitumen tar or asphalt will extend the useful life of flexible pavement. Heavy traffic tends to distort flexible systems. A lasting repair then requires removing the paving and reworking and stabilizing the sub grade and base.

In addition to prompt repair of cracks or breaks in asphalt pavements, the surface should be seal-coated periodically. Seal coating is the application of a thin surface treatment, such as asphalt, asphalt emulsion, or coal-tar emulsion. Seal coat will waterproof, improve texture, provide a

The frequency of seal coating depends on traffic and climate, but it usually is required every 3 to 5 years. The amount of exposed aggregate in asphalt pavement is a good indicator of the need for seal coating.

CAUTION: The pressure washing of interior parking garages can cause significant environmental issues as these facilities are not subject to normal

weather conditions and have a tendency to build up oil and grease from vehicles over time. When contracting to have these spaces cleaned you must assure that the vendor recovers the waste material or that the drainage system is connected to a sanitary sewer system for proper treatment by the municipal water treatment facility. Failure to investigate drainage systems and discharging hazardous waste can lead to significant fines by the EPA if discovered.



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11-04023



CARBON MONOXIDE ALARMS FOR HOTELS - AN UPDATE

Thomas G. Daly MSc. CSP
The Hospitality Security Consulting Group, LLC



The 2012 editions of the International Building (IBC) and Fire (IFC) Codes, published by the International Code Council (ICC), for the first time require hotels to install carbon monoxide (CO) alarms in all guest rooms or alternately a CO detection system in all common areas.¹ These new requirements not only affect newly constructed hotels but existing hotels as well.

All 50 states adopt the IBC and 44 states adopt the IFC as the basis for their state building and fire codes. Local jurisdictions typically then adopt those codes as well. When a new edition of these codes is published the state/local adoption process usually takes 12-36 months after the IBC and IFC become available. The current status of such adoptions for each state can be tracked monthly at the ICC website.² Many states are now in that code update/adoption process with effective dates starting in 2013.

CO alarm requirements are not new to the lodging industry as several states including New York, New Jersey, Massachusetts, Colorado, Florida, Illinois and Wyoming, among others, have had such regulations affecting hotels for several years. Those were unique regulations, however, not a requirement in a consensus code.

Shortly after the ICC approved these new CO alarm provisions for hotels their technical merit and impact were called into question by several experts. For hotels, this 'first edition' language had the unintended consequences of requiring CO alarms in places with very little probab-

ility of ever having a CO exposure while at the same time not requiring CO alarms in locations with a higher probability of an adverse CO exposure.

Realizing this issue and taking into consideration the history of earlier state regulations on this subject the ICC's Fire Code Action Committee (FCAC) appointed a Work Group on CO Alarms to review the 2012 code language to determine whether changes are warranted. After a 10 month study and debate this Work Group recommended in late September that the FCAC propose several changes to each code that would dramatically reduce the scope and cost of the requirement to install CO alarms in hotels while at the same time focusing where such alarms should be installed to provide early detection and warning for the most likely locations of fuel-fired appliances that have the potential to produce a CO exposure.

The FCAC will consider those recommendations at their November 2012 meeting and, if approved, will propose and recommend those changes to the ICC Membership at the May and October 2013 code change hearings. These changes would then appear in the 2015 editions of the IBC and IFC. The Hospitality Security Consulting Group, LLC was a member of the ICC CO Alarm Work Group.

As such, state, county and city regulators considering updates to their codes should watch the ICC process carefully. To adopt the 2012 language may impose unwarranted obligations on lodging properties only to have those requirements repealed three years later. HSCG estimates CO alarm installation cost estimate nationwide for the

lodging industry under the 2012 codes is more than \$250 million.

In California this scenario has already played out. California was the first state to implement the 2012 IBC/IFC language incorporating those requirements into their building code³ and making the installation of CO alarms in hotels retroactive impacting all existing hotels statewide as the result of state legislation SB 183 (2010). The deadline for such installations in new buildings, including hotels, was January of 2012 and for existing hotels is January 2013.

The California Hotel & Lodging Association (CH&LA) recognizing the problem, sought legislation to delay the implementation date for existing hotels until the ICC study was complete. Senate Bill 1394 (2012) passed the legislature and was signed into law by Governor Brown in late September which delayed until January of 2016 the requirements for CO alarm installation in existing hotels. The law also directed state regulators (Department of Housing and Community Development [HCD]) to consider pending changes in national codes and work with stakeholders in creating revisions to their code. The Hospitality Security Consulting Group LLC assisted the CH&LA in this legislative effort.

The remaining challenge for the lodging industry is to raise these issues with their state and local regulators before these regulators consider adopting this now flawed 2012 IBC and IFC language. State hotel associations should take this information to their regulators well ahead of the code adoption process to avoid unnecessary, costly and incorrect CO alarm requirements for hotels.

¹ See Sec. 908.7 of the 2012 International Building Code and Sec. 1103.9 of the 2012 International Fire Code.

² See <http://www.iccsafe.org/gr/documents/stateadoptions.pdf> ³ 2010 California Building Code, Sec. 420.4

International Codes-Adoption by State (Updated September 2012)

ICC makes every effort to provide current, accurate code adoption information. Not all jurisdictions notify ICC of code adoptions.

To obtain more detailed information on amendments and changes to adopted codes, please contact the jurisdiction. To submit code adoption information: www.iccsafe.org/adoptions

X = Effective Statewide A = Adopted, but may not yet be effective L = Adopted by Local Governments S = Statewide adoptions with limitations
 12= 2012 Edition 09 = 2009 Edition 06 = 2006 Edition 04 = 2004 Edition 03 = 2003 Edition 00 = 2000 Edition

* The title of the 2000 and 2003 IUWIC Code was changed to IWUIC in the 2006 version.

Jurisdiction	IBC	IRC	IFC	IMC	IPC	IPSDC	IFGC	IgCC	IECC	IPMC	IEBC	ISPSC	ICCP	IUWIC	IZC	ICC 700
Alabama	S09, L	L	S09, L	S09, L	S09, L	L	S09, L		L	L	L		L		L	
Alaska	X06	L06	X06	X06			X06		L06							
Arizona	S09, L	S09, L	S06, L	S09, L	S09, L	S06, L	S09, L	L	S09, L	S06, L	L		L	L	L	L
Arkansas	X06	X06	X06	X09	X06	L	X06		X09	L	L					
California	X09	X09	X09								X09		L			
Colorado	S09, L	S06, L	S06, L	S09, L	X09	L	S09, L		S09, L	L	L		L	L	L	L
Connecticut	X03	X03	X03	X03	X03				X09	L	X03					
Delaware	L	L	L	X09	X12		L		X09	L	L					
District of Columbia	X06	X06	X06	X06	X06		X06		X06	X06	X06					
Florida	X09	X09	X09	X09	X09		X09	X	X09	L09	X09					
Georgia	X06	X06	X06	X06	X06		X06		X09	L06	L06					L
Hawaii	X06	X06, L06							X06							
Idaho	X09	X09	X09	X09	L06		X09		X09		X09					
Illinois	S09, L	L	S09, L	S09, L	L	L	S09, L		X09	S09, L	S09, L		L	L	L	
Indiana	X06	X03	X06	X06	A09		X06									
Iowa	S09, L	S09, L	X09	S09, L	L	L	L		X09	L	S09, L				L	
Kansas	L	L	S06, L	L	L	L	L		S09, L	L	L					
Kentucky	X06	X06	X06	X06			X06		X09	L						
Louisiana	X09	X09	L	X09			X09		X09, L	L	X09					
Maine	X09	X09	L	L	L	L	L		X09	L	X09				L	
Maryland	X12	X12		X12	X12, L	L	L	X	X12	X12	X12					
Massachusetts	X09	X09		X09					X09		X09					
Michigan	X09	X09	L	X09	X09	L	X09		X09	L	X09		L			
Minnesota	X06	X06	X06	X00			X06			L						
Mississippi	L06	L06	L06	L06	L06	L	L06		L	L	L		L			
Missouri	S12, L	S00, L	L	S12, L	S12, L	L	S00		S12	L	L		L	L	L	
Montana	X09	X06	L	X09			X09		X09		X09					
Nebraska	S09, L	S09, L	L	L	L	L	L		S09, L	L	S09, L			L	L	
Nevada	S06, L	S06, L	S06, L	L	L	L	L		S09, L	L	S06, L		L	S09		
New Hampshire	X09	X09	L	X09	X09		L	L	X09	L	L09					
New Jersey	X09	X09	X06	X09			X09		X09	L						
New Mexico	X09	X09	X03	L	L		L		X09	L	X09					
New York	X06	X06	X06	X06	X06		X06		X09	X06	X06					
North Carolina	X09	X09	X09	X09	X09		X09	X	X09							
North Dakota	S09, L	S09, L	L	S09, L	L		S09, L		S09, L	L	L					
Ohio	X09	A09	X09	X09	X09		X09		X09	L					L	
Oklahoma	S06, L	S09, L	S06, L	S09, L	S09, L	L	S09, L		S03, L	S06, L	S06, L		S06, L	L	L	
Oregon	X09	X09	X09	X09			X09	X	X09							
Pennsylvania	X09	X09	X09	X09	X09		X09		X09	L	X09		X09	X09		
Rhode Island	X09	X09		X09	X09		X09	X	X09	X09	X09					
South Carolina	X06	X06	X06	X06	X06		X06		X06	L12	L12	L12	L12			
South Dakota	S12, L	L	S09, L	S09, L		L	L		L	L	L		L	L		
Tennessee	S06, L	X09	S06, L	L	L		L		X06	L	L		L		L	
Texas	X06	X00	L06	L06	L06	L	L06		X09	L	L06		L	L	L	
Utah	X09	X09	X09	X09	X09		X09		X09					L06		
Vermont	X06	L		X09			X09		X09							
Virginia	X09	X09	X09	X09	X09		X09		X09	X09	X09					
Washington	X09	X09	X09	X09			X09	L	L12	L	L		L	L09		
West Virginia	X09	X09		X09	X09		X09		X03	X09	X09					
Wisconsin	X09		L	X09			X09		X09		X09					
Wyoming	X12, L	S12, L	X12, L	X12, L	L	L	X12, L		L	S12, L	S12, L		L			
U.S. Territories	IBC	IRC	IFC	IMC	IPC	IPSDC	IFGC	IgCC	IECC	IPMC	IEBC	ISPSC	ICCP	IUWIC	IZC	ICC 700
Guam	X09	X09	X09	X09	X09	X09	X09				X09					
Northern Marianas Islands	X09															
Puerto Rico	X09	X09	X09	X09	X09	X09	X09		X09		X09					
U.S. Virgin Islands	X03	X03		X03					X03							

“Maintenance Creed”

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Ever wonder to yourself, why do we have maintenance in our hotels? The easy answer is to do preventive maintenance, for life safety issues, to keep the hotel looking good. All right, but there is more to it than that, and they will be discussed here. When concluded, everyone will be able to recite the 11 reasons we have hotel maintenance.

Reason 1- “S” Safety. Safety is the number one concern for guests and associates alike. Accidents can deplete profits in an instance. Be on the lookout for safety hazards and correct them, or report them to leadership right away.

Reason 2- “H” Hospitality. A guest in a hotel will on average only talk to one person and that is the person who checks them in. Let them have a maintenance problem and no one around and a stay can go from bad to worse. Maintenance personnel are tasked with doing many things and being in front of the customer is one of them. A friendly, well groomed maintenance person can make or break a guest stay.

Reason 3- “I” Innovation. Maintenance personnel are always looking at ways to make things better. Many of the systems in hotels now are the way they are because of input from hotel maintenance personnel. A good maintenance person is always trying to find a way to get things done, with what they have and minimal cost.

Reason 4- “T” Troubleshooting. A service call to an outsider service provider can range between \$50-\$125.00 an hour depending on equipment type and location. Having maintenance check it out (troubleshoot) before calling can reduce these calls to a minimum and save money.

Reason 5- “H” HVAC. No building can function without a proper working Heating, Ventilation, and Air Conditioning system. Filters need to be changed quarterly (depending on filter efficiency rating) and one of the top guest issues is heating and cooling of the guest rooms. Maintenance should be done on guestroom HVAC units at least quarterly (check for proper operation, replace or clean filters, verify drains are working properly). Think back 34 years to the American Legion Convention in Philadelphia where deaths resulted from a disease contributed to the HVAC system. Part of preventive maintenance on HVAC is to make sure this never happens again in any hotel by cleaning and treating the drain pans.

Reason 6- “A” Alarms. Fire alarms are vital to notification to everyone in a building in an emergency situation. There needs to be someone in charge during an emergency and also in charge of training. This job routinely falls on maintenance. By law, systems must be tested and documented annually and most brands require this more often.

Reason 7- “P” Profit. A good looking hotel and a good working hotel means “Mo Money, Mo Money, Mo Money.”

Reason 8- “P” Preventive. Preventive Maintenance was mentioned earlier as an absolute reason for having maintenance in the hotel. Our bodies require periodic preventive maintenance because it is a machine, as do the working machines in the hotel. Failure to perform preventive maintenance in a timely manner costs money. For instance, not cleaning HVAC coils will increase energy consumption anywhere from 20 to 50% and even more should they go longer without preventive maintenance. Simple math says if your hotel is budgeted to make \$1,000 a day in room revenue at an average rate of \$100 you need to sell 10 rooms a day. However do not clean the coils (50% lost) and you now need to sell 15 rooms to make the money.

Reason 9- “E” Environment. Regulatory compliance is very much a concern by the Government and many customers today. We can no longer dump chemicals, oils, and paints down the drain. Without someone monitoring these activities and taking readings on equipment, a hotel can violate the law very easily and cost ownership large amounts of money.

Reason 10- “N” Numbers. Failure to do preventive maintenance or make timely repairs can really hurt profit. It is proven that proactive maintenance can keep equipment running far longer than reactive maintenance, and predictive maintenance (replacing components on a schedule whether they have failed or not) even longer. There is really nothing worse for profit than the failed room AC on a sold out night resulting in walking guests.

Reason 11- “S” Standards. In order to drive rate and bring more money to the bottom line, high standards need to be maintained in every hotel. Arrival at the hotel and dead flowers, unpainted curbs, trash outside, are first and lasting impressions and indicative of a lack of maintenance. Maintenance should be held to high standards through inspections and accountability weekly. Good maintenance means higher profits.

In conclusion these 11 reasons are the top reasons for having maintenance in hotels. They are not the only reasons by any means, but touch on all areas of maintenance. In the end each letter adds up to the main reason we have maintenance in hotels:

SHIT HAPPENS