

ISSUE

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Lodging Engineer

1st Person

Interview with LaDean Gregory
Chief Engineer Residence Inn
Savannah Downtown



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LODGING ENGINEER™ reports about people, events, technology, public policy, practices, study and applications relating to hotel and motel engineering, maintenance, human communication and interaction in online environments.

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Lodging Engineer takes an in-depth look at QA inspections and common threads found in different inspections. This is one of three articles found in this issue on QA.

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From the perspective of an insurance provider, underwriting risks is a combination of evaluating your premises safety as well as the safety of both your guests and staff. Safety is the number one concern in an

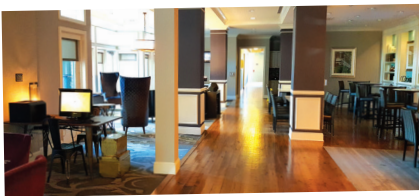


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Separating fact from myth is not always easy when it comes to evaluating new technology. Industry

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QA inspections are a certainty for hotel engineers. Gaining a greater understanding of the areas that others consider during a hotels QA inspection can help hotel engineers focus their time and resources for maximum impact and efficiency.



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Lock Down Your Hotel and Keep Others Out

In the role of Chairman of the Safety Committee, the observations and concerns of a hotel engineer as he walks his property are shared.





1st Person with LaDean Gregory

Hi LaDean. I would like to thank you for taking time out of your busy schedule to speak with us and share your experiences as a hotel chief engineer. As you know, we met via our certification program and after speaking with you and experiencing your enthusiasm for your work and employer first hand, I thought you would make an excellent 1st Person interview for our trade magazine, *Lodging Engineer*. I would like to start off with just asking you if you could tell our readers a little about yourself and your hotel. I am currently the Chief Engineer for the Residence Inn Savannah Historic District. We are an extended stay property located in the heart of the Savannah Historic District, Georgia. We are owned and operated by McKibbon Hotel Management. It is a 109 room, custom property built in 2008-2009. We opened our door on February 20, 2009. We have four floors in the main building and four cottages surrounding our courtyard that have eight rooms each, four upstairs and four downstairs. We are built on a historic battlefield from the revolutionary war and were built to represent the railroad town that was built on the site in later years. Our property honors the first four families that lived on the site that worked for the railroad and our cottages represent them with name plates on each one.

Can you tell us a little about how you became chief engineer, head of maintenance and engineering, for your property? Did you hire in as chief or did McKibbon help you grow into your current position? I was able to obtain my current position as Chief Engineer by being an Assistant Chief at another McKibbon property for 4 years prior to

building my current facility. With the support of my general managers, chief engineer and corporate engineer, I was able to transfer into the position I am in now. I have achieved my CPO certification (Certified Pool Operator) and I am also trained and certified in safety.

Maybe I should back up a little, as you know hotel engineering has been predominately staffed by men, however when I returned your call, I was pleasantly surprised to learn that you are one of many women in our field. How did career path begin for you? I am a native Californian and have been in the hotel industry for 35 years. I majored in building construction in high school and took drafting courses in college. I started my career in hospitality at a four room Bed & Breakfast (B&B) in the Napa Valley. I have worked in many different brands and styles of hotels, starting as a housekeeper. I worked my way up from a housekeeper to an assistant chief. I am knowledgeable in all aspects from the kitchen to the front desk as well. I took a break from the hotel industry to become a property manager for a private country club in Blacksburg, Va. and also in Savannah, Ga. While at the private club in Savannah, I was approached by a custom home builder to come work for him. I worked in the custom home building field for several years and decided to come back to hospitality. I was then hired on as an assistant chief with McKibbon Hotel Management and have been with them for 12 years now. I have raised 3 children and am now helping to raise a grandchild.

They say that managers are only as good as the staff that surrounds them. Often managers have learned from others along the way. Would you share your thoughts about your staff and the team you work with? The staff at our property is outstanding. All our staff has been with us for many years

and care about each other and our guests. We all work very closely and very well together. Our General Manager is great too. He is very compassionate and willing to go the extra mile to make sure everything runs smoothly. The open door policy he has is wonderful. He listens to all issues good or bad and tries to help find solutions that are reasonable and without judgment. Our property is very popular because of our management team and staff. We see repeat guests over and over, year after year.

I am sure with that review you are going to be the envy of many engineers. Can you share with us some of the challenges you have experienced? As our property stays full to capacity most of the time, the biggest challenge I find is scheduling large projects that require crews to come in for services. We have several big projects in the works and finding the availability for completion is my biggest challenge.

a field that is historically made up of men? I have found over the years that being a woman in the engineering field is very rewarding. At first you meet with some resistance, the initial “oh she’s a woman” automatically comes into play and some hesitation usually follows. However, I think the thinking has always been she can’t do what a man can do, will she understand and is she strong enough to accomplish the tasks required. After those moments and hesitations are passed and conversations begin, the tension goes away and I am very welcomed by my male counterparts. They are very patient and are willing to help and are usually very surprised by the outcome of whatever the project may be. I have developed a lot of great relationships with vendors and contractors and in general over the years. I have learned to be strong, stand my ground and not take things personally

What would you say to women considering entering the

“Keeping on budget, being efficient and performing my duties to the best of my ability are always my focus.”



The hotel engineer wears many hats from asset manager to problem solver. And, as you know, new problems arise at all hours of the day and night. How do you stay on track? What do you focus on personally as chief engineer? My primary areas of focus include a combination of areas. Guest service is the main focus at all times. Making sure our guest rooms are up to standards and clean and well maintained to avoid any guest complaints and issues. The upkeep and maintenance of all equipment so nothing is put out of service for long periods of time is crucial to our success. Following standards for inspections and training staff to keep up with standards and pass our inspections is very important. Keeping on budget, being efficient and performing my duties to the best of my ability are always my focus. We love our guest to be complimentary about our facility and staff.

At the risk of sounding politically incorrect, have you found any doors closed or impediments or barriers as a woman in

field of hotel engineering? Would you recommend hotel engineering as a career to other women? I would absolutely recommend being an engineer to other women. Just be patient, show your abilities, be strong and stand your ground and don’t take it personal. It can be hard work but it is very rewarding.

As I mentioned earlier, you are a candidate in NAHLE’s Certified Chief Engineer training program. I can’t help but wonder what you think of our CCE program and your company’s commitment to training and the professional development of their employees. I am really fortunate for the opportunity to be part of such a great company that is willing to provide such training courses as the CCE program. I have to admit it made me nervous at first. I am a hands-on kind of person, but as I made my way through this course, I found this to be very helpful and gave very valuable information. In areas that I am not as proficient, it gave great explanations and



Residence Inn Savannah Historic District

helped me to understand and improve. I would absolutely recommend this course to anyone interested in general knowledge and specialized fields. It's a great program and was easier to accomplish than I expected.

With so many years in the industry do you have a story that our readers would find of interest and you could share? Being in the hotel industry for as many years as I have, there are so many great stories... some you can share, some you can't. But one that really stands out for us at our property was the birth of a baby girl. We get a lot of long term stay guests and we had a family stay with us for several months when we first opened. They were a lovely couple with a very young daughter. The mom was pregnant and showing when they came to stay with us for relocation. Over the course of their stay, we watched the mother become closer and closer to her due date. One late evening she went into labor. Thinking she could wait a while since this was her second child, she was as comfortable as you can be in labor. Well, baby girl decided to make her own entrance into this world. As they were waiting for the ambulance to come for transport to the hospital, Grandma delivered baby girl on our sofa bed! Happy and Healthy! To this day, almost 7 years later, they still come to stay with us once a year and we celebrate with them like she is one of our own.

That story certainly speaks well of you and your team. Any last thoughts you would like to share with our readers?

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- As we like to tell our stories too. I have really enjoyed my years in the hospitality industry and hope to have a few more. ***

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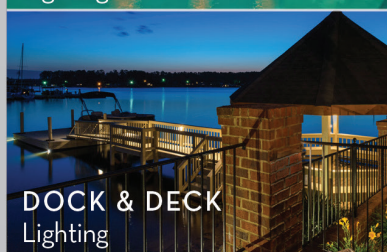
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Safety is Good Business for Hotels

by MINDY O'BRIEN

Hotel engineers are faced with the daily challenge of protecting the business from property damage or liability claims that can come from many different causes. On the property side, hotels are incredibly complex operations that rely on interconnected networks of systems to provide consistent services to guests. On the liability side, hotels have numerous exposures that present the chance of injury to both workers and the public, from traditional slip-and-fall hazards to challenging risks presented by pools, fitness centers, restaurants, and more.

In the lodging business, having a loss can also be particularly costly. There are direct expenses associated with paying damages and making repairs as well as indirect costs associated with investigating incidents, incurring extra expenses and fines, and more. Additionally, losses that interrupt operations can have long-lasting results because it can take time to rebuild a customer base after an unexpected closure. Losses that impact a hotel's reputation, like food poisoning or a bedbug claim, can be devastating.

Insurance Concerns

Hotel engineers work hard to maintain properties, which helps attract customers and reduce the chance of claims related to poor conditions, such as slips and falls. Understanding all the areas insurers consider when underwriting

a risk can help hotel engineers further target where to focus their time and resources for maximum impact.

- **Sprinklers.** A key area of concern for insurers involves sprinkler systems. When sprinkler heads fail to operate, nearly two-thirds of the time the failure is due to the system being shut off. In contrast, when sprinkler heads open, they are effective 96 percent of the time. In the four percent of cases where they are not, the cause tends to be:
 - Obstructed sprinkler heads,
 - Water supply deficiencies, or
 - System design inadequate for building size or occupancy.

Engineers should ensure that sprinkler systems are on and that nothing interferes with operations, such as painted sprinkler heads, hanging decorations, or other obstructions.

“Understanding all the areas insurers consider when underwriting a risk can help hotel engineers further target where to focus their time and resources for maximum impact.”



Sprinkler heads in the swimming pool and pool equipment area are subject to fast corrosion due to chlorine and chemicals. They must be replaced periodically if they are not manufactured from a special corrosion-resistant material. The same situation occurs for sprinklers located outdoors. When repairs are needed, it is critical to utilize the services of an engineer knowledgeable and experienced with sprinkler installation and maintenance.

to damaged furniture can exacerbate a hotel's liability if the repair fails and injury occurs.

- **Other slip-and-fall hazards.** Hotel engineers should carefully assess the premises for elevation changes in walking surfaces that present trip hazards. Floor coverings should be kept in good condition, and care should be taken so that mats at entries and exits are not curled or

“Hard surfaces around pools present a significant slip-and-fall exposure.”

- **Repair practices.** Repairs are an ongoing activity at every hotel. Insurers will address a property's practices and repair schedule. Hotel engineers should not undertake repairs that exceed their expertise and ensure that, if necessary, outside contractors with the appropriate experience and licensing are utilized.

- **Liability concerns.** Hotels have a high legal duty of care to do everything reasonably possible to make the entire premises—guest rooms, common areas, swimming pools, hotel shuttles, and more—safe for all guests and to prevent accidents. Expect your insurer to address many common areas and look for ways that hotels and their engineering staff are addressing them. Some areas include:

- **Swimming pools.** Hard surfaces around pools present a significant slip-and-fall exposure. ADA-required lifts can be an attractive nuisance to children. Appropriate controls need to be in place and monitored around many hazards, such as electronic equipment, chemicals and chemical storage, water temperature, and more.

- **Broken furniture.** It surprises many people to learn that some of the more significant injuries to guests arise from broken furniture, such as a chair that collapses. Engineers should ensure that hotels regularly inspect furniture, which can break down due to overuse and age. In-house repairs

buckled. Sidewalks, driveways, and parking lots should be well-lit, kept free of unrepaired cracks or potholes, and have snow and ice removed. Balcony platforms should be regularly inspected for structural integrity and strength.

- **Bed bugs.** Because bed bugs are difficult to prevent (although regular steps should be taken to attempt to do so), the early detection of bugs is essential to minimizing loss. Engineers should ensure that housekeeping inspects rooms and bedding on a daily basis and has a rapid-response plan in place to deal with any infestation.

- **Burns.** Scalding is a common injury and is generally caused by water heater thermostats being set too high. Irons, hair driers, and other heating equipment in guest rooms should also be regularly inspected for proper operation, including having working high-heat shutdown switches.

- **Assaults.** A hotel can be liable for assaults on its premises, particularly if it does not have proper deterrents in place. Hotel engineers should work with their insurer to assess a property's security program. There should be proper lighting in lobbies, hallways, and elevators, and the exterior landscape should be trimmed and well-lit.

“Hotel engineers should ensure that there is fireproofing installed around kitchen ducts, cooking equipment is installed properly, and all stoves and fryers are equipped with hood-and-duct extinguishing systems.”

■ **Other areas.** If a hotel has a playground, an insurer will assess the quality and condition of equipment and the type of groundcover provided. Elevators and/or escalators should be serviced and inspected regularly.

■ **Property concerns.** Because fire is a leading cause of loss, insurers will assess the adequacy and operation of firewalls and fire doors. They will evaluate the age of electrical equipment and the condition of electrical wiring; the age, type, and condition of fire detection and suppression equipment; and the storage procedures for flammable and combustible substances. Laundry ducts and filters should also be regularly cleaned.

■ **Restaurants.** The presence of a restaurant at a hotel raises many additional safety concerns. In addition to presenting liability issues arising out of foodborne pathogens, restaurants increase the risk of fire. Hotel engineers should ensure that there is fireproofing installed around kitchen ducts, cooking equipment is installed properly, and all stoves and fryers are equipped with hood-and-duct extinguishing systems.

■ **Staff qualifications.** The experience and qualifications of hotel engineers and their staff have a big impact on controlling losses and the profitable operation of a hotel business. Certifications demonstrate to the insurer that hotel engineers are experienced and knowledgeable.

The Right Insurance

It's also important that hotels have the right insurance in place so that they are protected if loss does occur. The ability to rebuild or repair property quickly is especially important in the hotel industry where time is

money. Each day the building is not repaired, customers are lost.

Commercial insurance is a diverse product that encompasses many different types of available coverages to protect hotel owners from losses. Property insurance covers the physical location of the business and its contents and can also provide protection against lost income. Liability insurance covers a business and business owner in the event that someone sues the business for negligence or for incidents where the hotel is legally liable for a person's injury or damage to a person's property.

To ensure the right coverage is in place, do business with an independent agent who specializes in the hospitality industry. An independent agent represents multiple insurance companies and will be able to work with an insurer that is in the best position to protect the hotel and prevent coverage gaps.

The Bottom Line

Understanding commercial insurance, including the questions insurance underwriters are likely to ask, can help hotel engineers prioritize their efforts on areas that have the greatest impact on controlling losses. Engineers and staff can also have a significant, positive impact on a hotel's insurance program, including coverages an insurer is willing to provide and the rates they are willing to offer. Through their work, hotel engineers can produce a positive impact not just on insurance premiums, but also on the bottom line.

Safety is a win-win for everyone involved in hotel operations. It's good business, keeping employees and guests safe, reducing insurance claims, and lowering insurance premiums.



Mindy O'Brien is a Sales Territory Director for Acuity Insurance's Colorado region.



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The Key to RFID Door Lock Technology



by AMANDA STROUSE

Installation, cost, maintenance, convenience, durability, security – these are all important factors to consider before a lodging facility or hotel chain switches its door lock technology (or any technology). While hotels search for a harmonious balance of benefits for the guests, hotel staff and the hotel's spending, there seems to be a new technology winning the heart of the hospitality industry: **RFID**.

There's no doubt that RFID is the present, but whether or not it's the future of hospitality access control is still uncertain. Are RFID door locks all they're hyped up to be? How do they compare against magnetic stripe cards? Learn the facts, read varying viewpoints and decide for yourself.

What is RFID door lock technology?

RFID stands for radio frequency identification. This type of technology uses two-way communication via radio waves and a small computer chip to assign unique data to something, often for tracking and access management purposes. It can be used for access control, but it's also used in inventory tracking systems, electronic toll collection systems and even in movie rental kiosks.

industry. "It's strictly another lock in another format that uses a different type of credential," Lopes said that his company started RFID projects for the hospitality industry in 2008 and RFID has since continued to grow in popularity.

To understand why more and more hotels are choosing RFID technology, we must first understand traditional door lock technology options.

"RFID was initially developed to track merchandise, then it became: how can we use this to track people?"

Even though RFID is used for a wide variety of reasons, it's gaining popularity as a low-risk, high-reward door lock technology in hotels.

"When data is loaded onto the RFID tag for that lock, a certain distance from it to the lock, the technology reads it and unlocks it," Certified Protection Professional (CPP) Thomas R. McElroy of the Hospitality Security Consulting Group, said. "It's a miniaturized radio." McElroy has worked in hotel and public venue security since 1999. He is a self-described "agnostic" in regards to RFID technology. "RFID was initially developed to track merchandise," McElroy said. "Then it became: how can we use this to track people?"

You may have seen a TV show or movie where the characters need to wave a card or something at a mounted device in order to get inside a room or building. That is RFID door lock technology. "They could be key fobs, key cards, bracelets, all that," said dormakaba Group's Senior Product Manager for Electronic Locks Division, Mike Lopes, who has more than 20 years' experience in the access control

Brief History of Access Control In Hotels

"Originally, hotels used hard keys," CPP and Executive Director of Security for Eldorado Resorts, Darrell Clifton said. He manages security for three resorts in Reno, NV, totaling around 4,500 rooms. "Hard keys had obvious drawbacks. Magnetic stripe cards replaced these in the late 1970s."



Now, the magnetic stripe cards (also called swipe cards, magstripes or magcards) we all have grown accustomed to are increasingly considered traditional door lock technology. Not only is the technology old – it can be easily hackable. But are magcards really seen as a security risk?

“Magnetic stripe has been in use for the last 20 plus years,” McElroy said. “But unfortunately, one of the manufacturers gave it a bad name. The manufacturer, didn’t update the code after hackers found a way into it.”

One way to avoid magcard breach problems is if the manufacturer consistently updates the code. McElroy also explained that manufacturers are producing cheaper magcards, which also creates inconveniences for the hotel guests and staff. “Cheap cards, with weaker coercivity or decrease the thickness of the magnetic stripe, so they’re thinner, makes them more susceptible to failure,” McElroy said. “They get decoded from magnetic fields. Cell phones demagnetize them, leather also does.”

Lopes said he has experienced a different major factor for the switch from magcards to RFID. “Key card costs were a huge driver for the shift,” he said.

What Hotels Use RFID?

Newer hotels or hotels that have recently gone through a renovation or remodel are more likely to have RFID technology for their guests’ doors. “RFID is more common in new installs and smaller hotels that require less capital for the upgrade,” Clifton said. “None of my hotels use this technology, mainly because of the expense and timing of modifying existing locks. As new locks are purchased, RFID would be an acceptable option.”

However, Lopes strongly believes that RFID technology is beneficial and looks appealing to lodging facilities of all sizes. “The price of the locks is about the same,” Lopes said. “But less maintenance and no key cards, that’s where everyone’s going. They’re all going toward RFID.”



Smart phones in the place of key cards / Bluetooth Low Energy (BLE)

Hung Luk is the Chief Operation Officer for the LAM Group hotel portfolio, one of the most prominent real estate investment conglomerates in New York City, NY, with various types of commercial and residential properties across the U.S. “We own 12 hotels,” Luk said. “Six use RFID and the other six have magcards. We have a RFID chip that is embedded into the room cards. We’ve been using them for around six or seven years.”

The LAM Group’s hotels utilize ASSA ABLOY Hospitality’s RFID door locks. Luk really likes this technology in his hotels and said that magcards are long gone. “Today, RFID is the best technology out there,” he said. “The magcard is history. It’s like when we had floppy discs, now we have USBs.”

The LAM Group’s six hotels that utilize RFID are their six newest hotels. “We will convert locks in more hotels to RFID in the short future upon renovations,” he said. “It’s the most convenient time as to not duplicate work.”

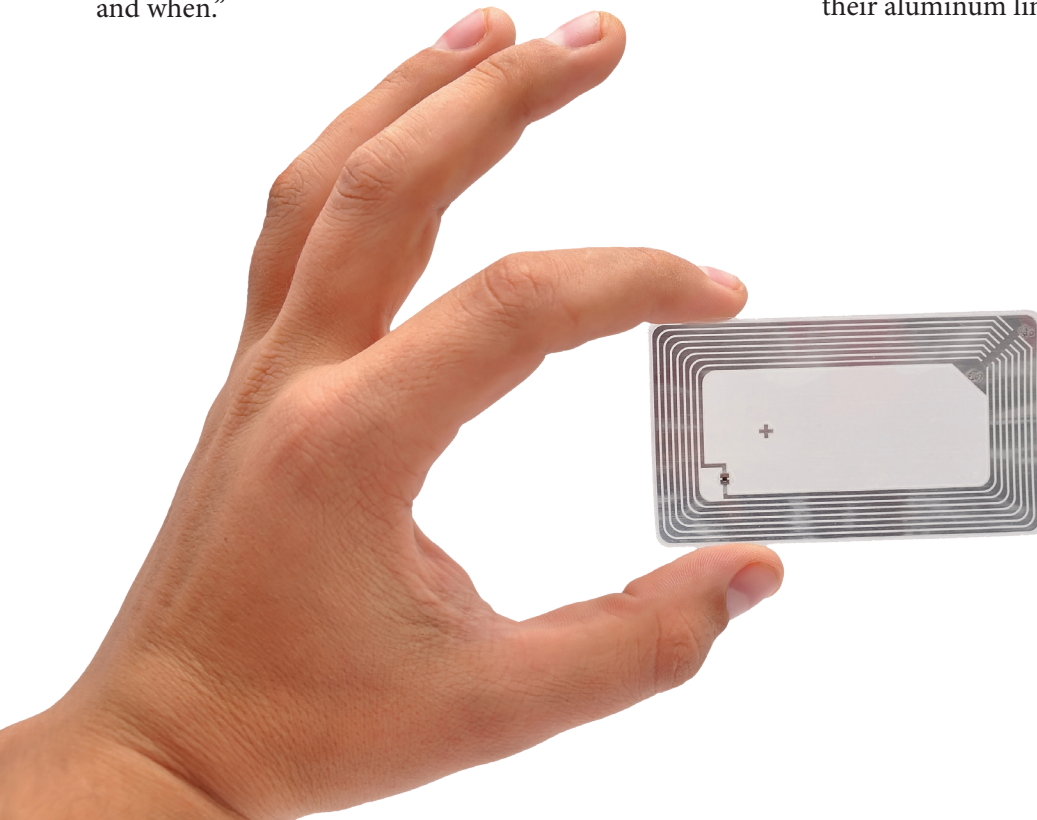
Additionally, some of the major global hotel chains use dormakaba’s RFID door lock technology, including Marriot, Hilton and Hyatt.

Advantages of RFID Door Locks

Lopes said some benefits of RFID for hotel doors are easy usage, guest satisfaction, they don’t demagnetize and there isn’t any maintenance to clean the readers. “There is 100 percent guest satisfaction because you can’t lock it incorrectly,” he said. “Some people get flustered at the door with magcards.” Most travelers have experienced this: they’re unsure of which way to insert the card, the card won’t work because it was

“If I had to put a percentage on it, a RFID card has a 99 percent accuracy for it to work.”

accidentally demagnetized, etc. Luk said that he prefers RFID technology because of convenience for guests, but also because the hotel can interrogate locks without physically being there, since it can be done online. “If I had to put a percentage on it, a RFID card has a 99 percent accuracy for it to work,” Luk said. “High end is 90 percent for a magcard. You can’t put your RFID card in the wrong way, it won’t self-destruct. It can get wet and still work. We can know who accessed what room and when.”



How Big of A Security Risk is RFID?

Clearly, the primary function of hotel guests’ door locks is competent security. “Door locks need to meet code compliance, provide safety for the guest and convenience for everyone,” Clifton said. “There are also some secondary considerations like durability, reporting availability and maintenance requirements.” “As a security professional, I would prefer the least defeatable door lock technology,” he said. “Since none of these is more or less secure than the others, I would prefer convenience and cost. That would be something that requires no key, like a phone app.”

But McElroy argued that the vulnerabilities for these technologies are still unknown. “Common Access Cards that utilize RFID are used by all government employees,” McElroy said. “It’s kept in a sleeve. If the RFID technology is so secure, why does the government mandate a protective

card holder for it? There is a company that makes aluminum-lined wallets for RFID cards. So obviously, the industry and the government think there is a vulnerability.”

According to Secrid, a company based in the Netherlands that produces aluminum-lined wallets to protect RFID cards, these types of cards “can be activated, read and copied at a distance of up to 98 feet,” so the company claims their aluminum lining prevents this from occurring.

Since this vulnerability seems to be a real threat, what are the RFID door lock manufacturers doing to increase and ensure security for their products? Lopes said that his company’s first priority is to make sure that their locks function in a secure manner. “We update our firmware and software on a daily or monthly basis,” Lopes said. “We feel we are trying to stay ahead of the curve.”

We are always looking at ways to enhance our products,” Lopes also pushed the significance of low maintenance on RFID door locks as one of its key attributes.

“From an engineering standpoint, it is truly about security, operational efficiency and less maintenance,” Lopes said. “The less they have to focus on

these doors, the better they have it. Security is important, but operational efficiency, from the aspect of low maintenance, is too.”

The Maintenance Factor

The more maintenance something requires, means more labor and time, meaning more money will be spent on it. Therefore, hotels that care about their bottom line prefer to invest in upgrades that require less maintenance than the previous system in place. “Hotel engineers have such a full plate of duties they have to attend to,” McElroy said. “Hotel engineers and the maintenance departments care about the low-maintenance factor and low-touch factor.”

An attractive quality about RFID is that the maintenance is solely for the batteries. “There are less components that are susceptible to failure,” Lopes said. “Battery life is up to two

years based on average usage. (The typical lock is opened eight to 10 times a day.) But I have seen them last longer than three years.”

Lopes said that replacing the batteries is less expensive than the magcard system. He also talked about a gross disadvantage to magcards. “Anything on the guests’ hands, gets on the magcards,” Lopes said. “Those key cards grab that dirt and then it goes inside the lock. It becomes a nightmare for engineers and maintenance. RFID is overall a by far easier platform to maintain.”

According to Luk, whose hotels have had RFID technology for more than five years, the maintenance for RFID and magcards is pretty similar, minus the cleaning aspect.

Who Prefers RFID and Who Benefits From It?

One of the biggest benefits to RFID technology is convenience. McElroy said that hospitality’s business model, to provide guests with the best experience possible, leaves room for potential convenience risks. “This is a matter of convenience overtaking security,” he said. “Everything is vulnerable.”

Although door lock technologies are widely known to the hospitality industry to be easily hackable, it’s clear that most hotel staff would still like the use of RFID.

“Hotel engineers prefer fewer visits to the doors,” McElroy said. “RFID is embraced by the operations side,

“From an engineering standpoint, it is truly about security, operational efficiency and less maintenance.”

“The maintenance is the same because it’s run by either a hard wire or battery,” Hung said. “But you do not clean them like magcards. You need support from the manufacturer to make sure the technology systems are upgraded, whether you have a magcard or RFID. You need it compatible to your PMS (property management system).”

Lopes and Luk agreed that the cost for magcards and RFID are comparable.

“Magcards used to be five times cheaper, but you get what you pay for,” Luk said. “But now the prices have switched. RFID got cheaper and is about the same amount as magcards – a little more expensive but more than worth the purchase.”

Lopes said more hotels are becoming conscious that RFID lock prices are about the same price as other types of locks. “Some more traditional locks are more expensive because they have older parts that are more expensive,” Lopes said.

guest services and front desk staff, because they have fewer complaints.”

Luk said that it takes the same amount of time to code an RFID card as a magcard, so the front desk staff see the RFID benefit as being that it doesn’t get demagnetized. “It’s less of a problem,” he said. “The mag strips fail, the RFID chips do not.”

Also, guests may favor RFID, because they might see magcards as an older technology.

“Most guests prefer modern applications of technology,” Clifton said.

Lopes said the level of convenience RFID establishes is a huge perk to both engineers and guests.

“It’s about satisfaction,” he said. “You can’t insert RFID in the wrong way, you can’t demagnetize RFID like you can with a key card, I can go on and on. We have people writing



and asking me: Can you discontinue the old door locks so that I have a reason to upgrade?”

Changing The Locks

If a hotel doesn't want to wait for a remodel or renovation, how do the engineers determine whether it's time to replace their current door lock technology? “When it becomes unreliable,” said Clifton. “This is generally when maintenance or breakdown costs become unreasonable and justify a large investment.”

Upgrading door lock technology to RFID can be viewed as the same as upgrading to energy-efficient light bulbs and low-flow plumbing fixtures, in the sense that it's a newer technology but requires relatively the same type of installation process as magcards, according to Luk and Lopes.

“We use certified installation teams to install the systems,” Lopes said. “The hotels usually contract the appropriate people to install them. It's preferred.”

Skepticism of RFID Door Locks

What are the disadvantages to RFID access control technology in hotels? The best answer seems to be: the unknown.

McElroy is primarily concerned with what hotels are doing with the data they're collecting from the RFID cards when they are used for more functions than just opening up a hotel room. “Some hotels actually use the RFID cards for payment,” McElroy said. “Now they're capturing your spending habits. It's called data mining. What do you want them to know about you? Are they using the data internally or selling it? Does that bother people? This hurts privacy.” “My second concern is the vulnerability by hackers,” he said. “My third concern is where is it going to go from here? Is RFID going to go into drivers' licenses? Other people will start embracing it. Then we're at a ‘everyone's watching you state.’”

Luk, as a big fan of RFID, wasn't as suspicious. “When you compare RFID to magcards, I don't see any negative,” Luk said. Modern Competition of RFID Door Locks. RFID is the door lock technology trend of today, but how long will it stick around?

“I think we are at a point somewhere at the end or middle of the RFID period,” Clifton said. “Next will be something to do with phones or biometrics or something like that. Phone apps, using near-field communication (NFC) and even audio combinations have seen popularity in the past five years or so.”

Lopes practically agreed. “RFID is the current technology and, I think, the future,” he said. “If there's a modern alternative, it's leveraging smart phones in the place of key cards [Bluetooth Low Energy (BLE)].

The Future of RFID

McElroy said that RFID should be built upon to make it more complex, robust and less susceptible to hacks. “The technology is there, but the security isn't,” he said. “When you're putting people inside guest rooms in hotels, they're vulnerable. This is not like checking in and checking out a library book.”

Despite vulnerability skepticism from security professionals, Lopes is confident that the door lock industry is going in the direction of RFID. “RFID is here and is here to stay for quite some time,” Lopes said. “We don't see that going away. RFID is here and there may be different formats, but it could potentially be here for decades.”

If your hotel suffers from severe inconveniences as a result of traditional door lock technology, you might be on the edge of your seat waiting for an upgrade or counting down the days to the hotel's next renovation. But it's important to weigh all of the pros and cons of different door lock technologies, as well as your budget, the hotel's environment and your guests' tech savviness. Before you make a commitment to a technology, ask yourself if you are sacrificing security for efficiency or cost.

While magnetic stripe cards aren't yet obsolete, the disadvantages (including soaring card costs) when compared to RFID may turn more and more hotels off. It seems to be only a matter of when, not a matter of if, a better door lock technology will eventually outshine modern RFID and the others without jeopardizing guest security.

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Amanda Strouse is a professional writer with six years of experience writing about plumbing systems. Connect with her on LinkedIn:
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Maintenance Tip

To support healthy operations and help prevent pest activity at your hotel, consult with your pest management provider about implementing an Integrated Pest Management (IPM) approach along with your current property maintenance and sanitation efforts. IPM is the best way to proactively reduce conducive conditions for pests through an ongoing cycle of assessment, corrective actions and program improvements.

The following tips from Orkin Pest Control can help prevent future pest issues in your hotel:

- Install plastic strip doors in loading dock entrances to serve as a barrier for doors that are kept open for long periods of time.
- Work with an HVAC professional to create positive air-flow in the building. When doors open, air should push flying insects out, rather than sucking them into the building.
- Create an air curtain that flying insects won't be able to surpass in entryways by installing fans opposite each other that point down and out the door.
- Ensure all doors and windows have weather stripping installed so smaller pests can not squeeze their way into the building.
- Create an exposed terrain and eliminate hiding places for pests by installing a two-foot gravel strip around the building.
- Keep plants at least two feet away from the building, as they can promote excessive moisture and hide pest activity.
- Seal any cracks and crevices with steel mesh and caulking, as some pests need less than a millimeter to access a building.



Details Make the Difference

In QA Inspections

by CASEY LAUGHMAN

It's no secret that every hotel is different and every hotel management company is different, so it should be no surprise that hotel Quality Assurance (QA) inspections are also different. What every inspection does have in common, though, is that paying close attention to the details can be the difference between a pat on the back and a note in your file.

When it comes to determining how you can ensure your hotel is making the grade on its QA inspections, there are three distinct timeframes to keep in mind: Before the inspection, during, and after.

BEFORE THE INSPECTION

The “before” can be tricky, because QA inspections are generally unannounced. So this part relies heavily on incorporating the things QA inspections will examine closely into your regular operations. By maintaining a high standard in your day-to-day operating of the building, you won't have to try to scramble when the inspector walks in the front door.

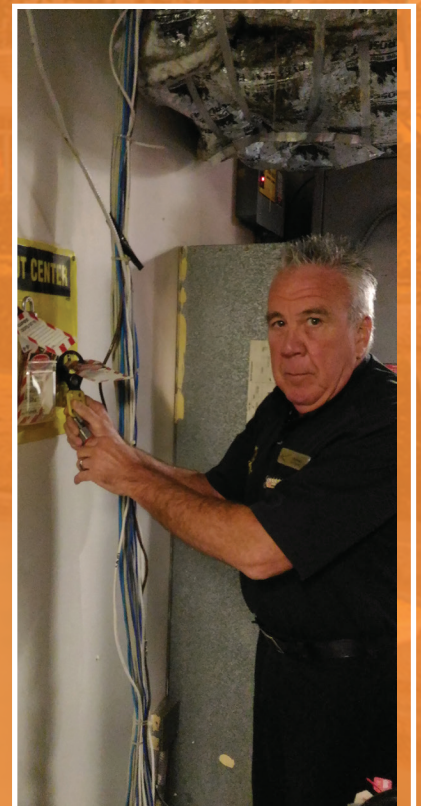
“You really have to be thinking 10 steps ahead before you take the first step,” says Ed Shaffer, chief engineer, Casa Monica Resort and Spa, St Augustine, FL.

This is especially important when considering the amount of turnover that most hotels experience. When someone new comes in, it is crucial to make sure that they are fully introduced to what they are expected to do, how to do it, and how to understand the entire operations of the hotel.

Shaffer says that a large part of successfully integrating new employees into operations is simply providing them with the necessary information and keeping a close eye on them. New employees are given training manuals that include photos and troubleshooting tips, and are also assigned a job coach who will work with them for an extended period of time. By closely working with an experienced employee, new employees gain a better understanding of just how many things go into successfully operating a hotel.

“It typically takes a year for me to train an engineer, because you can't predict all the scenarios that person is going to encounter,” says Shaffer.

In addition to focusing on operations as an everyday concern, prior QA inspections can come in handy when preparing for the next one. A good QA





“The key to the inspection process is understanding that it’s not meant to be a punishment; it’s an opportunity to ensure that the hotel is being operated at a standard that meets the goals of the property and the company overall.”

nent part of the next inspection. While they may overlap with your normal operations procedures and action items, it’s important to understand that the more detailed you can make your plans and preparation, the better your chance of passing or scoring high on your inspection.

DURING THE INSPECTION:

While the brunt of a hotel’s QA inspection may be borne by the engineering department, make no mistake: A QA inspection is really an evaluation of the entire hotel. This means involvement from the property’s entire staff is important, as is communication. Engineering has to be talking to housekeeping, which has to be talking to the front office, which in turn has to be talking to engineering.

Leaders of different departments should be involved in the inspection process, and communicating how everything is interconnected is critical, says Tammy Bateman, general manager of the Castle Hotel in Orlando. “We try to show that through all this process, everything affects something else,” says Bateman. “If there’s someone in the back of house putting something in the wrong area, maybe it’s blocking a fire extinguisher.”

From a general manager’s standpoint, one of the best ways to get a sense of potential trouble spots before an inspection is by keeping an eye out for them during regular walk-arounds. If your property is small enough, you can check guest rooms yourself; if it’s too large for one person, enlist other senior staff to help check. Don’t forget to check under beds and behind furniture as well, because the inspectors will.

Once the inspection starts, much of it will be engineering-focused even though it’s a whole property inspection process. The benefit of this for engineers is that the inspection process can also be a learning process, because it gives you an opportunity to look for things that need to be added to your normal operations checklists. Even if you have

inspection includes extensive documentation — especially in problem areas — so previous inspection results are a useful tool for preparation.

WHEN REVIEWING PRIOR RESULTS, ASK YOURSELF THESE QUESTIONS:

Is everything from the previous QA inspection addressed? If so, were there any necessary steps that should affect ongoing operations? If not, what needs to be done and what timeframe can it be done in?

Is there an area that we have repeatedly been marked down for? Have we taken all steps suggested to shore it up? Do we need to do a self-audit of that particular area, or an overall self-audit?

Do we have a clear understanding of what the QA process is designed to evaluate? Do we need more clarity on a standard or standards? Do we need to get a perspective from outside the engineering department on any areas?

After you have walked through these steps, you can develop an initial checklist of items that you believe will be a promi-

those items built into your normal routine, it can be helpful to ensure that you're checking them often enough.

"If you're looking at motors, you want to make sure you're checking connections," says Shaffer. "You want to make sure you're tightening all the connections on, say, a starter. "Any piece of equipment utilizing electricity, the lugs will tend to loosen up. It's very important that they're tight; also, in the same respect, you want to make sure that they're clean. You wouldn't want to have what we call carbon arc," where a buildup on contacts can cause electricity to arc.

From a general manager's perspective, the key to the inspection process is understanding that it's not meant to be a punishment; it's an opportunity to ensure that the hotel is being operated at a standard that meets the goals of the property and the company overall. This is especially important when you have turnover that may make it more challenging to ensure consistency.

"As your operational managers change, QAs are very important to keep everyone in tune and intact with what's important," Bateman says. "Every day is a different day in operations, so we have to make sure we're always doing what the core values of our company represent."

AFTER THE INSPECTION:

QA inspections end, but what they represent never does. So, instead of considering QA inspections to be independent, one-time occurrences, view them as opportunities to refine and improve your ongoing operations.

The first step is taking a look at the documentation from the inspection and using it to identify areas that may need shoring up. Be sure to include department heads when putting together action plans, because they need to be involved in corrective actions.

"If you have something that's a violation multiple times, then we have to start documenting the fact that we need to get the leaders involved and hold them accountable," Bateman says.

Once items that need improvement have been identified, an action plan with detailed requirements for refinements

and improvements can help ensure you are being proactive instead of reactive. Don't be afraid to make changes based on what has been found in QA inspections, especially if the same area repeatedly comes up as a problem.

QA inspections can be daunting, because nobody likes to be told what they're doing wrong. But by embracing them as learning opportunities, involving all departments and paying close attention to the details, engineers and GMs can use inspections to improve their operations and ensure their hotels are running as efficiently and orderly as possible.



"Instead of considering QA inspections to be independent, one-time occurrences, view them as opportunities to refine and improve your ongoing operations."



Casey Laughman



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QA QUALITY ASSURANCE

by TODD ISBELL

LET'S TAKE A MOMENT TO TALK ABOUT QUALITY ASSURANCE (QA), YOUR BI-ANNUAL INSPECTION OF THE PROPERTY TO ENSURE OUR GUESTS HAVE A GREAT EXPERIENCE. FROM AN ENGINEERING POINT OF VIEW YOU MUST HAVE ALL OF YOUR INSPECTIONS AND DOCUMENTATIONS UP TO DATE AND FILED, READILY ACCESSIBLE FOR THE INSPECTOR. ALL OF MY INSPECTIONS AS I GET THEM ARE FILED IN A SINGLE BINDER AS THEY COME IN FILED FROM FRONT TO BACK WITH THE MOST RECENT UP FRONT.

QA is not only that the rooms must be in top order, but the property must have a very good “First Impression”. Are the curbs painted and unscathed? Are the parking lot lines well visible? Your QA inspector will be looking at all of this as he or she drives onto your property. Having your plan in place is key to passing the engineering side of the QA inspection.

If you plan your work every day and work your plan, you will be ready for any inspection either from the QA inspector to the state health inspector. In another article I have already mentioned to have a room preventive maintenance plan in place to where all engineers are on board, and have a distinct agenda for each room, and then change it once all rooms have been touched. Each engineer gets 15 to 20 minutes per room to go in and do what the top 5 issues are in the guest complaint section of your calls I. E. sink and tub clogs, television issues, keys don't work, phone non op, mildew around the tub or toilet... Sound familiar? These are everyday issues that the QA inspector will see. With this in mind, make your every day rooms preventive maintenance list to cover these and other issues and inspect what you expect. I can't stress enough of this to you as a director to follow up on your engineers.

Make yourself a daily agenda to walk your property. For me, when I first get to my property, I first check my boilers, just to ensure my guests have hot water for their early morning shower. Next I check the outside lighting to ensure a safe parking lot and garage including guest room balcony lights. I

after it became an issue because it then becomes an issue the guests had to deal with as well as you.

Set your own agenda that fits your property needs and stay with it. Once you have established this goal, it doesn't matter what inspector is coming or already “here.” You will be ready, and don't have to go into the chaotic running around mode that I have seen so many times. Plan your work... work your plan.. Keep it simple, perseverance is the key. Know what you need to do and do it. Maintain the full speed ahead attitude and your work life will be much easier.

The first thing is the inspector will call and “check in” to the hotel under an assumed identity. This gives the inspector an idea of how many times the phone rings, the answer as to hotel name, friendliness and name of the reservationist, and also how they handle reservation requests such as a roll away bed, refrigerator or microwave etc. After this the inspector will call and cancel the reservation to see how this goes as well.

Then same day or next day the inspector will come to the property and actually check in usually in the evening. They will eat in the restaurant, walk around looking and taking pictures of things, taking notes or speaking into a digital voice recorder. The next day around 9 am the inspector will approach the front desk, introduce themselves and ask for the general manager. In turn the GM will gather the executive committee members I.E. housekeeping director, engi-

“Never depend on anyone to let you know of potential emergency situations, because in the end, it's you that is held responsible.”

then I go to my office and check e-mails, out of order rooms, last night's security report, guest service scores, etc. Then I go to the public areas, checking public area sinks, soap dispensers, checking for loose or discolored seats etc. A walk through the kitchen checking freezer and cooler temperatures, water pressures air conditioning... Ice machines ovens, fryers, you know the drill. Checking the fire alarm panel is also a good idea as I have a few times came in to work with a trouble on the panel that no one let me know about. Never depend on anyone to let you know of potential emergency situations, because in the end, it's you that is held responsible. Walk your properties, check ice machines and vending g areas. Go to the roof, check your ventilation fans, roof top units, listen for loose belts or bearing s going bad. As an engineer you must use your ears, eyes nose and sense of touch. Find the issues before they become issues and you'll always come out on top. To repair or replace an issue, planned before it became an issue is always much better than repairing

neering director, sales director, human resources, assistant general manager, accounting controller and the food and beverage director.

Inspectors vary in this meeting in that sometimes they go to each office, and other times want to meet in one room. The day of meeting with the inspector if meeting in one room, the documents you will need to take with you should be found in a binder with a glossary page. Your binder should include:

- Balcony inspections
- Fire panel and sprinkler system inspections including kitchen hood Ansul systems inspections
- Fire extinguisher inspections
- Fluorescent light, ballast and battery disposal
- Emergency generator tests and inspections
- Grease trap services
- Property fire drills

“Remember, organization is a major key to success, regardless if you are being inspected by QA or state inspectors.”

- Kitchen hood cleaning
- Elevator inspections
- Emergency lighting tests
- Diesel storage tank inspections
- Emergency procedure manual
- State inspections
- Boiler inspections
- Fitness center inspections



If you are going to go over these documents as you walk to your office, ensure all documents are where you can get to them all in one move, not running around looking for them. Remember, organization is a major key to success regardless if you are being inspected by QA or state inspectors.

The inspector, when checking the rooms, will be looking for anything that the guest would see and complain about. This affects your guest satisfaction scores and everyone is held accountable because as a property, you are all a team. Make sure the front of the property is pristine as this is the first impression. Not just for the inspector, but for your guests as well. Make sure all lights are on, no scuff marks on walls or doors, wall vinyl is in good repair... Things such as this are imperative to passing your inspection.

Although a pristine property is admirable, there are some things out of your control such as cracked sidewalks, windows that can't be cleaned or reached because of height or accessibility, worn carpet, outdated furniture etc. These are all things that will come back to you in a "PIP" (Property Improvement Plan) which your corporate company will send out or set up themselves with either in house projects or a general contractor depending on the magnitude of the issues.

The QA inspector looks in every nook and cranny and checks for anything that might depreciate the company's assets. Once the inspection is complete, the inspector will go to their room, or sit in the lobby and fill out their report, after which you will all meet again to go over what was found. The report is usually



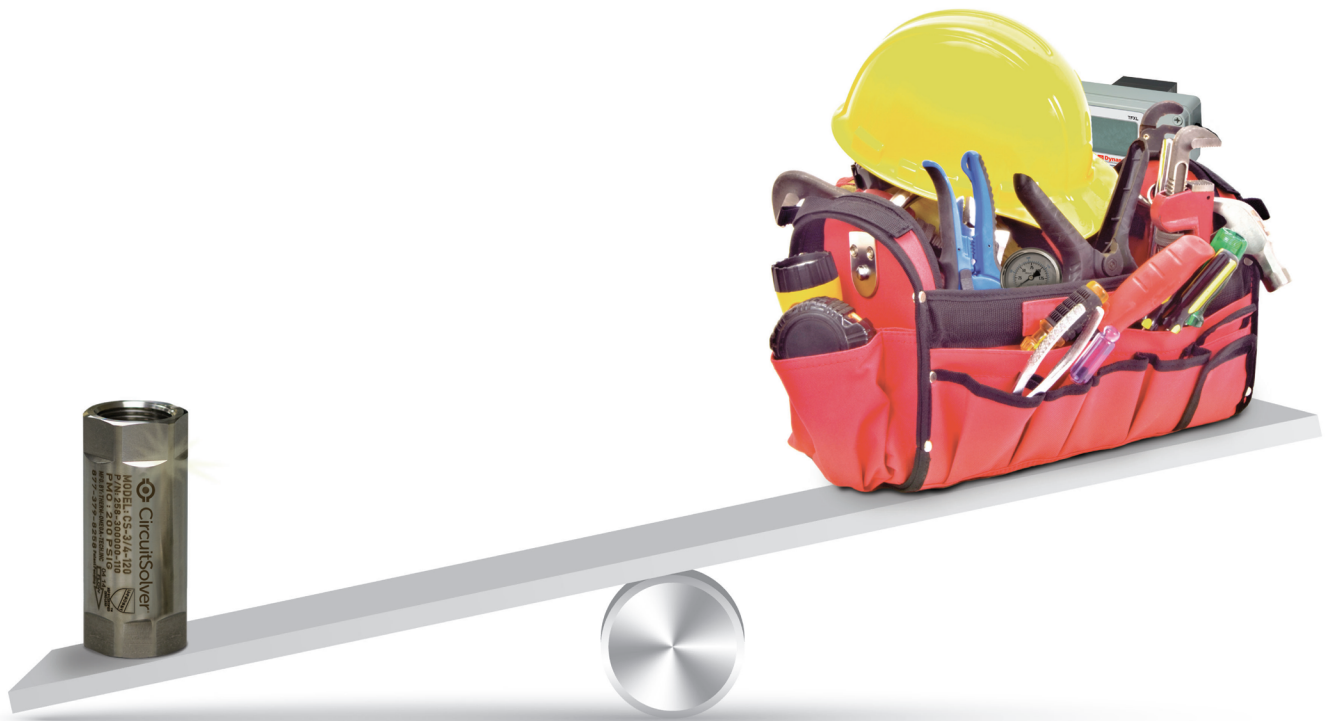
very detailed and I cannot stress enough that what was found will need to be rectified before the next inspection as they WILL go back and check to see if what was in your control to be repaired is in fact completed.

Again, all you have to do is "think" like you're going to be inspected every day. If you stay on top of any issues you see and try to take care of these issues before they become problems, you should be fine. Train your engineers to look for issues and take care of them as they see them. Make each engineer keeps a small notebook and something to write with on them at all times. This way, if they don't have time to take care of it now, make sure to take care of it later, don't keep walking and wait for someone else to call it in. If you are lucky enough to have engineers assigned to different aspects of your department, i.e.; paint, electrical, plumbing, have your associates contact the correct engineer for the job if they can't do it themselves. Cross training is a great way to ensure everyone knows a little about other fields of engineering.

There will always be things you missed, or lights that go out a minute after you walk past it, but as long as there are not too many lights out you should do well. Remember, your hotel is a building just like your house is a building, except that everything at your property is used many times more than what is in your house, so it will wear out much faster.

Keep a good inventory of parts and supplies so you are not waiting for a shipment to come in. Take an inventory of what you have and need and get it ordered.

Remember; a QA inspection is not meant to actually get you in trouble, it is in place to ensure safety and help you take care of your guests and maintain your property's assets.



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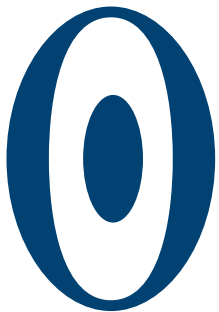


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data analysis

The DOE's Newest Tool Helps Hotels Reduce Energy Usage



One of the biggest trends for hotels in 2016 was lowering energy consumption. Surely, none of us will be shocked to see it make the list for 2017 and many more years to come. The spotlight on sustainability isn't expected to dwindle away anytime soon.

Hotels are often attracted to reducing their energy consumption due to factors such as lower overall costs, more oversight given to energy use, the embracement of sustainability as a beneficial trend and positive PR for their brand. But how can hotel management determine efficient energy usage? How can employees in one hotel know where that particular hotel measures up against other, comparable hotels' energy usage?

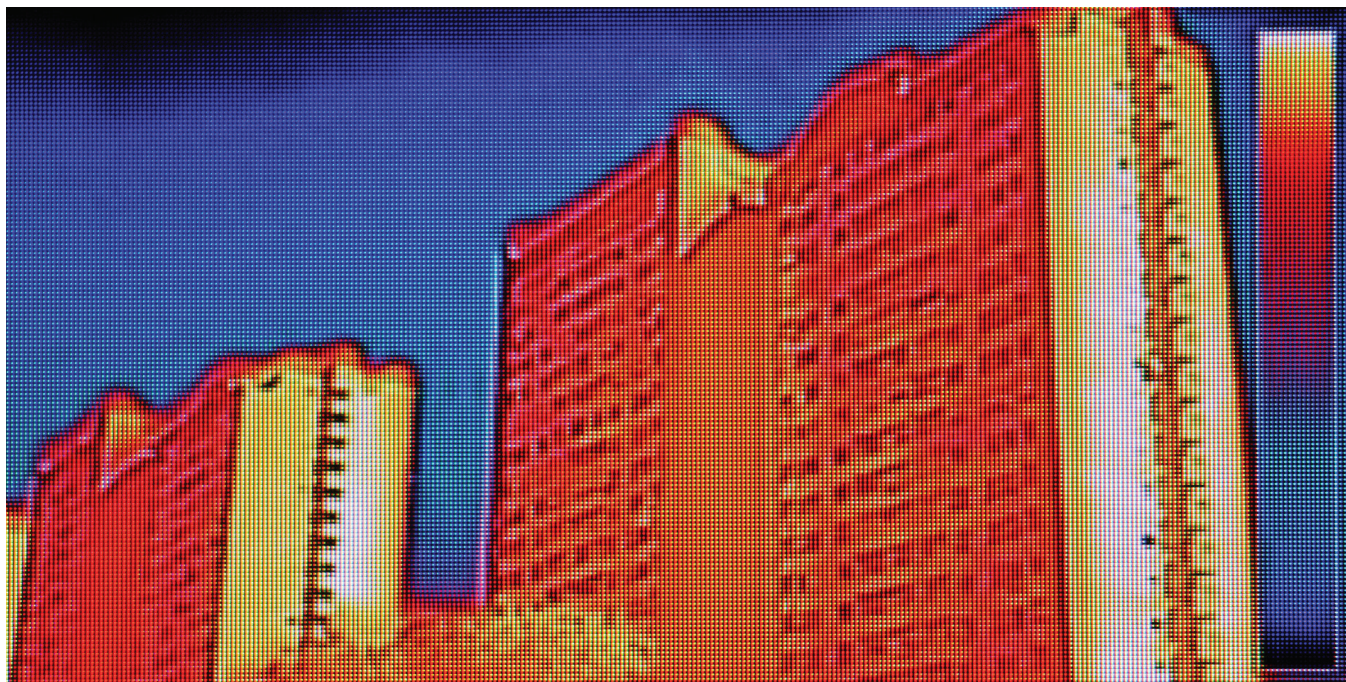
The key ingredient is more data. So, the government stepped in to give the private sector easy access to a bunch of information.

The U.S. Department of Energy's Building Performance Database is the country's biggest dataset of energy-related information for residential and commercial buildings, with the ultimate goal of driving energy efficiency and reducing energy usage, especially for commercial buildings. This database, known as the BPD, is a free and public tool to allow stakeholders in the commercial market (or anyone) to compare and contrast energy usage among different types of buildings.

DOE's Program Manager Jason Hartke says, "A big benefit is that they can determine how their facility stacks up against their peers."

It's a market-driven solution to empower everybody to make these types of comparisons and do better data-driven analysis so they're able to determine what their facility could and should be doing, DOE's Commercial Buildings

been utilized by more than 13,100 people and has grown to hold almost one million building records, including 7,500 hotel records. Think of 7,500 as the same number as all of the hotels in California, Las Vegas and New York



Integration Program Manager Jason Hartke said. A big benefit is that they can determine how their facility stacks up against their peers. This is a really important tool for the market.

The DOE is encouraging anyone who works in energy efficient decision making to use this tool.

[The BPD] allows and enables analysis at a whole variety of different levels, as well as on the project level, said Hartke. It allows project teams to shape and guide their decision making. It's that ability to explore real data across real estate sectors in different regions to compare operational trends and differences in energy performance. The hope is that this will ignite additional new solutions and even further pushes, in terms of energy goals.

This online tool was released to the American public in the summer of 2013 with 60,000 building records. After three years, with its data updated quarterly, the database has

City combined, reflecting 14.4% of the U.S.'s approximate 52,000 hotels and motels. However, sample size calculators reveal that the ideal sample size needed for 52,000 hotels is 12,600. That means the database is 5,100 hotels short for a BPD user to make a confident comparison.

"It's still a useful comparison, Hartke said. It's a good start. We're always trying to encourage others to provide their data. It should go without saying: The more energy usage data that is collected for the BPD, the more valuable and useful it becomes."

Another benefit to providing the DOE with this type of data is that it is kept anonymous in the system. Therefore, BPD users can pick variables to compare and contrast hotels based on their geographic location, their size and other features, without knowing which specific hotels are in the database or what data belongs to which hotel, making it safe for privately-owned hotels to share their data for the good of the industry.



“Getting access to this data isn’t easy, Hartke said. So, we’re trying to open the door to what is difficult data to get your hands on.”

That includes the ability to use the BPD as a customizable stepping stone to be built upon. Hartke said the DOE has been able to issue dozens of licenses to private companies and universities exactly for this purpose. The licenses enable these entities to utilize the BPD’s data the best way they see fit by taking the original BPD and adding to it to create their own unique databases. Then they can provide the data to their customers, partners or whoever would benefit from it.

Hartke said the BPD is in alignment with the growing trend of professionals wanting to measure everything. “More and more of the buildings industry is thinking about measurement, Hartke said. We typically talk about whole building measurement, but now it’s about submetering and subcomponents; measuring at the tenant level and equipment level.”

The database definitely provides some segmented information. It allows users to compare energy usage data by type of building (including different types of lodging facilities), floor area, LEED scores or ENERGY STAR ratings, type of cooling or heating system, type of ceiling, type of wall and many other data points. This can potentially help hotel professionals who want to know if they could anticipate a de-

cline in energy usage by changing a certain building system or component.

While more operations, maintenance and engineering professionals in the hotel industry utilize the BPD tool or wish to utilize it, the hope is that they contribute their own hotel’s data. A database is only as useful as the information it holds.

Examples of information you can find on the BPD:

- **Building system information that impacts energy usage (such as lighting, heating and cooling)**
- **Building information that can help management make more targeted comparisons (such as floor area, operating hours and year built)**
- **Geographic information to help make comparisons across buildings within the same climate zone**
- **Occupant information (number and density)**
- **The database protects all buildings’ anonymity. (Information on individual hotels is not available.)**

Tips for reducing energy usage in your hotel or motel:
www.greenhotelier.org

To contribute data: Contact bpd@ee.doe.gov
Or visit - <http://energy.gov/eere/buildings/contributing-data>

Lock Down Your Hotel and Keep Others Out

by MANNY MERCADO

Hi everyone! Today I write about the importance of locking down your hotel. My role as Chairman of the safety committee is to ensure the safety and welfare of our hotel guest and staff by directly focus on day-to-day activities. Each and every day when I walk the property I gather notes to address with the committee. One key point I addressed recently at a committee meeting was lock down of the building.

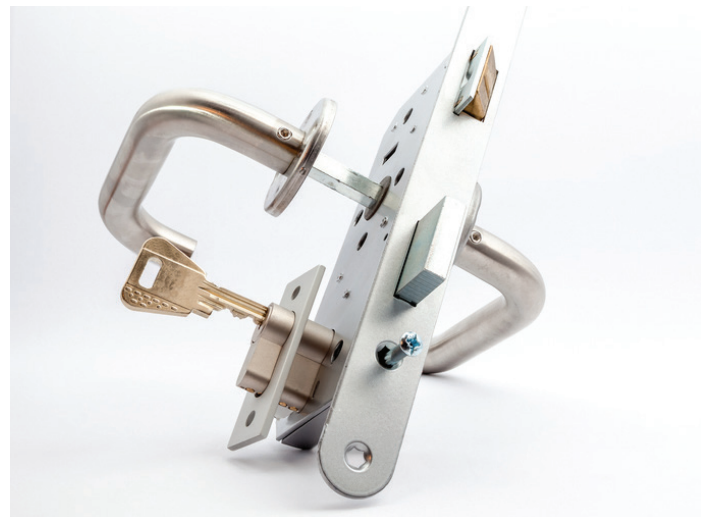


“Your everyday routine should include a property walk, taking notes, and immediately addressing security exposure concerns.”

We have addressed the security issue to make sure all storage rooms and meeting spaces are locked at all times when not in use. As you know, sometimes you have staff that really follow the rules and others that take short cuts because they feel that rules are not important. So I took the matter into my own hands and made some changes to the building. I went around to each and every storage room and changed out the mortise into a mortise that is locked at all times and requires a key to access.

Now when a member of the staff enters a room for supplies and leaves the door closed, there is no need to remember to lock the door, because it is already locked. This change has reassured me that the storage rooms are locked and secured in order to keep unauthorized personnel out. During my discussion with the safety committee, I addressed a concern about a mentally ill person that was on the property in the men's room a few weekends before being loud and disorderly. Police were called to assist and to make sure the person was fine. During conversation with police the person got out of control and was removed off the property. This situation proves that in the hotel industry we have all walks of life entering our property, some with good intentions and some with bad. By securing your building and areas surrounding, it helps to minimize access. If this mentally ill person walked

around the property and found an open door, we would be pointing fingers and wondering how did this happen to us? So today instead of wondering, take a walk around your property, gather notes, and share the safety concerns. Address them and find solutions sooner rather than later. Do not stay in the circle of everyday routines, which include showing up to work, eating lunch, and going home at end of day. Your everyday routine should include a property walk, taking notes, and immediately addressing security exposure concerns. Remember a locked down building is a secured building that is a safe and healthy place for all guests and staff.



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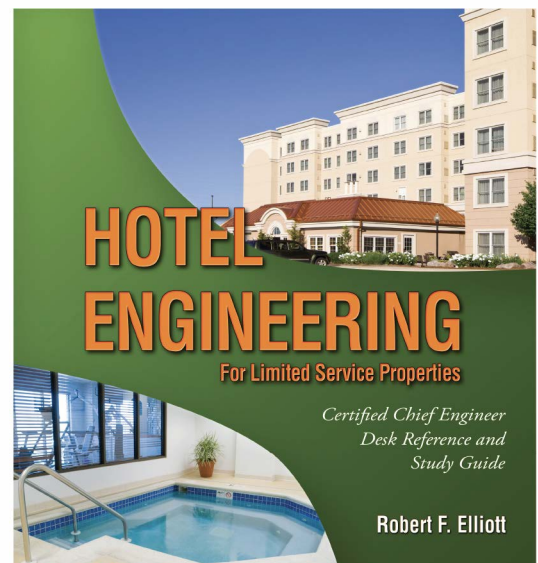
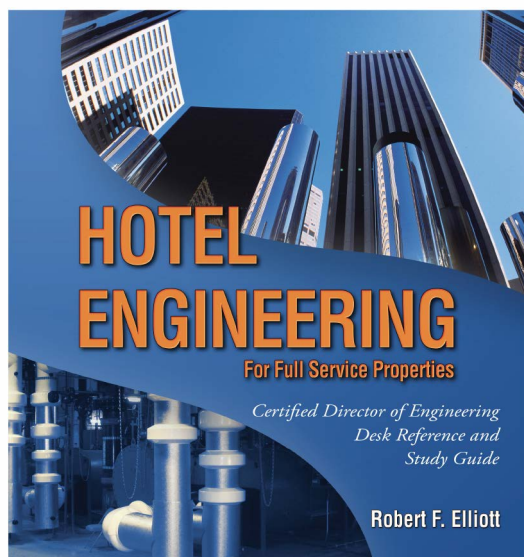
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Lodging
Educational
Institute**



*NAHLE Partners with AHLEI to provide professional development and
training programs for hotel engineers and maintenance professionals.*

**Certified
Director of Engineering**

**Certified
Chief Engineer**



Training Today's Hotel Engineer To Be Tomorrow's Asset Manager

Our Curriculum is written in plain English with simple and easy to understand words. Our program includes information related to the planning and organizing of tasks, overviews of building engineering systems, and the financial and ethical skills required to operate effectively within a hotel organization. The limited-service program includes many common CDOE chapters as well as additional chapters that among others, focuses on; low-rise wood-frame construction, through-wall penetrations, saline pools, moisture infiltration and PTAC units.

Here is what NAHLE Certified Engineers across the U.S. are saying about our programs:

Certified Director of Engineering (CDOE) – Full Service Hotels

"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

"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."

"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."

"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."

"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)."

"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."

Program Attributes

Program Revision 2016 - Both our CDOE and CCE programs have been transferred to our new Online Management Software. Our CCE program now offers the CCE study guide online along with practice exams for each chapter to assist engineers in their review and preparation for their required exams. Our CDOE's new printing includes a useful Index to help engineers during their study and as a future reference.

Transferable: By focusing on the principles of management, building engineering systems, and the hotel building and its property grounds, we created a curriculum that is easily transferable across different hotel brands and property types.

Informed Decision Making: When hotel engineers become better informed, their decision making process improves and they in turn tend to lead others, especially their own staff, to a higher quality standard. This new level of professionalism is best reflected in your property's appearance, staff productivity and efficiency and increasing the useful life of your property's building systems and equipment.

Hotel Centric: Both our Certified Director of Engineering (CDOE) and our Certified Chief Engineer (CCE) programs are written exclusively for hotels and lodging properties. From the heart-of-the-house to the property's perimeter access, NAHLE's certification programs are all about hotels and the unique environment of mixed-use occupancies.

Self-Paced Study: Our programs are designed for engineers to study at their property and learn at their own speed. An experienced engineer should complete our full service (CDOE) program in about 40 hours typically stretched out over a few months. While the limited-service (CCE) program averages about 20 hours of study. Our curriculums are both based upon the engineer remaining on property and studying on the job.

Online Registration & Technical Support: Both Nahle and EI register candidates online and provide technical phone support.

Reporting: Nahle has online software available should you want to track study hours for limited-service candidates. We can also provide exam results for groups of properties.

Multiple Property Roll-Out: Our programs are designed for management companies to enroll multiple engineers in the program at the same time and have all candidates working toward their certification concurrently.

Online Exams: Candidates are designated as a certified engineer upon the successful completion of multiple sectional tests administered online by EI. The CDOE program has two tests and the CCE has three tests. Each sectional test is comprised of numerous multiple-choice test questions drawn from the Study Guide's individual chapters. A minimum passing score of 70% is required. Applicants may take Sectional tests twice.

Certificate of Completion: Upon successful completion of the course, NAHLE issues an electronic certificate suitable for high quality color printing. The certificate designates the candidate as successfully completing the educational requirements to become a Certified Chief Engineer or Certified Director of Engineering.

All Program Candidates Provided One Year Free NAHLE Membership: Free job postings, NAHLE's eNewsletter, and *Lodging Engineer* magazine.



Asset Management Begins at the Property

The National Association of Hotel & Lodging Engineers (NAHLE) partners with the American Hotel & Lodging Educational Institute (AHLEI) to provide two self-paced online professional development and training programs for hotel engineers and maintenance professionals.

- **Certified Director of Engineering**
Full Service Properties
- **Certified Chief Engineer**
Select Service Properties

Our programs are exclusively hotel centric. By focusing on the principles of management, building engineering systems, the building and its grounds, we've created a curriculum that is easily transferable across different hotel brands and property types. From the heart-of-the-house to the property's perimeter access, our certification programs are designed to create a uniform environment of informed decision making. Our management reports track the progress of multiple candidates and our most popular program, the Certified Chief Engineer, has online software allowing select service employees to track their hours of study while on the job.

Contact us today:

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