October 2019

President’s Message….

On September 9th, Tim Costello, WJE, made the 3rd part of his presentation on the Fundamentals of Fire Resistance. He focused on repair and reconstruction of building structural components after exposure to fire.

I especially want to thank Tim for these informative presentations over the past NJSFPE year. I presented Tim with the 2019-2020 NJSFPE President’s Award in recognition of his support for the advancement of fire protection engineering in New Jersey throughout his 20 plus year career. Tim exemplifies unselfish payback to our important life safety profession.

It’s not too late to register for the NJ-NY Metro Chapters Education Foundation/AIA joint Technical Conference in Tarrytown, NY at the Marriott Westchester on Thursday, October 3, 2019. There is a tremendous line up of speakers. Click here to register.

I would like to welcome our new AHJ member, Paul Murphy from the Hazlet Fire Department.

Register Now for our annual field trip on Thursday, October 10th at the Chubb Global Learning Centre located in Branchburg, NJ. Don’t miss this unique opportunity!

This is your opportunity to see their new incredible hands on building fire protection equipment facility. They are all types of sprinkler valves, fire pumps and sprinkler heads that are live for training. There is also different types of fire alarm panels and devices including releasing panels.

Further information on the trip is included in this edition of the Fusible Link.

I look forward to seeing you on October 10th!

Paul

Chapter President
The Chapter met on September 9, 2019. President Paul McGrath opened the meeting at 6:00PM with a salute to the flag and our customary introductions. There were nineteen in attendance.

The members voted to accept the application of Paul Murphy, Hazlet FD for Chapter (AHJ) membership. Welcome Paul.

The Secretaries report for the Aug 1 reorganization meeting was read and accepted. The Treasurer’s reports for July and August were read and accepted.

Paul announced the four winners of 34 applicants to our 2019 Fire Protection Week Grant Program. Allamuchy FD, Belmar, East Orange and Kearny. Each will be awarded a $1,000 grant. We thank the NJ-NY Metro Education Foundation for their financial support to the awards. The current proposal is for next year’s FPW topic to be ‘Impairment- Hidden Danger’.

Paul announced that the Chapter will receive the Gold ACE award from the Society at the Annual meeting next month in Phoenix, AZ. Congrats.

Brad Hart, Editor of the Fusible Link asks that contributions for our publication be sent to himself or Lindsey@cityfire.com.

Proposed changes to the Chapter’s by-laws were discussed, the entire document was published in the September Fusible Link and the topic has been discussed at several previous meetings. Changes are primarily intended to support the Chapter’s new Incorporation. The membership voted to accept the new by-laws which the executive board had approved earlier.

Dave Kurasz announced the NJ’s adoption of the 2018 IBC and IRC effective 9/3/19 with a 6month grace period.

The Society’s Annual Meeting will be held in Phoenix, AZ during the week of Oct 13. Paul mentioned several of the benefits of the meeting; the quality of speakers and technical presentations and encouraged anyone to attend who can make it.

The Engineers’ Club is sponsoring a BBQ event on 9/20 at the Golf Museum for the benefit of homeless veterans. We are all invited.

Paul announced the upcoming Annual Technical Seminar by the NJ NY Metro Chapter Education Foundation and AIA Westchester to be held on Oct 3 in Tarrytown, NY. Four meeting attendees were selected at random to receive free admission to the event on behalf of the Chapter.

Tim Costello of WJE Associates delivered part three of his three part series, ‘Fundamentals of Fire Resistance’. This section concentrated on repair and reconstruction of structures following fire exposure. Tim discussed that while forensic analysis often proceeds repairs that codes don’t provide much guidance although there is some guidance in concrete and steel industry publications. Its understood that steel and concrete strength drop off with increasing temperatures, notably around 1000F. And the major life safety intention of the construction is to allow occupants time to evacuate and first responders time to arrive and begin work.

Tim mentioned ASTM E119, standard time temperature curve as the basis for prescriptive repairs. And explained that for alternative, performance base a credible fuel load must first be determined for the situation. Tim described that since codes do not specify how to repair fire damaged structures it often results in ‘best guess’ performance based design. And he concluded the presentation with a few pictorial examples of such repairs he is aware of.

At the close of the presentation Paul McGrath presented Tim with the Chapter’s ‘Engineer of the Year’ award in appreciation of his service to the Chapter and our industry. Congrats and thanks Tim.

The meeting was adjourned at 8:10PM.

Please note that our October meeting will be held on THURSDAY, Oct 10, 5:00PM at the CHUBB LAB, 35 Columbia Road, Branchburg, NJ for a guided tour and demonstrations of some of their fire protection equipment.
Pre-Register Today. Full Agenda to follow. $125/ pp
Click [HERE](#) to register online.

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<tr>
<th>TIME</th>
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<td>7:30AM</td>
<td>REGISTRATION OPENS</td>
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<tr>
<td>8:00AM</td>
<td>BREAKFAST</td>
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<td>8:15AM</td>
<td>WELCOME AND OPENING REMARKS</td>
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<tr>
<td>8:25AM</td>
<td>Christopher Gates, - UL, Leonard Ramo—Telgian  ESFR Sprinklers— Full Scale Testing</td>
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<td>9:25AM</td>
<td>Michael Crowley, PE, FSPE—JensenHughes  Health Care Fire Protection</td>
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<td>10:25AM</td>
<td>Break 1</td>
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<td>10:45AM</td>
<td>Carl Baldassarra, PE, FSFPE—WJE  The History of Code Development in the United States</td>
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<td>11:45-1:00PM</td>
<td>Lunch</td>
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<td>1:00PM</td>
<td>George Poulis—JCI and Woody Ridgway—JCI  Special Suppression System Technology Update</td>
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<tr>
<td>2:00PM</td>
<td>Qianru Guo, PhD, PE (CA) - SGH  Structural Fire Protection</td>
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<td>3:00PM</td>
<td>Break 2</td>
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<td>3:15PM</td>
<td>Noah Ryder, PhD, PE—Fire Risk Alliance   Large Scale Test Regarding the Dispersion of Natural Gas</td>
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<td>4:15PM</td>
<td>CLOSING REMARKS</td>
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<td>4:20PM</td>
<td>AFTER-CONFERENCE NETWORKING EVENT AT COOPER’S MILL (Cash Bar)</td>
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NORTHERN NEW JERSEY SEMINAR
BERGEN COUNTY POLICE, FIRE & EMS ACADEMIES
281 CAMPGAW ROAD, MAHWAH, NJ 07430
FRIDAY, OCTOBER 4TH, 2019
9:30AM - 2:30PM

SAFER BUILDINGS COALITION

SPEAKERS
- Safer Buildings Coalition Leadership
- Industry Experts
- Local Code Officials

WHY YOU SHOULD ATTEND
Understand and apply International Fire Code and NFPA 72 & 1221 Codes relevant to Public Safety In-Building Radio Booster Systems for greater confidence, efficiency, and compliance
Led by Safer Buildings Coalition leadership, together with subject experts from our sponsors and other industry experts, this interactive seminar is based on model codes regarding in-building public safety communications systems.

AGENDA
- Emergency Responder Radio Communications Systems (ERRCS): General Requirements Review
- Cellular Communication vs. Public Safety Communication Systems
- National and Local Code Requirements for Public Safety Radio Communications
- Recent and Planned Code Updates – NFPA, IFC, Local Amendments
- System Testing and Best Practices
- Panel Discussion, Local Town Hall and Q&A

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Special North Jersey event that NJSFPE and AFAANJ members should attend.
Come learn about In-Building Radio Communications, DAS, BDA, NYC-ARCS, First Net
Learn from the leaders in this growing market and how you can get involved!
Fusible Link

NJSFPE
Chubb Lab Tour

Thursday October 10\textsuperscript{th}, 2019
35 Columbia Road
Branchburg, NJ

Agenda
5:00 - 5:30 pm – Chapter meeting
5:30 – 6:00 pm – Buffet Dinner
6:00 – 8:00 pm – Fire Protection Equip. Lab Demos

The NJSFPE October 2019 dinner meeting will be held at the Chubb Lab at the above address. After dinner the Chubb staff will guide us through demonstrations of the latest fire protection equipment in action. The Lab is a new facility so come on out for a great learning experience with your peers. Price $30

Sign up on line HERE or e-mail Vicki at vicki.serafin@affiliatedfm.com

CHUBB
LOSS CONTROL UNIVERSITY
<table>
<thead>
<tr>
<th>2019-2020 SFPE Program</th>
<th>Presenter</th>
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<tr>
<td>Chubb Lab &amp; Training Center</td>
<td>Chubb Engineer</td>
<td>October 10, 2019</td>
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<tr>
<td>Corrosion Management in Fire Sprinkler Systems</td>
<td>Jeff Kochelek, Engineered Corrosion Solution</td>
<td>November 4, 2019</td>
</tr>
<tr>
<td>Latest Lessons Learned from Losses</td>
<td>Jerry Naylis, Technical Fire Services</td>
<td>December 2, 2019</td>
</tr>
<tr>
<td>No Meeting Scheduled</td>
<td></td>
<td>January 6, 2020</td>
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<tr>
<td>Cla-Val RE: Breach Valves</td>
<td>Bill Moore</td>
<td>February 3, 2020</td>
</tr>
<tr>
<td>Power over the Ethernet</td>
<td>Ernesto Vega Janica, IEEE</td>
<td>March 2, 2020</td>
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<tr>
<td>NJSFPE &amp; AFAANJ Technical Seminar</td>
<td>Various Presenters</td>
<td>April 22, 2020</td>
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<tr>
<td>United Fire Protection Facility Tour on Special Hazards</td>
<td>Frank Savino, United Fire Protection</td>
<td>May 4, 2020</td>
</tr>
<tr>
<td>NJ-NY Metro Education Foundation Golf Outing</td>
<td>New York County Club</td>
<td>June 1, 2020</td>
</tr>
<tr>
<td>Fire Sprinkler Anti Freeze Protection</td>
<td>Amber Bodner, Johnson Controls Fire Protection</td>
<td>June 8, 2020</td>
</tr>
<tr>
<td>NFPA Conference &amp; Expo</td>
<td>National Fire Protection Association</td>
<td>June 15-18, 2020</td>
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IT’S TIME TO PROTECT OUR HERITAGE AND STOP BURNING IT
Fire is a major hazard to cultural heritage buildings around the globe. Severe fires have almost completely destroyed libraries, museums, palaces, and cathedrals. The recent fire at Notre Dame Cathedral in Paris was the latest in a growing list of such tragedies involving the world’s cultural heritage (Table 1). Such events have resulted in a massive outpouring of national and global grief, anger at the loss of national treasures and huge and unrealistic commitments to rebuilding. However, the combination of the construction, contents, and the challenges to the introduction of fire protection features into existing buildings means that these fires will continue unless there is a commitment to something quite possible, but very different.

The challenge of protecting cultural heritage properties from fire

These buildings are unique and require solutions that are tailored for each location. Due to their age, cultural heritage buildings are often constructed of combustible materials with numerous combustible voids within them. Their contents are often precious, but also often very combustible.

At the same time, these old buildings are subject to significant ongoing renovations and repairs. These seek to retain much of the original features of a property and there is resistance to disturbing or changing them too much as we seek to share an authentic view of these properties.

The introduction of modern fire protection methods is often dismissed; fire barriers, fire doors, detection systems and automatic fire protection systems are seen as intrusive. They will spoil the aesthetics of the property and alter its original form. However, the retention of those same combustible features has made these buildings extremely vulnerable to fire, especially during renovation periods when hot work or additional equipment are brought to the building to conduct the repairs. This means such buildings are susceptible to common ignition sources, and once ignition occurs, a fire will almost inevitably spread to the available combustibles.

As good as our systems of management of potential ignition sources may become and the speed at which fire services can respond to such ignitions, they have clearly been shown to be inadequate; hence these destructive fires will continue. Therefore, it is vital that we open our thinking to the means by which we can protect such buildings, retain their character, but limit the potential significant damage from such fire events.

Arts and heritage fires in the U.K.

There have been several high-profile fires involving heritage properties in the U.K. Each has raised questions about the level of protection for such properties and our national heritage. Notable amongst them was Clandon Park House, an 18th-century mansion in Surrey.
where a fire in April 2015 destroyed thousands of historic items. In October 2016 the Royal Clarence Hotel in Exeter, considered England’s oldest hotel, was consumed by fire.

The Glasgow School of Art Mackintosh Building demonstrates the devastating impact of fire on such heritage. The building was severely damaged by fire in May 2014. During reconstruction on 15 June 2018, another fire broke out. The flames spread to neighbouring properties. More than 120 firefighters and 20 fire engines were called to extinguish the blaze.

There has been a clamor to understand how this happened. Where were the fire sprinkler systems? Why had not everything possible been done to protect this irreplaceable piece of Scotland’s heritage?

**The National Museum Fire in Rio**

The September 2018 fire at the National Museum in Rio de Janeiro, Brazil, received worldwide coverage. The fire destroyed the largest anthropological collection in Latin America consisting of about 20 million artifacts, including the earliest human remains found in the continent.

The building had reportedly been in dire need of repair, and the lack of a fire sprinkler system was arguably one of many problems. Structural and electrical deficiencies needed urgent attention, and a contribution for emergency repairs had just been signed with the Brazilian development bank, BNDES.

**TABLE 1**

Recent major fires in cultural heritage sites

<table>
<thead>
<tr>
<th>CULTURAL HERITAGE SITE</th>
<th>YEAR</th>
<th>PLACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glasgow School of Arts</td>
<td>2014</td>
<td>Glasgow, UK</td>
</tr>
<tr>
<td>Dukezong, Shangri-La County</td>
<td>2014</td>
<td>Yunnan Province, China</td>
</tr>
<tr>
<td>Institute of Scientific Information on Social Sciences</td>
<td>2015</td>
<td>Moscow, Russian Federation</td>
</tr>
<tr>
<td>Clandon Park House</td>
<td>2016</td>
<td>Surrey, UK</td>
</tr>
<tr>
<td>National Museum of Natural History</td>
<td>2016</td>
<td>New Delhi, India</td>
</tr>
<tr>
<td>Cathedral of Saint Sava</td>
<td>2016</td>
<td>New York, USA</td>
</tr>
<tr>
<td>Lingguan Mansion</td>
<td>2017</td>
<td>Sichuan Province, China</td>
</tr>
<tr>
<td>Jakarta Maritime Museum</td>
<td>2018</td>
<td>Jakarta, Indonesia</td>
</tr>
<tr>
<td>Glasgow School of Arts</td>
<td>2018</td>
<td>Glasgow, UK</td>
</tr>
<tr>
<td>Jokhang Temple</td>
<td>2018</td>
<td>Tibet, China</td>
</tr>
<tr>
<td>National Museum</td>
<td>2018</td>
<td>Rio de Janeiro, Brazil</td>
</tr>
<tr>
<td>Notre Dame Cathedral</td>
<td>2019</td>
<td>Paris, France</td>
</tr>
</tbody>
</table>

Source: Compilation by the authors

The official investigation concluded that the fire started in an auditorium on the first floor of the building, due to an overloaded electrical connection of three air conditioning units to a single circuit breaker.

This was yet another in a long list of fires involving Brazilian cultural resources in recent years. In 2015, the Museum of the Portuguese Language, one of the most visited museums in São Paulo and Latin America, was extensively damaged by a fire started by construction work. In 2013, the auditorium of the Latin American Memorial in São Paulo, designed by renowned Brazilian architect Carlos Niemeyer, was damaged in a fire. In 2011, the São Pedro de Alcantara Chapel in Rio de Janeiro, built in 1850, was destroyed by a fire reportedly started by welding operations. In 2010, a fire at Butantã Institute in São Paulo, destroyed the largest collection of snakes in the world, composed of 85,000 specimens collected over the last 120 years.
Arts and heritage fires in Asia

There have been several historical and library buildings that have been severely impacted by fire across Asia in recent years. The National Museum of Natural History in New Delhi was due to be relocated to a new facility because the museum was dilapidated and needed extensive renovation. Unfortunately, before this could be done, a fire broke out in an area of the museum that did not have automatic fire protection. Numerous exhibits and more than half the exhibition space were lost.

In 2018 a fire damaged the Jokhang Temple in Lhasa, a UNESCO Heritage site. The temple is reported to be undergoing repair.

Fire protection strategies

The traditional concepts of fire protection for such buildings are all valid. Their application to the heritage buildings will have increased challenges in terms of assessment, design, installation and cost. Importantly, installing fire protection can have an impact on the aesthetics of the properties. However, before discounting such protection for this reason alone, one needs to consider the potential consequences of a fire.

Deploying fire hoses can be difficult. This is an element that needs to be understood, prepared and planned for in any emergency response.

A basic concept in fire protection comes in the form of compartmentation to limit fire spread within the building. This could take the form of firewalls, barriers in combustible roof spaces or barriers to limit fire spread in voids. Compartmentation is intrusive but will delay fire spread and contain the fire to an area that a property owner is “willing to lose.”

A form of fire protection that generates much debate is the use of active fire protection systems. Where speed

A 10-year study of FM Global data in claims for electronic assembly-type facilities revealed three times as many fire incidents as incidents of sprinkler leakage.

Across China there have been fires in temple complexes and buildings. In the area of Tibetan habitat that is said to have inspired the stories of Shangri-La, the Dukezong fire in 2014 destroyed over 240 buildings and countless items. The dense wooden structures, cold weather and challenges with access to water for firefighting hampered efforts to save the properties. In 2017, the Lingguan Mansion complex in Sichuan province was undergoing reconstruction following a devastating earthquake when a fire destroyed the 16-storey pagoda and adjoining temple. Late

A fire detection system can trigger action around identifying the area of the fire, shutting down electrical systems, evacuating a building and summoning the fire and rescue services. There are several fire-detection technologies such as beam detectors for large spaces, multi-sensor devices for complicated spaces or air sampling systems for very sensitive spaces.

Fire incidents also raise the challenge of access for firefighting and access to water. These buildings are often in locations that are hard to access and where

in tackling fire is of the essence, these systems offer a huge advantage in combination with the other strategies. Yet these systems are rarely found in heritage properties.

Automatic fire sprinklers: an option with history

Following the devastating fire in Notre Dame Cathedral, it is not surprising that there were questions about the absence or non-use of automatic fire sprinklers. Automatic sprinklers have an excellent track record as a method to control or
suppress fires in numerous types of occupancies. A recent study in the U.K. by the National Fire Chiefs Council placed their reliability and effectiveness in the 90th percentile. Years of cumulative research still show that water used by these systems is the fastest, safest, and most efficient way to control or extinguish a fire. Despite the effectiveness and reliability of this 150-year-old fire protection technology, sprinklers can still be controversial. The controversy is not about how well sprinklers perform during a fire but rather the fear that sprinklers will activate when there is no fire, causing irreparable water damage to the building contents, as depicted in many a Hollywood blockbuster.

This argument is repeated in sectors such as health care, warehouses, and areas handling electronics. These are all areas where sprinklers have demonstrated very positive results in controlling fires, but the fear persists that water from an open sprinkler will damage sophisticated electronic equipment or drench a patient.

The data does not support this lopsided view. Sprinklers are actuated separately when each one is exposed to enough heat. A 10-year study of FM Global data in claims for electronic assembly-type facilities revealed that the average loss for fire in electronic assembly facilities without sprinklers was seven times that of the average sprinkler leakage damage.

Despite such data, no other area seems as sensitive to the fear of water damage as that of arts and heritage buildings. A prevailing opinion in this field, and repeated since the Notre Dame Cathedral fire, is that sprinklers will do more harm than good, irreversibly damaging sensitive works of art by accidentally operating in non-fire situations.

Instead of arguing over what is too difficult to achieve or dismissing solutions for fear of lesser consequences, perhaps we should look at systems that have a proven track record of success, and implement them wisely for the unique challenges of this application.

Learning from history?

In the Glasgow School of Art fires, the owners wanted to install automatic fire protection. They had considered the impact of a fire and recognized it was worth the investment—learning the lesson from history. Unfortunately, the fire broke out before action could be taken. If automatic protection had been installed, the outcomes could have been very different.

It is therefore surprising to note that a few weeks after the National Museum fire in Brazil, the federal government agency responsible for management of cultural resources, IPHAN, issued a document to regulate fire protection in historical buildings and cultural resources. In this document, the aversion to water in museums and similar buildings is reiterated, virtually prohibiting the use of automatic sprinklers, by stating that, “The use of automatic sprinkler protection will only be allowed in areas where there are no collections that can be damaged by water.” The lack of a definition within the IPHAN decree for what constitutes a collection that can be
damaged by water leaves the issue open to speculation.

On a positive note, approximately seven months after the National Museum fire, the Brazilian federal government finalized a project to upgrade electrical installations and improve fire protection measures in 200 historical buildings and federal museums.

Two museums in the city of São Paulo, the Museum of the Portuguese Language (MPL) and Ypiranga Museum are being totally rebuilt and will be protected by sprinklers. At MPL, the work is already underway and will be completed in January 2020. There is now a growing list of cultural heritage sites that are using active forms of fire protection (Table 2).

<table>
<thead>
<tr>
<th>CULTURAL HERITAGE SITE</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abby Aldrich Rockefeller Folk Art Museum</td>
<td>Colonial Williamsburg, VA, USA</td>
</tr>
<tr>
<td>Bodleian Library – Storage Facility</td>
<td>Swindon, UK</td>
</tr>
<tr>
<td>DeWitt Wallace Decorative Arts Museum</td>
<td>Colonial Williamsburg, VA, USA</td>
</tr>
<tr>
<td>Getty Villa</td>
<td>Los Angeles, CA, USA</td>
</tr>
<tr>
<td>Huntington Library</td>
<td>San Marino, CA, USA</td>
</tr>
<tr>
<td>Los Angeles County Museum of Art</td>
<td>Los Angeles, CA, USA</td>
</tr>
<tr>
<td>Louvre-Lens</td>
<td>Lens, France</td>
</tr>
<tr>
<td>Museo del Oro (Gold Museum)</td>
<td>Bogotá, Colombia</td>
</tr>
<tr>
<td>National Gallery of Ireland</td>
<td>Dublin, Ireland</td>
</tr>
<tr>
<td>National Gallery (retrofit in some areas)</td>
<td>Washington D.C., USA</td>
</tr>
<tr>
<td>National Library of Congress</td>
<td>Washington D.C., USA</td>
</tr>
<tr>
<td>National Library of Scotland</td>
<td>Edinburgh, Scotland</td>
</tr>
<tr>
<td>National Portrait Gallery</td>
<td>London, UK</td>
</tr>
<tr>
<td>San Francisco Museum of Modern Art</td>
<td>San Francisco, CA, USA</td>
</tr>
<tr>
<td>Smithsonian Institution</td>
<td>Washington D.C., USA</td>
</tr>
<tr>
<td>The British Library</td>
<td>London, UK</td>
</tr>
</tbody>
</table>

Source: Compilation of notable examples by the authors
Conclusion

Our heritage is very precious to us and teaches us a lot. History clearly shows that heritage buildings, due to their age, construction and contents are vulnerable to fire. Once destroyed, they are impossible to replace. Fires across the globe destroy this heritage during renovations or simply by everyday ignition sources. The fire events are followed by immense national grief, anger, fundraising and commitments to rebuild. Yet we still see heritage sites burn.

We want to continue to enjoy and learn from these cultural heritage buildings. We cannot lock them up to control and police them for fear of damage from such incidents. Globally, organizations strive to have them open to the public. As good as our systems of management of potential ignition sources may become and the speed at which fire services can respond to such ignitions, these destructive fires will continue. Therefore, it is vital that we open our thinking to the means by which we can protect such buildings, retain their character but limit the potential damage from such fire events.

The enviable track record of fire sprinklers over their 150-year history shows they are worthy of further consideration for protecting buildings and their contents from fire. We should pursue all possibilities for their inclusion, weighing the benefits of limiting damage and operational continuity against what could be lost from a fire and the potential for water release. The data would indicate that fire is more frequent and far more damaging than sprinkler leakage. More simply put, an accidental release of water may damage an object and remedial work may be required but fire will destroy, and a building and its contents are likely to be lost forever.

Authors:

Tom Roche, Senior Consultant, International Codes and Standards, FM Global based in Windsor, U.K.

Marcelo Lima, Senior Consultant, International Codes and Standards, FM Global based in São Paulo, Brazil
ME Blast Killing FF Caused by 400-Gallon Propane Leak

Investigators confirmed Friday that the propane leak in Farmington was responsible for last week’s explosion, which killed Capt. Michael Bell and injured six other firefighters.

CAITLIN ANDREWS  SEPTEMBER 27, 2019
BANGOR DAILY NEWS, MAINE

Farmington, ME, Fire Capt. Michael Bell was killed and six other firefighters were injured when a propane tank leak led to an explosion Sept. 16.

WMTW-TV SCREEN SHOT

A propane line that had leaked 400 gallons of propane from a tank over the course of a weekend was responsible for the explosion that leveled the LEAP Inc. building in Farmington last week, killing a firefighter and injuring seven others.

The state fire marshal's office Friday confirmed that the propane leak was responsible for the explosion, following an investigation by state and federal officials who interviewed more than 100 people about the blast.

The propane tank at the LEAP building had been filled Friday, Sept. 13 with 400 gallons of propane but was empty when the building exploded just after 8 a.m. last Monday, Sept. 16. The explosion seriously injured six Farmington firefighters and killed Fire Capt. Michael Bell. A LEAP employee, maintenance supervisor Larry Lord, was also severely injured in the incident.
Investigators located the leak in a propane line buried under LEAP's paved parking lot, said Stephen McCausland, a spokesman for the Maine Department of Public Safety. The line connected an outdoor propane tank at the back of the property to the basement of the building. The leak was "significant," McCausland said, and its cause — as well as what sparked the explosion — is still unknown.

McCausland said the distinct smell of propane may have been diluted by the soil under the parking lot where the leak occurred. He said investigators believe the propane permeated the soil under the parking lot in addition to leaking into the basement.

The explosion leveled the two-story building that had been renovated last year.

Lord and another LEAP employee checked the tank early Monday before ushering people out of the building minutes before it exploded. Lord was in the basement, along with firefighters "TD" Hardy and Joseph Hastings and Capt. Scott Baxter when the explosion happened. Upstairs, Capt. Bell was on the first floor with his brother, Fire Chief Terry Bell, who was standing near the rear door of the building, McCausland said. Deputy Fire Chief Clyde Ross and firefighter Ted Baxter, Scott Baxter's father, were in the parking lot.

As of Tuesday, the elder Baxter, Hardy and Ross had been released from Maine Medical Center in Portland. Scott Baxter was in serious condition and Bell was in fair condition, according to Maine Medical Center. Lord was still in critical condition at Massachusetts General Hospital in Boston.

The explosion could be heard from Livermore, more than 30 miles away. It destroyed two out of 11 manufactured homes in a nearby park and caused the rest to be uninhabitable. Houses surrounding the building also sustained damage such as broken windows, and insulation from the building could be seen in Farmington's downtown, nearly a mile away.

LEAP has since relocated to donated office space in Wilton.

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2018-2019 Chapter Committees

**STANDING COMMITTEES**

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<td>Joe Janiga</td>
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<tr>
<td>Arrangements</td>
<td>Vicki Serafin, Chairperson</td>
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<td>Membership</td>
<td>Rich Reitberger</td>
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<td>Nominating</td>
<td>Rich Reitberger</td>
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<td>Auditing</td>
<td>Vanessa Gallagher, Chairman</td>
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<td>Archivist/Historian</td>
<td>Vicki Serafin</td>
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<td>Speakers Gifts</td>
<td>Rich Reitberger</td>
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<tr>
<td>Communications</td>
<td>Fusible Link—Brad Hart, <a href="mailto:bradhart07438@yahoo.com">bradhart07438@yahoo.com</a>, Lindsey Taylor—Coordinator</td>
</tr>
<tr>
<td>Communications-Other</td>
<td>Paul McGrath</td>
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**SPECIAL COMMITTEES**

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<td>Spring Seminar</td>
<td>Jim Loftus</td>
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<td>Rich Reitberger</td>
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<td>Career Recruitment</td>
<td>Tim Costello</td>
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<td>Paul McGrath</td>
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<td>PE Examination</td>
<td>Donna Spano &amp; Marios Michaelides</td>
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<td>Legislative</td>
<td>Jerry Naylis</td>
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<td>Finance</td>
<td>Dave Gluckman</td>
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<td>Fire Prevention Week Grant Program</td>
<td>David Gluckman</td>
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**HELPFUL LINKS**

- ADAAG [http://www.access-board.gov/adaag/about/index.htm](http://www.access-board.gov/adaag/about/index.htm)
- Municipal Codes (E Codes) [http://www.generalcode.com/Webcode2.html](http://www.generalcode.com/Webcode2.html)
- FSDANY [http://www.fsdany.org/regs.htm](http://www.fsdany.org/regs.htm)
- The Joint Commission (JCAHO) [http://www.jointcommission.org/](http://www.jointcommission.org/)
- National of Fire Equipment Distributors (NAFED) [http://www.nafed.org/index.cfm](http://www.nafed.org/index.cfm)