DISASTERS AND HOW WE OVERCOME THEM

Association for Preservation Technology
Northeast Chapter

Annual Meeting & Symposium
February 26, 2021
Virtual Symposium
DISASTERS AND HOW WE OVERCOME THEM

Disasters come in various forms, whether they be a natural disaster, a man-made disaster, or a disastrous situation. In preservation, we deal with each of these disasters, whether it be from planning to prevent them, investigating the aftermath, or in overcoming them and coming out better than before. Each situation is defined in how we approach the disaster and each of us is judged in how we react. In a time that is currently fraught with various global disasters, each of us is challenged to move above and beyond, bringing our history and our buildings with us.

The virtual 2021 Symposium and Annual Meeting features 9 presentations and 1 panel discussions from professionals and local students. We have included not only case studies, but also social discussions and academic research. Presenters will demonstrate how the case study contributes broader knowledge to the field of preservation by providing in-depth analysis of what was learned in the course of the study or project and how that applies elsewhere.

PRESENTATIONS ARE TIED TO ONE OF THREE TRACKS:

1. Research and/or planning to better understand, prevent, and mitigate disasters
2. Reacting to and/or investigating the aftermath of disaster
3. Overcoming disasters, re-branding after disaster, and developing resiliency for future disasters

February 26, 2021

APTNE 2021 ANNUAL MEETING & SYMPOSIUM

9:00AM - 9:10AM
APTNE WELCOME ADDRESS
APTNE President, Rebecca Buntrock

9:10AM - 10:00AM
KEYNOTE PRESENTATION
The Social Construction of Disaster History
Don Friedman

10:00AM - 10:35AM
Addressing Graffiti on Masonry Substrates: Taking a Sensitive Approach
Casey Weisdock

10:35AM - 11:00AM
Living with Water: Adaption Processes, Heritage Conservation, and Conflicting Values
Shruti Oakwood

11:00AM - 11:15AM
Coffee Break (Breakout Rooms)

11:15AM - 12:00PM
Addressing Graffiti on Masonry Substrates: Taking a Sensitive Approach
Casey Weisdock

12:15PM - 12:25PM
CHAPTER HIGHLIGHTS
APTNE Vice President, Helena Currie

12:25PM - 1:45PM
Lunch Break, APTNE Annual Board Meeting

1:45PM - 2:20PM
Architects of National Identity: an Analysis of Urbanization and Historic Preservation of Minority Religious Venues in Shaxi, Yunnan
Olivia McCarthy-Kelley

2:20PM - 2:55PM
Protecting Our Diplomatic Structures: A Seismic Program Review
Shane Maxemow and David Keller

2:55PM - 3:20PM
Fires & Our Cultural Heritage: How Can We Further Protect Our Cultural Heritage
Chris Mantion and Esha Sangha

3:20PM - 3:55PM
A Phoenix Rises on East 85th Street
Art Femenella Jr.

3:55PM - 4:10PM
Coffee Break (Breakout Rooms)

4:10PM - 5:20PM
Panel Discussion
Power to the People
Pascale Sablan with Venesa Alicea-Chuqui and Ellen Abram

5:20PM - 5:30PM
CLOSING REMARKS
APTNE President, Rebecca Buntrock

5:30PM - 7:30PM
VIRTUAL RECEPTION
https://live.remo.co/e/aptne-2021-symposium-reception

DISASTERS AND HOW WE OVERCOME THEM

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WHO WE ARE

Originally founded as the APT New York Chapter in the mid-1980s, the organization was restructured in 2003 as the Association for Preservation Technology Northeast Chapter (APTNE) encompassing New England, New York State, and northern New Jersey. At present, we have over 300 active members.

APTNE is committed to serving this geographic community with regional and local preservation events and outreach. We conduct workshops, co-sponsor events with local and statewide preservation organizations, and sponsor symposia, including our annual meeting in late February. We support students interested in preservation by offering free student membership and discounted young preservation membership and event admission, as well as annual scholarship opportunities.

THANK YOU!

As of February 26, 2021, five of our Directors are stepping off of the Board of Directors. We’d like to take the time to thank each of them for their time and dedication to making APTNE excellent during their terms.

Rebecca Buntrock
7 Years of Service, President

Kurt Hirschberg
7 Years of Service, Treasurer

Tom Newbold
7 Years of Service, Director

Amanda Trienens
6 Years of Service, Director

Stephanie Davis
2 Years of Service, Director

As of February 26, 2021, we would like to announce that the Board of Directors has several new Officers.

Patricia S. Palmiere
President

Rebecca Buntrock
Vice President

Kurt Hirschberg
Secretary

Mark Anderson
Treasurer

Scott Aquilina
James Norberg

Jill Verhosek

ALAFIA AKHTAR is from NYC, works at CANY as a Project Manager, specializing in façade restoration and historic building conditions documentation, evaluation and repair. Previously, Alafia was an Architectural Conservator at Jablonski Conservatory. Alafia has a degree in Art History and Conservation in historic Preservation. In her free time Alafia enjoys travelling and experiencing different cultures and foods. Alafia also enjoys exploring different techniques in printmaking and visiting various art museums and galleries throughout the city.

ELLEN LANE is from NYC, works at Silman, and is a structural engineer. She holds a BEng from McGill University and an MEng from MIT. Her master’s thesis involved graphic static analysis of the historic cast-iron bridges of Thomas Telford in England and Scotland. She now enjoys a range of work from new construction toadaptive reuse to full historic preservation projects, including the New Jersey Executive Statehouse and the Fort Jefferson Lighthouse in the Dry Tortugas. She has served on the SEAoNY Young Members Committee and Student Outreach Committee and manages various initiatives within Silman. She received the APTNE Student Scholarship in 2019.

KEVIN DALY is from NYC, works at Walter Molen Architects as Technical Director. In 1995, he received an MS in Historic Preservation from Columbia University. Since then, he has worked in private preservation/conservation consulting. He has served in a significant capacity for Preservation Alumni, as chair of the Architectural Specialty Group of AIC, and is currently working on a Special Committee for APTI. He also has enjoyed volunteering in a much simpler, boots-on-the-ground capacity for local groups such as Landmarks West and Open House New York.

MICHELLE DALLUFF is from NYC, works at WJE Engineers & Architects as a Senior Associate. Her professional work involves investigation of distressed masonry facades, roof and window replacement, and facade condition surveys. She routinely conducts facade assessments and repair designs for historic masonry structures along with large residential and commercial towers. During the last 15 years, Michelle’s projects include repair design, construction document development, bidding period services, and construction observation services. Michelle earned her bachelor’s degree in Architecture at Northeastern University in Boston, and a Graduate Certificate in Heritage Preservation from Empire State University. Michelle is a registered Architect in New York.

JESSICA OUWERKERK is from NYC and works at Gladding McBean as the Northeast Territory Manager. Notable projects include: The Chari Building, 2 Park Avenue, The Ansonia, 1201 Surf Avenue, 400 Madison Ave, 17 Battery Place, John Jay College, Old Westbury Gardens, Providence Performing Arts Center, 434 Broadway, 1185 Park Ave and the Flatiron Building. In her current role, she is a preservation consultant, with a focus on creating condition assessments for historic resources, architectural photography and research-based interpretive projects. She holds a Master of Science in Historic Preservation from Columbia University and a Bachelor of Arts in Geography from Vassar College.

Interested in joining the APTNE Board?
Each year we have an annual call for Board Nominations in November to help keep the organization thriving with new energy and excitement!

We expect active participation from all of our board members. Typical roles and responsibilities include attendance at monthly board calls, support of local events and our annual meeting/Symposium, and active participation in one or more Committees. Other additional responsibilities may include managing finances, secretarial duties, website administration, outreach, and planning of our annual Symposium.

Please welcome our New Board Members!

2020-2021 BOARD MEMBERS

Rebecca Buntrock
President

Helena Currie
Vice President

Patricia S. Palmiere
Secretary

Kurt Hirschberg
Treasurer

Mark Anderson
Scott Aquilina
Jacqueline Bascetta
Sloane Bullough
Adrienne Cali
Brigitte Cook
Stephanie Davis
Ken Follett
Olga Hathaway
Jennifer Keamey
Charles Kramer
Connie Mugno
Tom Newbold
James Norberg
Corey Spitzer
Amanda Trienens
Jill Verhosek

APTNE 2021 Annual Meeting & Symposium
EVERYONE KNOWS THAT ENGINEERS LEARN FROM FAILURE. Just like everything else that “everyone knows” that statement is both true and false. While we have learned lessons from past failures, the learning process has often been long and convoluted. Lessons learned can be forgotten, incomplete, or taken out of context. The process of improving buildings based on past failures depends not only on the type of failure and professional understanding of the failure, but also on public understanding of the failure. The last item is usually overlooked, and plays an important role: new building technology is usually more expensive than old, at least at first, and economic decisions often require public pressure. For example, the general push towards “fire-proof” construction in the late nineteenth century was, in large part, due to the public’s reaction to the Chicago fire of 1871.

We can better understand the paths of failure-based improvements throughout history by looking at some of the more famous failures that have prompted the public to demand change. In fact, these paths can be demonstrated in a basic exemplar issue: egress paths. The Coconut Grove nightclub fire (Boston, 1942) has the second highest death toll for a single-building fire. That fireproofing worked: the Triangle fire caused no structural damage, despite killing 141 people. The most common story told today, largely the result of the trial of the factory owners, was that the deaths were the result of the owners locking the stairwell doors, but that is not accurate: at least four of the six stairwell doors were unlocked, as were the windows leading to the fire-escape. Modern analysis shows less dramatic but still damning failures: the doors to the fire stairs opened inward and were made of wood, the fire-escape collapsed because it was undersized and partially blocked by an iron shutter, the factory floors had extremely long egress paths with bottlenecks because of continuous rows of worktables, the fuel-filled work floors had no sprinklers or other active fire-suppression.

• Earlier still, the Brooklyn Theater fire (Brooklyn, 1876) has the third-highest death toll for a single-building fire. The majority of these deaths are attributable to inadequate and, more importantly, inadequately protected egress paths from the upper balconies. Egress paths from different levels that interfaced with each other led to blocked stairwells, a secondary egress route led to a locked door.

• Earlier still, a minor fire in the North Ward School (New York, 1855) led to a panic that killed 43. The deaths were attributed to the combination of inward-opening (locked) doors and a poorly-designed stair that led to those doors. The coroner’s jury that investigated the deaths made a recommendation that all schools should be built with stairs in fireproof shafts with outward-opening doors. There were clear lessons from this failure – that egress paths needed to be protected from fire and that egress doors should be outward-swinging.

“The deaths were attributed to the combination of inward-opening (locked) doors and a poorly-designed stair that led to those doors.”

The connection between the events presented here is clear in retrospect, but perhaps not in real time. Each of these disasters had multiple causes and played out in complicated ways. Newspaper accounts often focused on one issue and oversimplified the events. The most obvious example is the demonization of the Triangle owners locking the stairwell doors: while they created many of the conditions that led to the number of deaths, they are most famous in the popular imagination for something that they did not do. Many people would prefer to find fault in villains than to accept the failure of modern technology. If we are relying on a clear understanding of failure to move building technology forward, then we cannot rely on easy answers, myths and headlines.

The example discussed herein is not unique. Similar chains of historical events can be traced for other issues, including the stability of ornamental masonry on facades, fire protection of steel framing, proper use of traps and vents in plumbing drains, ventilation of interior spaces, etc. It is, unfortunately, easier as a society to cite one specific and fatal failure that alerted us to the need for industry-wide change, rather than years of discussion and understanding about how to make the built environment more resilient to disasters.

DONALD FRIEDMAN
President at Old Structures Engineering PC. A professionally licensed engineer in several states with over 30 years’ experience in the investigation, analysis, and restoration of landmark buildings. Mr. Friedman holds a B.S. in Civil Engineering from RPI and an M.A. in Historical Studies from NSSR. Mr. Friedman’s design experience includes the integration of modern construction into existing buildings with archaic and obsolete structural systems; repair and restoration of steel, masonry, iron, wood, and concrete structures; and the investigation of historic buildings to determine structural type and condition. He is author of The Structures of Skyscrapers in America, 2001-2005, After 9/11. Mr. Friedman is a Fellow at the World Trade Center Historical Building Construction and The Investigation of Buildings, and the co-author of Building the Empire State and The Design of Renovations.

Presented by Don Friedman

The Triangle-Diamond Building was completed in 1880. Mr. and Mrs. Seidle, owners of the Asch Building, at 23-25 Washington Ave.

The Triangle-Diamond Building was completed in 1880. Mr. and Mrs. Seidle, owners of the Asch Building, at 23-25 Washington Ave.

#APTNE21
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6 Association for Preservation Technology Northeast

7 APTNE 2021 Annual Meeting & Symposium
ADDRESSING GRAFFITI ON MASONRY SUBSTRATES:
TAKING A SENSITIVE APPROACH

Presented By Casey Weisdock

IT IS IMPOSSIBLE to ignore the current cultural crisis amplified by the tragic and inhumane killings of George Floyd, Breonna Taylor, and countless other people of color. As so many people in the United States demonstrate and demand justice, many of us in the preservation field have been called to address the dramatic increase of graffiti on buildings and monuments that is in direct response to systemic racism. Though we find ourselves rising to the task, we also find ourselves amidst a conflict of ethics.

Graffiti, typically thought of as unsightly and a magnet for more vandalism, has been a means for expression during this historic moment, and is not unprecedented. Historic graffiti, like that which is scribed into the Tower of London and in the ancient city of Pompeii, has given us a rare and significant insight into the everyday lives and interests of human beings throughout history.

As preservationists, we are tasked with creatively and conscientiously protecting and preserving cultural heritage, including artifacts of a historic moment. Additionally, the robust tradition of historic preservation in the United States has prepared us in the preservation field have been called to address a preventative graffiti plan, it is of the utmost importance that the composition of the graffiti media, anti-graffiti coatings, and original masonry substrate’s material properties and condition are known and understood to prepare effective and appropriate conservation treatments. Additionally, qualified masonry craftsmen play an integral role in the success of a historic masonry preservation project. The International Masonry Institute (IMI) provides craftsmen with the high-level of training, with experience in both design and contracting capacities. Her professional experience has focused on preserving historic structures and monuments through research of traditional materials/methods and the development of contemporary restoration techniques and repair strategies, supporting construction in greater Philadelphia, Delaware, New York City.

In all cases, whether preserving, removing, or establishing a preventative graffiti plan, it is of the utmost importance that the composition of the graffiti media, anti-graffiti coatings, and original masonry substrate’s material properties and condition are known and understood to prepare effective and appropriate conservation treatments. Additionally, qualified masonry craftsmen play an integral role in the success of a historic masonry preservation project. The International Masonry Institute (IMI) provides craftsmen with the high-level of training and education they need to carry out sensitive restoration and repair campaigns.

Preservation: If a project team deems it appropriate to preserve contemporary graffiti coatings, there are options to consider, such as breathable coatings that provide a “barrier” to the original graffiti, sensitive maintenance plans, and site protection. And still more creative methods using light projection can maintain representation without hindering the condition of the original masonry substrate.

Removal: In the event that preservation of graffiti may not be possible, practical, or appropriate, several chemical and mechanical cleaning options are available. As with any cleaning campaign, there are many considerations and choosing the least aggressive method is essential.

Prevention: There are also methodologies for preventing graffiti in regularly targeted areas. Sacrificial and permanent anti-graffiti coatings can be utilized on sound masonry, installing lighting and landscaping, and Commissioned Street Art and Arts Mural programs have proven to both reduce periodic vandalism and create a sense of community.

In cases, whether preserving, removing, or establishing a preventative graffiti plan, it is of the utmost importance that the composition of the graffiti media, anti-graffiti coatings, and original masonry substrate’s material properties and condition are known and understood to prepare effective and appropriate conservation treatments. Additionally, qualified masonry craftsmen play an integral role in the success of a historic masonry preservation project. The International Masonry Institute (IMI) provides craftsmen with the high-level of training and education they need to carry out sensitive restoration and repair campaigns.

Graffiti depicting the face of George Floyd with the text “I can’t breathe” in Portland, Oregon. Photo credit: Han-Mei Chiang

Graffiti from the George Floyd Uprisings in Philadelphia - Taken on 06/06/2020 by Jake Baumohl

Graffiti from the George Floyd Uprisings in Philadelphia - Taken on 05/31/2020 by Jake Baumohl.

"Bad Things Happen in Philadelphia" Taken on 12/21/2020 by Casey Weisdock in Philadelphia

Graffiti depicting the face of George Floyd with the text “I can’t breathe” in Portland, Oregon. Photo credit: Casey Weisdock

Graffiti depicting the face of George Floyd with the text “I can’t breathe” in Portland, Oregon. Photo credit: Casey Weisdock

Graffiti from the George Floyd Uprisings in Philadelphia - Taken on 06/06/2020 by Jake Baumohl

Graffiti from the George Floyd Uprisings in Philadelphia - Taken on 05/31/2020 by Jake Baumohl.

CASEY WEISDOCK is a Director of Industry Development and Technical Services for the International Masonry Institute (IMI). Casey is an Architectural Conservator by training, with experience in both design and contracting capacities. Her professional expertise has focused on preserving historic structures and monuments through research of traditional materials/methods and the development of contemporary restoration techniques and repair strategies, supporting construction in greater Philadelphia, Delaware, New York City.

She has developed and presented continuing education seminars and hands-on training for and has worked closely with colleagues at IMI to develop technical resources related to new masonry construction and masonry restoration and preservation.

Casey in-part develops and leads the Historic Masonry Preservation Certificate training offered through IMTEF. Casey is the Vice-Chair of the APT-DVC.
HERITAGE SITES ARE CONSTANTLY CHANGING due to natural and social processes. Living with current weather conditions due to climate change involves adapted lifestyles of communities, which are linked to actions of individuals, societies and governments worldwide. The historic preservation community is presented with complex issues of considering and adapting to climate change and its lasting effects, which will significantly influence decision-making and heritage policies. These issues raise important questions about the role that individual and societal values play in adapting to climate change. How do adaptation measures taken by some affect the values of others? In the case of value conflicts, whose values should be prioritized? What are the challenges and limits to adaptation processes in the context of culture and livelihoods? Ultimately, it is important to identify adaptation strategies that acknowledge and address a spectrum of values with governance based on shared cultural practices, ethics, justice and equity considerations.

This research aims to examine how an understanding of past impacts on heritage-related livelihoods from rising waters and erosion can aid design and implement future interventions. Through an examination of a primary case study on Majuli, a large inhabited river island subjected to frequent flooding and located in Assam, India, this research looks at adaptation as a social process, with implications for economic and political stability as well as culture. Majuli has a complex composition of different ecosystems, religions, and communities which have formed a lifestyle from fluctuating conditions. In Majuli’s case, the cultural perception of water and weather-related challenges is its natural resilience. The local population of Majuli have developed simple flood and water management strategies. These include careful use of cyclic flooding and memories of past flood events to establish their own cycle of annual activities like agriculture, fishing, animal husbandry, crafts and even festivals and celebrations. Some of the local adaptation measures practiced in the region are resilient agriculture systems, building construction, and long-term food production and storage.

By contrast, the Government of India set up an autonomous body, the Majuli Protection Plan laid out by the government includes hard infrastructure which is technocratic and top-down and the weather and water conditions are well-known to the communities living there. From in-depth interviews, locals have ‘lived with the floods’ for several years and are comfortable with normal flooding that both destroys and replenishes their agricultural fields with fertile alluvium. Their lifestyle highlights that there are different perceptions of water conditions as communities like Majuli have evolved with coping measures and adapted over time. Moreover, they provide a linear history of change and how communities have formed a lifestyle from fluctuating conditions.

Given current projections for climate change and rise in water levels, water management needs to be diversified and decentralized with an adequate appraisal of indigenous knowledge that can be used towards designing adaptive strategies. Given the prospect of global sea level rise, there is an urgent need to develop a more sophisticated toolbox for adaptation. Analyzing Majuli’s case, despite its different dynamics and causes, can potentially inform other vulnerable communities that are experiencing similar conditions.

"...the Majuli community continues to become more vulnerable due to the loss of indigenous knowledge base, livelihoods and the social organization which has evolved around living with varying water and weather conditions."
Architects of National Identity: An Analysis of Urbanization and Historic Preservation of Minority Religious Venues in Shaxi, Yunnan

Presented by Olivia McCarthy-Kelley

This student presentation explores the impact of tourism development on the architectural preservation of minority vernacular architecture in Yunnan, China, and proposes a method of architectural preservation that prevents the cultural and environmental impact of tourism development. During the Cultural Revolution, Chinese architecture that referenced an imperial or feudal past was destroyed or repurposed for revolutionary goals, and minority religious sects were forbidden from passing on their unique traditions. Places like Yunnan were not spared architectural destruction, and now face a more subtle destructive force: the onslaught of ethnic tourism.

Government entities in Yunnan have taken interest in the potential earning power of China’s indigenous cultures, and many economists see tourism as Yunnan’s entire economic future. Yunnan is China’s poorest province, with millions of residents living below the poverty line, and tourism provides an avenue for impoverished citizens to participate in a lucrative local economy. Though ostensibly productive, this attitude towards tourism has resulted in a catastrophic form of tourism-facilitated gentrification that displaces a significant proportion of local minority residents and reduces townships’ architectural and cultural character.

Architectural preservation has been a significant force in developing Yunnan’s tourism industry. One of Yunnan’s biggest attractions for tourists is its wealth of diverse, traditional vernacular architecture that is seemingly untouched by China’s construction boom. Visitors flock to urban hubs and small townships in search of “authentic” and “traditional” cultural experiences. Tourists expect to partake in these experiences in contextually appropriate architectural venues, such as a minority ancestral home or a local temple. Thus, some ethnic minority communities face pressure to rent out their homes, perform their cultural traditions out of context, or sensationalize their places of worship to cater to tourists consumption. Restored architecture thus possesses the potential to either facilitate or combat tourism’s destructive forces.

This research explores the interrelation between tourism, ethnic minority revival, and architectural preservation through detailed architectural analysis of three temples in Shaxi, a developing tourism center in China’s Yunnan Province. These temples are all devoted to the same minority sect of Buddhism, Azhali, and are located with a 1.5 radius of one another. Each temple employs a different method of architectural preservation and/or renovation. By observing and documenting architectural interventions, tourist and patron interactions within architectural spaces, and interviewing temple owners, this research analyzes three architectural conservation methods and their respective social and economic consequences regarding averting or aiding disaster. These case studies demonstrate the clearly disastrous impact of unthoughtful tourism development and reckless construction.

Shibaoshan, Jianchuan County, Dali, Yunnan, China. Photo courtesy of author.

Xingjiao Temple Entrance, Shaxi Old Town, Yunnan, China. Photo courtesy of author.

Local God Temple. Photo courtesy of author.

Bai Local God Temple, Shaxi Old Town, Yunnan, China. Photo courtesy of author.

Old Theater Inn. Photo courtesy of author.

Shaxi Old Town. Photo courtesy of author.
THE U.S. DEPARTMENT OF STATE’S Bureau of Overseas Buildings Operations (OBO) manages a portfolio of over 25,000 properties spread throughout 291 foreign missions. OBO’s mission is to provide safe, secure, functional, and resilient facilities that represent American values, and is charged with a broad range of responsibilities including acquisition, design, construction, and operations and management. In addition to contemporary structures, OBO’s portfolio includes a significant number of heritage structures on the OBO List of Significant Property (equivalency of the NPS Historic Register of Historic Places). Many of which are on the Secretary of State’s Register of Culturally Significant Property (equivalency of the NPS National Historic Landmark status) or have local, national and or UNESCO World Heritage Site designations.

Some of OBO’s portfolio is located in a region of moderately to very high seismicity, as defined by the US Geological Survey, and considered to be culturally significant. With such a large and diverse portfolio, managing the seismic risk and providing proper resource allocations is a challenge.

The seismic component of OBO’s Climate Security & Resiliency (CSR&R) program has renewed its efforts on becoming more data driven and proactive with efficient resource allocation strategies to gain a better grasp and be more transparent on risk exposure across OBO’s extensive portfolio. At the present time, portfolio risk, is defined by OBO as a function of hazard exposure, building vulnerability and population.

Hazard Exposure: In the case of seismicity, OBO utilizes contracted geotechnical and structural engineers to develop city specific seismicity data. This is an important first step, because the seismic threat may be unknown or inconsistent with OBO standards. Soon, the seismic program’s goal will be to integrate seismicity data into a newly developed OBO GIS dashboard. This will make access and utilization of the seismicity data easier for all OBO divisions and contractors.

The introduction of the new data visualization practices has helped improve transparency on perceived seismic risk, which supports bolstering of resources to implement mitigation resources.

Building Vulnerability: OBO captures baseline building vulnerability using rapid visual survey (RVS) metrics that are currently being evolved, based on FEMA’s P-154 system but with modifications for the unique OBO use. The RVS approach is utilized in several ways, to create maximum flexibility and efficiency. OBO can send contracted US-based private sector engineers, OBO structural engineers, or hire qualified local structural engineers (when available) to perform the RVS. This survey process brings with it several challenges ranging from contracting hurdles, rating difficulties for historic structures, variability in local building code practices and consistency across RVS engineers. Collected data can then be analyzed and communicated with stakeholders to develop mitigation plans. Interpretation of the data is complex and must be done with several programmatic questions in mind:

• Which of our heritage structures are at greatest risk of damage or loss?
• Which locations require additional evaluations?
• Which locations require seismic risk mitigation projects?

With the assistance of data visualization software developed to help quantify, analyze and prioritize the seismic risk exposure, OBO seeks to clarify seismic risk exposure and prioritize the needs of at risk cultural sites alongside numerous other considerations, such as, but not limited to, fire, ADA compliance, man made threats, mission functionality and structure conditions.
FIRES & OUR CULTURAL HERITAGE: HOW CAN WE FURTHER PROTECT OUR CULTURAL HERITAGE?

Presented by Chris Marrion and Esha Sangha

OUR CULTURAL HERITAGE IS CONTINUALLY BEING IMPACTED by various types of hazards (i.e. natural, human-made, climate change, etc.), including due to structure fires and wildfires. In just the past few years fires have significantly damaged such sites as Notre Dame Cathedral, Brazil’s National Museum, Namdaemun Gate in South Korea and Shuri Castle in Japan, as well as more local heritage, including the devastating fire at the Serbian Orthodox Church in NYC. Whether a site/structure within our local community, or a World Heritage Site (WHS), a loss to any part represents significant losses to us all and our collective heritage.

Through undertaking research of past fire events, a significant amount can be learned in how we can better protect our Cultural Heritage. Further, this research has led to important understandings of why fires started and progressed, what failed, and what worked, and several common themes emerge, including:

- Numerous sources of ignition are present.
- Significant combustible materials exist.
- Renovation/restoration work often in progress.
- Limited fire safety awareness and training.
- No/limited fire prevention plans are in place.
- Fire protection systems (e.g. fire detection, alarm system, and automatic suppression systems) are not present/operational.
- Access to the site for firefighters to the site (e.g. into the structure, to the area of involvement throughout the Church upon fire arrival of emergency responders). Photos courtesy of UNO.

A significant amount can be done to limit the probability of a fire occurring and to reduce the resulting damage should one occur. The prevalent issues in fire protection are interrelated and the roles they play in better protecting our heritage from fire shed insight on:

- Common themes & lessons learned from past fires and wildfires, both natural and man-made.
- How small fires grew to become devastating.
- Why historic structures are vulnerable during times of renovation.
- The advantages of developing risk-informed, cost-effective and practical prevention & mitigation strategies that utilize indigenous knowledge and people.
- Common misconceptions regarding fire, fire safety systems and sprinkler systems.
- Challenges that arise when relying solely on codes and standards.
- The need to focus on the prevention/mitigation phases of disaster risk management.
- The need to keep it simple.

Through this deeper understanding, we can become more resilient and help protect our heritage from fires and its devastating impact to our communities, both locally and globally.

CHRIS MARRION is a Fire and Disaster Risk Management consultant focusing on protecting our cultural heritage and historic structures from fire and other disasters. Chris is the Founder and CEO of Marrion Fire & Risk Consulting LP, a special interest group of the National Fire Protection Association (NFPA), a member of the National Fire Heritage Center’s Board of Directors, and a Fellow of the Society of Fire Protection Engineers (SFPE) and holds a Master’s degree in Fire Protection Engineering.

For over 30 years, Chris’ work has focused on creating awareness, building capacity, and providing risk-informed, sustainable, cost-effective strategies and integrating local, indigenous traditions, methods and people into developing solutions to effectively protect cultural heritage from disasters. He has worked closely with UNESCO, UNESD, CICOM, SFPE, NFPA, et al., including helping raise awareness regarding the need to protect cultural heritage from disasters, including working with these entities to help incorporate this within the Sendai Framework for Disaster Risk Reduction.

ESHA SANGHA’S interests and focus are in architecture particularly as it relates to interior design and sustainability. Working with Marrion Fire & Risk Consulting while undertaking her preliminary studies and research, Esha report the importance of the interconnections between architecture/interior design, preservation and the use of traditional and indigenous knowledge, materials and methods in her work, as well as the need to integrate components of disaster risk management to develop alternatives and solutions that are long term sustainable and protect our heritage.

A PHOENIX RISES ON EAST 85TH STREET

Presented by Art Femenella Jr.

CONGREGATION KEHILATH JESHERUN is a Modern Orthodox synagogue, located on East 85th Street in the Upper West Side of Manhattan in New York City. The Synagogue was founded in 1872 and the current building is executed in a Moorish style. In 2011, Femenella & Associates (F&A) inspected and prepared a condition report of the stained glass windows at the Synagogue, which stated the windows were in good condition with minor work needed throughout. F&A was subsequently selected to complete the window repair work during the Summer of 2011 in conjunction with a larger renovation project.

On July 11, 2011, there was a four-alarm fire at the synagogue building on 85th Street that required 170 firemen; the fire, which started on the top floor and roof of the three-story building, caused the roof to collapse, and further damaged the building’s stability. The renovation project had already begun and the extensive pipe scaffolding set on the newly reinforced floor joists is credited with keeping the complete interior from collapsing in on itself. Luckily, all the religious artifacts had been removed for the renovation. The stained glass windows and monumental wood frames were severely damaged in the fire. The small maintenance work anticipated for the windows soon became a major restoration and historic replication project.

Given the abrupt and unexpected nature of the disaster, the design team collaborated not only to replicate and restore the original designer’s aesthetic intent using all new materials, but also to design more resilient windows in the event of future disasters. The design team took advantage of the changed window system to add a higher level of protection against future, man-made disasters (e.g. bombings and physical impact).

The replacement window system is designed to fail, but slightly more slowly than the anticipated duration of an explosion, thereby absorbing most (if not all) of the broken glass and shock wave. Additionally, all the street-facing windows received an interior layer of blast mitigation glazing and an attic stock of glass was left at the Synagogue for future replacement, if needed.

This presentation will provide simple recommended procedures that historic building owners can do now to make future recovery from a disaster event more successful, effective, and efficient.
THE FIRST NATIONAL FLOOD RISK ASSESSMENT, published in June of 2020 by the First Street Foundation, found that 14.6 million properties in the continental United States have a greater than 26% chance of flooding at least once in the next 30 years. This new risk model, developed collaboratively between 20 hydrology research centers, accounts for an additional 5.6 million at-risk properties compared to FEMA’s Flood Risk Map. Thus, it is urgent that stewards of historic sites in flood risk areas overcome barriers to flood preparedness to preserve our irreplaceable built heritage.

This student presentation discusses four primary and interrelated barriers to responsible disaster preparedness at historic sites: organizational, financial, informational, and behavioral. Using flood preparedness as an example, this presentation focuses primarily on the behavioral barrier to preparedness – or what is more commonly referred to as “disaster denial” – as the main driver of poor preparedness among site stewards. The concept of “disaster denial” is based primarily on a literature review and reflection of Meyer and Kunreuther’s six “behavior biases” from their 2017 book “The Ostrich Paradox: Why We Under Prepare for Disasters.” Robert Meyer and Howard Kunreuther, codirectors of the University of Pennsylvania’s Wharton Risk Management and Decision Center, ground their six behavioral biases in cognitive psychology and behavioral economics to explain why people, despite having access to unprecedented levels of information about disaster risks, still underprepared.

Further, this research aims to investigate whether preparedness barriers like “disaster denial” have a more significantly influence on the protection of historic sites, through better understanding the role of the insurance industry, good or bad, on promoting preparedness of at-risk historic sites. For the purposes of this research, “historic sites” is defined as manmade structures older than 50 years which materially represent a historical trend, event, figure, or collection and whose architectural character is preserved for public visitation. This definition is fundamental because typical insurance valuations cannot necessarily capture the significance and irreplaceability of a historic site. Through interviews and primary research, this research aims to determine if and how insurers approach historic sites differently from “non-historic” sites (e.g., do their metrics align with preservation principles?). Is there opportunity for a more symbiotic relationship for guidance, critically evaluate our community must look to adjacent fields to improve preparedness and in turn lower claims? (Is there an opportunity for a more symbiotic relationship for guidance, critically evaluate our community must look to adjacent fields to improve preparedness and in turn lower claims?).

To potentially illuminate a path toward better disaster (flood) preparedness within the preservation field, I point to common practices in museum conservation and collection management. For decades, the American Institute for Conservation has worked to formalize best practices for and widely educate on disaster preparedness strategies for built heritage sites. Similarly, the Smithsonian’s Cultural Risk Initiative runs the Heritage Emergency and Response Training, cosponsored with FEMA as part of the Heritage Emergency National Task Force, which conducts standardized trainings domestically and internationally. Using today’s widely available information on flood risk, we in the preservation community must look to adjacent fields for guidance, critically evaluate our relationship with insurance companies, and overcome our disaster denial. This will require shifting the focus away from response and recovery, toward preparedness to better protect the US’s irreplaceable built heritage. 

...it is urgent that stewards of historic sites in flood risk areas overcome barriers to flood preparedness to preserve our irreplaceable built heritage.

FLOOD BARRIERS: OVERCOMING DISASTER DENIAL AND IMPROVING FLOOD PREPAREDNESS AT HISTORIC SITES

Presented By Meris Westberg

Meris Westberg graduated from American University (Washington, D.C.), majoring in French Language and European Studies. She entered the public history field as an Archives Technician with the NARA as a permanent conservator technician in the paper lab, where she began doing more preventive work such as environmental monitoring and emergency preparedness and response training. She then took a position in the Preventive Conservation Department at the National Gallery of Art, participating in the Smithsonian Cultural Resource Center’s 2018 Heritage Emergency and Response Training. She began her graduate studies in Historic Preservation, with a concentration in architectural conservation in 2018 and her master’s thesis focuses on disaster preparedness strategies for built heritage sites.
WHEN RESPONDING TO THE THREAT OF NATURAL DISASTERS, there are three fundamental approaches: protect, retreat or accommodate.

The third approach, accommodation has become a primary focus of the University of Florida’s Preservation Institute Nantucket (PIN), one of the nation’s oldest, continually operating field schools for historic preservation. From 2017 to 2019, PIN implemented the first phase of the Resilient Nantucket initiative with the goal of digitally documenting historic Nantucket Town and its waterfront, preparing 3D models and visualizations of sea level rise, and assessing vulnerability.

As an extension of this work, during summer 2020, PIN surveyed and evaluated the South Washington Street area of historic Nantucket Town. The goal was to document and assess the cultural landscape and to develop a resilience and adaptation strategy that responds to coastal hazards, specifically tidal flooding, storm surge and sea level rise. The studio format included six students from different disciplines paired with professionals and researchers in three areas of expertise: natural, built and urban environments. The subject of study, the South Washington Street area, was one of several districts of coastal hazards, geographic features, historic origins and boundaries are determined according to: types and severity of historic Nantucket Town. The goal was to document and assess the cultural landscape and to develop a resilience and adaptation strategy that responds to coastal hazards, specifically tidal flooding, storm surge and sea level rise. The studio format included six students from different disciplines paired with professionals and researchers in three areas of expertise: natural, built and urban environments. The subject of study, the South Washington Street area, was one of several districts of coastal hazards, geographic features, historic origins and boundaries are determined according to: types and severity of historic Nantucket Town. The goal was to document and assess the cultural landscape and to develop a resilience and adaptation strategy that responds to coastal hazards, specifically tidal flooding, storm surge and sea level rise. The studio format included six students from different disciplines paired with professionals and researchers in three areas of expertise: natural, built and urban environments. The subject of study, the South Washington Street area, was one of several districts of coastal hazards, geographic features, historic origins and boundaries are determined according to: types and severity

“Research focused on several key themes: historical development, cultural landscape, built environment, and natural environment, which resulted in adaptation recommendations to enhance resilience.”

The PIN South Washington Street project highlights what has changed historically and what must now change culturally in service of proposing new adaptive environments. The recommendations have the potential to inform and impact the reevaluation of Nantucket’s historic district guidelines.

The South Washington Street historic neighborhood resilience plan is a collaboration of the Town of Nantucket, Nantucket Preservation Trust, and the Maria Mitchell Association (MMA), among other stakeholders. The Maria Mitchell Association is a private non-profit organization founded in 1902 to preserve the legacy of Mitchell, a Nantucket native and internationally renowned astronomer, naturalist, and educator. The MMA currently operates out of a 600 square foot, former train depot on the harbor. The organization plans to relocate to a former arts school property at 33 Washington Street. Embracing the new setting as a “laboratory” of the sky, sea, and land, the proposed demonstration project is intended to display and promote adaptation measures for the neighborhood. Enacted concepts include elevating learning environments on an activated deck as well as returning the landscape to marsh.

Robert Miklos, Envision Resilient Nantucket Challenge Co-Chair, is a 30-year veteran and summer resident of Nantucket. Robert is the thunder of the Boston-based firm designLAB architects, whose work focuses on arts, cultural, and educational projects by helping clients advance their mission and enhance the communities they serve. He received his Master’s Degree in Architecture from Harvard Graduate School of Design and a Bachelor’s of Fine Arts from the Cleveland Institute of Art (CIA).

Robert is a member of the AA College of Fellows and has served as design faculty at Harvard Graduate School of Design, Rhode Island School of Design, and Northeastern University. Robert has served on the board of the Boston Society of Architects as both Commissioner of Design and Commissioner of Education and Research. In 2008, he received the Annual Award for Artistic Achievement from the CIA.

Morris (Marty) Hylton III is Director of the University of Florida Historic Preservation Program and the Center for World Heritage Research and Stewardship. He also oversees the nation’s oldest applied learning program for historic preservation—the Preservation Institute Nantucket (PIN) and its sister program, the Preservation Institute St. Augustine (PI-PSA). Marty’s research and work address multi-faceted strategies for documenting, advocating, and preserving endangered heritage sites, particularly architectural and cultural resources associated with the mid-twentieth century and underrepresented communities. He created the Envision Heritage initiative to explore the documentation of coastal communities impacted by sea level rise using emerging digital technologies.
THIS INTERACTIVE FORUM will use Haiti, Puerto Rico and Dominica as Case Studies of Resilience. In the aftermath of the 2010 Haiti Earthquake and Hurricane Maria in 2017, Architects working in resiliency and recovery efforts in the Caribbean Region identify this as an opportunity to build in higher levels of resilience and sustainability. Along with cultural sensitivity, these natural occurrences are transformed into catalysts for new planning and design principles that can be translated worldwide. Panelists will discuss the opportunities and challenges of working with impacted communities, while dealing with unfamiliar policies or unenforced construction laws & regulations. Sustainable Communities are the ones that are empowered in the recovery efforts. Architects and Design leaders facilitate community participatory design in recovery efforts by harnessing the local brain trust to create a collaborative and culturally relevant solution.

**PANEL DISCUSSION**

**POWER TO THE PEOPLE**

Presented By Pascale Sablan
with Venesa Alicea-Chuqui and Ellen Abraham

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**ELLEN ABRAHAM** aims to bridge the gap between ideation, design excellence and social awareness; all through her first love - Architecture. This MBA graduate and Senior Project Technical Lead at Skidmore, Owings & Merill LLP, nurtures her passions through finding various community-building initiatives. Design based philanthropy and high impact social advocacy. She is the Founder of Architect Plus & Elle-Abad, two companies focused on the celebration of diverse design identities and the promotion of BIPOC Architect and Designer Guest Editors, respectively.

**VENESA ALICEA-CHUQUI** AIA, NOMA, LEED AP BD+C, WELL AP, an Architect, Educator and Advocate, is Founding Principal of NYVARCH Architecture, a NYC based Architectural Practice committed to working with local communities to develop sustainable and socially conscious designs, that can influence the development of healthy and resilient spaces. She is the New York representative to the AIA Small Firm Exchange, President of the Architecture Alumni Group of the AIA New York Chapter, and sits on the AIA New York Chapter’s Social Justice Committee. She is also a 2019 Fellow of the Association for Community Design, and active member of the AIANY Planning and Urban Design Committee.

**PASCALE SABLON**, FAIA, NOMA, LEED AP, Associate at Adjaye Associates, with over 14 years of experience, she has been on the team for a variety of mixed-use, commercial, cultural & residential projects around the world. Pascale is the 353rd living African-American, woman registered architect in the U.S. She is an active architect who works to advance architecture for the betterment of society, bring visibility and voice to the issues concern women and BPOC designers. She founded Beyond the Ball Environment organization positioned to uniquely address the inequitable disparities in architecture. She was awarded the 2021 AIA Whitney M. Young, Jr. Award for her advocacy efforts and ascended to the AIA College of Fellows, the youngest African American to reach that honor. Pascale has given lectures at Colleges and Universities nationally, cultural institutions such as the United Nations and the Smithsonian National Museum of African American History and Culture.

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**Click or Scan for Q&A**

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CONGRATULATIONS TO APTNE’S 2021 STUDENT SCHOLARSHIP RECIPIENTS!

ANAGHA JATIN NAIK
Pratt Institute, New York

APTN is proud to announce that Anagha Jatin Naik is the 2021 Melissa Morrissey Scholarship Fund Recipient.

Anagha stands out as an especially gifted emerging professional in Historic Preservation, whether it be through her exemplary coursework, insightful curiosity, or ability to synthesize and communicate complex ideas about architecture and cultural heritage. To examine the relationship between preservation, planning and placemaking in an urban Indian landscape, she traveled to the historic city of Banaras and discovered that the landscape is defined by an intense duality: the static city (built with permanent materials) and the kinetic city or “city in motion” (built with temporary materials). Anagha’s graduate research questions the application of traditional preservation practices in a cultural landscape where the kinetic city predominates over the static city. Anagha clearly has a promising future as a preservation architect and is currently pursuing her career with Superstructures in New York.

MARISSA GIBBS
University of Vermont, Vermont

APTN is proud to announce that Marissa Gibbs is the 2021 APTNE Scholarship Recipient.

Marissa decided to pursue her curiosity and passion for preservation while attending the 2020 APTNE Annual Symposium on Adaptive Reuse. Marissa’s creativity, intelligence and level of inquiry in her preservation coursework is evident and enlightening, and her talent for photographic documentation has the eye-catching edge of professional work. Her unique academic background in Animal Sciences (prior to enrolling in the University of Vermont’s Preservation Program) offers a fresh perspective and reminds us all that there is more than one path to finding your passion for preservation.
2020 Year End Review

2020 Events
Finding New Ways To Collaborate and Connect

In Person | Providence, RI
January 23, 2020
12PM–4PM
Woodgraining & Gilding Workshop
with John Canning & Co.

Virtual
May 19, 2020
12PM–1PM
Reglazing Modernism:
Intervention Strategies for the
Renewal of 20th Century Icons

Virtual
July 16, 2020
5PM–6PM
Preservation at Home: The
Rehabilitation of a 1935 Colonial
Dutch Revival Style House in Troy, NY

Virtual
July 30, 2020
5PM–6PM
Preservation at Home: Slate Roof
Replacement of a 125 Year Old Victorian
House in Westerleigh, Staten Island, NY

IN PERSON | PROVIDENCE, RI
February 27, 2020
8AM–7PM
Virtual
2020 Annual Meeting & Symposium

Virtual
June 25, 2020
12PM–1PM
Guastavino Tile:
Architecture, Technology, History

Virtual
September 22, 2020
12PM–1PM
Saint Elizabeths Hospital Revitalization
in Washington DC

Virtual
October 19, 2020
5PM–6PM
Ornamental Copper Cornice
Restoration at Trinity Centre in
Lower Manhattan

Virtual
November 12, 2020
12PM–1PM
Courting the Next Wave of
Preservation Tradespeople with
HOPE Crew, National Trust for
Historic Preservation

Virtual
December 3, 2020
5PM–6PM
Conservation at Home: Relocating
a Timber Framed Church from New
York to Ohio

Virtual
July 16, 2020
5PM–6PM
2020 Annual Meeting & Symposium
Helping to conserve and protect historic masonry since 1878

Let our local experts assist you!

Anthony Truppi
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Perri Robinson
Northeast Region
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