JOHN E. DUMSICK, P.E. (VA)
306 E. Custis Avenue, Alexandria, Virginia
(703) 909-3650 / dumsick@gmail.com

April 8, 2019

Honorable Justin Wilson, Mayor, and Members of the City Council
City Hall
Alexandria, Virginia 22314

RE: 619 South Lee Street, Alexandria, Virginia (APPEAL of BAR Nos. 2018-00410 and 2018-00411)

I am writing to you as a licensed professional engineer in the Commonwealth of Virginia, who has over 15 years of dedicated experience on the preservation, restoration, rehabilitation, relocation, dismantlement and reconstruction of existing and culturally significant structures. As a professional engineer and concerned resident of Alexandria, I am taken aback by the rationale advanced to justify the demolition of a 19th century, historic, rear Kitchen addition of the historic structure located at 619 South Lee Street in Alexandria, Virginia. I ask you to set aside the decision of the BAR and uphold the recommendations of the BAR staff report to retain and preserve the historic curve of the Kitchen addition.

Based on my professional preservation engineering experience, I find the argument used before the BAR — that the difficulties of maintenance and repair justify the demolition of the historic curve — is unsupportable. As many of us who own or work with historic structures know, all historic and existing buildings require periodic preventative maintenance and unscheduled repairs that often require innovative strategies for their preservation.

The proposed demolition of the historic curve is for a component which has been previously documented as a significant and distinctive historic feature to the site. This masonry addition has a shallow gabled roof and exterior walls constructed of brick masonry. The bonding pattern of the masonry and the use of gauged header bricks (tapered) for the construction of the curvilinear wall (in lieu of tapered mortar joints), demonstrates careful thought by the mason implementing this addition. Therefore, I ask the question: should demolition be permitted for a large portion of the south wall of the Kitchen, if one, rather small, unique construction element causes some form of difficulty? I am concerned about the precedent this could set for the preservation of Alexandria's historic resources.

On March 18, 2019, Historic Alexandria Foundation (of which I am a board Member), sent the attached letter asking permission for me to visit the property and assess the curve so that I could see if existing conditions would disclose anything that would lend credence to the arguments for demolition. Unfortunately, the owners did not provide the requested opportunity to inspect the curve.

In lieu of a site visit, I requested and obtained photographs of the visual inspection performed by Mr. Al Cox, FAIA, the City of Alexandria's Historic Preservation Manager and Architect in the Department of Planning and Zoning. Additionally, I have reviewed the BAR Staff Report for the BAR applications 2018-00410 and 2018-00411. Neither the photographs, nor the report, reference

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any condition where an on-site inspection would be necessary in order for me to express the opinion I am sharing with you in this letter.

I do acknowledge that the curvilinear wall presents its challenges for repair and maintenance. However, I must note that masonry structures inherently require a higher level of repair effort than other forms of construction. Masonry walls require repointing efforts to their exterior mortar joints every 50-100 years and access to embedded elements, such as deteriorated steel and or wood lintels (over wall openings), typically require removal of masonry elements to expose the conditions. These repairs are typically once in a lifetime efforts. The conditions at this curve are no different.

First, an engineer wanting to make a repair, we must look at the causes of the deterioration. Upon a review of the provided documentation, it appears the overarching cause of deterioration mode is the masonry construction's continued exposure to water due to poor roof drainage and exposure to the elements. It appears that the existing roof gutter system terminates at the west end of the curve, and that the roof drainage at the curve is facilitated by a 'yankee gutter' in an attempt to direct water to the gutter beyond. It appears that this element is insufficient for the conveyance of water to the gutter system beyond. One method to minimize the deterioration to masonry elements below the roof could be to improve the current roof drainage design at the curvilinear wall area.

The curve does limit exterior access and impedes direct access to the bearing end of a stone lintel supporting masonry above the historic first floor window of the main house. To repair the stone lintel bearing, similar to repair of other types of wall support of masonry above openings, localized removal of the curvilinear wall will be necessary to provide access. This would most likely require localized temporary roof shoring and protection of existing interior finishes. Since the curvilinear wall appears to incorporate a cold/construction joint between it and the west wall of the house, the removal of the masonry should be relatively easy than if they were toothed and keyed into the main house walls.

Alternatively, a small area of the exterior of the main house walls could be locally removed to provide access to repoint the curvilinear wall, and or lintel repairs from the interior could be employed. Again, I must stress that these repair efforts are a once in a life-time repair. If coupled with improved roof drainage it is likely these repairs could last for multiple generations.

Although I do not have access to maintenance and/or repair records for the house, but having reviewed the available documents, my professional opinion is that little effort outside of painting and implementation of incompatible localized coatings of cementitious repair mortars has been performed to the curvilinear wall in its 150 year lifetime. Efforts to improve roof drainage, repoint the exterior curvilinear walls and or lintel repair since the addition was constructed have been minimal and or unsuccessful.

However, with careful and comprehensive thought, implementation of temporary shoring and protection, localized masonry removals to facilitate contractor access and roof drainage repairs can be

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performed to preserve this significant and rare historic addition to the main house for future generations of owners.

Please do not hesitate to contact me should you have any questions and or comments. I am willing to meet with any of you and or owners to discuss these potential strategies. For reference I have attached my CV should you wish to review my professional experience and credentials.

Thank you for your consideration.

John E. Dumsick, P.E. (VA)

Historic Alexandria Foundation, Board Member (2018-present)
Historic Alexandria Resources Commission, Commissioner (2016-present)
Friends of Carlyle House, Board Member and Treasurer (2014-present)
Association for Preservation Technology, Disaster Recovery Initiative, Co-Chair (2018-present)
Association for Preservation Technology, Board Member (2006-2018)
Association for Preservation Technology, Preservation Engineering Technical Committee, Co-Chair (2006-2018)
Robert Silman Fellow for Preservation Engineering at the National Trust for Historic Preservation (2006)

Historic Alexandria Foundation
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(703) 549-5811 • FAX (703) 548-4399
Email: h.a.f@erols.com • Website: HistoricAlexandriaFoundation.org

April 8, 2019

By Email DBlair@landcarroll.com

Duncan Wardman Blair
Land, Carrol & Blair, P.C.
524 King Street
Alexandria, Virginia 22314

RE: BAR Appeal- BAR Case #2018-00410 & BAR Case #2018-00411

Dear Duncan,

I am writing to ask if your clients, the owners of the 619 S. Lee Street property, would be kind enough to allow one of our Board Members to visit the property and inspect the "curve" that is one of the subjects of the pending BAR Appeal to City Council.

Historic Alexandria ("HAF"} would like John Dumsick, one of our Board Members, who is a well-respected structural engineer specializing in preservation issues, to inspect the 619 S. Lee Street Property and further assess the maintenance and construction issues around the proposed demolition of the "curve". While John works full time for the State Department and is often called upon by his job to travel overseas, I believe he is generally available over the next two weeks to perform this volunteer work.

Please let us know. Thank you.

Very truly yours,

John Thorpe Richards, Jr.
Member of the Board

JOHN EDWARD DUMSICK, P.E., M.ASCE

306 East Custis Avenue, Alexandria, Virginia USA 22301
(703) 909-3650 / dumsick@gmail.com





EDUCATION

SAVANNAH COLLEGE OF ART AND DESIGN, Savannah, Georgia USA

Master of Architecture, Department of Architecture, *Tau Sigma Delta National Architectural Honor Society*, 2006

Thesis: *"Architecture Metamorphosis: changing social agendas through an adaptive re-use of the offshore oil Platform Holly as a renewable energy educational center Santa Barbara, California, U.S.A."*, 2005. (Jen Library of the Savannah College of Art and Design (Savannah, Georgia (USA)), Catalog Number: B1119871. Advisors: Michael Moore, Chair; Stan Wrzeski, Andres Gaviria. This work evaluates the extensive stock of steel-jacketed offshore oil platform structures within coastal environments for rehabilitation. These industrial structures are currently being decommissioned and abandoned as a result of lack of oil and natural gas production, increased regulation and exploration in new regions and deeper oceanic environments. This architectural study investigated the structural feasibility for a chance in use of an existing offshore oil platform off the coast of Santa Barbara, California. The investigation studied a proposed architectural rehabilitation of the existing structure, Platform Holly, as a renewable energy educational center which both educates the public on past energy exploration and new technologies for sustainable and clean energy in coastal environments.

Scholarship: Mulberry Grove Plantation Design Competition Scholarship, Mulberry Grove Foundation, 2003. Matching scholarship by President of Savannah College of Art and Design, 2004. Competition design recognized the cultural, ecological and technological importance of the plantation, including birthplace of Eli Whitney's idea of mass part production and the invention of the Cotton Gin.

SAVANNAH COLLEGE OF ART AND DESIGN, Savannah, Georgia USA

Master of Art in Historic Preservation, Department of Historic Preservation, 2006

Thesis: "Conserving Oil: a historical analysis of the quest for petroleum and preservation of the U.S. offshore oil & gas industry", 2005. (Jen Library of the Savannah College of Art and Design (Savannah, Georgia (USA)), Catalog Number: B1127031. Advisors: Andres Gaviria, Chair, Marlborough Packard, Robert H. Allen. This work investigates the potential preservation opportunity of a relatively new form of industrial architecture that has provided a great deal of wealth to the history and development of the United States. Offshore oil and natural gas platforms are industrial objects that have been produced out of necessity, like many other forms of historic building types. These engineering marvels unlike any other structures demonstrate the vast wealth and knowledge in the American oil industry, incorporating technology, engineering, efficiency and determination. These offshore platforms provide a visual historical transformation of the oil industry which shifted from the easily accessible land-based wells to out-of-site offshore locales. This thesis reviewed the technological/engineering practices that led to the dynamic offshore industry and the several types of offshore oil platform structures in use today and those that are currently being decommissioned and abandoned and the common maintenance and preservation issues relating to various structure typologies.

TEXAS AGRICULTURAL & MECHANICAL (A&M) UNIVERSITY, College Station, Texas USA

Bachelor of Science, Maritime Systems Engineering, *Dean's Distinguished Student*, 1998

Student Activities: American Society of Civil Engineers, *Concrete Canoe Competition*. International Human-Powered Vehicle Association, *Human-Powered Submarine Competition*. Grant Employment: Dr. Jose H. Vazquez, Ph.D., *Galveston Beach Nourishment Project- Post-Monitoring*, (Land Surveyor and Small Vessel Operator).

Scholarship: US Naval Reserve Officers Training Program (Academic Scholarship), 1994-1998.

PROFESSIONAL MEMBERSHIP AND SERVICE

Virginia Board of Professional Engineers, Professional Engineer License #0402058020, Virginia USA
International Ground Source Heat Pump Association, Geothermal Heat Pump Designer & Contractor*
Historic Alexandria Resources Commission (2016 to present), City of Alexandria, Virginia USA
Presidential Appointed Board Member (2007 to 2018), Association for Preservation Technology International (APTI)
Co-Chair of Preservation Engineering Technical Committee (2007 to 2018), Association for Preservation Technology International (APTI)
Preservation Engineering Student Design Competition Task Force (2016 to present), Association for Preservation Technology International (APTI)
Chair, Buildings and Grounds (2008 to 2017), St. George's Episcopal Church, Arlington, Virginia USA
Board Member and Treasurer (2013 to present), Friends of Carlyle House, Alexandria, Virginia USA. Strategic Planning Subtask Group (2017 to present)
Board Member, Historic Alexandria Foundation, Alexandria, Virginia USA (2018 to present)
Committee Member, Preservation Engineering Committee (2015 to present), American Society of Civil Engineers (ASCE)
Committee Member, American Society of Civil Engineers (ASCE) Committee on Structural Assessment of Existing Buildings (2015 to present).
Review Committee, American Society of Civil Engineers (ASCE 11) Guidelines for the Structural Assessment of Existing Buildings (2015 to present).
Member, Association for Preservation Technology International (APTI), 2005 to present.
Member, American Society of Civil Engineers (ASCE), 1998 to present.
Member, Association for Preservation Technology District of Columbia Chapter, 2005 to present
Member, Friends of Carlyle House, 2015 to present
Member, Historic Alexandria Foundation, 2017 to present
Member, Bohol Restoration Group, 2015 to present
Member, Coastal Defense Study Group, 2008 to 2012
Member, Society for Industrial Archaeology, 2005 to 2010
Member, Vernacular Architecture Forum, 2005 to 2010
Member, Marines Memorial Association, 2013 to present
Member, Veterans of Foreign Wars, 2013 to present
Firefighter I and II, City of Fairfax Volunteer Fire Department, Virginia USA
Firefighter Instructor*, City of Fairfax Volunteer Fire Department, Virginia USA
Emergency Medical Technician*, City of Fairfax Volunteer Fire Department, Virginia USA
*Certifications expired

CURRENT PRESERVATION ENGINEERING OUTREACH EFFORTS

As a Co-Chair of the Preservation Engineering Technical Committee (PETC) of the Association of Preservation Technology International (APTI), with Timothy Crowe, PE, SE and Tom Morrison, Ph.D., Peng, we have identified that engineering students in the United States and Canada are not obtaining sufficient education and training in the structural analysis and investigation of historic archaic systems and the common structural preservation issues associated with these constructions. As an outreach initiative, the PETC Co-Chairs formed a task force to develop a student design competition which engages engineering, architecture and trade school students with heritage preservation professionals in the form of a structural preservation problem. In the 2016, the foundation year, two universities (Texas A&M University and Carleton University) participated in a historic timber bridge design competition in San Antonio, Texas. This competition required the students to select an 19th century bridge construction type, perform structural analysis of the bridge for a given span to determine stresses in truss components and their designed connection, and to construct a scaled bridge for load testing and outline a series of preservation based repair problems. This year, for the 2017 APTI Conference in Ottawa, the task force identified a masonry arch for the design problem. As of April 2017, nine engineering and trade schools from US and Canada have submitted the selection of their specific arch and have begun to engage their professional mentor for analytical techniques and testing of their scaled representative model. The PETC aims to select five teams for a final masonry arch design problem at this year's conference.

TEACHING

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland USA
Whiting School of Engineering, Department of Civil Engineering
Assistant-in-Instruction, Spring 2010

EN560.451 and 452: Civil Engineering Design I and II. Assisted John A. Matteo, P.E., Professor of Practice, with instruction of lateral design process and evaluation of existing structures (seismic and wind). Presented several case studies, to include the investigation of an existing temporary structure, *1939 World's Fair Belgian Building*, which was dissembled and relocated to Richmond, Virginia for permanent occupancy and use. An additional case study presented was the structural investigation and repair of the *Juliette Gordon Low Birthplace* (Savannah, Georgia).

PROFESSIONAL ENGINEERING EXPERIENCE

DEPARTMENT OF STATE, OVERSEAS BUILDING OPERATIONS, OFFICE OF CULTURAL HERITAGE, Arlington, Virginia USA, 2018-present.

Senior Civil Engineer / Historic Preservation Specialist

Senior Civil Engineer and Historic Preservation Specialist for the Office of Cultural Heritage within Department of State's Overseas Building Operations. This position serves as the subject matter expert for the preservation and repair of over 200+ heritage structures within the Department of State's international building portfolio and those listed on the Secretary of State's Register of Culturally Significant Structures. The position also provides technical expertise, guidance and training for the proper treatment and facilities maintenance of building materials in over 18,000 buildings worldwide. As an active member in the local Association of Preservation Technology Washington, District of Columbia Chapter, and a presidential appointed Co-Chair of the APTI Preservation Engineering Technical Committee, sharing knowledge with colleagues and collaboration in the field is a priority.

Supervisor: Mr. Tobin N. Tracey, AIA (Director, Office of Cultural Heritage)

FAIRFAX COUNTY FIRE AND RESCUE DEPARTMENT, VIRGINIA TASK FORCE ONE, URBAN SEARCH AND RESCUE, Fairfax, Virginia USA, 2019-present.

Structures Specialist (Disaster Specialist II)

As a member of a domestic and international Urban Search and Rescue Task Force, my role as a Structures Specialist is primarily to assess the immediate structural conditions and concerns of the affected area of Task Force Operations to include structure types, specific damage and structural hazards. Additionally the position recommends the appropriate type and amount of structural hazard mitigation to minimize risks on site to task force personnel. Additional responsibilities include design, inspection and supervisor of shoring operations and the monitoring of assigned structures for condition changes while rescue and recover operations are proceeding.

Supervisor: Mr. Jon Tung, P.E. (Structures Team Lead, VATF-1)

MCC≡1200 ARCHITECTURAL ENGINEERS, PLLC, Alexandria, Virginia USA, 2013-2018.

Associate

Senior Structural Engineer and Project Manager for building design and restoration, with an emphasis on preservation of historic structures; extensive experience with historic building systems and materials parallels broad ranging experience in new construction. Projects types range from historic preservation, restoration, and renovation, to small and medium scale new construction. With experience from a multitude of structural assessments, investigations, feasibility studies and collaboration with specialized sub-consultants have provided a broad knowledge of building types and systems, particularly in historic buildings.

Supervisor: Mr. John A. Matteo, P.E., FAAR (Principal, 1200AE)

ROBERT SILMAN ASSOCIATES, PLLC, Washington, District of Columbia USA, 2005-2013.

Senior Structural Engineer

Senior Structural Engineer and Project Manager for building design and restoration with an emphasis on preservation of historic structures; extensive experience with historic building systems and materials parallels broad ranging experience in new construction. Projects types range from historic preservation, restoration, and renovation, to small and medium scale new construction.

Supervisor(s): John A. Matteo, P.E., FAAR (Director of Preservation, RSADC Office)

Ed Meade, P.E., FAPT (Principal and Director of Preservation, RSA)

NATIONAL TRUST FOR HISTORIC PRESERVATION, Washington, District of Columbia USA, 2006.
Robert Silman Fellow for Preservation Engineering

Mr. Dumsick was awarded the Robert Silman Fellow for Preservation Engineering at the National Trust for Historic Preservation in 2006 through a competitive selection process. During this fellowship, structural consultation services were provided to the Graham Gund Architect of the National Trust for Historic Preservation (Ms. Barbara Campagna, FAIA, FAPT). Structural investigations were performed at several National Trust owned and co-stewardship historic sites to outline future repair and reinforcement design efforts. While at the National Trust for Historic Preservation, the research effort included the evolution of seismic strengthening schemes in unreinforced earthen architecture in Monterrey, CA. This research was presented at the 2007 Association for Preservation Technology International Conference in San Juan, Puerto Rico.

Supervisor: Barbara Campagna, FAIA, FAPT (Graham Gund Architect of NTHP)

WRECKING CORPORATION OF ST. LOUIS, Alexandria, Virginia USA, 1998-2000.
Field Engineer / Quantity Surveyor

Field Engineer and Quantity Surveyor for building dismantling and demolition activities. Project types ranged in scale from residential to industrial structures which permitted exposure to an extensive array of structural systems, their connections and means and methods of surgical dismantling operations and techniques.

Supervisor: Terry Anderson (Vice President)

REPRESENTATIVE PROJECTS – Historic Structures

Monticello Joiner's Shop and Weaver's Cottage (1809), Charlottesville, Virginia USA

Thomas Jefferson designed Monticello (1769-1809), his plantation home, employing architectural vocabulary based on classical antiquity that was thoughtfully integrated into a natural landscape. The Joiner's Shop Chimney is a Jefferson era construction that remains as a free-standing structure on a steep incline exhibiting erosion that is also within an archeologically sensitive site. The design effort incorporated the design of a cantilevered pile bracing system that provides lateral support with minimal visual impact. The Weaver's Cottage, a one-story rubble stone masonry construction built into a hill side, is one of the oldest buildings on the historic site. Currently, the structure is connected to an adjacent building by several twentieth century modern additions, which are to be carefully disassembled and removed as part of a restoration effort. The design effort included a review of the existing lateral system of the stone structure and the participation of the later additions to its lateral stability. Furthermore, a careful study of the contractors means and methods for the removal process was performed to maintain structural stability of the historic structure during selective demolition activities. Based on the structural findings, localized interventions for the strengthening of the existing below grade foundations was designed to serve as lateral bracing for the historic structure in its permanent configuration.

Louisiana State Capitol (1933), Baton Rouge, Louisiana USA

Designed by the acclaimed architecture firm of Weiss, Dreyfous and Seiferth in the art-deco style, the Louisiana State Capitol, is the tallest state capitol building in the United States. The existing limestone clad structure incorporates a 450-foot tall steel-framed tower structure which is flanked by two large and open base structures to house the different components of the legislative system. This large structure was completed within a year of the preparation of final drawings in a fast-track delivery process. This historic

structure and its grounds was listed on the National Park Service's National Register of Historic Places in 1978. Due to existing concerns regarding the displacement of stone façade units, a localized investigation to the observed conditions was performed. Based on the observed structural conditions, access to the structure was limited and a comprehensive structural investigation was performed. This effort was aided with a team of consultants to assist the structural investigation, and included technical rope teams to document existing conditions at all exterior surfaces of the structure and non-destructive testing technician to document the existing façade support structure and corrosion rates. Based on the information obtained from these efforts, global structural analyses were performed of the existing tower to evaluate the strength and stiffness of the structural system for the current applied gravity and lateral loadings, as well as the historic loadings utilized in the original design process. Localized structural analysis of the stone façade support system and stone connections was performed to determine available strength and stiffness. Based on the findings of this comprehensive structural investigation, repair and reinforcement recommendations were provided for cost estimation. Designs for the structural repair and reinforcement of the façade support system are currently being designed based on the findings of the structural investigation effort.

Other projects include:

Fallingwater, Mill Run, VA — Structural investigation of Frank Lloyd Wright's landmark residential structure including design and implementation of structural building monitoring, and concrete repair design

Washington National Cathedral, Washington, DC— Structural investigation of existing catacombs and reinforcement design for an early reinforced-concrete proprietary framing system.

Fort Negley, Nashville, TN— Structural investigation and analysis of the largest fortification constructed during the American Civil War and failing repairs and reinforcements of historic dry-stacked stone retaining walls.

St. Albans's School Little Sanctuary, Washington DC— Structural investigation and repair of existing hammer beam wood trusses.

Alexandria City Hall, Alexandria, Virginia— Comprehensive structural investigation of masonry and timber frame structure as part of a feasibility study for architectural reprogramming of space. Structural repair documents were prepared to adequately laterally brace masonry bearing walls and reinforce timber framing where modified by previous inappropriate measures.

Lockkeepers' House, Chesapeake & Ohio Canal Extension, Washington, DC— Structural investigation, relocation design to move historic structure and implement flood proof design measures.

Locks 3 and 4, Chesapeake & Ohio Canal, Washington, DC— Structural investigation of historic lock walls exhibiting excessive rotation and deterioration to timber cribbing foundation base.

Friendship Firehouse, Alexandria, Virginia— Structural investigation and design repair for deteriorated wood framed cupola/ventilator.

National Gallery of Art East Building, Washington, DC — Investigation of the façade distress and design of structural façade support system*

National Academy of Sciences, Washington, DC — Structural investigation of earthquake damage (August 2011) and design of repairs to stone façade and plaster ceilings*

1939's World Fair Belgian Friendship Building, Virginia Union University, Richmond, VA – Structural investigation of historic structure and repair design to bell tower*

Noguchi Playscape, Atlanta, GA — Structural investigation and repair design of history children's playground*

Hooper Island Lighthouse, Chesapeake Bay, MD — Structural investigation and repair recommendations*

Juliette Gordon Lowe Birthplace, Savannah, GA — Structural investigation and design of preservation repairs*

Fort Jackson, Plaquemines Parish, LA — Structural assessment of Hurricane Katrina damage; repair design*

Arlington House, The Robert E. Lee Memorial, Arlington, VA — Mechanical upgrades, restoration/repairs*

Woodrow Wilson Family Home, Columbia, SC — Structural investigation and repair design of structure*

The Rotunda at the University of Virginia, Charlottesville, VA — Portico column/Guastavino roof investigation and repair design*

Arts & Industries Building, Smithsonian Institution, Washington, DC — Mothballing study*

Memorial Stadium, Baltimore, MD — Dismantling, salvage and preservation of historic sports memorabilia**

* Indicates work performed at Robert Silman Associates, 2005-2013

**Indicates work performed at Wrecking Corporation of America, 2000

CONFERENCES & LECTURES

Co-Chair, “Flood Design Symposium for Historic Structures”, Association of Preservation Technology International Conference, San Antonio, Texas, 2016. As Co-Chair, developed a flood design symposium for conference attendees with Andrew Ferrell, LEED AP of the National Park Service National Center for Preservation Technology and Training. This symposium provided case-study based discussion of successful and non-successful flood resistant design methods which are sympathetic to the historic context of cultural important structures. Case studies included the structural interventions of the Hatteras Lighthouse (NC), Farnsworth House (IL), Toronto Brick Works (Toronto, Canada) and others. Furthermore, a working session with the National Park Service provided a background and update to the forthcoming Preservation Brief on Flood Resiliency and Design for Historic Structures.

"Structural Investigation and Repair of the Juliette Gordon Low Birthplace (Savannah, Georgia (USA)", National Trust for Historic Preservation Conference, Savannah, Georgia, 2014. This presentation was performed with the preservation architect, Mr. Forrest Lott of Lott&Barber Architects and the building owner, Ms. Sherryl Lang of Girl Scouts of the United States (GSUSA), to detail the collaborative effort of structural repairs and lateral system upgrades to a historic house museum in a coastal environment which is susceptible to high winds. Investigation and reinforcement concepts were presented on basis of minor invasiveness to a fully occupied and heavily visited historic structure in an urban environment.

"Preservation of America's Navigational Structures", Association for Preservation Technology International Conference, Victoria, British Columbia, Canada, 2010. This presentation was based on several structural investigations of various canal and ferry terminal structures in Washington, District of Columbia (USA) and New York City, New York (USA). This presentation was performed with Mr. Edmund (Ed) Meade, P.E., Principal of Robert Silman Associates, PLLC.

"Fortification: Structural Preservation of Coastal Fortifications", Association for Preservation Technology International Conference, Victoria, British Columbia, Canada, 2010. Review of typical structural failure modes and structural reinforcement strategies of historic fortifications situated in coastal environments within the continental United States due to natural disasters. Fortifications studied include Second and Third Systems and Endicott Batteries along the Mississippi River (Louisiana) which were flooded during Hurricane Katrina (2005).

"Califortication: Evolution of Seismic Strengthening Schemes in California", Association for Preservation Technology International Conference, San Juan, Puerto Rico, 2007. Review of over 40 years of strengthening approaches in unreinforced masonry structures in a highly active seismic zone. Approaches range from invasive to surgical, including use of new stand-alone lateral systems (moment frames) and localized reinforcement strategies.

"When the Temporary Becomes Permanent", Association for Preservation Technology International Conference, Atlanta, Georgia, 2006. Presentation with John Matteo, PE and Bryan Green, Ph.D. This presentation was of the structural investigation and analysis of the VUU Belgian Building (a relocated 1939 World’s Fair Structure to a Historic Black College).

“Structural Assessment Techniques to Document Historic Constructions”, Joint Conference of Southeastern Society of Architectural Historians (SESAH) and Construction History Society (CHS), Vanderbilt University, Nashville, Tennessee, 2006. Presentation with Ms. Jillian Kaup of various techniques utilized by structural engineers during structural site assessments which can aid architects and building owners in the documentation of construction evolution and period dating. Discussion of various structural observations, including nail shapes and sizes, threaded rod charactistics and markings, evolution of joist hangers and timber framing markings.

TRAINING & WORKSHOPS

"Building Documentation Workshop". Association for Preservation Technology International, Quebec City, Quebec, Canada, 2014.

"Non-Destructive Testing and Evaluation Workshop". Association for Preservation Technology International, Taliesin, Wisconsin, 2011.

"Stone Conservation Workshop". Association for Preservation Technology International, Atlanta, Georgia, 2006.