



HALLIWELL

PETER SOGN, PE

SENIOR FORENSIC ENGINEER, MECHANICAL
ENGINEERING SERVICES

PROVIDENCE, RI

peter.sogn@halliwellglobal.com

+1 401 318 4109 | Mobile

+1 877 411 2177 | Office

halliwellglobal.com

SPECIALTIES

- Vertical Transportation: Hydraulic Elevators; Traction Elevators; Escalators; Code Analysis
- HVAC Systems: Centralized and Decentralized HVAC Systems; Chilled Water Distribution Systems; Variable Air Volume and Constant Flow Systems
- Fire Protection Systems: Fire Pumps; Wet Pipe Systems; Dry Pipe Systems
- Plumbing Systems: Domestic Hot and Cold-Water Systems; Building Sewer Systems; Building Storm Systems
- Cause and Origin Evaluations
- Damage Assessment and Scope Restoration Analysis
- Preparation of Detailed Cost Estimates
- Analysis of Contractor Quotes and Invoices
- Code Analysis
- Subrogation Support
- Expert Testimony

BIOGRAPHY

Peter Sogn has more than ten years of experience in insurance property loss consulting and facility remediation consulting. He specializes in evaluations of vertical transportation and mechanical systems in a wide variety of property types ranging from single-family residential dwellings to large scale luxury resort facilities. His expertise includes cause and origin evaluations, scope of repair analysis, cost of repair estimating, and subrogation support. His services also include development of equipment test protocols, administering or monitoring of equipment testing, and code analysis.

Peter also has experience in providing engineering consultation to property owners to restore properties after a claim event and upgrade the existing mechanical systems. He has provided analysis for required code upgrades, replacement equipment selection, design and oversight for the implementation of upgraded mechanical systems and development of scope of repairs.

Peter also has more than seven years of experience in the residential and commercial construction field. Throughout this experience he has managed a large variety construction projects. He has assisted with the implementation and design of home HVAC systems including central air systems, radiant floors, boilers, and furnaces. He has worked on multiple plumbing projects including the replacement of water utility service lines for commercial properties.

QUALIFICATIONS

B.S. Mechanical Engineering, University of Massachusetts Dartmouth

INDUSTRY CERTIFICATIONS, LICENSES AND MEMBERSHIPS

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- Registered Mechanical Engineer: AL, CT, FL, GA, IL, MA, ME, NH, NJ, NV, NY, OH, PA, RI, and TX
- Qualified Elevator Inspector (QEI), NAESA Certificate Number C-6696
- Associate – American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc. (ASHRAE)
- Member – American Society of Mechanical Engineers (ASME)

PROFESSIONAL EXPERIENCE

- Halliwell, Senior Forensic Engineer, Mechanical Engineering Services

REPRESENTATIVE ASSIGNMENTS

County Properties | Bergen County, NJ

Provided engineering consultation to the Bergen County administration for the Bergen County COVID-19 Re-Occupancy Program. Evaluate and analyze the mechanical systems in a large variety of County properties including office buildings, assisted living facilities, county jail, public park and recreational facilities, homeless shelters and senior centers. Analyze mechanical systems and provide recommendations based on guidelines set by the Center of Disease Control and American Society of Heating, Refrigeration and Air-Conditioning Engineers. Recommendations include modifications to the existing systems as well as the design of new equipment to increase building ventilation and filtration.

High-rise Building | New York, NY

Evaluated scope of impact and reasonable cost of restoration to forty-two traction elevators. The property was subjected to multiple builder's risk claim event with a combined claim value to the vertical transportation equipment of over \$17.3M. Evaluated specialized equipment for TK Elevator's TWIN double car elevator system as well as double-deck elevator configuration. Work directly with Insured's elevator consultant, elevator contractor and construction management team to determine reasonable scope of restorations. Analyzed provided repair proposals and worked with Insured's elevator contractor to come to a value for the repairs that could be recommended to the insurance carriers.

Mid-rise Hotel | Fredericksburg, VA

Performed a cause and origin evaluation of elevator damage that resulted in the entrapment of two passengers. Interviewed property representatives and analyzed security footage and photographs to evaluate the claim event. Concluded that external forces on the elevator doors allowed for the displacement of the door and subsequent impact of the doors with hoistway equipment.

Office Building | Lexington, MA

Evaluated scope of impact to a hydraulic passenger elevator and a traction freight elevator due to a water main break and subsequent flooding. Worked directly with the property's elevator contractor to develop a reasonable scope of restorations. Analyzed repair proposals and worked with the elevator contractor to reduce original proposal to an industry standard level.

Commercial and Residential Properties | Essex County, MA

Provided engineering consulting to a local gas utility company for remediation to over eight thousand

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residences and commercial properties in Essex County Massachusetts. These properties were subjected to over pressurization of their natural gas distribution lines which led to multiple fires and explosions. Inspected hundreds of properties to provide equipment replacement recommendations for boilers, furnaces, and domestic hot water heaters. Performed a code analysis of the properties to provide recommendations on required code upgrades including ventilation and make up air requirements.

Commercial Property | New York, NY

Performed evaluation of a six-inch fire utility service line with mechanical joints that serviced a commercial retail property. After a local explosion, the utility line separated from the mechanical joint and released water into the property. Inspected and performed dimensional analysis of the pipe and mechanical joints. Provided support and details of evaluation to counsel.

Theater and Parking Facility | Houston, TX

Provided engineering consulting for the stabilization of a city-owned theater and parking garage facilities after Hurricane Harvey. The parking garage facilities consisted of three garages, each of which have three levels of underground parking as well as pedestrian tunnels for access to the theater and local shopping centers. During the event, the garages were completely submerged by flood water. The theater was exposed to approximately fifteen feet of flood water on the basement level, where a large portion of the MEP equipment was housed. Collaborated with a team of electrical and mechanical engineers to develop a scope of repairs for all MEP equipment affected by the event. Personally performed most of the mechanical inspections and consolidated MEP recommendations from the team of engineers into a deliverable product. Performed property walkthroughs with FEMA representatives and provided explanations on remediation scope when required.

Retail Plaza | Orange Beach, AL

Evaluated scope of impact to outdoor escalators and elevators due to water exposure from flooding and hurricane conditions. Analyzed scope and cost for over \$1M of restoration proposals. Provide estimate for reasonable cost of restoration based on event related impact.

Resort | Whitefield, NH

Performed a cause and origin analysis of a failed mechanical joint connection in the domestic water supply line. Provided engineering support to subrogation attorney.

Resort | Fajardo, PR

Performed an equipment evaluation and developed a scope of repairs for mechanical equipment impacted by Hurricane Maria at a vacation resort facility. The resort consisted of multiple buildings including ballrooms, shopping centers, a water park and hotel room buildings. The equipment evaluated includes rooftop air handling units, exhaust fans, cooling towers, boilers, domestic water pumps, water park pumps and equipment controls. Participated in meetings with adjusting team and insureds representatives to discuss differences in the scope of repairs.

New York City Housing Authority | New York, NY

Performed inspection of mechanical equipment impacted by storm surge resulting from Post Tropical Cyclone Sandy. Over 330 apartment building with 150 scotch marine fire tube boilers were claimed as

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impacted by the event. Buildings were subjected to storm surge ranging from minimal flooding to entire boiler rooms being submerged. Organized and supervised boiler hydrostatic testing for boilers with significant storm surge exposure. Developed a comprehensive scope of loss schedule with repair or replacement recommendations. Developed detailed cost estimates for impacted equipment. Estimates included temporary services, code upgrades, period of restoration and design services. Developed scope of remediation, cost estimate and period of restoration recommendation for all damaged boilers. Completed an on-site inspection of a sample selection of 30 elevators. Developed repair scope and cost estimate for 300 claimed elevators based on sample inspection and provided documentation.

New Jersey Transit | New Jersey

Performed an evaluation of damages to various components of New Jersey Transit railroad system including central intelligence huts, maintenance facilities, terminals, draw bridges, substations, and railroad equipment. Documented completed work to compare with provided invoices. Created detailed cost estimates for permanent repairs on temporarily repaired equipment. Performed an inspection of elevators and escalators that were subjected to storm surge. Created scope of repairs and cost estimate for all claimed vertical transportation equipment.

School | Rhode Island

Provide an investigation as to the cause and origin of re-occurring cast iron boiler section failure. Analyze failed boiler section and design of system to determine cause of the failure.

Hotel | Providence, RI

Evaluated scope of impact to eight traction elevators. The elevators were exposed to self-leveling concrete which entered the hoist way and contacted car tops during a building remodel. Analyzed scope and cost of provided restoration proposals and provided an estimate for reasonable cost of restoration.

Office Complex | Lowell, MA

Provided an investigation of the scope of damages to eight traction elevators. Elevator cabs and pits were subjected to water exposure from a failed fire suppression system pipe. Reviewed contractor proposal of repairs. Collaborated with the property's elevator contractor to revise the original proposal's scope of work. Revised proposal included all necessary like kind and quality repairs at a significant reduction of cost and elevator down time.

Residence | Philadelphia, PA

Performed a heat load calculation to estimate the amount of energy required to maintain specific temperatures in a residential property during a given period. Compared calculated values to provided utility invoices to opine on whether heat was being maintained in the property.

Residence | Bristol, RI

Performed a hydraulic analysis to estimate the amount of water released from a plumbing failure in a residential property. Utilized the extended Bernoulli's Equation with Darcy's friction factor to estimate the flow rate based on site specific conditions.

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Residence | Westerly, RI

Provided a cause and origin evaluation of multiple domestic water lines and heating system pipe freezes. Managed and oversaw the testing of the boiler's burner and oil lines.

Residence | East Greenwich, RI

The residence was experiencing symptoms consistent with an undersized boiler. Performed analysis of residence heating system and heat loss calculation to determine the required size of boiler.

School | Massachusetts

Provided a cause and origin evaluation of a sprinkler pipe failure. The failure occurred in a recently constructed school gymnasium building. Provided support to subrogation counsel.

RECENT TESTIMONY

- Deposition Testimony; Five R. Investments, LLC v. Independent Specialty Insurance Company
- Deposition Testimony; Sheally et al v. Selective Insurance Company of South Carolina
- Deposition Testimony; Wharf Retail Properties, LLC v. Landmark American Insurance Company
- Deposition Testimony; Fireman's Fund Insurance Company as Subrogee of Raisin Industries, LLC and Jack Casino LLC v. S.A. Comunale Co. Inc.