

Tyler W. Renz | Forensic Engineer, P.E.

165 Ledge Street, Suite 7, Nashua, NH 03060

Cell Phone: 603-812-9460
tyler.renz@efiglobal.com

Professional Summary:

Mr. Tyler Renz holds a Bachelor of Science degree in Civil Engineering from the University of New Hampshire. He is a registered professional engineer in multiple states with experience in building condition assessment, structural engineering, site civil engineering, forensic engineering, construction administration, and project management.

As a practicing licensed professional engineer, Mr. Renz has experience in the design and construction of new and existing building systems, including structural; site civil; mechanical, electrical, and plumbing (MEP); building envelope; and architectural components. He has experience in the private, commercial, municipal, and federal sectors performing design, cost estimating, and construction administration. Mr. Renz performs a diverse range of inspections and cause and origin analyses at EFI, including but not limited to storm-related damage, moisture damage, structural damage, construction defects and accidents, design defects, and code compliance violations.

Licenses and Certifications:

Professional Engineer, Alabama, License#: 51842

Professional Engineer, Connecticut, License#: 36287

Professional Engineer, Florida, License#: 95708

Professional Engineer, Louisiana, License#: 47224

Professional Engineer, Maine, License#: 17763

Professional Engineer, Massachusetts, License#: 57729

Professional Engineer, New Hampshire, License#: 17270

Professional Engineer, Rhode Island, License#: 14556

Professional Engineer, Vermont, License#: 135390

Federal Aviation Administration, Unmanned Aircraft General – Small (UAG) Certificate #: 4877867

OSHA 30 Certificate #:36-601444393

Project Experience:

Forensic

Moisture Damage

- Moisture mapping and damage assessments.
- Moisture intrusion cause and origin investigations.
- Evaluation of moisture intrusion, wind damage, ice damming, and mechanical damage to concrete tile, clay tile, EPDM, TPO, Mod-Bit, and asphalt shingle roofs.
- Pipe freeze and pipe burst cause, origin, and extent of resulting damage assessments.
- Building envelope assessments with cause and origin evaluations of reported suspected fungal growth.

- Construction defect matters with moisture damage resulting from design, installation, and/or material deficiencies.
- Assessment of freeze/thaw damage to building components and infrastructure.

Fire Damage

- Evaluation of fire-damaged structures.
- Chimney condition assessments to determine the cause and origin of structural and flue damage.

Structural Evaluations

- Evaluations of damage from tree strikes.
- Assessments of damage resulting from vehicular strikes.
- Cause and origin inspections of conventional and heavy-timber wood framing systems.
- Structural failure evaluations.
- Evaluation of concrete and masonry foundation systems.
- Assessment of damage to masonry structures.
- Construction vibration damage.
- Assessments of damage to structures resulting from jacking during construction/renovation.
- Structural code compliance reviews.

General Property

- Evaluation of tile floor defects.
- Cause and origin assessment of damage to historic structures.

Catastrophe

- Desktop evaluations of reported roof, moisture, and property damage resulting from natural disasters.

Design

Naval Research Laboratories, Washington, D.C.

Civil/Structural

Elevated precast concrete walkway to provide emergency egress at an existing research facility. The pier-supported walkway was designed around existing subsurface utilities to avoid rework and featured a galvanized steel convenience stairway. Architectural Barriers Act (ABA) clearances and pitch were maintained while working around existing exit door thresholds and existing walkway tie-ins.

Department of Defense, Washington, D.C.

Fire Suppression

Replacement of fire suppression system in the Pentagon Remote Delivery Facility to support storage of additional commodities in a revised configuration. The design included an investigation to document existing conditions and close collaboration with the fire protection engineer serving as a sub-consultant on the project. Acoustic ceiling tiles (ACT) were replaced in all affected areas.

NAVFAC - Portsmouth Naval Shipyard, Kittery, ME

Facility Additions and Alterations

Portsmouth Naval Shipyard Building 43 is a historically significant two-story structure that houses the Naval Facilities Engineering Command (NAVFAC) public works department. The objective of the Portsmouth Naval Shipyard Building 43 HVAC Renovation and Space Optimization Project was to design improvements to existing spaces to allow for increased occupancy and restore code-compliant ventilation provided by existing heating, ventilation, and air-conditioning (HVAC) equipment. A-E services associated with specified renovations included mechanical, electrical, architectural, civil, structural, fire protection, telecommunications, and

industrial communications design, as well as HAZMAT and cultural resources assessment. Responsibilities included cost estimating, design, sub-consultant management, drafting, site investigations, written reports, client presentations, and construction administration.

NAVFAC - Portsmouth Naval Shipyard, Kittery, ME
Facility Assessments

Existing conditions survey and facility condition report for an existing hazardous waste facility at the Portsmouth Naval Shipyard. The report included a complete evaluation of the building envelope, containment, civil, structural, and life safety components of the facility. Deficiencies with conceptual repair recommendations were documented. Replacement design for a failing secondary containment vault was included. Responsibilities included facility assessment, design, and engineering opinions of probable construction costs.

NAVFAC - Portsmouth Naval Shipyard, Kittery, ME
Facility Assessments

Existing conditions documentation of existing supervisory control and data acquisition (SCADA) systems and evaluation for obsolescence and security compliance. Responsibilities included engineering investigations of existing conditions, sub-consultant management, cost estimating, and design.

USACE CRREL, Hanover, NH
Facilities Assessments

Cause and origin investigation of ongoing moisture intrusion at the U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory. The scope of work included deficiencies and conceptual design of corrective measures.

Defense Finance and Accounting Service, Rome, NY
Facility Additions and Alterations

The DFAS Rome Repair HVAC Building 1 project involved the design of a complete replacement HVAC system in Building 1 of the DFAS Air Force Research Laboratory located in Rome, NY. The failing, existing HVAC equipment serving office space and a mail room were replaced with a more efficient and reliable mechanically forced air system meeting Anti-Terrorism Force Protection (ATFP) standards. Supporting electrical, mechanical, and plumbing infrastructure was addressed as part of the project. A-E services associated with the design included mechanical, electrical, plumbing, architectural, fire protection, civil, and structural design. Responsibilities included cost estimating, design, sub-consultant management, drafting, site investigations, written reports, client presentations, and construction administration.

NAVFAC - Portsmouth Naval Shipyard, Kittery, ME
Utilities

Mapping and assessment of existing water mains. Inspection revealed significant deterioration resulting in relining and replacement of affected pipe while avoiding shutdowns.

NAVFAC - Portsmouth Naval Shipyard, Kittery, ME
Utilities

Evaluation of existing cooling water intake structures at three existing dry docks at the Portsmouth Naval Shipyard for Environmental Protection Agency (EPA) compliance. Solutions for compliance with the EPA's current standards for marine organism impingement and entrainment (as regulated by the Clean Water Act of 1972) were evaluated and conceptual designs for all three dry docks completed. One of the designs was brought to final design for testing on a single dry dock. Responsibilities included cost estimating, conceptual design, final



design of dry dock 2, modeling, drafting, system schematics, control sequences, written reports, sub-consultant coordination, and client presentations.

Court Qualifications/ Depositions:

Mr. Renz has served as an expert witness on two civil trials in the state of Florida. He has been deposed preceding those trials in addition to providing other depositions for matters that settled before trial.

Professional Experience:

EFI Global Inc., Forensic Engineer, 2023 – Present
Rimkus, Forensic Engineer, 2022 – 2023
Wunderlich-Malec Engineering, Civil Engineer, 2018 – 2022
Bensonwood, Project Manager, 2016 – 2018

Education:

Civil Engineering, B.S., University of New Hampshire, Durham, NH, 2015

Publications and Presentations:

"Forensic Engineering of Off-Site Fabricated Structures," presented in a webinar to professionals in the insurance industry, 2023.