# Jason A. Nichols, PE, EVS/R | Regional Vice President, Pacific Southwest, U.S.

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## Professional Summary:

Mr. Nichols is a licensed professional engineer, certified roof and wall cladding specialist with over 22 years of experience in architectural and structural engineering. He has conducted over 4,000 forensic engineering investigations, most of which have involved structural and building envelope (roof coverings, waterproofing, wall cladding, windows/fenestrations) damage and/or failures. His engineering experience includes root cause studies of structural failures and collapses, moisture intrusion and condensation, soil subsidence, foundation settlement and heaving, damage assessment related to earthquake, fire, and storm events (hail, wind, hurricane, tornado, snow and ice), wind vs wave damage assessment, water testing and destructive testing of various building assemblies, stucco testing, coatings, product failures, design of temporary and permanent repairs for damaged structures and building envelope systems, structural framing and foundation design and analysis. Safety experience includes lighting assessment, determining the slip resistance of surfaces or products, and evaluating construction and code compliance related to slip, trip and fall incidents. Other experience includes expert witness testimony in depositions and mediations, property condition assessment, residential and commercial building inspection for real estate transactions, and engineering firm management. Mr. Nichols has developed and presented instructional courses on residential and commercial roofs, damage assessment, and subrogation investigations for insurance adjusters. As Senior Principal Engineer, he oversees the civil and structural engineering division for the Western region of the country.

## Licenses and Certifications:

Professional Civil Engineer, California, C 84644

Professional Civil Engineer, Arizona, 53107

Professional Engineer, Missouri, 2005010807

Professional Engineer, Nevada, 025413

Professional Engineer, Texas, 129149

Certified EFI Vale Specialist in Roofing (EVS/R), EFI Global & Vale Training

Certified Level I Authorized Person, Reality Rope Access

Level I Thermographer, #150213-9, Snell Infrared

Certified Level I EIFS Inspector and Level II Building Envelope Inspector, #MO-44, EDI

Moisture Analyst, Exterior Design Institute

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## Project Experience:

**Gibson Santa Monica Apartments, Santa Monica, CA**
**Moisture Damage Investigation**
Performed forensic engineering investigation of single-ply roof system, framing, and exterior wall cladding on a five-story multi-family residential building for cause of moisture damage and provided a written report of findings and recommendations. Roofing and wall materials investigated included TPO roofing and stucco cladding. Visual assessment, moisture testing, destructive testing, and consulting were performed as part of the investigation.

**First United Methodist Church, Fort Smith, AR**
**Hail and Wind Damage Investigation**
Performed forensic engineering investigation of seven building roofs for extent of hail and wind damage and provided a written report of findings and recommendations. Roofing materials investigated included copper standing seam, built-up, modified bitumen, and exposed fastener metal panel roofing.

**Property of Dave Powell, Joplin, MO**
**Tornado Damage Investigation**
Performed engineering investigation of medical office building for tornado damage and provided a written report of findings and recommendations. The CMU walls and wood framed roof were significantly damaged by an EF-5 tornado.

**Family Health Pharmacy, Stanberry, MO**
**Structural Collapse Cause and Origin Investigation & Repair**
Performed engineering investigation of downtown brick masonry building roof collapse and structural design of new roof structure and provided a written report of findings and recommendations. Building featured a wood framed roof which suffered extensive deterioration to the wood structure due to long-term water infiltration.

**Shoal Creek Patrol Station, Kansas City, MO**
**Structural Engineering Design of Police Station**
Produced structural drawings and engineering calculations for a two-story steel-framed police station (category IV emergency facility). The structure required a heavily reinforced concrete and composite steel deck supporting concrete masonry interior security partition walls.

**Ibarra Residence Swimming Pool, El Centro, CA**
**Pool and Pool Deck Damage Assessment**
Performed engineering investigation of an outdoor in-ground swimming pool and pool deck at a residence to determine the cause of cracking, separations and reported loss of water.

**Topeka Aquatic Center, Topeka, KS**
**Structural Engineering Design of Natatorium**
Produced structural construction drawings and engineering calculations for a concrete masonry and structural steel natatorium. Building featured exposed custom 141-ft and 117-ft clear-span structural tube steel trusses in a humid interior environment.

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**Malmstrom Air Force Base Medical Clinic, Malmstrom AFB, MT**
**Structural Condition Assessment**
Performed structural engineering property condition assessment of the 91,000 square foot medical clinic on the air force base and provided a written report of findings and repair recommendations. Building consisted of cold-formed steel stud framed walls with brick veneer exterior walls and reinforced concrete grade beams on deep drilled concrete piers.

**Western Bonaventure Hotel, Los Angeles, CA**
**Slip and Fall Investigation**
Conducted slip resistance testing of hotel guest room bathroom floors and investigated safety conditions and construction related to a slip-and-fall incident. Coefficients of friction in dry and wet conditions were obtained using an English XL Variable Incidence Tribometer.

**Wyndham Vacation Ownership, Flagstaff, AZ**
**Trip and Fall Investigation**
Conducted an investigation of construction and safety conditions at a miniature golf course related to a trip-and-fall incident. Investigation involved staff interviews, on-site measurements, observing, documenting and analyzing conditions and construction of stair, handrail and surfaces to determine compliance with code requirements at the time of construction.

## Court Qualifications/ Depositions:

Litigation CV available upon request.

## Professional Experience:

EFI Global, Inc. (formerly Unified Investigations & Sciences, Inc), Senior Principal Engineer and National Civil/Structural Practice Leader, 2017 – Present
Allana Buick & Bers, Inc, Senior Consultant, 2014 – 2017
Madsen Kneppers & Associates, Inc., Forensic Engineer & Sr. Roof Consultant, 2011 – 2014
Norton & Schmidt Consulting Engineers, LLC, Principal/Partner, 2003 – 2011
Bartlett & West Engineers, Inc., Project Engineer, 2001 – 2003
Thom Hume Consulting Engineers, Junior Engineer, 1999 – 2000

## Specialized Education:

SBS Roofing Technology & Design, Soprema, 2021
Professional Ethics for Engineers, NoonPi, 2021
ASCE Diagnosis, Repair and Restoration of Building Facades, 2020

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Respirator Protection Training, EFI Global, 2020
EFI/Vale Roof Specialist certification course, Vale Training, 2019
Level I Authorized Person Rope Access Certification, 2019
New Insights for Metal Roofing, RCI, 2018
CXLT Program, Excel Tribometers, 2018
How Your Projects Will Go Wrong (And What To Do About It), SunCam, 2017
Forensic Investigation Course, Unified Investigations & Sciences, 2017
Building Envelope Design for Moisture & Mold Control in Framed Wall Assemblies, Certainteed, 2017
Building Envelope Education Courses, RCI Annual Conventions - Dallas 2012, Orlando 2013, Anaheim 2014, San Antonio 2015
Air Barrier Systems: Silicone Solutions to Reduce Air Infiltration, Dow Corning, 2015
Level 1 Thermography Course, The Snell Group, 2015
PMMA Systems Overview, Siplast, 2014
Principles of Commercial Ventilation course, Metal-Era Engineered Roof Solutions, 2013
ASCE 6th Congress on Forensic Engineering, American Society of Civil Engineers, 2012
California Earthquake Adjuster Accreditation Course, Haag Engineering, 2011
Communicating Technical Ideas Persuasively webinar, National Society of Professional Engineers, 2011
Hilti Anchor seminar, Hilti, 2011
The Design of Fiber Reinforced Composite Materials for Strengthening of Existing Structures, Bentley, 2011
Differential Shortening of Tall Steel Building Columns, Bentley, 2011
BIM in a Cloud for Structural Engineers and Architects course, Bentley, 2011
IPD, BIM and Supply Chain Optimization course, Bentley, 2011
Level 1 EIFS Inspector and Moisture Analyst Certification Training Program, Exterior Design Institute, 2008
Level 2 Building Envelope and Quality Control Inspector Certification Training Program, Exterior Design Institute, 2008
Silicone Sealants in Construction, Dow Corning, 2008
Fire Cause and Origin, Haag Engineering, 2008
Siding Damage Assessment, Haag Engineering, 2008

## Education:

Bachelor of Science, Architectural Engineering, California Polytechnic State University
San Luis Obispo, California, 2000

## Affiliations:

American Society of Civil Engineers
International Institute of Building Enclosure Consultants (formerly Roof Consultants Institute)
Exterior Design Institute

## Courses Instructed/ Guest Lecturer:

Roof Basics: Evaluation of Commercial and Residential Roofing for Hail and Wind Damage
EFI/Vale Roof Specialist Certification Course

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## Publications and Presentations:

VanDerostyne, D., Hallet, S., and Nichols, J. "Post-Event Forensic Investigation of Damaged Structures from Strong Wind Events." ASCE 6th Congress on Forensic Engineering, November 2012

Nichols, J., Raap, S. "Straw Bale Shear Wall Lateral Load Test." Proceedings of the First International Conference on Ecological Building Structure, July 2001

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