

**Chief Engineer - APEC Engineering and Laboratory, LLC
Licensed Professional Engineer**

Licenses and Registrations



**International Accreditation Service (IAS) Accredited
Laboratory No. TL-515**

- P.E. – Texas License Number 83367**
- P.E. – Alabama License Number 32119-E**
- P.E. – Arizona License Number 53411**
- P.E. – Arkansas License Number 12406 expired**
- P.E. – Connecticut License Number 29309 expired**
- P.E. – Florida License Number 65354**
- P.E. – Georgia License Number PE036928**
- P.E. – Illinois License Number 062064596**
- P.E. – Indiana License – Pending**
- P.E. – Kentucky License Number 24869 - expired**
- P.E. – Louisiana License Number PE33824**
- P.E. – Maryland License Number 41801**
- P.E. – Minnesota License Number 45160 - expired**
- P.E. – Mississippi License Number 17561**
- P.E. – Missouri License Number 2013018950**

P.E. – Nevada License Number 21741

P.E. – New Jersey 24GE05054100

P.E. – New Mexico License Number 20511

P.E. – New York License Number 092030-1

P.E. – North Carolina License Number 39902

P.E. – Ohio License – PE.79303

P.E. – Oklahoma License Number 24759

P.E. – Pennsylvania – PE082031

P.E. – Tennessee License Number 115561

Professional Sanitarian – Texas License Number 3407 – expired

Independent Multi-line Adjuster – TX License 1546216 – expired

**HAAG Engineering Residential and Commercial Roof Inspector Certification No. – 03135
(renewal unpaid)**

**Texas Department of Insurance Appointed Windstorm Engineer (Windstorm and High
Wind Design for residential and commercial structures)**

Education:

Ph.D. Engineering Systems and Management – **Currently enrolled at Texas Tech University 2015**

Masters of Science Applied Meteorology – **Currently enrolled at Mississippi State University 2015**

Master of Science - Agriculture Engineering – **Texas Tech University–1993**

Bachelors of Science - Agriculture Business and Economics – **West Texas State University–1981**

Professional Associations:

Texas Department of Insurance (TDI) – Vetted engineer, current appointed windstorm engineer in good standing, continuously since 2009

American Association for Wind Engineering (AAWE) – Current member in good standing

International Code Council (ICC) – Current member in good standing

National Council of Examiners for Engineering and Surveying (NCEES) – Current member in good standing

American Society of Civil Engineers (ASCE) – Vetted member of the E.F. Tornado Committee, and Co-Chair for Enhanced Fujita (E.F.) Tornado Scale, Forensic Process work group, and E.F. Scale damage indicators for heavy trucks, work group leader. Wind loads on structures and methods of investigation. Wind loads on trucks and applied load response on heavy trucks.

Roof Consultants Institute (RCI) – Current member in good standing

National Roofing Contractors Association (NRCA) – Past member in good standing

Member of the Texas Department of Insurance Forensic Engineering Working Group – 2009 – Group responsible for developing minimum guidelines for Forensic Engineering in the state of Texas

Windstorm Insurance Network – Current member in good standing

American Society of Testing and Materials (ASTM) – Current member in good standing, voting member for roof and building envelope divisions

National Associate of Corrosion Engineers (NACE) – Past member in good standing

NWS Certified Storm Spotter – New Member

Texas Windstorm Insurance Association- Expert Panel. Reduction in Materials Resistance to Wind and Flood Elicitation Panel Member.

Presentations:

- Developed the curriculum and taught the class for Hail Investigation the practical instruction and assessment. 2015
- Developed curriculum and teach classes for Wind Damage Investigation, and Wind Vs Flood determination for practical instruction and assessment 2015
- Panel of Experts for wind vs flood investigations damage profile and causation model and hail damage to roofing materials at the Florida Association of Public Insurance Adjusters November 9th, 2015
- Hail Investigations Status Report for Hail Hardness, Impact Energy and Damage Profile Based on Impact Energy and Building Material Ductility and Brittleness, Dallas Texas, June 25th, 2014
- Wind Load on Roofs and Wind Effects on Steep Slope Roofs, REST Curriculum Development and Quad Pod Class, November, 2014
- Hurricane Sandy Damage Analysis Using The Applied Load Force Analysis (ALFA) Model at the First Party Claims Conference, Warrick RI, October 2013
- Objective Forensic Investigations Utilizing Energy Based Analysis for Wind and Flood Damaged Structures With The Applied Load Force Analysis (ALFA) Model at the 12th Americas Conference on Wind Engineering, Seattle Washington June 16-20, 2013
- Hurricane Investigations – Wind Vs Flood, Data and Analysis, Windstorm Insurance Network, January 2013
- Super Storm Sandy Masters of Disaster, Red Bank NJ and New York City NY, November 2012
- First Party Claims Conference, Warrick, RI October 2012
- California Restoration Contractors Association, Modesto, CA March 2012
- Windstorm Insurance Network, Orlando Florida, Jan. 2012
- National Association of Public Insurance Adjusters, Phoenix AZ, December 2011
- Texas Association of Public Insurance Adjusters, Dallas Texas, Fall 2011

- American Society of Civil Engineers Texas Section, Amarillo Texas, Fall 2011
- Merlin Law Group Ultimate Roofing Seminar, Coral Gables Florida, Summer 2011
- Texas Association of Public Insurance Adjusters, Houston Texas, Spring 2011
- Windstorm Insurance Network, Houston Texas, Jan. 2011
- Merlin Law Group Ultimate Roofing Seminar, Tampa Florida, Spring 2010
- Texas Department of Insurance, Austin Texas, Spring 2009
- Merlin Law Group Ultimate Roofing Seminar, Houston Texas, Fall 2009

Publications and Awards:

Helen DeVitt Jones part-time Graduate Fellowship 2016 – Funded through the Helen Jones Foundation and awarded through the Texas Tech University Graduate School.

Teaching, Learning and Professional Development, Texas Tech, May 2016 – Phelps was selected among several hundred applicants to one of the 85 graduate students to participate in the Ground Works teacher training academia at Texas Tech.

Graduate Student Advisory Council, November 2015 – Phelps was elected by his fellow graduate students at Texas Tech to the position of general member for the Graduate Student Advisory Council (GSAC).

Texas Windstorm Insurance Association, September 2015 – Elicitation expert panel for the variable response of damage caused by wind and water from hurricanes or other tropical storms. The purpose of the panel was to estimate the portion of damage attributed to wind for damage resulting from hurricanes and other tropical storms.

Patent September, 2015 – Received utility patent # 9,128,011 for “Method and Device Testing Extraction Load”, known as the Quad-Pod for asphalt shingle uplift, light weight concrete and wood substraight testing.

Helen DeVitt Jones part-time Graduate Fellowship 2015 – Funded through the Helen Jones Foundation and awarded through the Texas Tech University Graduate School.

Wind Vs. Flood – It’s All About The Timing, Hurricane Sandy Issues Update – Windstorm Insurance Network Annual Conference, Program Guide Published by Claims Management Magazine, January 2014

Objective Forensic Investigations Utilizing Energy Based Analysis for Wind and Flood Damaged Structures With The Applied Load Force Analysis (ALFA) Model – Presented and published at the 12th Americas Conference on Wind Engineering, Seattle Washington June 16-20, 2013, hosted by the American Association of Wind Engineering (AAWE). The

Americas Conference on Wind Engineering (ACWE) nominated this paper for inclusion in a special issue of The Journal of Wind Engineering and Industrial Aerodynamics (October 2014)

A Study of Wind Lifted Shingles, Using Training and Empirical Testing to Detect Damage, by Matt B. Phelps, PE, and Josh McMahon, EIT, Claims Management Magazine 2013 Forensic Guide

Objective Method of Wind Lifted Shingle Investigation – Presented and published at the ASCE Texas Section annual conference, fall 2011

Merlin Law Group – Ultimate Windstorm Conference, Coral Gables Fl. 2011 – Presentation on field testing of windows and curtain walls using ASTM E1105 and the numerical analysis of the test data. Reports using objective methods based upon engineering science and mathematics.

Texas Associate of Public Insurance Adjusters – Powerful Information for the Adjusting Community, presented in association with Ivan Browner of TSSA Strom Safe. Review of ASTM E1105 Field method for water penetration of windows, skylights, doors and curtain walls, and requirements of the Texas Department of Insurance windstorm inspection and certification requirements.

Windstorm Insurance Network – Wind Vs Flood damage and causation. Focus energy based method using ASCE 7 for calculating the percent of damage cause by wind and water forces acting on a structure.

Merlin Law Group – Ultimate Windstorm Conference, Tampa Fl. 2010 – Presentation on wind lifted roofing systems including shingles, rolled and built up, tile, roofing systems, including my patented in-situ method to determine damage and causation of wind lifted shingles.

Panel of Experts, Merlin Law Group – presentation on wind lifted shingles and roof damage assessments at the Merlin Houston seminar for public adjusters, August, 2009

Guest Lecture at Sandhill Community College - Southern Pines North Carolina – Decentralized Wastewater Utilities. Decentralized Wastewater Design Basics. June 2007

Decentralized Wastewater: The Best of Both Worlds - publication as article in Land Development Today Magazine June 2006.

Visionary Project Award – for the Greenland Hills subdivision, combining decentralized wastewater with a coved land plan, recognized for leadership, responsibility and innovation. Land Development Today Conference – Chicago, IL July 2006

Re-circulating Sand Filters and Drip Irrigation Design Build for Commercial Developments in Central Texas – publication as feature article in Installer Magazine, June 2005.

Public Improvement Districts for Residential Development in Texas – presentation at APEC sponsored land development seminar, 2004 Austin Texas.

Large Scale Effluent Drip Disposal System Design Build System in Texas – Publication and presentation at the 2004 NOWRA National Convention, Albuquerque NM - May 2004.

Nitrate Nitrogen Control Methods for On Site Sewage Facilities. Austin/ Travis County Health and Human Services Department. 1998

On Site Sewage Facilities Regulatory Review Austin/ Travis County Health and Human Services Department, 1998.

Soil Vapor Extraction and Air Sparging for Removal of Liquid and Dissolved Phase Volatile Hydro-carbons from an Unconfined Aquifer presented 1996 WEAT Summer Ground Water Symposium – Lubbock TX

Estimation of Crop Coefficients for Wetland Vegetation. - Publication and presentation at the 1993 ASAE National Convention – Chicago IL.

Experience, Qualifications and Background:

Mr. Matt B. Phelps is the CEO, Chief Engineer and Owner of APEC Engineering and Laboratory, LLC (APEC) located in Hutto, TX. APEC was founded in 1998 in Austin, TX and relocated its main office to Galveston, TX in 2009. While in Austin/Hutto Matt was responsible for land planning and civil engineering elements for residential and commercial land development and water and wastewater projects. Out of the Galveston office, Mr. Phelps conducts forensic investigations on residential and commercial buildings for multiple perils and interior corrosion, along with civil engineering in water and wastewater projects. He also does high wind structural design and windstorm compliance inspections. Phelps designed a corrosion control system for a condominium complex in South Padre Island. The Hutto office is a test lab in which Mr. Phelps conducts structural testing of building assemblies that include: shear walls, floor and roof diaphragms, windows, doors, curtain walls, shingles and other structural component elements of the building envelope.

Prior to starting his own company Mr. Matt B. Phelps was the chief engineer for the City of Austin Texas / Travis County Environmental Health Services Department – Austin, Texas. As chief engineer for this department his duties were to perform and/or supervise the review of all engineered plans for On Site Sewage Facilities (OSSF) and subdivision developments that utilized OSSF. Matt was also a design engineer and project manager for two small firms located in Lubbock and Austin TX and has 20 years experience as a civil engineer, E.I.T. and P.E.

In January of 2013 Matt B. Phelps was one of the few selected to participate in Goldman Sachs 10,000 Small Businesses Initiative. He successfully completed classes in May 2013.

Prior to obtaining his M.S. degree in engineering from TTU in 1993, Mr. Phelps was a self - employed farmer /rancher from 1980-2014

Mr. Matt B. Phelps has attended continuing education courses to maintain his engineering licenses in multiple states as well as increase his working knowledge of current engineering issues. Among the classes Mr. Phelps has attended are as follows:

2009 CONTINUING EDUCATION

Haag Engineering Residential Roof Certification
Basic Fastener Installations
High Wind Design & Detailing

2010 CONTINUING EDUCATION

2010 Forensic Engineering Conference
2010 Annual Windstorm Conference

2011 CONTINUING EDUCATION

2011 Annual Windstorm Conference
Durability in Commercial Roofing Assemblies
Conventional Roof Insulation: Making an Informed Decision
Cool Roofing: A Solution to National Energy and Environmental Challenges
Radiant Barrier Structural Roof Sheathing
Solutions to Moisture Control in the Building Envelope
Controlling Moisture Movement in Buildings:
The Complete Air & Vapor Barrier Approach
Controlling Moisture Movement in Buildings:
The Complete Approach-Below Slab Protection
Environmental Challenges
One Coat Stucco: An Efficient Stucco System
Siphonic Roof Drain Systems
Weather Resistant Barriers in Vertical Exterior Walls
Insulation for Cavity Wall Applications
Sustainable Building: From Concept to Design
The Principles of Rain screen Construction
The Sustainable Benefits of Roof Coatings
Window Performance and Materials:
Certification & Specification for Sustainable Design
Moisture Protection for Concrete & Masonry
Wind Uplift Solutions-Increasing the Durability of Roof Systems
Using Part-1 Polyurethane Adhesives in Roofing
Thermal Performance: Energy Efficiency through Insulation
SBS Modified Asphalt Roofing & Underlayment Systems
Using Water Repellents to Prevent Water Intrusion into Above-Grade Masonry
Metal Roof Systems: Design & Installation Considerations
FLIR Systems Level 1 Certification Infrared Thermography
RCI seminar- Chicago
High Wind Design & Construction

2012 CONTINUING EDUCATION

2012 Annual Windstorm Conference
National Association of Corrosion Engineers- Basic Corrosion
2012 Center for Lifelong Engineering Education
 Basic Wood Structural Design
 Ethic Component
2012 First Party Claims Conference
Haag Certified Roof Inspector Program
Water Entry Prevention and Moisture Control in Buildings –
Roofing Systems, Exterior Walls, Plaza Decks, Below –
Grade Waterproofing – University of Wisconsin

2013 CONTINUING EDUCATION

Umpire Certification Course (Windstorm Insurance Network)
Building Envelope Failure During Wind Events
Wind Damage Assessment, ID, and Research-Asphalt Shingles
National Association of Corrosion
Engineers Designing for Corrosion Control
Quad Pod Certification Training- Conducted the training
RCI Professional Building Consulting Course
Rutgers University, New Brunswick, NJ
Americas Conference on Wind Engineering, Seattle Washington
First Party Claims Conference- presented the ALFA system

2014 CONTINUING EDUCATION

Recent Case Studies in Forensics Engineering, David Fowler
West Side Story: Aftermath of the Explosion in West, Texas, Erik Nelson
More Findings From the Durability Lab: 2014 Report on Building Envelope Failures, David Nicasro
Investigation of the Collapse of the Dallas Cowboys Practice Facility, Ryan Chancey
Forensic Engineer's Approach to the Unknown in Historic and Recent Structures, Narendra Gosain
Engineering Ethics, C. W. Clark 1.6 hrs.
Engineering' your Expert Experience: A View from the Legal Trenches, Michelle Rieger
Forensics: Understanding Engineering, Construction and Distress, Ramon Carrasquillo
Nondestructive Evaluation (NDE) Methods for Forensic Evaluation of Construction Material Conditions and Geometry, Larry Olson
Deposition, Rieger/Nelson
Uncertainty in Geotechnical Forensic Engineering, Bob Gilbert
Be a Better Witness: Deposition Basics-Practical Pointers from Preparation to Testimony
Emerging Trends in Building Products, Codes, and Sustainability
Hurricane Wind vs. Surge Timing: The Facts, Plus When and How to Find a Meteorologist
Proving Your Case at Trial
Raise the Roof: A Look at How your Roof Supports Your Walls and Other Uncommon Knowledge
Separating Wind and Water Damage: Concurrent Causation Analysis
What is damage?

2015 CONTINUING EDUCATION

2015 Annual Windstorm Insurance Conference - Orlando FL
2015 ChaserCon Conference – Denver CO
2015 NWS Weatherfest, Hazards of Texas Weather – Austin TX
2015 NWS Spotter Certification – Austin TX
2015 RCI International Conference – San Antonio TX

2016 CONTINUING EDUCATION

2016 Annual Windstorm Insurance Conference - Orlando FL

2016 2016 RCI International Conference – Orlando FL