



Qualifications – Forensics and Engineering Investigations

George Barbour has over 22 years of structural engineering and construction observation/administration experience. He has prepared plans, specifications, and bid documents for a variety of projects including bridges, parking decks, and commercial and residential buildings and cellular communication sites. Mr. Barbour puts this experience to good use in serving his forensic clients, providing comprehensive engineering and forensics investigation services for a variety of building systems. He has performed construction/design defect assessments, building condition studies, OSHA and building code compliance reviews, insurance damage assessment studies, and personal injury and traffic accident reconstruction studies, and has provided expert testimony concerning his investigations. In addition, Mr. Barbour served on a joint committee of ASCE and the ABA compiling the *Manual of Forensic Engineering Practice*.

Relevant Experience

The following is a representative list of forensic projects Mr. Barbour has completed or is currently working on:

Exterior Insulation and Finish System (EIFS) Investigations, Southeastern United States: Performed several hundred **EIFS** investigations of single family, multi family, and commercial buildings. Investigations included moisture intrusion surveys in which the probable extent of the damage was determined and the construction details documented. Tear-off investigations were also performed where the construction details were further documented and the level of damage confirmed. Investigations were performed in North Carolina, South Carolina, Virginia, Tennessee, and Florida.

River Keeper / CP&L Sutton Plant, Brunswick County, NC: Determined the cause of the collapse of a coal conveyor system used to transport coal from barges to the stock pile serving the plant.

East Stroudsburg Savings Association, Stroudsburg, Pennsylvania: Assessment of installation of building envelope components and color variations in brick and masonry veneer on this four story office building.

Las Flores Housing, Base Naval de la Rota, Spain: Investigation of the EIFS façade on this 320 unit military housing complex in Rota Spain.

Storm Damage Investigations, Southeastern United States: Performed hundreds of storm damage investigations related to the multiple hurricanes that have occurred during the past 15 years, as well as numerous localized tropical storm events. Investigations included determination of damages caused by wind versus flood, differentiation of damages caused by storms versus pre-existing conditions and developing damage repair plans and scopes.

River Creek v Sea Trail v Pope & Pope, Sunset Beach, NC: Investigation of claims concerning the design, construction and maintenance of this 12-building condominium complex. The project included the investigation of roofing, structural and stucco façade related claims. Provided litigation support on behalf of the general contractor.



Club Villa v Sea Trail v Pope & Pope, Sunset Beach, NC: Investigation of claims concerning the design, construction and maintenance of this 25-building condominium complex. Provided litigation support on behalf of the general contractor.

Osprey Watch v Sea Trail v Pope & Pope, Sunset Beach, NC: Investigation of claims concerning the design, construction and maintenance of this 5-building condominium complex. Project included a moisture intrusion survey and EIFS tear-off investigation. Provided litigation support on behalf of the general contractor.

Vanderbilt University Parking Garage Collapse, Nashville TN: Investigated the collapse of this 12-story precast concrete parking garage. The collapse occurred on a weekend prior to completion of the structure.

Highwoods Bridge Collapse, Morrisville, NC: Investigated the collapse of a 3-span concrete bridge supported on treated timber piles.

Prestige Farms Chip Warehouse Collapse, Harrells, NC: Investigated the collapse and developed alternative scopes of repair for this large, wood chip distribution warehouse. The warehouse sustained damage from a fire and collapsed under the weight of snow several days later.

Carolina Tobacco Warehouse Collapse, Lumberton, NC: Investigated the collapse of 2 tobacco auction warehouses and the partial collapse of another. Evaluated the technical details related to potential subrogation opportunities. The collapse occurred during a routine snowfall event.

Ashton Town Homes v Tri-Con v CAMMS, Wilmington, NC: Investigated claims concerning the design, construction and maintenance of this 14-building condominium complex. Worked with plaintiffs' and defendants' experts to develop a scope of repair for identified deficiencies.

Daniels v Moore v Wayne County, Pikeville, NC: Selected as a third party expert by attorneys representing the building owner, contractor and Wayne County Inspection Department to design foundation repairs to this single family residence. Expert testimony in jury trial.

Extended Stay, Morrisville, NC: Investigation of claims made by the property owner concerning the construction of the building envelope on behalf of the builder.

Suitt Construction v Eckhart, RTP, NC: Investigated the cause of a Keystone Segmental retaining wall failure at the Sphinx Pharmaceutical Facility in Research Triangle Park on behalf of Suitt Construction Company and St. Paul Insurance Company. Provided expert testimony and litigation support concerning the design, construction, failure and repair of the walls.

SVM v Ace v Carrier, Myrtle Beach, SC: Investigated the performance of Carrier PTAC units in the Sleep Inn guest rooms related to mold and moisture problems in the exterior facade. The project included a preliminary condition assessment of the construction of the building envelope and litigation support on behalf of Carrier Corporation.

Warren/Lane v Dowless Roofing, Wilmington, NC, Investigated the cause of moisture related deterioration in this historic residence. Performed blower door testing and analysis of the performance of the HVAC system and produced a report of my findings.



Grande Shores Ocean Resort, Myrtle Beach, SC: Investigated the cause of interior damages caused by water infiltration in this 13 story building. Worked on behalf of the owner with the original contractor and architect to correct identified deficiencies.

Royal v Sharpe Architecture v Stevens & Jones Construction, Wilmington, NC: Investigated claims made by the building owner concerning the construction of the building envelope on this medical office building. Provided litigation support on behalf of the roofing contractor.

Welch v Nelson, Elizabeth City, NC: Reviewed the applicable standards related to the construction of a set of stairs on a rental cottage where a tenant fell and was seriously injured.

Kornegay Farms Fuel Facility Explosion, Smithfield, NC: Investigated the cause of the explosion of an above ground fuel tank facility which occurred during the delivery of fuel. The explosion and resulting fire resulted in the destruction of the fuel facility, an adjacent commercial maintenance facility and the delivery vehicle as well as life threatening injuries to the delivery vehicle operator. The investigation included an evaluation of the construction of the fuel facility and OSHA mandated safety procedures and or features for the delivery company as well as the facility.

Roney Williams Store Fuel Facility Explosion, Rocky Mount, NC: Investigated the cause of the explosion of an above ground fuel tank facility which occurred during the delivery of fuel. The explosion and resulting fire resulted in the destruction of the fuel facility and the delivery vehicle. The investigation included an evaluation of the construction of the fuel facility and OSHA mandated safety procedures and or features for the delivery company as well as the facility.

Firestone Plant Explosion, Wilson, NC: Investigated the events leading up to and cause of the explosion of a 100,000-gallon number 6 fuel oil tank that occurred while a contractor was installing a mechanical level indicator on the tank. The explosion resulted in the death of 2 construction workers and substantial damage to the fuel facility. The investigation included an evaluation of the OSHA mandated safety procedures by plant personnel, contract security guards and the contractor that performed the work.

Novo Nordisk Solvent Vapor-Related Respiratory Injury, Franklin, NC: Performed and investigation and analysis of the organic solvent vapor levels associated with a coating contractor spray painting the interior of a new manufacturing facility. Calculated levels were compared to OSHA threshold values to evaluate the risk of possible respiratory injuries to workers in the area.

Spencer v Wright Holman Construction, Wilmington, NC: Investigated the construction death of a worker that occurred while installing piles at a residential construction site.

Truelove v Zaring Homes, Robeson County, NC: Investigated and provided expert testimony concerning the injury of a construction worker during the construction of a residence. The injury occurred when the plaintiff fell down a temporary stairway.



Daughety v Moore, Craven County, NC: Investigated the injury of a worker that occurred while installing roof trusses on a small airplane hanger. The trusses collapsed while the plaintiff was standing on them.

James Dean v General Wholesale Building Supply, Cumberland County, NC: OSHA investigation of the cause of a fall and injury of a construction worker in a truss manufacturing facility. The plaintiff fell when a roof truss on a conveyor struck the ladder he was standing on.

Draughon v Kemper, Topsail Beach, NC: Investigation into the cause of mold and moisture related damage to this 3-story vacation residence.

Randolf Stair & Rail, Raleigh, NC: Investigation of the failure of a Climax Tree Stand resulting in serious injury to the plaintiff.

Wofford Blasting Damage, Sanford, NC: Investigated the effects of blasting operations at the Martin Marietta Quarry on the Wofford residence. The project involved reviewing blast reports, monitoring blasts using portable seismographs and calculating the effects of higher levels of blasting that occurred on previous occasions.

Vibration Damage, Norfolk, VA: Investigated the effects of roadway construction related vibrations on a nearby structure.

August 21, 1992 Earthquake, Charleston, SC: Investigated damage claims for several structures related to an earthquake that struck Charleston, South Carolina August 21, 1992.

Wheeling Downs Flood Damage, Wheeling, WV: Investigated the extent of damage to the facilities related to this dog racing venue caused by the January 14, 1996 flood. Identified flood related and pre-existing settlement damage.

Peal v NC Farm Bureau, Lake Waccamaw, NC: Investigated the extent of the damage to a residence related to flooding associated with Hurricane Floyd. Provided expert testimony concerning alleged foundation settlement and structural damages.

New Greenville Tobacco Warehouse v NC Farm Bureau, Greenville, NC: Investigated the extent of damage to this large warehouse structure related to flooding associated with Hurricane Floyd.

Dunigan v Haywood, Winston-Salem, NC: Investigated to cause of structural failure of the roof structure and supported brick veneer. Developed plans and specifications for the repair of identified deficiencies.

O'Donnell v Eddie Evans Construction, Hampstead, NC: Performed a moisture intrusion investigation on this EIFS clad residence. Evaluated the extent of damage to the structure caused by moisture intrusion.

Rayfield v Colvin, Figure Eight, NC: Investigated the property owners claims against the builder related to the construction of this 3-story, ocean front residence.

Ramm v Camina Design & Construction, Bald Head Island, NC: Investigated the property owner's claims against the builder related to the construction of this residence.



Himes v Camina-Speight Design & Construction, Bald Head Island, NC: Investigated the property owner's claims against the builder related to the construction of this residence.

Renaissance Resort Tower Storm Damage, Myrtle Beach, SC: Investigated the failure of sections of this 21-story, multi-family condominium stucco façade.

Sands Resort Moisture Damage, Myrtle Beach, SC: Performed a moisture intrusion investigation of this 11-story condominium. Identified deficiencies in the design and recommended waterproofing and structural repairs.

Club de Golf, Puerto Vallarta Mexico: Performed a condition assessment of this facility for the owner with special emphasis on damage related to a recent earthquake.

The Cove at Lake Lynn Apartments, Raleigh, NC: Investigated construction and/or design related problems at this 225-unit apartment complex comprised of 12 wood-framed, 2 and 3 story buildings. Developed repair designs for site grading, replacement of approximately 200 wood decks, structural and façade repairs and foundation repairs. Solicited bids for construction and monitored the construction on behalf of the owner.

Janus Cottage Balcony Collapse, Indian Beach, NC: Investigated the cause of the collapse of a second floor balcony resulting in serious injuries to the tenants using the facility.

Emanuel African Methodist Church, Charleston, SC: Investigated the cause of a coating failure on the pressed, galvanized metal shingles on the 105 foot steeple of this historic church.

Sewer System Backup, City of Boonville, NC: Investigated the cause of a city sewer system backup which resulted in discharged of untreated sewage into a residence.

Hood v Oceana Marina, Carolina Beach, NC: Investigated the cause of the failure of a marina bulkhead located adjacent to a residence.

Brode v East Coast Mobile Homes, Onslow County, NC: Investigated claims made by the homeowner regarding the manufacture and setup of their mobile home. Provided expert testimony in trial.

Caudle v State Farm, Oxford, NC: Investigated cause of collapsed retaining wall in the basement of a home. Provided expert testimony by deposition.

Lancaster v JBR Enterprises, Leland, NC: Investigated the cause of damage to the roof and siding of a modular home. Provided expert testimony by deposition.

Miller v Solaris Properties, Kiawah Island, SC: EIFS investigation. Provided arbitration support and expert testimony by deposition.

NC Baptist Assembly v Barnes Roofing, Oak Island, NC: Investigated the installation of laminated composition shingles. Provided expert testimony by deposition.

Paramount Foods v Grocer's Mutual, Clinton, NC: Investigated Hurricane Floyd damage to roof systems of 5 grocery stores. Provided expert testimony by deposition.



Smith v Foster v Coastland Realty, Topsail Island, NC: Investigated cause of deck collapse . Provided expert testimony by deposition.

Sturdy v Beasley on Masonboro, Wilmington, NC: Investigated various deficiencies related to construction of neighborhood clubhouse and privacy walls. Provided expert testimony in arbitration hearing.

Michalk v Thomas, Surf City, NC: Investigated the cause of the failure of the handrail system on the elevated pedestrian beach access walkway.

Southeast Builders v Joan Smith, Supply, NC: Provided arbitration support in construction dispute.

Lewis v Renny's Creek Mine, New Bern, NC: Evaluation of ground subsidence claims at 14 properties located adjacent to a mining operation. Provided expert testimony.

Ronan v State Farm, Wilmington, NC: Mold and moisture cause and origin. Provided expert testimony by deposition.

Shank v Weatherwax, Oak Island, NC: Construction defect investigation. Provided expert testimony by deposition.

Shenango Presbyterian SeniorCare v. Perkins Eastman Architects & , Pennsylvania: Construction defect investigation. Provided plaintiffs arbitration support.

Willard v Wren Heating and Air, Wilmington, NC: Mold and moisture cause and origin. Provided expert testimony by deposition.

Henry Tingley and Judy Tingley v. Sea Air Heating & Cooling: Morehead City, NC: Construction defect case, expert testimony in jury trial

Anderson v Lowell, Wilmington, NC: Construction defect investigation, providing litigation support.

ESA Management v Fullerton et als, Missouri: EIFS investigation

ESA Management v Paric Corporation, Missouri: EIFS investigation

First Presbyterian Church v Carolina Steel Corporation, Greensboro, NC: Investigation of fabrication and installation of structural steel in church family life center.

Four Seasons Resort v Prost Builders, Missouri: EIFS investigation

Hayward v RVR Builders, Wilmington, NC: Construction defect investigation

McConnell v Mike Stetton Homes, Wilmington, NC: Construction defect investigation

Sawmill v Pope and Pope Construction, Wilmington, NC: Construction defect investigation



Smith v Kolb/Camina, Bald Head Island, NC: Construction defect investigation.

Thompson v Canady and Son, Wrightsville Beach, NC: Moisture and termite cause and origin investigation

Wall v Genesis Condominiums Owners Association, Pine Knoll Shores, NC: Mold and moisture cause and origin investigation

Duane Jones v Thomas Franklin and Franklin Bros., Jacksonville, NC: Construction defect investigation

John and Kay Calahan v Charles Devane and Devane Inc., Bladenboro, NC: Construction defect investigation

Baldwin v Atlantic Seaboard, Bald Head Island, NC: Construction defect investigation

Rice v Hanover Insurance Company, New Bern, NC: Mold and moisture cause and origin

McGonigals Flamingo, Inc. v. RJG Construction Company and Coastal Glass et al, North Myrtle Beach, SC: Construction defect investigation

The Seacrest Condominium Horizontal Property Regime, et al. v. The Sea Crest Development Company, et al., Hilton Head, SC: Construction defect investigation

Peerless Insurance Company v. South Atlantic Construction Company: Wake County, Construction defect investigation

Sandy Sneedby and Jane Venters, Individually, and Bridgewood Condominium Owners Assoc., Inc., v. S.F. Ballou, Inc., and Bal-Flow, LLC –and- S.F. Ballou, Inc., v. Rivenbark's Construction, Inc., et als: Morehead City, NC: Construction defect investigation

Duplin County v. J & J Mechanical et als: Duplin, County, NC: Construction defect investigation

Cape Fear Med. v S.K. Anderson: Wilmington, NC: Construction defect investigation

Russell Woody v. R.H. McClure Builders, Inc.: Shallotte, NC: Construction defect investigation

McDaniel, et al v. Bill Clark Homes: Wilmington, NC: Construction defect investigation

Structuretone v. Limbach Facility Services et al : Virginia: construction defect case

Patricia North v. Dargan Construction, Inc. , et al: Construction defect case: Myrtle Beach, SC

Barry & Risa Amos v. Ken Wrangall Custom Homes, Inc.: Construction defect investigation

Cockrell & Kershner v Coldwell Banker Fountain Realty : Jacksonville, NC: real estate non-disclosure case



Ocean Grande Bay Developers v. Baiden & Assoc.: Myrtle Beach, SC: construction defect case

Wynne v. MAJ Enterprises, Inc.: Hilton Head, SC: construction defect investigation

Laura Green v Dallas Harris Builders: Wilmington, NC: construction defect investigation

Pavone v. S.F. Ballou, Inc.: Morehead City, NC: Construction defect investigation

Moore v. Lands End Construction, Inc.: Morehead City, NC: Construction defect investigation

Hahn v Auto Owners Insurance: Tennessee: Construction defect case

Ken & Melinda Lloyd v. Norman & Mary Lloyd: Durham, NC: real estate non-disclosure case(EIFS)

McRae v. Landmark General Contractors & Spann Architects, Inc.: Florida: construction defect investigation

Sims et al v Keyes et al: Bald Head Island, NC: deck collapse case