



**George Barbour** has over 22 years of 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 also provides comprehensive engineering and forensics investigation services for a variety of building systems. He has performed construction/design defect assessments, mold and moisture causation investigations, building condition studies, building code compliance reviews, insurance damage assessment studies, OSHA and accident reconstruction studies and provided expert testimony concerning his investigations.

### **Education**

- Bachelor of Science in Civil Engineering, North Carolina State University, 1987

### **Registration**

- Professional Engineer in North Carolina, South Carolina, Virginia, Tennessee, Florida, Pennsylvania, Kansas, and Missouri

### **Certification and Licenses**

- General Contractor in North Carolina, Classification: Building (License # 53600)
- OSHA 500 Certified Instructor For 10-and 30-hour classes covering OSHA safety and health standards for the construction industry (expired)

### **Previous Experience**

- Associate/Office Manager, Kimley-Horn and Associate, Raleigh, NC, April 1996-January, 2002
- Associate, Kimley-Horn and Associates, Raleigh, NC, 1993-96
- Partner, G.J. Tierney Engineering, Raleigh, NC, 1991-93
- Project Engineer, Dewberry and Davis, Raleigh, NC, 1990-91
- Structural Analyst, Kimley-Horn and Associates, Inc., Raleigh, NC, 1987-90
- Applied Research Inc., Raleigh, NC 1986-87
- Carolina Power and Light, Raleigh, NC 1984-85
- Centurion Construction Company, Raleigh, NC, 1983
- Speight and Associates, Williamston, NC, 1981-82
- J.H. Hudson, Greenville, NC 1980-81

### **Professional Organizations**

- National Academy of Forensic Engineers - Senior Member
- American Society of Civil Engineers - Member
- Professional Engineers of North Carolina - Member
- National Society of Professional Engineers - Member

### **Community Organizations**

- Greater Wilmington Chamber of Commerce, Local Government Affairs Committee and Education Council
- Past Chair, Greater Wilmington Chamber of Commerce Communities in Schools of Cape Fear
- Greater Wilmington Chamber of Commerce, Education Council

### **Awards**

- Charles Kenneth Little Scholarship, 1987
- Association of General Contractors Scholarship, 1987
- Chi Epsilon, 1987
- Knights of Saint Patrick, 1987
- NC Chapter of the American Society of Engineers Outstanding Student Achievement, 1987
- KHA Outstanding Field Representative, 1988
- KHA Certified Project Manager, 1998

## Structural Engineering

### Principal Areas of Practice

- Building Design
- Contract administration/Construction Phase Services
- Parking Deck Design
- Bridge Design
- Bridge Inspection
- Studies, Condition Assessments, and Repair Design Single/Multi-family Housing

### Building Design

- Municipal Golf Course Maintenance Building, City of Wilmington, NC
- Northside Baptist Church Sanctuary Addition, Wilmington, NC
- Legion Stadium Renovations and Additions, Wilmington, NC
- Division Drive Pump Station, New Hanover County, NC
- Northgate Mall Expansion, Durham, NC
- Windrose Clubhouse, Meeting House and Tournament House, Dallas, TX
- Southern Middle School, Roxboro, NC
- Siemens Medical Training Center, Cary, NC
- Forum III Office Park, Raleigh, NC
- American Board of Orthopedics, Chapel Hill, NC
- Garner Auto Mart, Garner, NC
- Greensboro Recreational Centers, Greensboro, NC
- Wake County Public Safety Center, Raleigh, NC
- Northern Telecom Educational Center, Raleigh, NC
- Weston II, Cary, NC
- Person County Senior High School, Roxboro, NC
- Bladenboro Elementary School, Bladen County, NC
- Elizabethtown Elementary School, Bladen County, NC
- Southern Middle School, Roxboro, NC
- Cross Island Parkway Toll Plaza, Hilton Head

- Technical support Center – Shearon Harris Nuclear Power Plant, New Hill, NC
- L. Herman Building, Danville, VA
- 400,000 Gallon Tank/Foundations/Related Facilities, Camp Lejeune, NC
- Cary Pediatrics Office Expansion, Cary, NC
- Holiday Inn Restaurant Canopy, New Bern, NC
- NCDOT Currituck Maintenance Facility, Currituck, NC
- NCDOT Maintenance Building, Duck, NC

### Contract Administration/ Construction Phase Services

- Caterpillar Assembly Plant, Clayton, NC
- Aviation Support Warehouse, Marine Corps Air Station, Cherry Point, NC
- Helicopter Maintenance Hanger, Marine Corps Air Station, New River, NC
- Bellemeade Street Parking Deck, Greensboro, NC
- Raleigh/Durham Airport Roadway Improvements, Morrisville, NC
- Gorman Street Bridge, Raleigh, NC
- Hope Mills Bridge 161, Hope Mills, NC

### Parking Deck Design

- Raleigh-Durham International Airport, NC
- Bellemeade Street Parking Deck, Greensboro, NC
- Northgate Mall Parking Deck #2, Durham, NC

### Bridge Inspection

- Sabraton Avenue Arch over Hartman Run, Morgantown, WV
- High Street Bridge, Morgantown, WV

## Structural Engineering

### Bridge Design

- Taxiway N, Aircraft Bridge,
- Memphis International Airport, TN.
- Gorman Street Bridge, Raleigh, NC
- Brentwood Street Bridge, High Point, NC
- Westinghouse Boulevard over Southern Railroad, Charlotte, NC
- I-77 over Westinghouse Boulevard (dual bridges), Charlotte, NC
- South Columbia Street over NC 54, Orange County, NC
- NC 54 over Smith Level Road (dual bridges), Chapel Hill, NC
- NC 54 over Jones Ferry (dual bridges), Chapel Hill, NC
- Taxiway N, Aircraft Bridge, Memphis International Airport, TN

### Studies, Condition Assessments, and Repair Design

- Emphy Park Fire Station Floor Slab Replacement, City of Wilmington
- Las Flores Housing, EIFS Study, Base Naval De La Rota, Spain
- Fire Station No. 2 garage slab replacement, City of Wilmington, NC
- Stevens Building, Design repairs to partial roof collapse of 2-story building. Smithfield, NC
- Legion Stadium Master Plan Facility assessment, Wilmington, NC
- Hope Mills Dam Number 1
- Condition Assessment, Hope Mills, NC
- Initial tornado damage assessment of various residences in Raleigh, NC
- Four Seasons Warehouse, design of repairs to collapsed three-story timber frame warehouse, Charlotte, NC
- The Cove at Lake Lynn Apartments, Raleigh, NC
- L. Herman Building, Danville, NC
- Defense General Supply Center, Richmond, VA
- Medical District Parking Facility, Huntsville Hospital, Huntsville, AL
- John Morrell & Co. Meat Packing Plant, Wilson, NC
- First Union National Bank, Durham, NC

- NCSU Parking Deck, Raleigh, NC
- Park Green Apartments, Raleigh, NC
- Spring Forest Apartments, Raleigh, NC
- Bramble Wood Apartments, Goldsboro, NC
- The Cove/Cinnamon Ridge Apartments, Raleigh, NC
- Sumter Square Apartments, Raleigh, NC
- Capital Area Transit Garage Foundation Repairs, Raleigh, NC
- Club de Golf, Clubhouse Earthquake Assessment, Puerta Vallarta, Mexico
- Lennar Properties
- First Union National Bank, Durham, NC
- NCSU Parking Deck, Raleigh, NC
- First Union National Bank, Durham, NC

### Single/Multi-Family Housing

- Structural design of approximately 30 standard designs for M/I Schottenstein Homes, 30 standard designs for Pulte Home Corporation, and 20 custom homes
- Structural and building envelope repair designs for The Cove at Lake Lynn Apartments, Raleigh, NC; Park Green Apartments, Raleigh, NC; Cinnamon Ridge Apartments, Raleigh, NC; and Spring Forest Apartments, Raleigh, NC
- Structural design for bid package for 200 single-and multi-family military housing units, Fort Hood, TX
- Structural design for bid package and construction documents for 170 single-and multi-family military housing units, Fort Bliss, TX
- Structural design for bid package and construction documents for 179 single-and multi-family military housing units, Dyess Air Force Base, TX

## Engineering and Forensics Investigations

### Principal Areas of Practice

- Moisture Intrusion Investigations
- Construction/Design Defect Investigations
- Event-Related Damage Assessments
- Workers Compensation/Personal Injury and OSHA Claims Investigations

### Facilities

- Pender County Schools Mold Litigation, Pender County NC
- CP&L Sutton Plant, Coal conveyance system collapse, Wilmington, NC
- Grande Shores Ocean Resort, Myrtle Beach, SC
- Welk Theater façade collapse investigation, Branson, MO.
- Hundreds of Exterior Insulation And Finish System (EIFS) investigations throughout the southeastern United States
- ClubCorp of America, Facility Condition assessments, WI, IL
- Lennar Properties, Chase
- Manhattan Bank Portfolio Assessment, NY, NJ, and CT
- South Chem, Inc., Material Packaging Building, Durham, NC
- The Cove at Lake Lynn Apartments, Raleigh, NC
- Sewer system backup, various locations in NC
- Blasting-related structural damage, NC
- L. Herman Building, Danville, NC
- Helicopter Maintenance Hanger, MCAS New River, NC
- Defense General Supply Center, Richmond, VA
- NCSU Parking Deck, Raleigh, NC
- Numerous component failures including roofing systems, brick veneer, tile, and hardwood flooring, insulated glass units, foundations, structural framing, drainage systems, and fire protection system.

### Event-Related Damage Assessments

- Vanderbilt University, Parking garage Collapse
- Various damage assessments and wind vs. flood evaluations in North Carolina and Florida related to multiple hurricanes and tropical storms that have occurred in the last 10 years
- Various damage assessment studies in South Carolina related to Hurricane Hugo, the 1992 “Storm of the Century”
- Initial tornado damage assessment of various residences in Raleigh, NC
- Club de Golf, earthquake damage assessments, Puerto Vallarta, Mexico
- Bulk fuel storage facility explosion and fire, Kornegay Farms, NC
- Wheeling Downs, flood-related
- Structural damage assessment, Wheeling, WV
- Liquid petroleum explosions and fires
- Blasting and vibration damage assessments, NC and VA

### Workers Compensation/Personal Injury and OSHA Claims Investigations

- Solvent vapor-related respiratory injuries, NC
- Construction, design, or maintenance related injuries or deaths, NC
- 100,000-gallon no. 6 fuel storage tank explosion, Firestone Plant, Wilson, NC
- 20,000-gallon gasoline storage tank explosion, Kornegay Farms, NC
- 10,000-gallon gasoline tank explosion, Roney Williams Store, Wilson, NC
- Roof truss collapses during construction
- Evaluation of OSHA standards related to injury to construction workers



## **Civil Engineering**

### **Roadway, Drainage and Site Design**

- University of North Carolina at Wilmington Civil/Structural On-call Service Agreement for 2003-2004, 2004-2005, 2005-2006
- University of North Carolina at Wilmington, Park and Ride Facility Design
- Alliance Credit Parking and Teller Addition, Wilmington, NC
- Wrightsville Avenue Enhancements, City of Wilmington, NC
- Northside Baptist Church Sanctuary and Parking Additions, Wilmington, NC
- CVS Site, North Myrtle Beach, SC
- Long Leaf Creek Hurricane Floyd Repairs, City of Wilmington, NC

### **Cellular Communications Design**

- South 17<sup>th</sup> Street Water Tank Alltel Site, Wilmington, NC
- Downtown Kinston Water Tank Alltel Co-Location, Kinston, NC
- James City Alltel Co-location, New Bern, NC
- Chadbourn Alltel Co-location, Chadbourn, NC
- Ramada Inn Rooftop Alltel Site, Nags Head, NC
- Emerald Isle Water Tower, Alltel Co-location, Emerald Isle, NC
- Garden City Alltel Co-location, Murrells Inlet, SC
- Adrian, 255' Self Support Tower, Conway, SC
- South Gate Alltel Co-location, Hilton Head, SC
- McDonald Alltel Co-location elevated building site, Robeson County, NC