

## Dr. Paul G. Carr, P.E.

### Education:

#### Doctor of Philosophy (Civil Engineering)

Virginia Polytechnic Institute & State University, Blacksburg, VA  
Civil Engineering –Construction Engineering and Management

#### Master of Engineering (Civil Engineering)

Cornell University, Ithaca, New York  
Civil Engineering

#### Bachelor of Technology (Civil Engineering)

Rochester Institute of Technology, Rochester, New York  
Civil Engineering (Summa Cum Laude)

#### Continuing Education (Partial)

Legal Aspects of Architecture, Engineering and Construction,  
Drexel University

New York Construction Law, Federal Publications

School of Construction Estimating, Richardson Systems

Planning and Scheduling with Primavera, CTS

Analyzing Construction Delays – Saddlebrook Institute

Myers-Briggs Type - Psychological Administrator & Interpreter

Wind Loads on Structures – ASCE

Design by the Building Code of NYS – AIA

Design in Existing Buildings with New Code – AIA

Design, Construction & Renovation of Masonry Structures – ASCE

Chairman Emeritus – The Bernier-Carr Group

Architects, Engineers, Surveyors and Construction Managers

#### Adjunct Associate Professor – Course Offerings

##### Cornell University: Fall 2000 - Present

CEE 591: Engineering Management Project

*Practice Management for the Consulting Professional*

CEE 592: Engineering Management Project

*Contract Dispute Resolution for Engineers*

CEE 595: Construction Planning and Operations

CEE 596: Management Issues in Forensic Engineering

CEE 786: Special Topics in Structural Engineering

##### Virginia Tech: 1998- Spring 2000

Chair - Ph.D. Seminar (Fall, 1998)

CEE 2984 Introduction to Civil Engineering: Lecture

CEE 3014 Construction Management: Lecture

CEE 4334 Hydraulic Structures: Lecture

CEE 4014 Estimating, Production and Cost Engineering



Paul G. Carr, Ph.D., P.E.

National Academy of  
Forensic Engineers  
*Board Certified Diplomate  
in Forensics*

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### **Registrations and Certifications:**

Professional Engineer in New York  
NAFE Board Certified Diplomate in Forensics  
American Arbitration Association – Construction Arbitrators’ Panel of Neutrals

### **Memberships and Awards:**

Member - National Society of Professional Engineers  
Senior Member - National Academy of Forensic Engineers - Diplomate  
Member – American College of Forensic Examiners  
Member - American Society of Civil Engineers  
*Technical Committee on Forensic Engineering*  
Member - Association for the Advancement of Cost Engineering  
Member – Construction Management Association of America  
Member - Association for Psychological Type  
Member - American Association of University Professors  
Member - American Association of Engineering Educators  
Member – American Concrete Institute  
Member – Design-Build Institute of America  
National Science Foundation (NSF) Research Grant Review Panelist  
Cornell University - School of Engineering  
*Engineering Outstanding Teaching Award 2003-04*  
Virginia Tech – Department of Civil Engineering  
*Myers- Lawson School of Construction Outstanding Alumni Award 2006*  
Rochester Institute of Technology –  
*2008 Distinguished Alumni Award - College of Applied Science and Technology*  
Phi Kappa Phi - National Honor Society  
Chi Epsilon - National Civil Engineering Honor Society  
Associated General Contractors (AGC) Scholarship Recipient  
Northern New York Builders Exchange Scholarship Recipient  
Environmental Protection Agency (EPA) Scholar – Cornell University  
Past President and 1989 Construction Person of the Year:  
*Northern New York Builders Exchange*  
Board Member – Samaritan Medical Center  
*Finance Committee Chair*  
*Planning Committee Chair*  
Licensed Helicopter & Airplane Pilot –  
*Single/Multi-Engine - Instrument Ratings*

### **Experience and Services:**

Dr. Carr graduated summa cum laude from Rochester Institute of Technology, in the honor society of Phi Kappa Phi, and as an Associated General Contractor’s scholarship recipient. He then became an EPA Scholar at Cornell University’s Graduate Schools of Civil Engineering, where he was awarded his Master of Engineering degree. Professor Carr earned his Doctorate from the Charles E. Via School of Civil Engineering at Virginia Tech in Construction Engineering and Management. Dr. Carr’s doctoral research focused on enhancing teamwork among Design and Construction Professionals. This area of study focused on a systems approach to engineering management problems. This systems approach may be described as a complex search for patterns in organized data structures.

**Dr. Carr worked as a field engineer and office executive for construction contractors in New Jersey and Pennsylvania. While in Pennsylvania, he was promoted to vice president of corporate planning, supervising the estimating and bidding work of the firm. This work primarily involved general construction of both public and private facilities. Dr. Carr returned to New York to work as a project engineer with consulting engineering firms. Again, this work primarily involved public works, although design commissions began to focus on all aspects of municipal and institutional projects.**

**His private practice as a Professional Engineer was opened in 1980, and headquartered in Northern New York, where he remained for the next 18 years. While there, he grew his practice to a firm of over one hundred staff members and multiple offices, providing the planning, design and construction management of \$800 million in capital improvement projects. The major projects that define the scope of his career include a number of municipal and institutional building programs. These projects focused on the planning, design and construction management of primary and secondary schools, water treatment plants and distribution works, sewage collection and treatment systems, bridges, municipal buildings, public housing projects and libraries.**

**Paul Carr, a founder of Bernier-Carr and Associates, was the firm's Chief Executive until his retirement in 1998. In that time period he was the Chairman of the Board of the Bernier-Carr Group of Companies; a group of firms which provided architectural design, engineering design, construction management, as well as an "at risk" construction division which performed design-build services. During his tenure within the Bernier-Carr Group, Dr. Carr was responsible for all of the estimating, scheduling and cost controls for the firm's work. Professor Carr later served on the faculty at Virginia Tech, where he taught and conducted research on engineering and architectural professional behaviors.**

**In addition to his duties to his current Forensic Engineering consulting practice, Dr. Carr is on the graduate faculty of the School of Civil and Environmental Engineering, and the Graduate Real Estate Field at Cornell University, where his teaching and research area specializes in program risk assessment, dispute resolution and the management of the engineering and construction process, primarily within the public construction industry.**

**Professor Carr is widely published, lectures and provides consulting on management techniques to troubled projects. Recently Dr. Carr was engaged to advise on program management improvements to the DOE \$300 million Highly Enriched Uranium Materials Facility (HEUMF) under construction in Oak Ridge TN.**

**As a Board Certified Diplomate of the National Academy of Forensic Engineers, Dr. Carr focuses his current practice on failure assessment and prevention in public building projects and infrastructure capital programs. Dr. Carr's service to project owners is in program management risk assessment, and dispute avoidance and resolution.**

**Dr. Carr provides Expert Testimony services to attorneys, serving as the designated expert witness to testify and communicate findings to the mediators, arbitrators or juries. Services to the legal community include testimony on focused topics and the coordination of experts with diverse skills related to building damage or construction. He also assists with the preparation for the deposition and trial cross-examination of engineering experts. The challenge in this high-technology age is to explain within an adjudication forum, sophisticated analyses and scientific field studies, and also why they are essential to support proper conclusions.**

## **EXAMPLES of PUBLICATIONS and REPORTS**

Professor Carr's publications and reports have primarily consisted of confidential studies for both public and private clients, and are therefore not open to public review. Dr. Carr has completed over 150 forensic investigations, along with reports, primarily consisting of design practice and construction failures.

Below is a list including peer-reviewed or juried articles published by Dr. Carr:

Vaziri, Kabeh, Carr, P. G., Nozick, Linda (2007) "Project Planning for Construction under Uncertainty with Limited Resources" *Journal of Construction Engineering and Management* Vol. 133, No. 4, April 2007

Carr, P.G., Thesier, J.T., Kimball, M.S. (2006) "An 'Invisible Menace' – The Impact of Pyrite Induced Expansive Forces on Long-Term Building Failure – A Case Study" *ASCE Technical Committee on Forensic Engineering*, Cleveland OH, October 2006

Carr, P.G., Thesier, J.T., Kimball, M.S. (2006) "The difficult role of the Forensic Engineer in Complex Building Failures" *National Academy of Forensic Engineers* Boston MA., July 10, 2006

Carr, P. G., Beyor, Pamela S. (2006) "Behind the Curve – Design Fees and a Case for Corrective Action" *American Council of Engineering Companies (ACEC) 2006 Annual Convention*, Washington, D.C. May 1, 2006

Carr, P. G., Beyor, Pamela S. (2006) "Design Fees, the State of the Profession and a Time for Corrective Action" *American Council of Engineering Companies (ACEC) Online Seminar On New Business Models For Design Firms*, February 1, 2006

Carr, P. G., Beyor, Pamela S. (2005) "Design Fees, the State of the Profession and a Time for Corrective Action" *Journal of Management in Engineering* Vol. 21, No. 3, July 2005

Carr, P. G., (2005) "An Investigation of the Level of Competition, Pre-Bid Project Estimates and Actual Bid Prices, in the Public Building Sector for the Institutional Construction Market" *Journal of Construction Engineering and Management* Vol. 131, No. 11, November 2005 p. 1165-1172

Carr, P. G., (2004) "Engineers and the Betterment of Human Welfare", *The National Society of Professional Engineers' Engineering Times*, November 2004

Carr, P. G., de la Garza, Jesus M., and Vorster, Michael C. (2002) "The Relationship between Personality Traits and Performance for Engineering and Architectural Professionals Providing Design Services" *Journal of Management in Engineering* Vol. 18, No. 4, October, 2002.

Kannan, Govindan and Carr, P. G., (2001) Discussion Paper on "Simplified Program Evaluation and Review Techniques" *Journal of Construction Engineering and Management*, Vol. 127, No. 1, Jan./Feb. 2001

## **EXAMPLES of TECHNICAL REPORTS**

In addition to the peer-reviewed articles, a few of the investigation documents prepared by Professor Carr are listed below. While Dr. Carr will prepare numerous reports on cases in any given year, to limit the listing, the examples below are restricted to a single example from each year, simply to give the interested reviewer a sense for the breadth of work undertaken over his career in private practice.

**Carr, P. G. (2006) “Analysis of the Production Efficiency relating to the Electrical Contractor’s Claim for Lost Labor Productivity, Livonia Central School” document prepared for NYS Supreme Court adjudication (successful post-trial withdrawal of suit).**

**Carr, P. G. (2005) “Analysis of the Pavement System and Subsurface Failures at the Owego Apalchin Central School” document prepared for negotiations of a contract dispute (successfully negotiated).**

**Carr, P. G. (2004) “Foundation Failure and Remediation Plan” Fonda-Fultonville Central School District (repairs complete – American Arbitration Association case with successful settlement negotiations)**

**Carr, P. G. (2003) “Evaluation of Design Standards for Sewage Works – Professional Standard of Care” Jody Filliatrault vs. Rist-Frost Consulting Engineers (successful motion for summary judgment to dismiss)**

**Carr, P. G. (2002) “Analysis of the Structural System Failure resulting from the Paper Machine Explosion – Knowlton Bros. Paper” private document prepared for insurance recovery and settlement (successfully negotiated).**

**Carr, P.G. (2001) “Various Building Failures at the Peru Central School District – Structural, Heating, Building Envelope and Sitework” presented before the American Arbitration Association Mediation hearing.**

**Carr, P. G. (2000) “Analysis of the Impacts on the Jefferson County Courthouse Complex through Project Labor Considerations”; for The Jefferson County Board of Legislators.**

**Carr, P. G. (1999) “Analysis of the Wall System Failure at the Willow Point Nursing Home,” prepared for the Broome County Attorney for contract dispute settlement negotiations (successfully negotiated).**

**Carr, P. G. (1998) “Analysis of the Pavement System and Subsurface Failures at the Summersville Wal-Mart” private document prepared for Frontier Insurance Company for the mediation negotiations of a contract dispute (successfully negotiated).**

**Carr, P.G. (1997) “Essential Seismic Reinforcing – Response to Request for Equitable Adjustment for Contract Interpretation and Lost Labor Productivity” presented before the American Arbitration Association hearing on the matter.**

**Carr, P. G. (1995) “Investigation of Contract Failures at the Municipal Fire Station Capital Improvement Program in Watertown, New York” presented before the American Arbitration Association hearing on the matter.**