

MATTHEW INNOCENZI, PE, RBEC

SENIOR CONSULTANT

minnocenzi@btc.expert

Matthew Innocenzi is a consultant to Building Technology Consultants, Inc.

REGISTRATIONS

- Licensed Structural Engineer (**PE**), West Virginia, Virginia, New Jersey, Pennsylvania, Maryland, Washington, South Carolina, Tennessee, Louisiana, Florida, Texas, District of Columbia
- Registered Exterior Wall Consultant (**REWC**)
- Registered Roof Consultant (**RRC**)
- Registered Waterproofing Consultant (**RWC**)
- Registered Building Envelope Consultant (**RBEC**)



PROFESSIONAL EXPERIENCE

Since earning his Master of Engineering degree in 1999, Matthew Innocenzi has been working in the diagnosis and analysis of building envelope assemblies and structures. Prior to starting his own firm, Nick Innocenzi & Sons Consulting Engineers and Associates, LLC (NISCEA) he was employed by WDP and Associates Consulting Engineers where he served as Staff Engineer, Project Engineer, Senior Engineer, Associate, and finally Senior Associate before departing in late 2015.

Mr. Innocenzi has over 15 years of experience in:

- **Litigation support** and **expert testimony**;
- Structural analysis and design;
- Non-destructive **testing**;
- Laboratory testing;
- Structural repair and **retrofit design**;
- **Water intrusion analysis** and **remediation design**;
- Failure investigation;
- **Contract document** preparation; and
- Project management

EDUCATION

Matthew Innocenzi earned his **Bachelor of Science** degree in Civil Engineering from **Virginia Polytechnic Institute and State University**, Blacksburg, Virginia, 1997. He earned a **Master of Engineering**, Civil Engineering, **Virginia Polytechnic Institute and State University**, Blacksburg, Virginia in 1999.

Master of Engineering Project and Report

M.E. - "Structural Analysis and Retrofitting of a Historic Industrial Facility"

PROFESSIONAL ACTIVITIES

- Member of American Institute of Steel Construction (**AISC**)
- Member of American Society of Testing Materials (**ASTM**)
- Member of Roof Consultants Institute (**RCI**)
- Member of Mid-Atlantic Region of Roof Consultants Institute (**RCI**)
 - Educational Director, 2008-2009
 - Treasurer, 2010
 - Vice President, 2011
 - President, 2012
 - Past President, 2013
 - Board of Directors, 2014-2015
- Member of Florida Lath and Plaster Bureau (**FLAPB**)
- Member of **ASTM** Committee D08 "Roofing and Waterproofing"
 - Subcommittee D08.02 – Prepared Roofings, Shingles and Siding Materials
 - Wind Resistance of Asphalt Shingles Task Group Member
 - Performance of Asphalt Shingles Task Group Member
 - Facade Task Group Member
- Member of **ASTM** Committee C11 "Gypsum and Related Building Materials and Systems"
 - Co-chairman of Task Group C11.02 on ASTM C926, "Standard Specification for Application of Portland Cement-Based Plaster"
 - Task Group Member on ASTM C1063, "Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster"
 - Chairman of Task Group C11.03 on "Standard Test Methods for Field Measurement of Tensile Strength of Bond Strength of Portland Cement-Based Plaster by Direct Tension"
- Member of **RCI** Task Force to develop the Registered Exterior Wall Consultant (RWC) Exam
- Member of **RCI** Task Force to develop the Stucco and Exterior Finish Cladding Systems (EIFS) Education Program

PUBLICATIONS

- Innocenzi, M. and Peterson, J., "**Masonry Flaw Detection and Evaluation Using Infrared Thermography**" Inframation 2001 Proceedings, Vol. 2, pgs. 161-170.

- Peterson, J. and Innocenzi, M., **“Use of Infrared Thermography as a Standard in the Quality Assurance and Quality Control of Grouted Masonry Construction”** Inframation 2002 Proceedings, Vol. 3, pgs. 155-162.
- Peterson, J. and Innocenzi, M., **“The Effect of Control Joint Detailing and Construction on the Design of Non-Load Bearing Single Wythe Masonry Walls for Out-of-Plane Wind Loads”** 9th North American Masonry Conference Proceedings, Clemson, South Carolina, June 2003.
- Innocenzi, M. and Peterson, J., **“Repair and Strengthening Techniques for Reinforced or Unreinforced Concrete Masonry Walls”** 9th North American Masonry Conference Proceedings, Clemson, South Carolina, June 2003.
- Peterson, J. and Innocenzi, M., **“Water Testing of Glazing Systems: Strategies, Pitfalls, and Quality Assurance/Control”** The Construction Specifier, September 2006.
- Innocenzi, M. and Whitlock, A., **“Deflection Criteria for Fiber Reinforced Plaster (Stucco) Based on Experimentation and Rational Analyses”** 10th North American Masonry Conference Proceedings, St. Louis, Missouri, June 2007.
- Innocenzi, M. and Whitlock, A., **“In the Wrong Place at the Wrong Time: Coastal Concerns with Portland Cement Plaster and Light-Gage Steel Framing”** The Construction Specifier, The Construction Specification Institute, Alexandria, Virginia, April 2008.
- West, J., Innocenzi, M., Poston R., and Ulloa F., **“Assessing Vibrations: Analysis of a Long-Span Post Tensioned Concrete Structure”** Concrete International Magazine, the Magazine of the American Concrete Institute- an International Technical Society, October 2008.
- Innocenzi, M., **“Windows and Air/Water Barriers: with finned, less is more”** The Construction Specifier, October 2008.
- Innocenzi, M., **“Balconies: Stepping Up for Water”** The Construction Specifier, July 2009.
- Innocenzi, M. and Whitlock, A., **“Organic Weather Resistive Barriers: Understanding the Points of Papers and Facts of Felts”** The Construction Specifier, February 2010.
- Innocenzi, M., **“Avoiding Unstuck Stucco”** Failures article from, The Construction Specifier, March 2011.
- Innocenzi, M. and Aguirre, P., **“A Nice Ending to your Clerestory”** The Construction Specifier, April 2012.
- Innocenzi, M. and Aguirre, P., **“How to Get What You Paid For: Value Engineering for Masonry and Building Envelopes”** The Construction Specifier, May 2012.

- Innocenzi, M. and Aguirre, P., "**Avoiding Problems with Stucco Over Fiberglass-faced Sheathing**" The Construction Specifier July 2012.
- Innocenzi, M. and Aguirre, P., "**More is Less with Stucco Lath**" The Construction Specifier, August 2012.
- Little, C. and Innocenzi, M. "**Ensuring Lath Integrity**" The Construction Specifier, June 2013.
- Innocenzi, M., and Grant, E., "**Whetherability - How do Architectural Design Students Consider the Building Envelope**" RCI 30th International Convention and Trade Show, San Antonio, TX, March 2015.
- Innocenzi, M., Aguirre, P., and Whitlock, A., "**Required Tensile Bond Strength of Direct-Applied Stucco**" 12th North American Masonry Conference Proceedings, Denver, Colorado, May 2015.

PRESENTATIONS

Innocenzi, M., "**Key Factors to Maintaining Your Building: Part I – Walls**," WDP's Open House Seminar Series, September 2010.

Innocenzi, M., "**Felts vs. Papers: Weather Resistive Barriers & Underlayments**" Presenter at RCI Mid-Atlantic Chapter Meeting, March 2010.

Innocenzi, M. "**Value Engineering - Initial Cost Savings versus Long Term Costs**" Presenter at RCI Mid-Atlantic Chapter Meeting, May 2012.

Innocenzi, M., "**The ABCDE's of Masonry Veneer**" Presenter at RCI Mid-Atlantic Chapter Meeting, March 2012.

Innocenzi, M., Hinojosa, Robert, and Daniels, Jim "**Stucco and Exterior Finish Cladding Systems**," RCI Educational Program, September 2012, September 2013, April 2014.

Innocenzi, M., "**Key Factors to Maintaining Your Building Part I- Walls**," Association for Facilities Engineering, Washington, D.C., September 2012.

REPRESENTATIVE PROJECTS

- **Porte Liberte II** – Jersey City, New Jersey

Mr. Innocenzi served as the project manager and designated expert witness for Porte Liberte II, a high-profile development consisting of 19 multi-family brick and precast concrete clad structures facing lower Manhattan. Retained by the insurance carrier for the masons, Mr. Innocenzi was responsible for evaluating the claims brought

forward by the Plaintiffs' consultants, reviewing the repair scope, and developing an independent cost analysis and repair cost projection.

- **1100 Adams Street** – Hoboken, New Jersey

The 1100 Adams Street facility is a mid-rise brick veneer condominium project located in downtown Hoboken, New Jersey. Working on behalf of the mason, Mr. Innocenzi and his team assisted in the litigation brought forth by the owners by assessing alleged design and construction issues, evaluating the cause(s) of reported damage, and proposing effective repair solutions and projections.

- **Groves Residence** – Washington, DC

During excavation and construction of a condominium project immediately adjacent to a single family home, the homeowner claimed of cracking and extensive water intrusion damage throughout a 1920 era multi-wythe brick and wood framed structure. Retained by the insurance adjuster for the developer, Mr. Innocenzi and his team provided building envelope consulting and geotechnical engineering to assess the cause(s) of the damage, allocation of responsibility, and a budget for repair.

- **Hershey Building #41** – Hershey, Pennsylvania

During renovation of one of the original Hershey Foods manufacturing buildings, concerns of water intrusion into the basement level of the building were raised. Mr. Innocenzi served as project manager to investigate the below grade waterproofing and soil conditions to diagnose the cause(s) of the reported water intrusion and offer recommendations for repair.

- **Dawson County Hospital** – Lamesa, Texas

Mr. Innocenzi was retained on behalf of the mason for the Dawson County Hospital to investigate and respond to alleged defects with the masonry workmanship. The hospital was a single story with a clerestory over the main lobby and gallery. The exterior walls were constructed of gypsum sheathing over light gage steel studs with ground face concrete masonry unit (CMU) veneer. Mr. Innocenzi served as expert witness and project manager and conducted a site visit with a team of engineers to administer water testing and exploratory openings throughout the walls to address claims regarding the masonry workmanship. Upon completion of the site investigation, Mr. Innocenzi developed an expert report summarizing the findings of the field investigation and design review, responses to the alleged defects, and discussion of a repair scope with cost estimate.

- **Windsor at Bee Cave** – Bee Cave, Texas

The Windsor at Bee Cave project is a development near Austin, Texas, that featured approximately 20 low-rise multi-family dwelling units. The units were constructed of wood framing, OSB sheathing, and traditional portland cement plaster (stucco). Mr. Innocenzi was retained on behalf of the stucco applicator to investigate and testify regarding the cause and solution to alleged design and installation issues regarding the waterproofing on the exposed balcony surfaces throughout the units.

- **South Eastern Louisiana University (SELU)** – Hammond, Louisiana

Retained on behalf of the General Contractor's Counsel, Mr. Innocenzi led a team of engineers to test and investigate alleged water intrusion issues throughout a total of nine (9) brick veneer/fiber cement board clad dormitory buildings with alleged water intrusion and attendant damage. Subsequent to the investigation, Mr. Innocenzi prepared an expert report that identified and discussed design, construction, and maintenance issues that contributed to the alleged damage and co-moderated settlement conferences.

- **MI Windows and Doors, Inc.** (Class-action lawsuit)

Mr. Innocenzi assisted in a nationwide class action lawsuit against MI Windows and Doors, Inc. (MIWD). The nature of the lawsuit involved three particular series of MIWD windows with an alleged history of water intrusion resulting from poor design and manufacturing. To investigate the problems associated with the windows, MIWD manufactured windows were visually assessed and/or tested in accordance with applicable ASTM standards in residential structures located in New York, Pennsylvania, Illinois, West Virginia, Virginia, Georgia, Florida, South Carolina, North Carolina, Kansas, Michigan, and Ohio. Other investigations included disassembly of MIWD specimens for comparison to shop drawings and engineering analyses to determine the suitability of various materials used in the window composition.

- **Arlington County Fire Station #3** – Arlington, Virginia

In response to concerns regarding the workmanship and installation of a standing seam metal roof, Mr. Innocenzi performed a condition assessment and evaluation of the metal roof. The investigation consisted of reviewing the original Contract Documents, shop drawings, and various industry standards to compare with the as-built construction. Various recommendations were given to provide the County with a roof system that was durable and waterproof.

- **Southgate Towers** – Baton Rouge, Louisiana

Retained on behalf of the General Contractor's Counsel, Mr. Innocenzi led a team of engineers to test and investigate alleged water intrusion issues throughout a total of four (4) eight story residential structures clad with both brick veneer and stucco finishes. Subsequent to the investigation, Mr. Innocenzi assisted with the preparation of an expert report and offered testimony relating to the original design and construction of the building's exterior walls.

- **M.D. Anderson Cancer Center** – Orlando, Florida

Mr. Innocenzi was retained as a consultant on behalf of the Architects of a mid-rise hospital clad with brick veneer. As project manager, Mr. Innocenzi led a team of engineers to review original construction documents, investigate the cause(s) of brick bowing at shelf angles, and evaluate the original construction. Pursuant to the investigation, recommendations for future action were provided.

- **Continuum at South Beach** – Miami, Florida
The Continuum at South Beach project is a high rise luxury condominium tower that featured a direct applied stucco finish. As project manager and expert witness, Mr. Innocenzi was responsible for the sampling, testing, and investigation to determine the nature of cracks within the stucco finishes. In addition to the cracked stucco, Mr. Innocenzi evaluated potential cause(s) for stucco delamination and options for repair.
- **Memphis City Schools** – Memphis, Tennessee
Retained on behalf of the General Contractor's Counsel, Mr. Innocenzi served as project manager and expert witness on nine (9) recently constructed schools for the Memphis City Public School system. Mr. Innocenzi was responsible for the review of contract documents, review of on-site testing and investigation performed by others, and development of repair solutions and responsibility allocation for arbitration purposes.
- **T3H Properties** – Warrenton, Virginia
Mr. Innocenzi served as an expert witness for the owner of a commercial facility that was experiencing water infiltration problems from a standing seam metal roof. Based on diagnostic water testing performed in the field and a review of construction documents, shop drawings, and industry standards, Mr. Innocenzi was able to determine the causes of the water infiltration and develop an appropriate repair.
- **Aurora Hills Fire Station** – Alexandria, Virginia
Mr. Innocenzi served as project manager in performing non-destructive testing on reinforced masonry walls and water testing of windows and other architectural components. Based on the findings of the testing, Mr. Innocenzi led a team of design engineers to analyze the as-built conditions and design repairs where necessary.
- **Marais Townhomes** – Charleston, South Carolina
Retained as the expert for the General Contractor's Counsel, Mr. Innocenzi led a team of engineers and technicians to review the original Contract Documents and perform on-site testing to determine the source(s) of reported water infiltration through standing seam metal roofs, windows, doors and other areas of multi-story wood construction residential dwellings.
- **Immaculate Conception Church** – Trenton, New Jersey
At the request of Our Lady of the Angels Parish, Mr. Innocenzi served as the project manager for the testing, condition assessment and recommendations associated with the envelope of a 120 year old load bearing masonry Church. The analysis and testing of the building were focused on the roof coverings, roof structure, masonry walls, and below grade waterproofing.

- **Beaufort County Courthouse** – Beaufort, South Carolina
Assisting counsel retained on behalf of an EIFS supplier/distributor in a litigation case, Mr. Innocenzi led an investigation to conduct destructive test cuts and water infiltration testing of an EIFS clad county courthouse in Beaufort, South Carolina. In addition to the field testing, Mr. Innocenzi was responsible for reviewing the original design documents and manufacturer's installation instructions to determine if design and/or manufacturing issues were present.

- **Indiana Harbor Coke Company** – East Chicago, Indiana
Served as project manager and led a design team of engineers in the analysis and design of repairs for an industrial steel-framed structure that sustained damage from displacements within the foundations. Mr. Innocenzi was responsible for directing the advanced analysis of the steel frames via computer analysis software, the design of repairs to meet current Building Code and the development of repair drawings for the owner of the facility.

- **Wheaton Metro Parking Garage** – Wheaton, Maryland
Requested by Washington Area Metropolitan Transit Authority to inspect, evaluate and repair a five level post-tensioned parking garage for the Wheaton Metro Rail Station. Mr. Innocenzi supervised the development of repair design documents including details, plans and Project Specifications.

- **Colleton River Plantation Golf Clubhouse** – Hilton Head, South Carolina
Mr. Innocenzi assisted in performing a building envelope investigation and presentation for a single story brick veneer structure. The investigation involved documentation of the as-built conditions with respect to the brick veneer over steel studs, application of shingle slate over plywood deck, and water testing of operable windows to pinpoint source(s) of water intrusion to assist counsel.

- **Beckett Meadows Development** – Cincinnati, Ohio
Served as the project Manager for a litigation related investigation of an asphalt shingle blow-off phenomenon throughout several buildings. Field and laboratory testing identified an allegedly insufficient shingle seal-down feature as the cause for the shingle blow-off. Responsible for the development of an expert report including results of the laboratory and field testing as well as development of anticipated repair cost estimates.

- **Palisades Office Complex** – Raleigh, North Carolina
Mr. Innocenzi performed architectural testing to identify causes of water infiltration through brick veneer over steel stud wall system. Mr. Innocenzi also examined the as-built masonry construction via destructive test openings and surveyed the construction of the steel stud framing and provided litigation support to owner's counsel.

- **Vienna Metro Parking Garage** – Vienna, Virginia
Requested by Washington Area Metropolitan Transit Authority to inspect, evaluate and repair a four level precast prestressed “double tee” concrete parking garage for the Vienna Metro Rail Station. Mr. Innocenzi supervised the development of repair design documents including details, estimated quantities, repair plans and Project Specifications.
- **Hammond Middle School** – Alexandria, Virginia
Project Manager for non-destructive testing (infrared thermography and surface penetrating radar) to identify inadequately grouted cells, missing or incorrectly installed reinforcement and other significant construction defects. Mr. Innocenzi served as the Special Inspections Engineer of Record for the repair design documents prepared by others.
- **Office of Thrift Supervision** – Washington, D.C.
Performed document review, site investigation and site monitoring of cracked limestone veneer to determine the nature and cause of the cracking as well as recommend repair techniques and associated cost estimates to address the phenomenon.
- **Village West Villas** – Hilton Head, South Carolina
Assisted in the investigation and analysis of steel stud framing at a multi-building residential facility. Mr. Innocenzi performed structural calculations, wind load analyses and cost estimates for proposed repairs for counsel.
- **Park Danforth Retirement Facility** – Portland, Maine
Performed non-destructive testing to identify location of brick veneer wall ties in a high-rise retirement facility. Once wall ties were identified, Mr. Innocenzi performed load testing to determine the as-built withdrawal capacity of the anchors. An extensive statistical probability analysis was conducted to establish the in-situ safety factor of the wall ties.
- **Bice House** – Charlottesville, Virginia
Assisted in the structural and building envelope consulting services to the University of Virginia for \$5 million renovation of a high-rise residential building. Mr. Innocenzi played an active role in the investigation of the masonry veneer system and performed structural calculations in the analysis of the existing framing system and design of repairs. Mr. Innocenzi also assisted in the development of the Repair Drawings and Project Manual.
- **W.C.N. Properties Distribution Facility** – Chambersburg, Pennsylvania
Performed advanced computer modeling and structural analysis of large industrial warehouses to retrofit the internal steel framing for wind resistance. The structural

analysis consisted of diaphragm analysis, second order-effects and beam-column interaction to satisfy the Code criteria for strength and serviceability.

- **Retail Shopping Center** – Holmdel, New Jersey

Field Engineer for the structural evaluation and repair of the exterior masonry and roofing for a 300,000 s.f. retail shopping center. Duties of this position included infrared testing and a non-destructive reinforcement survey to identify inadequately grouted cells, missing or incorrectly installed reinforcement and other significant construction defects. Mr. Innocenzi also assisted in the preparation of as-built and repair documents based on the structural inspection and analysis of the masonry walls and supporting steel framing. Inspected and coordinated the construction of the designed repairs and provided litigation support to owner's counsel.

- **Beach Club III Condominiums** – North Myrtle Beach, South Carolina

Project Manager for the litigation related investigation of fiber-reinforced plaster (FRP) application over light gage metal framing of high-rise hotel resorts. Mr. Innocenzi was responsible for the analysis of the FRP cladding over steel studs, review of original project documents, field investigation and testing and development of an expert report outlining the observations and conclusions of the investigation to assist counsel.

- **Wild Dunes Ocean Club** – Charleston, South Carolina
- **Continuum Resort** – Miami, Florida
- **Victory W Hotel** – Dallas, Texas
- **Ocean Sands Resort** – North Myrtle Beach, South Carolina
- **Charleston Oceanfront Villas** – Charleston, South Carolina
- **Sea Crest Resort** – Myrtle Beach, South Carolina
- **Patricia North Resort** – Myrtle Beach, South Carolina
- **Beach Cove Resort** – North Myrtle Beach, South Carolina
- **Beach Colony Resort** – Myrtle Beach, South Carolina
- **Ocean Bay Club Condominiums** – North Myrtle Beach, South Carolina
- **Beach Club I Condominiums** – North Myrtle Beach, South Carolina
- **Beach Club II Condominiums** – North Myrtle Beach, South Carolina
- **Hershey East Coast Distribution Facility** – Hershey, Pennsylvania