

ANTHONY L. VOLONNINO, P.E.  
Civil Engineer

## **ENGINEERING PROFILE**

Experienced in the inspection, analysis, and design of structural systems for buildings, bridges and other structures, including but not limited to the following:

- Engineering and behavior of structural systems for concrete, steel, precast, post tension concrete, masonry and wood, heavy wood timber and glulams timber
- Structural building design/analysis and overall management of structures from inception to completion of construction
- Dynamic analysis and engineering of structures for seismic, wind and vibration analysis
- Structural building detailing
- Architectural detailing
- Design of deep foundations systems including steel piles and caissons for bridges, retained earth structures and buildings
- Steel connection and detailing design
- Retained earth structures including:
  - Bridge abutments on piles/caissons
  - Building retaining walls
  - Gabion Gravity walls
  - Landscape retaining walls
  - Marine bulkheads
  - Revetments
  - Segmented retaining walls
  - Sheet pile retaining systems
  - Soil nailed walls
- Mid-rise and high rise building structures
- Casino structures
- Parking deck structures
- K-12 school structures
- Modular structures and vierendeel modular staggered truss systems
- Transmission tower/switch gear station structures
- Warehouse/big box structures

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- Military structures
- Bridge structures
- Roadway structures
- Wastewater treatment structures
- Sheeting/shoring of adjacent structures/facilities during construction
- Underpinning of adjacent structures
- Large scale single family residential/multi-unit housing and single family homes
- Historic retrofit structures
- Institutional/Pharmaceutical/Biomedical research structures including structures for the support of vibration sensitive equipment such as linear accelerators, MRI's, X-ray machines rooms
- Architectural draftsman
- Drafting and AutoCAD instructor
- Woodworking and kitchen designer

## PROFESSIONAL EXPERIENCE

2016 to present **Robson Forensic, Inc.**  
*Associate*

Provide technical investigations, analysis, reports, and testimony toward the resolution of commercial and personal injury litigation involving structural engineering, structural failure analysis, structural reverse engineering, professional liability disputes, and structural design and code compliance reviews in commercial, public sector and residential construction.

2014 to 2016 **Rimkus Consulting Group, Inc.**  
*Senior Consultant*

Senior forensic engineer providing services which include catastrophic collapse and failure analysis, assessment and investigation, emergency structural stabilization, damage repair, vehicle impact assessment, explosions assessment, emergency response, stucco structural damage, bridge and other civil/structural projects bridge damage assessment, mold damage, fire assessment, structural finite element analysis, expert witness testimony, construction claims investigation, and building code analysis. Assessment and mitigation of excessive building vibration subgrade subsidence and differential settlement monitoring; emergency structural stabilization and repair recommendations structural design and code compliance reviews; and material and construction defect studies and testing.

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2005 to **Paulus, Sokolowski and Sartor**

2014 *Senior Structural Project Engineer*

- Overall structural designer, engineer, project manager consultant of foundation and superstructures of multi-story casinos, convention centers, pharmaceutical, industrial, modular and casino alteration
- Analysis of high rise structures, including wind tunnel review, finite element mesh generation, deep foundation analysis, vibration analysis and long span truss design

2001 to **Schoor DePalma Inc.**

2005 *Structural Project Manager*

- Managed, designed and detailed various engineering projects including: K-12 schools, biomedical research facilities, police facilities, office buildings, wastewater treatment plants, and large scale housing projects and single family homes
- Prepared proposals monitored project budgets, schedules, and accounts receivables
- Developed client base and assisted in marketing which included an architectural seminar to promote understanding of IBC 2000 Code impact on structural building systems
- Extensive forensic work as structural engineer of record for various counties, towns, and public entities that included emergency response of building collapses, boiler explosions, fires, sprinkler main breaks, due diligence and building restorations

1999 to **Nadaskay Kopelson Architects**

2001 *Senior Structural Engineer*

- Overall structural design of foundation and superstructure with emphasis in detail coordination and drafting of construction documents including hospital, schools, biomedical research facilities, industrial, internet switch gear stations and historical restoration experience

1998 to **Paulus, Sokolowski and Sartor**

1999 *Structural Engineer*

- Overall structural design of building foundation and superstructure including detail and coordination of construction documents
- Design and detailing of steel framed connections for steel detailing companies

1995 to **Schoor DePalma Inc.**

1998 *Structural Designer*

- Structural bridge engineer designing both superstructure and foundations including precast, prestressed concrete stringers, curved girder analysis, pier design, deep foundation systems, and seismic design requirements
- Structural building engineer for sewer treatment plant, K-12 schools, pharmaceutical, facilities, warehouse, and tank analysis
- Structural design of box culverts, retaining walls, sheet piles, metering chambers

THE EXPERTS  
**Robson Forensic**

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- 1995 **Bertin Engineering**  
*Staff Engineer*
- Structural, civil, hydraulic, and building design including site development, storm water management, hydraulic, sheet pile design, lighting analysis, grading, and structural rehabilitation of buildings
  - Filing soil erosion permits, develop color renderings for zoning board presentations, and perform traffic surveys
- 1989 to 1992 **Plaza School of Drafting**  
*Drafting and AutoCAD Instructor*
- Instructor who developed 5 month architectural drafting program and course work to develop hand drafting skills for architectural drafting residential and commercial buildings
  - Presented AutoCAD course to develop training skills to be able to set up and draft a computer aided drafting project from start to finish. Additional training skills included customization of AutoCAD and understanding of X-refs and how to use, use of blocks and developing typical details
- 1985 to 1989 **Ecoplan Architects**  
*Drafting*
- Prepared construction drawings for residential and mid-rise buildings, commercial retail, and restaurants
  - Provided zoning and code analysis
  - Prepared colored renderings for zoning board presentations
  - Prepared 3D perspective building renderings for concept sketches and plans
  - Prepared zoning plans, site landscaping
  - Developed egress plans for buildings
  - Used early age AutoCAD to develop complex residential condominium units
- 1982 to 1985 **Ulrich Inc.**  
*Drafting and Carpentry*
- Installed kitchen cabinets, countertops and crown and base moldings including Wainscot detailing
  - Prepared construction drawings for kitchen and master bath plans
  - Prepared 3D renderings of kitchens

**PROFESSIONAL CREDENTIALS**

Professional Engineer: Connecticut, Delaware, District of Columbia, Florida, Illinois, Indiana, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Texas, Virginia, West Virginia, NCEES

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## EDUCATION

Certified Drafting Course, The Plaza School of Technology, 1982  
B.Sc. Civil Engineering, New Jersey Institute of Technology, Newark, New Jersey, 1995

### *Continuing Education*

Engineering Disaster Prevention and Mitigation (live webinar), 2022  
Structural Concepts for Non-Structural Engineers, December 2021  
Fundamentals of Helical Anchors/Piles, December 2021  
FHWA Bridge Inspector's Manual: Primer on Bridge Terminology and Mechanics, January 2021  
FHWA Bridge Inspector's Manual: Bridge Inspection Reporting, January 2021  
FHWA Bridge Inspector's Manual: Bridge Inspection Programs, January 2021  
Engineering Laws, Rules and Ethics for Florida Professional Engineers, December 2020  
Engineering Laws, Rules and Ethics for Florida Professional Engineers, December 2020  
Controlling and Preventing Cracks in Concrete Flat Work, June 2020  
Indiana Engineering Laws, Rules and Ethics, June 2020  
Special Inspections Under the International Building Code Chapter 17, April 2020  
Special Inspections Under the International Building Code Chapter 17, Part II, April 2020  
Review of Engineering Dynamics Part 1: Kinematics of Particles and Rigid Bodies, SunCam, December 2019  
Retaining Wall Basics, Half Moon Education Inc., December 2019  
Geosynthetics and Retaining Walls, Half Moon Education Inc., December 2019  
Slope and Retaining Wall Failures, Fixtures and Prevention, Half Moon Education Inc., December 2019  
Slope Stability and Geosynthetics, Half Moon Education Inc., December 2019  
Corrosion Control and Tactics, SunCam, December 2019  
Engineering Ethics: The Big Dig Tunnel Collapse, PDHengineer.com, December 2019  
Structural Design Loads in Accordance with the ASCE-7 Standard, Half Moon Education, Inc., May 2019  
Deck Connections and Factors That Affect Performance, Hilti North America, August 2018  
Introduction to the Forensic Engineering Process, Half Moon Education Inc., June 2018  
Causes of Failures and the Forensic Engineering Report, Half Moon Education Inc., June 2018  
Forensic Examination of Structures and Use in Litigation, Half Moon Education Inc., June 2018  
Case Studies of Three Explosions and a Chemical Accident, PDHengineer.com, June 2018  
Biodeterioration of Wood, PDHengineer.com, June 2018

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Professional Ethics for Texas Engineers (Renewal for 2018), PDHengineer.com, June 2018  
Engineering Ethics: Case Study of the TV Antenna Tower Collapse, PDHengineer.com, June 2018  
Professional Practice Ethics for New Jersey Engineers (Renewal for 2018), PDHengineer.com, April 2018  
Forensic Analysis Involving Fugitive Natural Gas and Propane, SunCam, March 2018  
Design of Buildings for Coastal Flooding, Red Vector, March 2018  
Designing Post-Installed Reinforcement for Development, NCSEA, February 2018  
Seismic Design of Building Structures, Half Moon, December 2017  
Seismology and Building Codes, Half Moon, December 2017  
Basics of Soil Resources 2: Erosion, Desertification, Salinization & Soil Acidification, Red Vector, August 2017  
Designing Foundation Repairs, Red Vector, August 2017  
Designing with Structural Composite Lumber, Red Vector, August 2017  
Wind design Using ASCE 7-10, Red Vector, August 2017  
Structural Guying for Electric Distribution Systems, Red Vector, August 2017  
Designing for Flood Loads Using ASCE, Red Vector, August 2017  
2015 International Residential Code (IRC): Significant Changes, Red Vector, August 2017  
Ethics for Professionals, Red Vector, May 2017  
Fracking: Environmental Consequences, February 2017  
Basics of Water Resources: Groundwater Hydrology, February 2017  
Indiana Engineers' Laws and Rules, February 2017  
Concrete 1: Evaluation and Causes of Damage, February 2017  
Risk Management for the Design Professional: Basic Principles, February 2017  
Ethical Decision Making for Engineers #5, February 2017  
Soil Mechanics, Bearing Capacity and Slope Stabilization, January 2017  
FARO Scanner Technician Training  
Certified Visual Observer (VO) for Small Unmanned Aircraft System (sUAS)  
Ethical Decision Making for Engineers #4, October 2016  
Design of Steel Elements for Second Order Effects, October 2016  
Structural Dynamics: An Introduction, October 2016  
Driven Piles: Static Analysis – Single Piles, October 2016  
Advancements in Concrete, October 2016  
2015 International Building Code: Significant Changes to Structural Provisions, October 2016  
Principles of Design-Build, October 2016  
Helical Foundations & Tiebacks: An Introduction, October 2016  
Florida Engineering Laws and Rules, October 2016  
2014 Florida Building Code Advanced 5<sup>th</sup> Edition: Structural Summary of Provisions, September 2016  
Pole Structural Loading, September 2016

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Protecting People Against Terrorist Attacks: Chemical, Biological, and Radiological (CBR) Threat Protection, September 2016  
Bridge Inspection and Maintenance: Laws and Requirements, September 2016  
Building Pathology: Foundations, September 2016  
Wind Design Using ASCE 7-10, September 2016  
Site Planning and Design, January 2016  
Roofing Materials - Concrete Tiles, November 2015  
Hurricane Mitigation: Design and Construction Lessons, October 2015  
Wood Design: Design Loads 2 - Lateral & Wind Forces, October 2015  
Basic Wind Loads ASCE 7-10, September 2015  
Ethical Decision Making for Engineers #5, September 2015  
Coastal Engineering: Sea Level Rise, August 2015  
Hurricane Damage: Wind vs. Water Determination, August 2015  
Coastal Engineering: Storm Surge, August 2015  
Gabions - Design of Retaining Walls, August 2015  
Mold Sampling, August 2015  
Residential Construction for Coastal Areas, August 2015  
Mold Remediation, August 2015  
Ethical Decision Making for Engineers #2, January 2014  
Ethical Decision Making for Engineers #3, January 2014  
Finite Element Analysis, January 2014  
Earthquakes: The Basics, January 2014  
Basic Wind Loads I – ASCE 7-05 Revealed, January 2014  
Basic Wind Loads II – The Law and Implementation, January 2014  
Structural Dynamics: An Introduction, January 2014  
Brittle Fracture for Steel Structures, January 2014  
Wood Design: Beam Design, January 2014  
Concrete Fundamentals II – Concrete Slab-On-Grade, January 2014  
Concrete Evaluation and Repair 1, January 2014  
Retaining Wall Design –Part 1 and 2, January 2012  
Green Building with Steel – Part 3: Light Gage Metal Components for Framing, January 2012  
Wood Design: Behavior of Structures Under Loads and Forces, January 2012  
Ethical Decision Making for Engineers #1, January 2012  
Concrete 1: Evaluation and Causes of Damage, January 2012  
Concrete 2: Repair, Planning, and Preparation, January 2012  
Concrete 3: Methods, Materials and Maintenance, January 2012  
OSHA 10 Hour Construction Program 2009 REV 1, July 2011

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**PROFESSIONAL MEMBERSHIPS**

American Institute of Steel Construction, Professional Member  
Tau Beta Pi, National Engineering Honor Society, Member  
Chi Epsilon, New Jersey Engineering Honor Society, Member

**PUBLICATIONS**

Volonnino, Anthony and Edward G. Nawy. "Slip Form Construction Chapter" for  
Concrete Construction Engineering Handbook

**SPEAKING ENGAGEMENTS**

*Technology in Vehicle-Related Investigations*: Pennsylvania Auto Crime  
Investigator's Association, Philadelphia, PA, January 8, 2016  
*Construction Vibrations*: Delaware Claims Association, Philadelphia, PA,  
January 5, 2016

EXPERT NOT RETAINED