



**Zohaib A. Alvi, M.Eng., P.E., ENV-SP**  
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## **Curriculum Vitae**

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### **Summary of Qualifications**

I am a Civil, Structural, and Forensic Engineering Consultant, and Principal of za/engineering. I am a graduate of State University of New York, Farmingdale State College, and have dual Bachelor of Science degrees in Architectural Technology and Construction Management Engineering Technology (ETAC-ABET Accredited Programs). I also have an Engineering Leadership Certificate from Cornell University, completed a Master of Engineering program in Engineering Management at University of Buffalo in February 2023. I am a Licensed Professional Engineer (P.E.) and maintain licensure in New York, New Jersey, Connecticut, Pennsylvania, and Texas. I have extensive experience in evaluation, repair, and rehabilitation of existing structures and historic buildings, and I am skilled in the structural design of new commercial and residential structures.

I am also highly experienced in forensic investigations evaluations, to determine the cause and origin of structural deficiencies, damage following accidents, weather-related damage, slips, trips, and falls, and other concerns. I also have experience in verifying construction compliance with applicable building codes and contract specifications, evaluating impact of construction errors, change orders, and damages during construction, along with evaluating job site safety concerns. I have also facilitated seminars for professional organizations for continuing education credits.

I am an active member of the American Society of Professional Engineers (ASCE), the National Society of Professional Engineers (NSPE), the National Academy of Forensic Engineers (NAFE), and maintain membership with the National Academy of Building Inspection Engineers (NABIE), Structural Engineers Association of New York (SEAoNY), and the International Association for Bridge and Structural Engineers (IABSE), among others.

### **Ongoing Professional Experience**

#### **ZA Consulting Engineering Services PLLC d/b/a za/engineering**

*Lake Ronkonkoma, New York*  
*Principal and Owner*  
*August 2016 to Present*

I am the Principal and Owner of za/engineering, a boutique structural engineering consultancy with a strong focus on evaluation, repair, reuse, and preservation of existing structures. za/engineering is located in the heart of Long Island, New York, but operates throughout the northeast. In addition to structural engineering consulting, za/engineering provides services such as building consultation and property condition assessments. za/engineering engages in projects for municipal, state, and federal governments, various public agencies, contractors, and private owners. I participate in the entire process of a project, from pre-planning, to design, along with construction, administration, inspections, and close-out. za/engineering also provides forensic investigation services related to structural and non-structural failures (such as slips, trips, and falls, and construction disputes) to determine cause, nature, effect, required remedial actions, and to apply engineering methods and analysis techniques to those failures and/or defects.

#### **Forcon International**

*Red Hill, Pennsylvania*  
*Structural Engineering Consultant*  
*August 2021 to Present*

I am a part-time structural engineering consultant for Forcon International, where I conduct forensic engineering investigations and provide expert witness services as they relate to my areas of expertise.

#### **Global Forensic Engineers**

*Parsippany, New Jersey*  
*Senior Engineering Consultant*  
*August 2022 to Present*

I am a part-time senior engineering consultant for Global Forensic Engineers, where I provide forensic engineering services related to my areas of expertise.

## **Past Professional Experience**

### **State University of New York – Farmingdale State College**

*Farmingdale, New York*

*Adjunct Professor*

*January 2020 to December 2021*

I was an adjunct professor at my alma mater, Farmingdale State College, and taught CON207, Elements of Strength of Materials, within the Department of Architecture and Construction Management.

### **LGI Forensic Engineering PC**

*Westchester, New York*

*Senior Structural Engineer*

*November 2018 to June 2020*

I was a part-time structural engineering consultant for LGI Forensic Engineering PC. My responsibilities included forensic investigation related to structural engineering and building science matters, and I was responsible for authoring detailed technical reports related to failures and deficiencies, and to provide technical expert court testimony as required.

### **Rimkus Consulting Group, Inc.**

*New York, New York*

*Consultant – Structural, Construction, and Property*

*November 2016 to November 2018*

I was responsible for investigating, evaluating, and preparing reports on commercial and residential structures to determine the cause and origin of structural deficiencies, damage, or abnormalities within structures, due to vehicle accidents, construction accidents, improper construction, wear and tear, and weather-related disasters such as hurricanes, snowstorms, and floods. I also conducted building codes and standards research, contract and specification review, analysis of manufacturers data, and performed structural calculations, as required per project. In addition to the above, I was also responsible for surveying existing job site conditions and providing necessary data to estimating teams and/or drafting teams for production of cost estimates and/or construction drawings, and I was responsible for overall project management.

### **H2M Architects + Engineers**

*Melville, New York*

*Project Engineer – Forensics*

*January 2016 to October 2016*

I was responsible for building investigations and production of engineering reports for various public and private agencies, for both residential and commercial structures, for reporting on the cause and origin of damage, conducting research and analysis, and performing structural calculations. In addition, some assignments included assessment of damage to determine scope of work required for repairs, with estimation of cost using Xactimate when required.

### **Schmitt Engineering PLLC**

*Stony Brook, New York*

*Associate Engineer*

*March 2010 to December 2015*

I designed, analyzed, and produced drawings for structures and various associated components. I also managed construction projects from inception to completion, including field inspections and special inspections. I performed structural calculations and analysis as per publications by ASCE, IBC, AISC, ACI, and local building codes for commercial and residential buildings including new structures, and modification or rehabilitation of existing structures. I surveyed existing buildings in order to determine structural capacities for reuse, conducted on-site engineering inspections for new construction projects, including special inspections and compliance to contract drawings. I was also involved in forensic reporting and assessment of damage to structures in order to determine safety and stability and required repairs.

### **Ahern Contractors Inc.**

*Woodside, New York*

*Project Manager – Steel Division*

*June 2008 to December 2009*

I managed projects relating to rehabilitation and repair of major infrastructure, including airports, interstate bridges, tunnels, highways, and related structures. My responsibilities included verifying contract drawings and preparing shop drawings, reviewing structural rehabilitation proposals and contracts, estimating costs and material quantities, managing supplier relations, scheduling and execution of projects, and inspection of work after completion and before final inspection by client.

## **Professional Engineering Licenses**

**State of New York:** License Number 096497 - June 2016

**State of Connecticut:** License Number Pen.0032725 - October 2017

**State of Texas:** License Number 128419 - October 2017

**State of Pennsylvania:** License Number PE087161 - January 2018

**State of New Jersey:** License Number 24GE054551000 - July 2018

## **Education**

### **State University of New York – Farmingdale State College**

Dual Bachelor of Science – May 2008

Architectural Technology and Construction Management Engineering Technology - ETAC/ABET Accredited Programs

### **Cornell University**

Engineering Leadership Certificate – December 2018

### **State University of New York – University at Buffalo**

Master of Engineering – February 2023

Engineering Management

## **Recent Presentations and Public Events**

### **Career Development in Theory, Not Practice**

Joint Presentation at the NSPE National Conference – Philadelphia, Pennsylvania – August 2022

### **Structural Consideration When Installing Rooftop Solar Panels**

Engineer's Joint Committee of Long Island (EJCLI) E-Week Seminar – Long Island, New York – February 2021

### **An Introduction to Forensic Engineering**

A Joint Presentation by the Long Island Branches of the ASCE and NSPE – Long Island, New York – February 2021

### **Building Personal Resilience**

New York Build Expo, Manhattan, New York – March 2020

### **What if Forensic Engineering?**

New York State Society of Professional Engineers – Long Island Branch, Long Island, New York – January 2020

### **PE Day Advocacy for Professional Engineering Licensure**

Office of Congressman Pete King, and Office of Senator Kristin Gillibrand, Long Island, New York – August 2019

### **Structural Consideration When Installing Rooftop Solar Panels**

New York Build Expo, Manhattan, New York – March 2019

### **Moisture Intrusion and Mold Growth**

Chartwell Law Offices, Manhattan, New York – June 2018

### **Effects of Moisture Intrusion**

New York Build Expo, Manhattan, New York – March 2018

## **Recent Publications**

### **Don't Let an 'Imposter' Derail Your Career**

PE Magazine: The Magazine for Professional Engineers – Spring 2021 Issue

### **The Importance of Learning About History (For Engineers Who Never Liked History)**

PE Magazine: The Magazine for Professional Engineers – Fall 2020 Issue

### **Why Should I Care About Diversity in Engineering?** (Contributing Author)

PE Magazine: The Magazine for Professional Engineers – July/August 2020 Issue

## **Professional Memberships and Affiliations**

**American Society of Civil Engineers (ASCE):** Member – Since 2010

*Specialty Membership in Architectural Engineering Institute (AEI) and Structural Engineering Institute (SEI)*

*ASCE Met Section Long Island Branch, Board of Directors - Director of Communications – August 2022 to August 2023*

**National Society of Professional Engineers (NSPE):** Member – Since 2018

*NSPE Diversity, Equity, and Inclusion Committee Member – October 2019 to June 2022*

*NSPE Emerging Leaders Program Task Force – September 2020 to June 2022*

*NSPE New York Long Island Branch, Board of Directors - Vice President – June 2022 to June 2024*

**Structural Engineers Association of New York (SEAoNY):** Member – Since 2018

*SEAoNY Small Practice Engineering Committee Member – Since 2018*

**International Code Council (ICC):** Certified Member – Since 2018

**National Academy of Forensic Engineers (NAFE):** Associate Member – Since 2018

*Journal of the NAFE, Associate Editor – Since August 2022*

**ASTM International (ASTM):** Participating Member – Since 2018

*Specialty Membership in E58 Committee on Forensic Engineering*

**American Concrete Institute (ACI):** Member – Since 2019

**American Institute of Steel Construction (AISC):** Member – Since 2019

**International Association for Bridge and Structural Engineers (IABSE):** Member – Since 2019

**National Academy of Building Inspection Engineers (NABIE):** Member – Since 2020

**ACE Mentor Program of America (ACE):** ACE Team 33 Mentor – Since 2022

## **Additional and Past Certifications**

**National Council of Examiners for Engineering and Surveying (NCEES)**

*Active Record*

**Institute for Sustainable Infrastructure**

*Envision Sustainability Professional (ENV-SP) – December 2022*

**ASTM International**

*Property Condition Assessments Certificate – June 2020*

**National Society of Professional Engineers (NSPE)**

*Emerging Leaders Certificate Program – July 2019*

**The Snell Group**

*Certificate of Achievement, Infrared for Weatherization and Energy Audits – April 2018*

**Excel Tribometers LLC**

*Certified XL Tribometrist (CXLT) – November 2017*

**New York City Department of Buildings**

*Supported and Suspended Scaffold User Licenses – January 2017*

**Occupational Safety and Health Administration (OSHA)**

*30 Hour Construction Safety – August 2015*

**Engineers Without Borders**

*Professional Mentor, Stony Brook Chapter – 2013 to 2014*

**International Code Council (ICC)**

*Certified Structural Steel Inspector, S1 and S2 – 2012*