

## Joseph P. Roberts, M.E.C.E., P.E., S.E.

Senior Structural Engineer

[joseph@pseglobal.com](mailto:joseph@pseglobal.com)



April 13<sup>th</sup>, 2020

### PROFESSIONAL EXPERIENCE

#### **Paragon Structural Engineering, LTD.**

#### **Senior Structural Engineer (April 2020 – Present)**

As Senior Structural Engineer for Paragon Structural Engineering, LTD. (PSE), Mr. Roberts leads a technical staff of graduate engineers, project managers, and field technicians in the structural design and forensic investigation of planned and existing structures. Mr. Roberts structural design services include analysis and engineering of large, custom single-family residences, multi-family apartment/condominium complexes, low-rise commercial facilities, and ancillary structures (retaining walls, screen walls, and swimming pools) utilizing a variety of building materials including dimensional lumber, engineered wood products, rolled steel, light-gauge steel, CMU, masonry, and cast-in-place concrete. Mr. Roberts design projects include the following types of structural systems: conventional/post-tensioned elevated foundation systems, pier-and- beam elevated foundation systems, wood/steel/CMU superstructures, masonry/concrete/CMU ground-supported or elevated retaining walls, ground-supported or elevated screen walls, and ground-supported or elevated pools. Mr. Roberts also performs construction phase observations of the aforementioned structural systems to verify design compliance. Projects also include performing design of remedial work for the aforementioned types of structural systems. Mr. Roberts has performed engineering designs for hundreds of residential and low-rise commercial structures and dozens of retaining walls, screen walls, and pools.

Mr. Roberts structural forensic services include investigations concerning soil-structure interactions, performance of structural systems, evaluations of building envelopes, and determination of cause, origin, and extent of peril damage. Soil-structure interaction assessments include claims relating to design, construction, historic/current site effects, and moisture source influences. Structural system assessments include claims relating to patent or latent design and construction issues. Building envelope assessments include claims related to roof coverings, veneers, flashing, and weather resistive barriers. Peril assessments include claims relating to hurricane damage, tornado damage, lightning strikes, earthquakes, explosions, fire damage, and vehicle-structure collisions. Mr. Roberts performs site investigations and devises protocols for site-specific investigative tests that may include relative elevation surveys, geotechnical borings, geophysical resistivity surveys, ground- penetrating radar surveys, groundwater monitoring, water chemical analysis, test pit excavations, material strength tests, and water application/infiltration tests. His typical projects include single-family residences, multi-family apartment/condominium complexes, commercial facilities, and warehouses as well as ancillary structures such as retaining walls, screen walls, and swimming pools. Mr. Roberts has performed hundreds of forensic investigations, and he has authored expert reports for use in mediation, arbitration, and/or litigation.

#### **KWS Structural Consultants**

#### **Project Manager (July 2012 – March 2020)**

As project manager at KWS Structural Consultants, Mr. Roberts designed building per IBC and related reference standards. Structures included utilizing post-tension foundations, spread footing foundations, deep foundations, wood framing, light gauge (cold-formed steel) framing, structural steel framing, heavy timber framing, load bearing masonry, and reinforced concrete design. Projects included buildings from 20,000sqft to 270,000sqft and up to \$35 million budgets. Advanced projects also included seismic design and high wind (TDI and Miami Dade) design.

#### **Sabre Tubular Structures**

#### **Design Engineer (April 2011 – July 2012)**

As design engineer at Sabre Tubular Structures, Mr. Roberts designed transmission poles using PLS-Pole software. Specifications, drawings and project specific information were interpreted to develop efficient custom designs with calculation packages for various utility companies.

#### **Schricket Rollins and Associates**

#### **Graduate Structural Engineer (January 2010 – April 2011)**

As Graduate Structural Engineer at Schrickel Rollins and Associates, Mr. Roberts designed structural concrete, masonry, timber and steel. Projects included pedestrian bridges, cantilever retaining walls, soil nail retaining walls, traffic barriers, and single and multi-story buildings.

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## **PROFESSIONAL EXPERIENCE (CONTINUED)**

### **Structural Solutions Inc.**

### **Structural Intern/Graduate Structural Engineer (May 2008 – January 2010)**

As Graduate Structural Engineer at Structural Solutions Inc., Mr. Roberts performed structural steel design, connection design, and erection analysis. He also produced design calculations for structural steel connections.

## **PROFESSIONAL LICENSES**

State of Texas

Professional Engineer #116975

State of California

Professional Engineer #85284

NCEES National Registration

Professional Engineer #14-580-95

## **EDUCATION**

### **University of Texas at Arlington (Arlington, TX)**

Master of Engineering in Civil Engineering (structural emphasis), 2012 - Graduate, GPA 4.0

Bachelor of Science in Civil Engineering, 2009 - Graduate, GPA 3.9 Summa Cum Laude

## **PROFESSIONAL CERTIFICATIONS AND TRAINING**

Building Envelope Trained (BET-1), Building Envelope Science Institute (pending)

Building Envelope Certified (BEC-2), Building Envelope Science Institute (pending)

Model Law Engineer, National Council of Examiners for Engineering and Surveying (NCEES)

Ladder Safety (Single, Extension, Articulated, and Step), American Ladder Institute (pending)

Residential Roofs Inspector, Haag (pending)

Commercial Roofs Inspector, Haag (pending)

Rope and Harness for Steep Roof Slopes, Safety Services Company (pending)

Wind Damage Inspector, Haag (pending)

Wind Storm Inspector, Texas Department of Insurance (TDI) (Pending)

## **PROFESSIONAL ASSOCIATIONS**

Building Envelope Science Institute (pending)

## **EXPERT WITNESS DESIGNATION**

This curriculum vitae shall not be used for expert witness designation unless an authorized proposal has been executed with this firm.