



## Richard Kaczowski, P.E., S.E.

### VICE PRESIDENT, STRUCTURAL ENGINEERING & MECHANICS

Mr. Kaczowski has over 36 years of broad engineering experience encompassing construction problem investigation, structural analysis and design, building envelope leakage assessment, testing, code compliance evaluation, repair design, project management, construction product development, and intellectual property consulting.

Mr. Kaczowski currently serves as a Vice President of the Structural Engineering and Mechanics Group of CTLGroup. While at CTLGroup, Mr. Kaczowski has managed a wide range of projects related to problem investigation and repair of buildings and other structures. These projects have typically involved the assessment of structural distress or moisture leakage issues at roofs, exterior wall claddings, window and door systems, or foundations. Typical project scopes may involve field investigation, laboratory and/or field testing, analysis of problem cause(s), repair design, and expert testimony as needed. Mr. Kaczowski also has provided consultation to building product manufacturers related to new product development, product performance verification, building code compliance and intellectual property issues.

#### **Academic Credentials**

M.S. in Civil/Structural Eng.  
University of Illinois, 1984

B.S. in Civil/Structural Eng.  
University of Illinois, 1983

#### **Licensure/Certification**

Structural Engineer  
IL

Professional Engineer  
AR, FL, GA, ID, IL, IN, MI, MN,  
MS, MO, NE, NY, NC, PA, SC, SD,  
TN, UT, WI, WY  
NCEES

#### **Professional Affiliations**

American Institute of Steel  
Construction

ASTM International

Structural Engineers Association  
of Illinois

#### **Contact Information**

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Skokie, Illinois 60077

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#### **Representative Project Experience**

##### **Response to Severe Weather Events**

- Mr. Kaczowski has led or participated in the investigation of hundreds of buildings and other structures in the wake of major natural disasters including Hurricanes Frances, Charley, Jeanne, Rita, Katrina, Ike and Irma, as well as tornadoes, micro-bursts, and other storms involving high winds or severe rainfalls. Typical scopes of work involved determining the extent of damage, assessing the need for and designing shoring or other temporary measures to safeguard the structure, evaluating the cause of damage, and designing necessary repairs.

##### **Assessment of Developmental Cementitious Panel for Structural Use in Residential Construction in High Wind Areas.**

- Mr. Kaczowski served as Project Manager and Lead Engineer for the assessment of the suitability of a developmental cementitious sheathing panel for structural use in residential construction for high wind areas. This work included calculating the required structural capacities for axial, racking shear, and transverse loading for the targeted applications in accordance with applicable building codes and referenced standards, such as ASCE 7. It also included designing test assemblies and overseeing the execution of laboratory tests in accordance with ASTM standards, such as ASTM E72. The expected structural capacities of alternate materials, such as masonry and wood framing, were calculated in accordance with applicable masonry and wood standards, and compared with the structural capacity of the developmental panel as derived from the test results. A report was authored assessing the suitability of the developmental panel for structural use in the targeted applications.

##### **Structural Evaluation of Track Alley Slab and Support Structure | Covert, MI**

- Mr. Kaczowski served as Project Manager and Engineer-in-Responsible Charge for the assessment of a concrete slab and support structure at a nuclear plant to determine its suitability to accommodate increased live loads. The evaluation work he oversaw included field inspections of the overall structure and laboratory tests on concrete samples extracted from the structure to determine its strength and extent of deterioration, and to verify the as-built structural configuration relative to the original design drawings. Structural calculations were performed to assess the suitability of the structure for the increased loads, and supplemented by detailed finite element

analyses. The evaluation work also included obtaining displacement measurements during a trial application of the increased live loads to verify the analysis results. A comprehensive report was issued addressing the structural suitability of the slab and supporting structure for the increased loads.

#### **Assessment and Repair Recommendations of Structural Damage to Commercial / Industrial Buildings | Norcross, GA**

- Mr. Kaczowski served as the Project Manager and Lead Engineer for the assessment of structural damage and development of repair recommendations for eighteen office and warehouse buildings alleged to have been damaged by blasting from an nearby quarry. He oversaw field inspections conducted to determine the extent of damage and deterioration, which included directing a contractor to make openings through brick and drywall claddings to expose underlying structural elements. Structural analyses and calculations were performed in accordance with applicable building codes and masonry / steel industry standards. The assessment included the development of a recommended repair scope and details, and interfacing with contractors to obtain bids to implement the recommended repairs.

#### **Investigation and Structural Testing of Balcony Railings | Myrtle Beach, SC**

- Mr. Kaczowski served as the Project Manager and Lead Engineer for structural investigation and field testing of balcony railings for a 21 story residential building. As part of this work, he conducted and oversaw detailed field inspections of the railings from a swing stage to determine their as-built configuration and select critical railings and supporting posts for testing. He reviewed the applicable building code and relevant standards (such as ASCE 7 and ASTM Standards) to determine the required structural capacities. He oversaw the development of a field test procedure and, with the assistance of others working at his direction, conducted tests to verify the capacity of the as-built configuration. He also authored a comprehensive report documenting all work.

#### **Ray Compressor Station Exhaust Foundation Concrete Distress Evaluation | Armada, MI**

- Mr. Kaczowski served as the Engineer-in-Charge for the condition assessment, analysis, and development of repair recommendations for the foundation of a high temperature exhaust stack system. The field inspection work for this evaluation included the recording of surface temperatures on selected foundations in both operating and shut down conditions, visual surveys, hammer soundings, and the identification of as-built reinforcement locations using impulse radar methods. The evaluation focused on identifying the cause and recommended corrective actions for concrete cracking and delamination.

#### **Publications**

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Contributing Editor, Gypsum Construction Handbook, 5th Edition, published by USG Corporation, ©2000.

“Commonly Used Building Materials”, published as Chapter 1 of More Sticks + Bricks, ©2018 by American Bar Association.

#### **Presentations and Technical Seminars**

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“Commonly Used Building Materials and Basic Engineering Concepts,” part of the ABA forum on Construction Law Sticks and Bricks seminar, New York, New York.

“Building Envelope and Moisture Transport,” a LORMAN Group educational seminar, various locations.

“Field Investigative Techniques,” presented to Western Loss Association, Lombard, Illinois.

“Building Problems and Problem Buildings”, presented at Property Loss Research Bureau Annual Conference, Nashville, Tennessee.

“Construction Defects and Mold in Buildings”, presented at MidAtlantic Hygiene Research Center Training Seminar, Chicago, Illinois

“Construction Sites in the Urban Environment: Damages to Adjacent Structures”, a LORMAN Group educational seminar, Chicago, Illinois.

### **Prior Experience**

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#### **Packer Engineering, Inc., Naperville, Illinois, 2002 - 2010**

Vice President  
Senior Director

Mr. Kaczowski held several positions of increasing responsibility while at Packer Engineering, eventually serving as a Vice President and responsible for managerial oversight of the Construction Technology Group. The Construction Technology Group was comprised of eight to twelve engineers, architects, and support staff members in the Naperville, IL and Ann Arbor, MI offices. The Group provided a wide range of consulting services to solve construction related problems for the legal and insurance communities, property owners / managers, and general industry.

In addition to his managerial responsibilities, Mr. Kaczowski maintained an active construction consulting practice while at Packer Engineering, which included the following:

- Investigation, field testing, evaluation, and development of repair recommendations for buildings and other construction assemblies subjected to structural distress or failure. This work included investigation of storm damage, distress from settlement, foundation failures, failures during construction, and damage from impact or vibration.
- Investigation, field testing, evaluation, and repair design for building exterior envelope systems. This work addressed brick and stone masonry, wood and vinyl sidings, exterior insulation finish systems (EIFS), direct applied exterior finish systems (DEFS), portland cement plaster stucco, commercial and residential roofing, window and door assemblies, and curtainwall systems.
- Evaluation of construction for compliance to model building code requirements and relevant industry standards.
- Consultation to building product manufacturers related to new product development, product performance verification, building code compliance and intellectual property issues.
- Development and review of Quality Control programs for manufacturing production. This work addressed raw material specifications, in-process controls, final product testing and performance criteria, inspection and testing frequencies, procedures to be taken in the event of failure, and documentation requirements.

#### **USG Corporation, Libertyville, Illinois, 1993 - 2002**

Program Manager  
Senior Technical Staff Member  
Technical Staff Member

Mr. Kaczowski held several positions of increasing responsibility within the Research + Development Department of USG Corporation. USG Corporation was the

parent company for, among others, the largest U.S. gypsum drywall manufacturer (U.S. Gypsum Co.) and a leading building materials distributor (L+W Supply). As Program Manager of the Construction Systems Laboratory, Mr. Kaczowski oversaw the development of building system assemblies for wall, floor, ceiling, and roof applications. The Laboratory was also responsible for the performance verification and certification testing of all USG products and systems.

Mr. Kaczowski's work experience while at USG Corporation included the following:

- Development of new wall, floor, ceiling, and roof products and building systems for residential and commercial construction. This work included prototype design development, laboratory testing, and field trials.
- Analysis and testing of wall, floor, ceiling, and roof assemblies containing USG and competitor products and systems to model building code requirements and industry standards. These evaluations encompassed a large number of interior and exterior system assemblies and considered structural, environmental, fire, acoustical, and general serviceability performance criteria.
- Coordinating certification testing and obtaining approval reports from model code evaluation service groups and listing agencies. This work involved considerable interface with organizations such as the International Code Council Evaluation Services Group, Underwriters Laboratories, and Factory Mutual, and similar organizations.
- Development and review of Quality Control programs to ensure that manufacturing production satisfied applicable performance criteria.
- Field investigation and evaluation of construction problems potentially related to USG products and systems.
- Analysis of USG and competitor patents and intellectual property.

#### **Impell Corporation, Lincolnshire, Illinois, 1984 - 1993**

Supervising Engineer  
Lead Senior Engineer  
Senior Engineer  
Principal Engineer  
Engineer II

While at Impell Corporation, Mr. Kaczowski was responsible for the project management and the execution of work related to structural analysis and design of power plants and other industrial facilities.

Mr. Kaczowski's work experience while at Impell Corporation included the following:

- Development and application of design criteria and project specifications for stress analysis and structural design of nuclear power plants and other industrial facilities. This work included project management and staff supervisory responsibilities.
- Analysis and design of a variety of buildings, piping, equipment, storage tanks, crane supports, foundations, and other structural elements in power plants and industrial facilities. This work included detailed linear and non-linear computer finite element analysis for static and dynamic loads, and field investigations for seismic risk assessment.
- Engineering oversight of construction activities and technical field support for resolution of installation issues, providing response to contractor questions, evaluating field change requests, and similar tasks.