

MATTHEW E. KUBA, P.E.

Principal



Summary

Matt Kuba is the Midwest Regional Façade Engineering practice leader. He specializes in structural analysis, finite element modeling and thermal performance analysis of exterior wall systems, with a focus on glass and steel specialty structures. His portfolio includes higher education, government, residential, retail, cultural and commercial projects.

Matt provides design of exterior wall systems that optimize structural efficiency, aesthetics, and thermal performance. He believes in tailoring the level of detail to meet the unique needs of each individual project.

Areas of technical expertise

- Façade Forensics
- Façade Engineering

Education

- M.S., Structural Engineering/Civil Engineering, 2008, University of Wisconsin-Madison
- B.S., Civil Engineering, 2006, University of Wisconsin-Madison

Registrations

- Licensed Professional Engineer in AL, MA, MI, NC, NJ, NY, RI, TX, and WI

Select Project Experience

Façade Forensics

Faena House Condominium Tower, Miami Beach, FL

Investigation of alleged waterproofing, tile, guardrails, safety glazing and stucco deficiencies on a new construction. Provided sworn testimony regarding structural glass aspects of exterior guardrails.

Private Residence, Storm Loss Assessment, Dallas, TX.

Damage assessment services for insurer of private residence as a result of a tornado event. Glass assessment included review of hermetic seals for IGU's, scratched and broken glass claims.

Commercial Office Building, Lake Charles, LA.

Damage assessment services of curtain wall as a result of a hurricane event. Glass and curtain wall assessment included review of IGU seals, aluminum mullions, and curtain wall gaskets.

Confidential Residential Tower, Chicago, IL.

Expert consultant services in connection with the evaluation of certain alleged design and construction issues on a high rise residential tower. Services included investigation for the causation of operable vent hardware failures.

Confidential Residential Tower, Pensacola Beach, FL.

Hurricane Sally structural and building envelope damage assessment of a high-rise condominium tower.

Office and Apartment Buildings, Blast Damage, Milwaukee, WI.

Damage assessment services and owner representative during inspection and testing of various window systems as a result of an explosion. Assessment included review of curtain wall mullions, punched windows, storefront units, terrace doors, sliding doors, IGUs, weather seal gaskets, and operable window components.

Gun Lake Casino, Wayland, MI.

Damage assessment of broken glass on new monumental skylight and glass wall system above pool area. Glass assessment included site observation and review of laboratory test reports that confirmed NiS inclusions.

CONTACT

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University of Wisconsin-Madison Mechanical Engineering Building, Madison, WI.

Damage assessment of failed precast cornice piece that dislodged and fell onto lower roof of building. TT provided stabilization design for existing wall, structural assessment of existing structure to support stabilizing scaffold, and review of precast connections to assess causes and contributors of the anchorage failures.

Confidential Senior Living Housing, Condensation Investigation, Chicago Area, IL.

Investigation of exterior wall systems for condensation issues related to thermal performance of wall make up.

Confidential Hospital, Condensation Investigation, NY.

Investigated exterior wall systems for condensation issues related to thermal performance of existing wall make up and the proposed repair make up.

Office Building, Construction Defect Assessment, Madison, WI.

Investigation of glass breakage due to potential nickel sulfide inclusions, lamination bubbles, IGU primary seal failures, and site installed gasket issues.

Office Building, Construction Defect Assessment, Chicago, IL.

Review of glass balustrade design exhibiting excessive deflections in newly constructed condition.

Office Building, Lafayette, LA.

Engineering investigation of a six-story office building following reported distress caused by Hurricane Laura and Delta. The evaluation also included recommendations for repair methodology and scope of the lock-strip gasket curtain wall system and IGUs.

Private Residence, Bedminster, NJ.

Investigation of extensive IGU primary seal failures throughout private residence during sale process.

Condominium Tower, Miami Beach, FL.

Review of extensive glass breakage on newly constructed exterior glass balustrade.

Confidential Residential Tower, Glass Damage Assessment, Birmingham, AL.

Glass investigation and support services for insurer regarding widespread damage to IGUs during construction.

Confidential Highrise Office Building, New York, NY.

Investigation of failed fasteners on building envelope.

Confidential Office Building Madison, WI.

Investigative services related to glass defects on a new addition to a 9 story office building. The point supported, insulated glass walls exhibited multiple glass breakages, lamination bubbles, IGU primary seal failure, and site installed gasket issues. Provided on site observations to determine the likely causes of the glass breakage and other glass defects.

Façade Engineering

John F. Kennedy International Airport, New Terminal One, Jamaica, NY.

Structural, façade, and connection engineering, protective design, and Advanced Project Delivery under a design-build contract for Phase A of the international terminal. Phase A contains 15 gates and 1.85 million square feet. The three-level Headhouse with folded plate roof is supported on ten 100-foot-tall tree columns. The project includes a three-level Concourse with retail, airline lounges, customs and a subterranean baggage handling system.

TruStage Corporate Headquarters, Madison, WI.

Structural engineering and façade consulting services for the new 125,000-square-foot building on the CUNA Mutual Group's headquarters campus. The building will act as the primary entrance to campus. The design contains a 500 person auditorium, a 4-story feature stair, and a 4 story atrium. The exterior wall systems feature a 60-ft.-tall steel fin wall, a unitized curtain wall with terracotta and aluminum brise soleil, a custom back-lit rain screen system, and long-span stick curtain wall.

The Couture, Milwaukee, WI.

Structural and façade engineering services for a 860,000-square-foot mixed-use development comprised of a 44-story tall/slender residential tower with public, retail and restaurant areas in the podium base. The site contains a new light rail connection that passes through the low-rise podium and over the 2-story basement parking levels.

Arkansas Museum of Fine Arts, Little Rock, AR.

Structural and façade engineering for the renovation of the existing theater and studio spaces and the expansion of new education facilities and gallery space. The building will engage its historic MacArthur Park setting by creating interior and exterior public gathering areas. Façade work includes a new built up steel T mullion with veneer system, traditional curtain wall, storefront and customized curtain wall to match a historic 1937 system.

Sworn Testimony

Deposition, 3315 Tower Condo. v. Coastal Const., regarding an investigation of alleged waterproofing, tile, guardrails, safety glazing and tiles deficiencies on new construction. Provided testimony regarding structural glass aspects of exterior guardrails. Miami Beach, FL. February 3, 2022.

Select Papers, Lectures and Publications

"Tilt!" Extraordinary Laminated Glass Projects, Chicago, IL, October 2019 (presenter)

"Role of Glass Engineer," GlassConGlobal Conference, Boston, MA, July 2016 (presenter)

"Integrated Structural and Thermal Design of Facades," GlassCon Global Conference, Philadelphia, PA, July 2014 (presenter)