

GEORGE R. MULHOLLAND, S.E., P.E.

Associate Principal



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George Mulholland is a licensed Structural and Professional Engineer with 29 years of experience specializing in the evaluation, investigation, and repair of distressed facades, buildings, and structures. His portfolio has encompassed cast-in-place, precast, and post-tensioned concrete, masonry, steel, and timber structures with a specialization in parking garages.

He has served as Project Manager on numerous investigation projects utilizing the latest techniques and testing approaches, ranging from exterior facade and masonry wall evaluations to concrete deterioration, steel corrosion, and other structural performance-related problems and collapses. His investigative responsibilities consist of structural component surveys, structural strength evaluations, nondestructive testing, building code compliance, field testing, and material sampling. Project investigations have included destructive openings; concrete crack and delamination mapping; steel corrosion, waterproofing membrane, and masonry wall evaluations; and exterior wall critical examinations. He has extensive knowledge of remedial design approaches for rehabilitation, durability, and strengthening of structural framing components and connections to prevent, manage, and control air, water, and vapor migration of building envelopes, and historic facade restoration.

Mr. Mulholland has performed structural analysis, finite element modeling, nonlinear analysis, and structural peer reviews on a range of building types.

With his extensive knowledge of structural and facade assessments and repair, he has provided litigation support and served as an expert witness on related failures.

■ EDUCATION

Master of Science in Structural Engineering, 1988
 University of Illinois at Urbana-Champaign
 Bachelor of Science in Civil Engineering, 1986
 Iowa State University

■ REGISTRATIONS

Licensed Structural Engineer in Illinois
 Licensed Professional Engineer in Arizona, Illinois, Iowa, Missouri, and South Carolina
 Registered Safety Assessment Program Evaluator,
 Disaster Service Worker

■ PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)
 ASCE Standards Committee on Structural Condition Assessment, Chairman
 Precast/Prestressed Concrete Institute (PCI)
 PCI Building Code Committee
 Structural Engineers Association of Illinois (SEAOI)
 American Institute of Steel Construction (AISC)
 International Concrete Repair Institute (ICRI)
 Chicago Chapter, Director



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■ PUBLICATIONS

- "Communication and Concrete Slabs, Balancing Owner Expectations with Construction and Design Realities," G.R. Mulholland and W.J. Macicak, *The Construction Specifier*, August, 2017
- "Grain Elevator Collapse," RRJ *Insight* Issue No. 30, K.R. Hoigard and G.R. Mulholland, August 2013
- "Terra Cotta Facade Repairs on Two Mellon Center," Proceedings of the Tenth North American Masonry Conference, St. Louis, MO, R.C. Haukohl, G.R. Mulholland, and K.R. Hoigard, June 2007
- "Terra Cotta Facades," Building Facade Maintenance, Repair, and Inspection, ASTM STP 1444, J.L. Erdly and T. A. Schwartz, Eds., ASTM International, West Conshohocken, PA, K.R. Hoigard, G.R. Mulholland, and R.C. Haukohl, 2004
- "Detecting Mild Steel Hairpin Anchors in Stone Cladding," *Stone World*, K.R. Hoigard and G.R. Mulholland, March 2003
- "Two Mellon Bank Center Terra Cotta Restoration," RRJ *Insight* Issue No. 15, K.R. Hoigard and G.R. Mulholland, September 2000
- "Evaluation of Stone Cladding Anchorages on Precast Concrete Building Panels," Proceedings, Degradation of Natural Building Stone, American Society of Civil Engineers, Minneapolis, MN, K.R. Hoigard and G.R. Mulholland, October 1997
- "Structural Analysis of Stone Clad Precast Concrete Building Panels," Proceedings of the 34th U.S. Symposium on Rock Mechanics, Madison, WI, K.R. Hoigard, R.W. Kritzler, and G.R. Mulholland, June 1993
- "Non-Loadbearing Precast Concrete Panel Shear Wall-Type Behavior," Proceedings, Architectural Precast Concrete Cladding - Its Contribution to Lateral Resistance of Buildings, Prestressed Concrete Institute, Chicago, IL, C.H. Raths and G.R. Mulholland, November 1989

■ PRESENTATIONS

- "Restoration of Masonry," International Masonry Institute, Chicago Chapter Workshop, Addison, IL, November 6, 2017
- "Retrofit Subgrade Waterproofing Options and Pitfalls," International Concrete Repair Institute, Fall Convention, W.J. Macicak and G.R. Mulholland, Ft. Worth, TX, October 2015
- "Repair Methods for Stone Facades," Dimension Stone Cladding: Design, Construction, Evaluation, and Repair, ASTM STP 1394, Hoigard, K. R., Ed., ASTM International, West Conshohocken, PA, K.R. Hoigard and G.R. Mulholland, 2000
- "Investigation and Repair of Terra Cotta Facades," American Society of Civil Engineers, Illinois Section Structures Group, K.R. Hoigard and G.R. Mulholland, February 17, 1999