

Joel M. Wolf, P.E., LEED AP
Principal Engineer

Professional Profile

Mr. Joel Wolf is a Principal Engineer in Exponent's Buildings and Structures practice. He has more than 28 years of experience diagnosing and solving problems associated with building technology and structural engineering. Mr. Wolf has a broad-based knowledge of both the architectural and structural systems that make up most buildings. He leads the Exponent's Building Technology Group, specializing in performance assessment of building envelope components to withstand moisture intrusion and its associated effects such as decay and corrosion, as well as environmental loads such as wind and seismic forces. Building types investigated include low-rise residential and commercial buildings as well as mid-rise and high-rise structures. Mr. Wolf has extensive knowledge of exterior wall systems and components including stucco (cement plaster), Exterior Insulation Finish Systems (EIFS), hardboard siding, glass fiber reinforced concrete (GFRC) panels, concrete and natural stone panels, concrete and brick masonry systems, glass and metal curtain walls, and residential and commercial windows. Mr. Wolf has performed both field and laboratory testing of window and wall systems.

Mr. Wolf has performed numerous investigations of both low-slope and steep roof systems including built-up and single-ply roofing, architectural and structural standing seam systems, asphalt composition shingles, cement fiber shakes, wood shingle and shake, and concrete and clay tile. Below-grade and plaza waterproofing systems investigated include polymer-modified asphalt membranes, bentonite-based systems, crystalline waterproofing and fluid-applied membranes.

Mr. Wolf has investigated structural/serviceability failures of building systems both during and after construction. He has investigated damage to hundreds of structures from the 1989 Loma Prieta, 1994 Northridge and the 1995 Kobe, Japan earthquakes. Much of his structural work has focused on the failures of wood-based products and structural systems.

Prior to joining Exponent, Mr. Wolf held several research positions that include Research Engineer for Structural Research Incorporated and Research Assistant for the USDA Forest Products Laboratory.

Academic Credentials and Professional Honors

M.S., Civil and Environmental Engineering, University of Wisconsin, Madison, 1979
B.S., Civil and Environmental Engineering, University of Wisconsin, Madison, 1977

Licenses and Certifications

Registered Professional Civil Engineer, Arizona, #51210
Registered Professional Civil Engineer, California, #C039366
Registered Professional Civil Engineer, Wisconsin #22717

U.S. Green Building Council, Leadership in Energy and Environmental Design Accredited Professional, LEED AP, 2009

Publications

Wolf J, Griffith M. Wind-driven rain as a design parameter. 2008 ASCE Structures Congress, Vancouver, B.C.

Woodframe Project Case Studies. In: CUREE 2001, Schierle GG (ed). CUREE Publication W-04, Richmond, CA.

Wolf, J, Shusto L. Case Study 7: Sherman Oaks Condominium.

Wolf J, Osteraas J. Case Study 8: Santa Clarita Apartment Complex.

Wolf J, Osteraas J. Case Study 9: Northridge Complex.

Huet R, Wolf J, Moncarz P. Delayed fracture of tempered glass panels due to nickel sulfide inclusions. In: Handbook of Case Histories in Failure Analysis. ASM International, 1992.

Moncarz P, Osteraas J, Wolf J. Designing for maintainability. Civil Engineering, June 1986.

Presentations

Wolf J. Investigation and diagnosis of building problems. Distributors Council, Annual Meeting, Calgary, Alberta, October 6, 2005.

Wolf J. The forensic investigation, what to look for and how to find. Defense Research Institute, Construction Law Seminar, Scottsdale, AZ, September 9-10, 2004.

Wolf J. Impact of building defects on mold growth. Chicago Building Congress, Keynote Speaker, Chicago, IL, November 20, 2002.

Wolf J, Lahnert B. Performance of latex-modified thin-set mortars in applications of thin-brick veneer. American Society of Civil Engineering Convention, Denver, CO, August 1990.

Moncarz P, Osteraas J, Wolf J. Impact of design construction/maintenance practices on structural deterioration. American Society of Civil Engineering Convention, Seattle, WA, April 1986.

Technical Reports

Wolf J. Study of subsidence and related damage due to the construction of the Portman Hotel in San Francisco. Failure Analysis Associates, Inc., Report, April 1987.

Wolf J. Bending strength of timber poles—A summary and evaluation of literature. Forest Products Laboratory Internal Report, 1979.

Prior Experience

Research Assistant, Forest Products Laboratory, Madison, Wisconsin 1978–1979
Engineer, Structural Research Inc., Middleton, Wisconsin, 1979–1983

Professional Affiliations

- American Society of Civil Engineers (member)
- American Concrete Institute (member)
- Structural Engineers Association of Northern California (member)