DAVID WEBSTER

Senior Managing Engineer

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LOCATION
Seattle, WA

BIOGRAPHY

David Webster is a Senior Managing Engineer at YA Group with more than 30 years of experience as a structural engineer. In his role, he provides technical leadership and engineering expertise across new design, structural retrofits, field testing, and advanced analytical and mathematical modeling, supporting complex projects and delivering practical solutions for clients.

David has extensive experience working with a wide range of construction materials, methods, building codes, design standards, and analytical techniques. He is adept at developing solutions from first principles and has applied diverse problem-solving strategies, including statistical methods and experimental design, to address complex engineering challenges. Over the past two decades, he has completed dozens of structural vibration evaluations and has instrumented buildings to collect and analyze noise and vibration data.

David's additional industry experience includes a strong focus on delivering cost-effective, implementable solutions that meet or exceed client expectations. His specialized expertise in structural vibration analysis and performance evaluation, combined with his broad technical background, enables him to provide practical, data-driven recommendations across a wide range of project types and conditions.

REPRESENTATIVE CONSULTING ASSIGNMENTS

- Various | WA & OR | Structural Design | New and retrofit design of a variety of steel-framed, reinforced concrete, post-tensioned concrete and wood framed buildings.
- Various | US Wide | Insurance Claim Investigations | Field investigation and reporting for hundreds of residential and commercial structural failures, structural damage assessments and water intrusion investigations for insurance carriers. Prepared permit drawings and calculations for WA & OR projects upon request.
- Various | US Wide | Litigation Support | Assisted attorneys with litigation proceedings for dozens of construction defect, design defect and personal injury cases associated with structural designs and structural failures.
- Steel-framed Manufacturing Facility | Natchitoches, Louisiana | Bridge Crane Failure Investigation | Investigation of industrial bridge crane corbel failure. Fatigue analysis and conceptual design for retrofit.
- Wood-framed Civic Building | Fairbanks, Alaska | Damage Investigation for Owner | Field investigation and material testing of exterior wood columns to inform building maintenance and repair planning for borough.
- Industrial Cooling Tower | Fruitland, New Mexico | Collapse Invsetigation | Structural collapse investigation and material testing of wood-framed cooling tower.
- High-rise Building | Chicago, Illinois | Vibration Mitigation | Structural vibration investigation and design of machine vibration isolation system for industrial washing machines. Preparation of permit drawings.
- Industrial Warehouse | Arlington, Washington | Vibration Evaluation | Field monitoring and evaluation of floor vibrations for human comfort inside warehouse.
- Research Facility | Seattle, Washington | Construction Noise & Vibration Monitoring | Field monitoring of construction vibrations impacting lab operations. System was designed to operate continuously for 12- months and alert lab staff when sound and vibrations exceeded acceptable thresholds.
- Confidential Client | Carlstadt, New Jersey | Collapse Investigation | Collapse investigation and analysis of steel-framed roof structure due to roof drain failure and subsequent ponding instability.
- Various | Christchurch, NZ | Earthquake Damage Assessment | Assisted lawyers and insurance carriers with Canterbury Earthquake Sequence damage allocation and repair consenting for a wide variety of commercial, high-rise residential and industrial buildings.
- Various | Canada & NZ | Third-party Peer Review | Third-party peer review of high-rise and sports stadia structural design.
- Confidential Client | Portland, Oregon | Seismic Evaluation and PML | Condition assessment and seismic performance evaluations of several buildings on single campus. Evaluated earthquake Probable Maximum Loss (PML) for different periods of earthquake hazard exposure.
- Sports Arena | Seattle, Washington | Seismic Evaluation & Design | Structural analysis and design for the seismic retrofitting and refurbishment of Key Arena.

PROFESSIONAL EXPERIENCE

- **2026 - Current** | Senior Managing Engineer | YA Group
- **2020 - 2026** | Principal Engineer | Jensen Hughes
- **2014 - 2020** | Senior Associate II | Thornton Tomasetti
- **2013 - 2014** | Senior Engineer | Sargent & Lundy
- **2009 - 2013** | Research Assistant | Univ. of WA
- **2001 - 2010** | Structural Engineer | KPFF

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- **2000 - 2001** | Student | Univ. of MN
- **1999 - 2000** | Structural Engineer (contract) | Sinclair Knight Merz, Sydney, AUS
- **1998 - 1999** | Structural Engineer | Price & Myers, London, UK
- **1997 - 1998** | Structural Engineer | Connell Wagner, Sydney, AUS
- **1996 - 1997** | Structural Engineer | Price & Myers, London, UK
- **1995 - 1996** | Structural Engineer | Atelier One, London, UK
- **1994 - 1995** | Engineer | Neil McKenzie & Associates, Brisbane, AUS

PRACTICES & SKILLSETS

- Structural Analysis
- Failure Analysis
- Seismic Evaluations and Retrofit Design
- Condition Assessment

PUBLICATIONS AND PRESENTATIONS

- Webster, D., J. “Lessons Learned from a Former Design Engineer”, Oral Presentation, Washington Defense Trial Lawyers Association, Seattle WA, January 2025.
- Webster, D., J. “Forensic Structural Engineering – An Introduction”, Oral Presentation, Construction Lawyers Society of America, Los Angeles CA, July 2024.
- Webster, D., J. “Dynamics in Earthquake Engineering”, Oral Presentation, George Mason University, Fairfax County VA; 2021.
- Designed and instructed class in Advanced Steel Design (CESG-524) at the University of Washington in winter quarter; Seattle WA, 2019-2020.
- Webster D., J., Berman J., W. & Lowes L., N. “Experimental Investigation of SPSW Web Plate Stress Field Development and Vertical Boundary Element Demand,” Journal of Structural Engineering, 2014 140(6).
- Webster D., J. “The Inelastic Seismic Response of Steel Plate Shear Wall Web Plates and Their Interaction with the Vertical Boundary Members,” Ph.D. Dissertation, 2013.
- Webster, D., J. “Alternative SPSW Web Plate Model Through Analytical and Experimental Investigations,” Oral Presentation, 44th Annual Structures Congress, Pittsburgh PA, March 2013.
- Webster, D., J. “The Elastic and Inelastic Post-Buckling Behavior of Steel Plate Shear Wall Web Plates and Their Interaction with Vertical Boundary Elements,” Oral Presentation, Structural Stability Research Council Annual Stability Conference, Grapevine TX, April 2012.
- Webster, D., J. “Design of Multi-tuned Mass Damper for Ridgefield Footbridge,” Oral Presentation, 43rd Annual Structures Congress, Chicago, IL, March 2012.
- Webster, D., J. “Overview of Design, Analysis and Control of Building & Footbridge Vibration”, Oral Presentation, University of Washington. May 2010.
- Webster, D. J., "Managing Shrinkage Cracks in HCA-Waterproofed Concrete Structures", Waterproof Magazine, December 2025.

EDUCATION

- Queensland University of Technology - Bachelor of Engineering (Civil) - Civil/Structural Engineering - Brisbane, Australia
- University of Minnesota - Master of Civil Engineering - Structural Engineering - Minneapolis, Minnesota
- University of Washington - Doctor of Philosophy (PhD) - Structural Engineering - Seattle, Washington

AFFILIATIONS

- ASCE Professional Member
- Affiliate Assistant Professor - Dept. of Civil & Environmental Engineering, University of Washington.

LICENSES

- Structural Engineer (SE) - Washington - License #38848
- Structural Engineer (SE) - Oregon - License #96260SE
- Structural Engineer (SE) - Utah - License #11737691-2203
- Structural Engineer (SE) - Hawaii - License #PE-19325
- Professional Engineer (PE) - Colorado - License #61028
- Professional Engineer (PE) - Idaho - License #19339
- Professional Engineer (PE) - Montana - License #PEL-PE-LIC-63227

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SERVICE SPECIALTIES

- **Forensic Engineering & Architecture** | Building Envelope, Engineering, Seismic Engineering & Risk Assessment, Forensic Engineering – Litigation Support and Expert Witness, Construction Defect Investigations, Forensics, Design & Code Review, Failure & Damage Investigations, Repair Design

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