

ENGINEERED RESEARCH GROUP, INC.

W. Andrew Fennell, PE, CPEng, FIEAust.

Principal / Construction Consultant / Civil Engineer

Education

Bachelor of Engineering (Civil)	1996
Queensland University of Technology, Australia	
Completed 10 Engineering Classes, U.C. Berkeley	1993 - 1996
University of California, Berkeley	
Numerous seminars and continuing education activities	1992 - present

Professional Accreditations

Registered Professional Engineer	(Civil)	
State of California	(CA Engineer Lic. C 58931)	1999 - present
State of Hawaii	(HI Engineer Lic. 9978)	2000 - present
State of Nevada	(NV Engineer Lic. 20894)	2010 - present
Chartered Professional Engineer	(Civil, Structural)	
Australia	(NPER Lic. 94254)	1999 - present
Queensland	(RPEQ Lic. 09822)	2010 - present
Licensed General Contractor		
State of California	(CA Contractor: "B", Lic. 769481)	1999 - present
Certified Building Inspector		
International Code Council	(Cert. 877723)	1994 - present
Registered Emergency Services Volunteer (Civil Engineer)		
California Governor's Office of Emergency Services (No. 04215)		2001 - present

Employment History

Engineered Research Group Inc. (ERG)	
President / Construction Consultant / Civil Engineer	2016 - present
Scientific Construction Laboratories, Inc. (SCL)	
Principal / Construction Consultant / Civil Engineer	2003 - 2015
Jax Kneppers Associates, Inc. (JKA)	
Construction Consultant / Civil Engineer	1992 - 2003
University of California – Berkeley (UCB)	
Lecturer - Department of Civil and Environmental Engineering	2002, 2009,
CE-124 Structural Design of Timber	2017, 2018, 2019.

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Work Experience - Typical duties have included:

Project Manager - Numerous projects ranging from single-family residences and multi-family dwellings to industrial and commercial construction. Responsibilities included:

- Inspection, evaluation and testing of engineered building materials, components and assemblies.
- Building structure and envelope design, construction, performance evaluation and repair/retro-fit analysis (roofs, floors, claddings, fenestrations, sub-systems). Typical issues include weather-resistivity, waterproofing, durability, structural engineering, cost engineering, fire-resistivity, acoustic isolation, corrosion-resistance, mold, etc.).
- Coordination of Forensic Investigations requiring specialty consultants such as Petrographers, Geotechnical Engineers, Industrial Hygienists, Metallurgists, Acoustic Engineers, etc.
- Application/interpretation of applicable Codes, Standards, manufacturer installation instructions & construction documents (plans, specifications, contracts, subcontracts, warranties, etc.).
- Claims Analysis (Including Schedule & Impact Delay).
- Project manager for additions, alteration and retrofit of numerous projects including design evaluation, compliance with applicable Codes & Standards, administration of construction contract, and Owner Representative services.

Civil Engineer - Various design tasks including the preparation of structural design calculations, construction documents, specifications and drawings. Performed field inspections on numerous projects to evaluate "as-built" conditions. Prepared detailed evaluation of construction documents including both technical and contractual analyses.

Litigation Support - Retained as a forensic construction consultant and/or designated as an expert on hundreds of projects to represent Plaintiffs, Developers, General Contractors, Sub-contractors and Manufacturers.

Qualified as an expert witness in trial and/or arbitration including the following construction matters:

Building Code Issues	Contract Analysis
Construction Defect Analysis & Repair Methods	Cost Estimating
Engineering Design & Specification	Impact / Delay Claims
Building Envelope Performance	Field and Laboratory Testing
Standard of Care	Allocations

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Professional Affiliations

Structural Engineers Association of California (SEAOC)	Member	1997 - present
International Code Council (ICC, formerly ICBO)	Member	1994 - present
American Society of Civil Engineers (ASCE)	Member	1996 - present
Institution of Engineers, Australia (IEAust)	Fellow	1998 - present
American Concrete Institute (ACI)	Member	2014 - present

Seminar(s) / Teaching / Publications / Awards

Lessons Learned from Recent Failures of Structural Timber Appurtenant Assemblies 11/29/18
ASCE Forensic Engineering 8th Congress, Austin, TX
American Society of Civil Engineering (ASCE)

Spring Seminar: Recent Design Updates for Exterior Elevated Elements (EEE's) 03/29/18
Structural Engineers Association of Northern California (San Francisco, CA)

Lecturer for CE-124 Structural Design in Timber 2002, 2009, 2017-2019
University of California - Berkeley
Department of Civil and Environmental Engineering

S.B. Barnes Research Award 06/2016
Structural Engineers Association of Southern California (Los Angeles, CA)

Summer Seminar: Recent Design Updates for Wood & Masonry Construction 06/17/15
Structural Engineers Association of Northern California (San Francisco, CA)

Interim report on testing of tension-only steel anchor rods embedded in reinforced concrete slabs. (Fennell, et al):

- 82nd Annual Convention, San Diego, CA 09/2013
Structural Engineers Association of California (SEAOC)
- Light Frame Engineering Symposium, Stockton, CA 10/2013
Simpson Strong-Tie Company, Inc. (SSTC)
- Structures Congress 2014, Boston, MA 04/2014
American Society of Civil Engineers (ASCE/SEI)
- 10th US National Conf. on Earthquake Engineering, Anchorage, AK 07/2014
Earthquake Engineering Research Institute (EERI)
- Awarded 2011 "Special Projects Initiative" Grant 05/2011
Structural Engineering Association of Northern California (SEAONC)

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Seminar(s) / Teaching / Publications / Awards (continued)

Spring Seminar: Update on SEAOC "Blue Book" – Seismic Design Recommendations Structural Engineers Association of Northern California (San Francisco, CA)	03/17/10
Wood-framed design in seismic areas: re-tooling for the IBC in light of current design practice. (VanDorpe, Chou & Fennell).	(IBC-2009) 12/2010 (IBC-2006) 10/2007
Report on laboratory testing of anchor bolts connecting wood sill plates to concrete with minimum edge distances. (Fennell, et al):	
• 78th Annual Convention, San Diego, CA Structural Engineers Association of California (SEAOC)	09/2009
• 3 rd International Conf. on Advances in Experimental Structural Engineering, Pacific Earthquake Engineering Research (PEER)	10/2009
• 9 th US National Conf. on Earthquake Engineering, Toronto, Canada Earthquake Engineering Research Institute (EERI)	07/2010
• Awarded 2009 "Special Projects Initiative" Grant Structural Engineering Association of Northern California (SEAONC)	05/2009
• Awarded 2011 "Excellence in Structural Engineering" Award Structural Engineering Association of Northern California (SEAONC)	05/2011
• Awarded 2011 "Excellence in Structural Engineering" Award Structural Engineering Association of California (SEAOC)	09/2011
Construction Risk - Liability, Coverage and Challenges in the Contracting Industry Surplus Line Association of California	02/09-10/09
Numerous articles and papers published by the SEAOC Seismology Committee Many are included in the 2009 printing of the SEAOC "Blue Book" Structural Engineers Association of California (SEAOC)	2005-2009
Design Considerations for Wood-Framed Structures in California LORMAN Educational Services	08/23/06
Structural Aspects of Deck Construction American Society of Home Inspectors (ASHI) – Golden Gate Chapter	09/08/05
Fall Seminar: Wood Construction: Design, Detailing & Plan Approval Structural Engineers Association of Northern California (San Francisco, CA)	11/17/04

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Seminar(s) / Teaching / Publications / Awards (continued)

Durable Decks: Construction, Degradation & Inspection University of California Cooperative Extension - Durability Seminar Series	11/10/04
Earthquake Design Manual for Low Rise Building Structures SEAOC Code Streamlining Committee	01/2004
Developing a Practical Interpretation and Application of the Building Code to Wood Frame Building Diaphragm Design (Mochizuki, G.L.; Fennell, W.A.) SEAOC 71st Annual Convention, Santa Barbara, CA	09/2002
Forensic Evaluation of Mold (Fennell, W.A; Hermens, J.M.) Toxic Mold Liability Conference, (Attorneys / Contractors) Bridgeport Continuing Education (Sacramento, CA)	06/27/02

Technical Committees - Structural Engineers Association of California (SEAOC)

Seismology + Structural Standards Committee

Member	2005-2009	- State Level (California)
Observer	2002-2005, 2010-present	- State Level (California)
Member	2002-Present	- Chapter Level (Northern Section)
Chair	2007-2008	- Chapter Level (Northern Section)

Light Frame Construction Subcommittee

Member	2002-Present	- State Level (California)
Chair	2002-2006	- Chapter Level (Northern Section)
Member	1999-present	- Chapter Level (Northern Section)

Code Evaluation Report Committee

Member	2011-Present	- State Level (California)
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Code Streamlining Committee / "Earthquake Design Manual"

Member	2002-2004	- State Level (California)
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Technical Activities – Peer-reviewed Journal Papers (by invitation)

Hiroshi Y., Bending properties of MDF & plywood obtained by compression bending test. Forest Products Journal: 2011, Vol. 61, No. 1, pp. 56-63.

Demirel et al. Face lateral shear resistance of one-row multi-staple joints in oriented strandboard. Forest Products Journal: 2013, Vol. 63, No. 5-6, pp. 207-212.

Piao, C., Monlezun, C. et al. Mechanical Properties of Finger-Jointed Wood from Composite Utility Poles Made of Small Diameter Timber. Forest Products Journal, (paper withdrawn by authors).

Olson, B., Dolan, J.D., Duncan, B., and Schiedermeier, H (2015) Potential Use of Deformed Shank Nails as a Solution to Annoying Vibrations in Wood Floor Systems. Forest Products Journal: 2015, Vol. 65, No. 3-4, pp. 76-83.

Technical Activities – Other

Committee 332, Residential Concrete American Concrete Institute (ACI)	(Voting Member)	2014 - present
ICC Tri-Chapter Prescriptive Crawlspace Retrofit Committee Plan Set "A"		2004
City of San Francisco – Department of Building Inspection Sunset District "Soft-Story" Retrofit Project		2006-07

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Technical Activities – Expert Witness Testimony

Trial Testimony	Deposition Testimony (continued)
Bachelor v Patterson	Goldeen v. Presley
Heffel v. Presley	Rosato v. Presley (El Chico)
Jenkins v. Presley	Summit Ridge v. Shakertown
Carter v. Motel 6 Corporation	Devonwood COA v. Centex, et. al.
Quartz Drive Self-Storage (JB v Brelle-West)	Truck Insurance v. Colony at Mandalay Beach
Walsh v WLHI	Barnett v. Ken's Restaurant
LMI v TIG (Franklin Street Apartments)	Sea Beach HOA
Chavez v Silver	Daggett v. WL Homes
	Jasper v. Allen
Arbitration Testimony	Lombardo v. MBP et al
Daggett v. WL Homes, Inc.	Bachelor v. Patterson et al
Swirles v. The Driveway Specialists	Boss v. Murphy
Riley v. Chien	City of Pinole v. CHAP et al
Nesladek v. Dettling Construction	Griggs v. Spielbauer
846-848 North Point, San Francisco	Louis v. Presley
3838 Sacramento St. HOA v. C.O.D Builders	Cabernet Vineyards v. J. Lohr Properties
Port of Hueneme – Channel Entrance Wharf	VandenBerghe Properties v. Ashwood Homes
San Pedro Marina Pointe v. Palos Verdes Dev.	Baywood COA v. Sequoia Equities
McGuinness v. Songer Construction Management	Agoncillo v. Presley
Bluffs Senior Housing v. Wathen-Castanos	Weiner v. Cal-Shake
Irvine v. Segue (Cherry Orchard)	Walshin v. Presley
Irvine v. Segue (Pines B-1)	Roberson v. Allstate
	Rancho Arroyo Grande v. US Home
	Irvine v. Segue (Cherry Orchard)
Deposition Testimony	Antoine v. Hunt
	Vineyard Park v KB
McMullan v. Presley	CUSD v RRM (Cambria Elementary School)
Sebasto v. Presley	Irvine v. Segue (Pines B-1)
Oak Hollow / Diablo Ridge v. Presley	Quartz Drive Self-Storage (JB v Brelle-West)
Coleman v. Presley	Walsh v William Lyon Homes
Sweeney v. Presley	Liberty Mutual v TIG (Franklin Street Apts)
Lewis v. Tom Dodge Builders	Regents v Devcon (UC Santa Cruz)
Howard L. Jenkins III v. Presley	Nicholson v Seascape Ridge HOA
Hummel v Castle Properties	Chavez v Silver
Geweke Trust v. SD Deacon	Sibbitt v Sierra Village
ABA-Roseville v. Crane	Levi's Stadium ADA Claims

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Project Experience (Partial List)

131 Steuart Street, San Francisco, CA
301 Brannan Street, San Francisco, CA
350 Rhode Island, San Francisco, CA
31 Amberwood Lane, Walnut Creek, CA
7 Victorian Apartments, San Francisco, CA
Alderwood Apartments vs. Weyerhaeuser, Lynnwood, WA
Allison v Presley, Davis, CA
Antelope Hills, Fremont, CA
AOAO Olaloa Retirement Village, Mililani, HI
Benventano v. Presley, Elk Grove, CA
Bethel A.M.E. Church, Oxnard, CA
Brown Residence, Orinda, CA
Buck Mansion, Vacaville, CA
Cabernet Vineyards v. J. Lohr Properties, et. al.
California Plaza v. Dillingham, Walnut Creek, CA
CENTEX Homes, multiple homes in Northern/Central/Southern CA
Concord Methodist Church, Concord, CA
Cohan Residence, Camarillo, CA
Cromer Residence, Ojai, CA
Cypress Cove, Half Moon Bay, CA
Devonwood v. Centex, Hercules, CA
Dublin Sewer Claim, Dublin, CA
Eastern Development, Clayton, CA
Ennis Development Corp. vs. Weyerhaeuser
Excel Homes, Greene, NY
Fieldstone Homes, numerous homes in Southern CA
Gateway Apartments, San Leandro, CA
Habitat for Humanity, Brentwood, CA
HS Wright Construction v. Balch, San Jose, CA
ICF Kaiser Engineers vs CBR Corp., Tehachapi, CA
Jang Residence, Orinda, CA
JFK Int'l Airport - Skylight Damage Claim
John Laing Homes – Daggett Residence, Sacramento, CA
Kaiser Hospital Phase II Waterproofing, Walnut Creek, CA
KB Homes – multiple homes in Northern CA
KPIX Channel 5 Earthquake Site Inspections, Napa

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Project Experience (Partial List) continued

Lennar Homes, numerous projects in Northern/Central CA
Library Gardens Balcony Deck Collapse, Berkeley, CA
MBK Homes, numerous homes in Southern CA
Motel 6 – Roof Damage, Pittsburg, CA
Oakhollow / Diablo Ridge Condominiums
Ogando Residence, Orinda, CA
Oracle Buildings – Re-roofing, Redwood Shores, CA
Pacific Regents, La Jolla, CA
Pacific Stable Building, Old Town, Sacramento, CA
Palace of Fine Arts, San Francisco, CA
Park Almaden HOA, San Jose, CA
Parkmead Elementary, Walnut Creek, CA
Pentagon Project, Arlington, VA
Pierpont Village, Ventura, CA
Pinole Senior Village, Pinole, CA
Pisor Fence v. Biltwell Development, Napa, CA
Pointe Sausalito, Sausalito, CA
Port of Hueneme – Cool Carriers Facility, Oxnard, CA
Port of Hueneme – Channel Entrance Wharf, Oxnard, CA
Port of Hueneme – Del Monte Building, Oxnard, CA
Port of Hueneme – Building 101 & 434, Oxnard, CA
Port of Hueneme – Office Building, Oxnard, CA
Port of Hueneme – Wharf 1 Ship Impact, Oxnard, CA
Rancho Temescal – Hay Barn/Shop, Piru, CA
River Run Apartments, Vacaville, CA
San Francisco Airport – T-3/BAE Claim Analysis, San Francisco, CA
San Francisco Airport – Tunnel Waterproofing, San Francisco, CA
San Francisco Airport – Data Center, San Francisco, CA
San Francisco Art Institute, San Francisco, CA
San Quentin Seawall, San Rafael, CA
Santa Fe Ridge Apartments, Silverdale, WA
Sea Ranch Project (Burbank Housing), Sea Ranch, CA
Silvas Adobe, San Juan Capistrano, CA
Stucco / Earthquake Damage at Colony, Oxnard, CA
Sunset Pointe, Long Beach, CA
Susanville Prison – Re-roof, Susanville, CA
Serreno Project (The Bluffs), Modesto, CA

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Project Experience (Partial List) continued

South Coast Metro Centre, Costa Mesa, CA

Truckee Sierra Resort & Spa, Truckee, CA

US Homes, numerous homes in Northern CA

Vokach-Brodsky Residence, Cupertino, CA

Walnut Creek Gas Pipeline Explosion, Walnut Creek, CA

Weyerhaeuser Class Action (Hardboard siding products), USA

William Lyon Homes (+ former Presley Homes) – Numerous projects in California

Willow Ridge Apartments, Tacoma, WA

Winncrest Homes, numerous homes in Northern CA

Windsor Court Apartments, Antioch, CA

Woodside Homes, multiple homes in Northern CA