



CURRICULUM VITAE

ROBERT HOLMER, PE, GE PRINCIPAL ENGINEER

AREAS OF EXPERTISE

SWIMMING POOL ACCIDENT INJURY AND CONSTRUCTION DEFECT

- Engineer of Record for over 30,000 residential and 500 public swimming pool projects.
- Performed over 100 Forensics Investigation of swimming pool construction defects/failures
- 20 years expert witness experience including over 40 depositions and testimony at 7 trials
- Special Expert on the Technical Advisory Committee with the Uniform Swimming Pool, Spa, and Hot Tub Code
- Numerous publications in conference proceedings and trade magazines on various topics for best practices of swimming pool construction
- Numerous speaking engagements at conferences and trade shows on various topics for best practices of swimming pool construction
- Degrees in Civil Engineering from California Polytechnic State University and the University of Colorado
- Registered Civil and Geotechnical Engineer and licensed in nine states
- Engineering license exam development with the California Board of Professional Engineers
- Past Director for the California Geotechnical Engineers Association

Education

California Polytechnic State University, Bachelor of Science in Civil Engineering, 1994

University of Colorado, Master of Science in Geotechnical Engineering, 1998

Certifications

Registered Civil Engineer: CA, FL, NV, TX, CO, HI, MO, PA, NM

Registered Geotechnical: CA

PROFESSIONAL EXPERIENCE

Rob is the President of H2 Engineers Inc, an engineering consulting firm specializing in the design, engineering and construction of swimming pools and aquatic facilities. Prior leadership roles have included Principal Engineer and Sacramento Office Manager with Terracon Consultants, Inc (2014 to 2019), Director of Aquatic Engineering Services, Director of Field and Laboratory Testing Services, and Chief Operations Officer of Neil O. Anderson & Associates (2000 to 2014). In 2005, Rob opened the Concord office of NOA and managed both Sacramento and Concord offices.

Expert witness consulting makes up approximately 50% of Rob's practice. His clients have included owners, contractors, attorneys, insurance companies, and public agencies. He has been retained by both plaintiff and defense and has testified more than 30 times at deposition and trial.

SWIMMING POOL ENGINEERING EXPERTISE

Rob has served as the Engineer of Record for the successful construction of over 30,000 residential and 500 commercial swimming pool projects. Rob specializes in the most challenging swimming pool projects including large residential and commercial facilities, rooftop pools, competition pools, public and private recreation facilities, and water parks. His engineering consultation services includes structural, geotechnical, mechanical systems, hydraulics, water treatment, materials engineering, risk management, and code compliance.

GEOTECHNICAL ENGINEERING EXPERTISE

Over the span of his career, Rob has authored over 1000 Geotechnical reports and investigations. He is an experienced expert in many geotechnical disciplines including: soil mechanics, deep and shallow foundations, expansive soils, ground water monitoring, temporary and permanent construction dewatering, pavement design, slope stability analysis, liquefaction, geosynthetics, retaining walls, and materials testing.

FORENSICS ENGINEERING EXPERTISE

Rob has performed forensic investigations to diagnose the cause of defects at more than 100 swimming pools throughout the United States. Using a combination of both destructive and non-destructive test methods, Rob carefully and comprehensively evaluates construction materials, foundation systems, mechanical equipment, plumbing, and water treatment for compliance with construction documents, industry standards and building codes. Rob is an expert in reverse engineering and diagnosing construction defects and structural failures related to all phases of swimming pool construction including structure settlement, structure heave, concrete (shotcrete) workmanship defects, reinforcement workmanship defects, waterproofing failures, porcelain and stone tile failures, plaster failures, water treatment deficiencies, and mechanical system failures. Field methods used to perform investigations have included, but are not limited to, visual inspection, concrete coring and testing, geotechnical drilling and sampling, ground penetrating radar, and laboratory testing.

PROFESSIONAL AFFILIATIONS

Uniform Swimming Pool, Spa, and Hot Tub Code, Technical Advisory Committee Member, 2015 – 2021
 Pool and Hot Tube Alliance – International Code Council Drafting Committee for Rooftop Pools
 California Geotechnical Engineers Association (CGEA), Board of Directors 2002 ~ 2008
 California Board of Professional Engineers, Geotechnical License Exam Development, 2005~2006
 Forensics Expert Witness Association (FEWA), Member
 ANSI/PHTA/ICC-10 – Standard for Elevated Pools, Spas, and Aquatic Venues, Voting Committee Member
 ACI 322 – Concrete Pool and Watershape Code, Voting Committee Member

PUBLICATIONS

- **“Hazards of Loose Fill”**, co-authored with Neil Anderson, Case Study of Swimming Pool Failure, Pool and Spa News, January 23, 2006
- **“Unpopping a Pool”**, co-authored with Neil Anderson, Case Study of swimming pool failure, Pool and Spa News, April 10, 2006
- **“Patio Deck Heave”**, co-authored with Neil Anderson, Case Study of swimming pool decking failure, Pool and Spa News, May 22, 2006
- **“Shaky Ground”**, co-authored with Neil Anderson, Case Study of swimming pool failure, Pool and Spa News, July 24, 2006
- **“Gunite Troubles”**, co-authored with Neil Anderson, Case Study of swimming pool failure, Pool and Spa News, September 18, 2006
- **“Reviving a Classic”**, co-authored with Neil Anderson, Case Study of swimming pool renovation, Pool and Spa News, January 22, 2007
- **“Elevated Engineering”**, Part 1 of 2, Engineering and Construction Considerations for roof-top pools, Watershapes, November 4, 2015
- **“Overhead Defects”**, Part 2 of 2, Case Studies of failures of roof-top pools, Watershapes, November 18, 2015.
- **“Everybody Loves a Pool, But What’s Lurking Beneath the Surface”**, Co-Author with Michael Phiffer, Conference proceedings, RCI Building Envelope Technology Symposium, October 2016, Houston, Tx.

LECTURES

- **“The Anatomy of a Perfectly Engineered Pool”**, 9 hour workshop on soils, structures, and materials, Pool Industry Expo, Sept 2004, Monterey, Ca
- **“Swimming Pool Engineering”**, 4 hour workshop on soils and structures, Sacramento Valley Association of Building Officials, June 2005, Sacramento, Ca
- **“Case Histories of Swimming Pool Failures”**, 4 hour lecture on swimming pool failures, their causes, and repairs, April 2006, Hyatt Regency Hotel, Sacramento, Ca
- **“Case Histories of Swimming Pool Failures”**, 4 hour lecture on swimming pool failures, their causes, and repairs, Pool Industry Expo, September 2006, Monterey, Ca
- **“Swimming Pool Engineering”**, 6 hour workshop on soils, structures, and case histories, Sacramento Valley Association of Building Officials, June 2008, Sacramento, Ca
- **“Everyone Loves a Pool, But What’s Lurking Beneath the Surface”**, 2 hour lecture on engineering and construction considerations of rooftop pools. RCI Building Envelope Technology Symposium, October 2016, Houston, Tx.
- **“Pool Shell Structural Failures, Case Studies”**, 2 hour lecture on swimming pool failures. International Pool, Spa, and Patio Expo, New Orleans, November 2016
- **“Swimming Pool Structural Failures, How to Avoid Them and How to Fix Them”**, 2 hour lecture on swimming pool failures. International Pool, Spa, and Patio Expo, Dallas, November 2021

PARTIAL LIST OF EXPERT WITNESS EXPERIENCE

Year	Case	Counsel	Plaintiff/Defense
2023	Seabrook v. Kulla	Alexander Holburn	D
2023	Insalaco v. CCC	McNamara Law	D
2023	Allende v. 5 Star	Gray Duffy, LLP	D
2023	Eagle Fitness v. HDT Pools	Hawley Troxell, LLP	D
2023	Gonzales v. Bluegreen	Law Office of Domingo Garcia, LLP	P
2023	Hamilton Teaff v. Main Street	Law Office of Richard Levine, P.C.	P
2023	Turner v. City Wide	LJU Law Firm	P
2023	Ochoa v. Waterways	O'Brien Zender Las	P
2023	Raft v. Maggetti	Rossi, Hamerslough, Reischl, & Chuck	P
2023	Carrooll v. Lagoon	Snow, Christensen & Marin	D
2023	Hughes v. Becker	Wolfe & Wyman, LLP	D
2022	Enns v. Richie Hampton	Alexander Holburn	D
2022	Galen v. Blakely	Biesty, Garretty & Wagner	D
2022	Solares v. Eminence Pools	Bimonte Law	P
2022	Palmer v. Big Cedar Lodge	Caddell Reynolds Law Firm	P
2022	KRC Rock v. Elite Landscape	Clausen Miller P.C.	D
2022	McNulty v. Cooper King Hotel	Datsopoulos, MacDonald & Lind, P.C.	P
2022	Marcher v. Air Liquid	Dean Omar Branham & Shirley, LLP	D
2022	Mid Atlantic Construction v. City of Allentown	Deasey, Magoney & Valentini, LTD	D

2022	Crovetti v. Dax	Dickinson Wright PLLC	D
2022	Kaelber v. Gillette Bros	Fieger Law	P
2022	Figueroa v. Padilla	Gray Duffy, LLP	D
2022	Las Cruces Rehabilitation v. Pools by Design	Kent Smith Law	P
2022	Mendez v. Geosoils	Kutak Rock, Attorneys at Law	D
2022	Ciraulo v. T&J	Merry Farnen & Ryan P.C.	P
2022	Oswald Residence	Morris, Polich & Purdy	P
2022	Narvick v. Creative Environments	Philadelphia Insurance Company	D
2022	Eola Condo v. BA Eola LLC	Pursiano, Barry, Bruce, Simon, LLP	P
2022	McDowell v. CW Hotels	Queenan Law	P
2022	Amaya v. Sage Pools	Sandhu Law Group, APC	D
2021	Dahmer v. Coeur d'Alene Resort	Datsopoulos, MacDonald & Lind, P.C.	P
2021	Nichols v. Davis	Law Office of Tim O'Hare	P
2021	Bernstien v. Meadow Brook	McNamara Law	D
2020	Marina City Club v. Marina City COA	Greenberg Glusker LLP	P
2020	Mahbubian v. Lemkin	McNamara Law	D
2020	Svajion v. Jamba	Resnick & Louis, P.C.	D
2020	Valencia v. DPT	Romano Law	P
2020	Narang v. Patel	Steele Law Group	P
2019	Northkey v. Karisma	Beasley, Allen, Crow, Methvin, Portis & Miles	P
2019	Seidenberger Injury	Chapman Bowling	P
2019	Moore v. Advanced Pools	Colderbank Law	P
2019	Mackesey v. Venco	Merrill Nomura Law	P
2019	Killian Residence	Morris, Polich & Purdy	P
2019	Rozmiarek v. Duffy	Peterson, Poll & Trostler	D
2018	Hyatt Place Hotel	Bullivant Houser Bailey	D
2018	Davis v. Porter	McNamara Law	D
2018	Vineyard Valley LLC	Trainor Fairbrook	P
2015	Greer v. Legacy Partners	Gibbs, Giden, LLP	D
2014	Campbell v. Cupertino	Law Office of David Burnett	P
2013	Stofer v. Shapell	Newcomb Law Offices	D
2012	Hotel Terra adv. Shaw Construction	Schwartz, Bon, Walker, & Studer, LLC	D
2011	Briar Chapel Country Club	Parker Poe	P
2009	Hotel Partners v. Swinerton	Pahl & McCay	P