

John G. Shipp, S.E., F.ASCE
Senior Managing Engineer

Professional Profile

Mr. Shipp is a licensed civil and structural engineer with over 40 years of diversified professional experience. Mr. Shipp has served as a structural engineering manager for numerous projects ranging in cost from \$10 million to more than \$200 million, and has supervised staffs of structural, civil, mechanical, and electrical engineers, architects, and designers. He has performed structural analysis and design, site-adaptation and proto-typical facility design, and seismic retrofit design of various municipal, commercial, residential, and industrial buildings, high-rise office and medical buildings, modular structures, offshore structures, petrochemical plants, and nuclear facilities. He has also been responsible for the development of structural design criteria, and the design and analysis of many buildings for retrofit construction to strengthen these structures to meet current building code criteria, and/or to repair damage caused by earthquakes. Mr. Shipp has also developed detailed analysis/design criteria for numerous essential facilities that require analysis for tornado-induced pressure and missile loads, ANSI wind and snow loads, seismic qualification of equipment, seismic analysis including two- and three-dimensional response spectra and time histories, blast design, and in-structure response spectra generated from both time histories and site-specific response spectra. He also has extensive experience in the application of FEMA 350-353, FEMA 273/356, and FEMA 310 (FEMA 178, ATC-14, ATC-22) methodologies.

Mr. Shipp has performed structural evaluation and retrofit analysis for damage caused by earthquakes to a variety of structural systems, including both low rise and high rise buildings, for most of the major earthquakes dating back to the 1971 Sylmar California earthquake, with extensive studies of damage from the 1987 Whittier, 1989 Loma Prieta, and the 1994 Northridge California earthquakes. Mr. Shipp has also performed similar studies for damage caused by wind and/or water (storm surge) due to Hurricane Katrina for buildings located in Louisiana, Mississippi, and Alabama.

Prior to joining Exponent, Mr. Shipp was a Vice President and Office Director with ABS/EQE. Mr. Shipp was a part-time faculty member at the California State University, Long Beach, where he taught courses in structural analysis, timber design, steel design, reinforced concrete design, and advanced structural design and analysis

Academic Credentials and Professional Honors

M.S., Civil Engineering, University of Southern California, 1967
B.S., Civil Engineering, California State University, Long Beach, 1964
A.A., Engineering, Long Beach City College, California, 1962

Engineer of the Year Award- SEAOSC, June 2000; Institute for the Advancement of Science, Fellow; Tau Beta Pi-California Theta, Civil Engineering Honor Society

Licenses and Registrations

Licensed Professional Engineer (Civil), California, #CE 17905
Licensed Professional Engineer (Structural), California, #SE 1728
Licensed Professional Engineer (Civil/Structural), Hawaii, #6435-S
Licensed Professional Engineer (Civil/Structural), Washington, #28167

Publications

Shipp JG. Separate licensing for structural engineers, two-tier practice act. ASCE 150th Anniversary Annual Conference, Washington, D.C., November 3–7, 2002.

“A Comprehensive Plan Check Procedure,” *Building Standards*, May/June 2001 (with B. Nagarajim).

“Findings from Cyclic Testing of Plywood Shear Walls,” *Structure*, March 2001.

“The Seismic Design Handbook—Second Edition,” Klumer Academic Publishers, 2001 (with F. Naeim).

“Plywood Shearwalls—Cyclical Testing Gives New Design Insight,” *Structural Engineering*, July 2000.

“Structural Steel Details,” *Civil Engineering*, March 1984 (with T. Sakoff).

“Design of Headed Anchor Bolts,” *AISC Engineering Journal* 20, No. 2, 1983.

“Bolted Joints on Trans-Alaska Pipeline Structures,” *ASCE Journal of the Structural Division* 103, No. ST1, January 1977 (with J.M. Plecnik).

“Single Leg Catenary Mooring and Anchors,” *ASCE Journal of the Waterway, Port Coastal and Ocean Division*, 1978.

“Structural Design of Timber Structures—Vol. 1 and Vol. 2,” Professional Engineering Publications, Inc. 1994.

Presentations

“The Performance of Steel Moment Resisting Frames During the Northridge Earthquake,” Paper presented at the 5th DOE National Phenomena Hazards Mitigation Symposium, Denver, CO, November 1995 (with R.O. Hamburger).

“A Rational Elf Dynamic Analysis for IBC 2000,” Paper presented at the 1995 Annual SEAOC convention; published in Proceedings, 1995 SEAOC Convention, October 1995 (with M. Lew and M. Kallros).

“Northridge Earthquake, 17 January 1994: Seismic Performance of Steel.” Paper presented at American Iron and Steel Institute 1994 General Meeting, New York, May 1994.

“Seismic Strengthening of Johnstown Tank in Lakeside, California,” Paper presented at Structures Congress 93; published in Proceedings, April 1993.

“Seismic Design of Wood and Masonry Buildings,” Paper presented at Boston Society of Civil Engineers 1991 Seismic Design Lecture Series; published in Lecture Series Proceedings, October 1991.

“Performance of Engineered Buildings,” Paper presented at ASCE's 9th Structures Congress; published in Conference/Book Title for Structures Congress 1991, April 1991.

“Earthquake Damage Evaluation and Earthquake Repair for Emporium Capwell Building,” Paper presented at the 1990 Annual SEAOC Convention, published in Proceedings 1990 SEAOC Convention, September 1990.

“Seismic Loss Estimation for Non-Structural Components in High-Rise Buildings,” Paper presented at 4th U.S. National Conference on Earthquake Engineering, May 1990.

“Use of Vibration Isolation for Support of Large Module with Mounted Reciprocating Compressors: Prudhoe Bay, Alaska,” Paper presented at the 1987 Annual SEAOC Convention; published in Proceedings 1987 SEAOC Convention, October 1987.

“Interactive Anchorage Design Using ACI-349,” Paper presented at ACI Annual Convention; published in convention proceedings, March 1984.

“Low Temperature Effects on High Strength Bolted Steel Connections,” Paper presented at the 2nd International Symposium on Cold Regions Engineering, University of Alaska, Fairbanks, Alaska, August 1976 (with J.M. Plecnik).

Chair of Publications

- Seismic Design Manuals
- Volume I – Code Application Examples
- Volume II – Building Design Examples Light Frame, Masonry and Tilt-up
- Volume III – Building Design Examples Steel, Concrete and Cladding
- 2000 IBC Structural/Seismic
- Volume I – Design Manual Code Application Examples
- Volume II – Design Manual Building Design Examples
- Volume III – Design Manual Steel & Concrete Building Design Examples

Professional Affiliations

Structural Engineers Association of California (Past President); Structural Engineers Association of Southern California (Past President); National Council of Structural Engineering Associations (Past Member Board of Directors); Consortium of Universities for Research in Earthquake Engineering (Past Member Board of Directors); American Society of Civil Engineers (ASCE), Life; ASCE Forensic Engineering Technical Group; American College of Forensic Examiners; Forensic Consultant's Association of Orange County; CSULB; American Institute of Steel Construction; American Concrete Institute; Portland Concrete Association; Earthquake Engineering Research Institute; The Masonry Society; International Conference of Building Officials (Professional Member); Applied Technology Council (Past Member Board of Directors); National Council of Examiners for Engineering and Surveying