
Juan Carlos Araiza | Vice President – Large/Complex Loss, Ph.D., P.E.

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Professional Summary:

Dr. Araiza has over twenty years of design, construction, research, and technical leadership experience related to the evaluation of existing structures, forensic engineering, and expert witness services. He also has extensive experience with structural dynamics and advanced finite element modeling applied to failure analysis. He has led the forensic investigation of some of the most significant structural collapses in the U.S. in the last few years, including the 2018 collapse of the FIU Bridge in Miami and the 2019 collapse of the Hard Rock Hotel in New Orleans.

Dr. Araiza holds a Ph.D. in Structural Engineering. His experience includes failure investigations of a wide variety of buildings, transportation, water, and power facilities in the United States, South America, Europe, and Asia. He is an active member of the ASCE Forensic Engineering Division and ACI Committee 444 on Structural Health Monitoring. He is a registered Professional Engineer in the States of Texas, Florida, California, Maryland, Arkansas, and in Mexico.

As Vice President with EFI Global, Juan Carlos and the Large Loss Practice provide world-class engineering consulting services on large and complex property losses to facility owners, insurance carriers and re-insurers, independent adjusters, and attorneys.

Areas of Expertise:

- Forensic Engineering
- Structural Failure Analysis
- Structural Analysis/Finite Element Analysis
- Non-destructive Testing and Structural Health Monitoring
- Leadership on Consulting Engineering Services

Licenses and Certifications:

Professional Engineer, Texas, #110876
Professional Engineer, Florida, #79944
Professional Engineer, California, #C80119
Professional Engineer, Arkansas, #17973
Professional Engineer, Maryland, #51768
Registered Engineer in Mexico, #2560494 (Civil Engineering)
NCEES Record holder
USAV Pilot License (Drones) by FAA

Project Experience:

Forensic Engineering

FIU Bridge Collapse Investigation, Miami, FL. Lead Forensic Engineer for Builders Risk Insurer
Forensic Investigation, Lead Structural Engineer, Hard Rock Hotel collapse, New Orleans, LA.
MGM National Harbor, MD, Parking Garage partial collapse investigation and retrofit for owner
Hard Rock Hotel, Palm Springs, CA, Condition Assessment and Retrofit Design for owner
Post-Earthquake Assessment of multiple industrial facilities in Mexico City after the 2017 EQ
Post-Hurricane Assessment of multiple Industrial facilities in Houston, TX after Hurricane Harvey, 2017

Round Butte Dam, Jefferson County, OR: Vertical flow conduit failure investigation

Mokelumne Aqueducts, Oakland, CA: Investigation of seismic isolator failures

Sacramento Region Water Treatment Plant, Elk Grove, CA: Digester No. 5 structural failure investigation

AMTRAK Sacramento Valley Station, CA: Forensic investigation of platform excessive cracking

Valero Refinery, Houston, TX: Evaluation of cracking issues in sulfur recovery tank

Las Vegas Stadium – Raiders new NFL Venue. Investigation of reported construction defects and seismic retrofit for insurer

Structural Evaluation and Retrofit

Early-Age concrete bridge deck cracking investigation for the California Department of Transportation, statewide, CA

Inter-American Development Bank, Port-au-Prince, Haiti: Post-earthquake evaluation of bank facilities

Guy West Suspension Bridge over the American River, Sacramento, CA: Condition assessment

Devil's Slide Tunnel, Pacifica, CA: Panel support design for tunnel liner

Muscatine Municipal Airport, IA: Concrete assessment and recommendations for airfield pavement preservation

Caldecott Tunnel, CA: Assessment of concrete consolidation issues, concrete liner

Tocumen Airport expansion, Panama, Panama: Alkali-Silica reaction evaluation in concrete

BahaMar Casino and Resort, Nassau, The Bahamas. Structural consulting and NDT for GC China Construction

Crescent Dunes Solar Plant, Tonopah, NV. Structural health monitoring of concentration tower.

DeCordova Power Plant. Granbury, TX. Structural assessment of existing power-generation infrastructure.

Washington Monument, Washington D.C.: Finite element analysis for seismic retrofit after 2011 Earthquake

Alcatraz Warden House, San Francisco, CA: Vibration monitoring during construction activities

Court Qualifications/ Depositions:

Litigation CV available upon request.

Professional Experience:

EFI Global, Inc., Vice President – Large/Complex Loss, 2020- present
DeSimone Consulting Engineers, Principal and Forensic Engineering Practice Leader, 2017 – 2019
University of Texas at Austin, Invited Lecturer, 2013 – Present
CTLGroup, Principal Engineer and Vice President, 2013 – 2016
Wiss, Janney, Elstner Associates, Inc., Project Manager and Senior Associate, 2009 – 2013
Sparks Engineering Inc., Senior Consultant, 2007 – 2009
University de Colima-Mexico, Professor, 2003 – 2007
InPat Consulting - Mexico, Principal, 2003 – 2007
Barcelona Tech – Spain, Research Fellow Construction Engineering Dept., 1998 – 2003
Consorcio Hogar, S.A. – Mexico, Structural Engineer, 1998
Ingenieros Civiles Consultores, Associate Bridge/Transportation Engineer -. Mexico, 1997

Education:

Ph.D. Structural Engineering – European Doctorate Mention, Barcelona Tech, Spain, 2003.
B.Sc., Civil Engineering – Honors, Universidad Autónoma de Aguascalientes, Mexico, 1996

Affiliations:

American Society of Civil Engineers (ASCE)
American Concrete Institute (ACI)

Committee participation:
ASCE/ACI Committee 343 on Concrete Bridge Design
ACI Committee 444 on Structural Health Monitoring
ACI Committee 546 on Repair of Concrete
ASCE Forensic Engineering Division
– Committee on Forensic Investigations
– Committee on International Activities