

Here is What Awaits You!

- Geotechnical Earthquake Engineering Overview and Projects
- Awards and Recognitions

Design and retrofit of buildings in the urban cores of seismically vulnerable regions present several unique seismic, geotechnical, geologic, and constructability challenges. In close collaboration with leaders in academia, the engineers at ENGEO developed precise methodologies for performing seismic-hazard and site-response analyses for new structures and existing buildings. These approaches allow us to provide optimised earthquake engineering, typically resulting in much more efficient superstructure designs in seismically active urban environments.

Earthquake Engineering Overview



Geotechnical Earthquake Service

ENGEO's engineers use advanced methods, including non-ergodic and ergodic analyses, to perform site-specific geotechnical earthquake engineering.

We address unique challenges in urban core buildings of seismically vulnerable regions, leading to more efficient designs and collaborate with regulatory agencies to ensure timely permitting and project advancement. Our peer-reviewed analyses highlight our commitment to excellence.

[Learn More](#)



Meet Our Geotechnical Earthquake Engineering Team in US/NZ



This is ENGEO's Earthquake Engineering Team!

Ayoub Riman, CMEngNZ (CPEng)

Bahareh Heidarzadeh, PhD, PE

Chris Nicas, PE

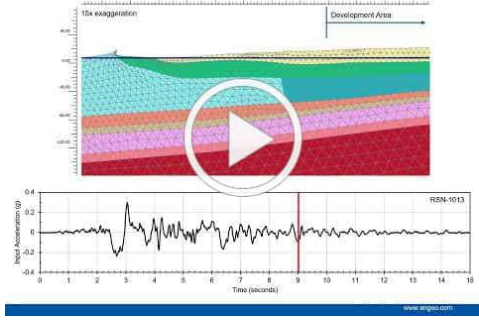
David Teague, PhD, GE

Pedro Espinosa, GE

Stephanie Cherfane, CMEngNZ (CPEng)

[Learn More](#) about their journey.

Understanding PLAXIS GRA with PM4Sand: A Geotechnical Insight



Understanding PLAXIS GRA with PM4Sand: A Geotechnical Insight

As shown in this video, ENGEO uses advanced modelling techniques to improve earthquake resilience at a waterfront site in San Francisco. The first part shows the impact of ground shaking on the existing conditions, while the second part demonstrates how a soil-cement-mixed buttress can stabilise the site and reduce deformations.

Featured Projects



1 Whitmore Street: The Pinnacle of Seismic Performance

ENGEO provided geotechnical, environmental, and hydrogeological services for the development of a multi-rise commercial structure located at 1 Whitmore Street, Wellington, New Zealand. The now-completed building is a waterfront, 12-story, base-isolated structure, with an approximately one-story basement that has been formed to accommodate the base isolation system below ground level.

An in-depth understanding of the ground, seismic performance, and our practical approach allowed ENGEO to recommend a robust design that met and exceeded the requirements and achieved one of the most resilient buildings on Wellington's Waterfront.

[Learn More](#)



Sutter Medical Center of Santa Rosa, Medical Center Expansion

ENGEO utilised lean design and integrated project delivery methods, along with advanced building technologies, to enhance efficiencies and optimise project outcomes.

Our contributions included addressing geotechnical hazards such as moderate liquefaction and seismic softening potential, as well as compressible soil, ensuring a streamlined construction schedule and cost-effective solutions.

[Learn More](#)

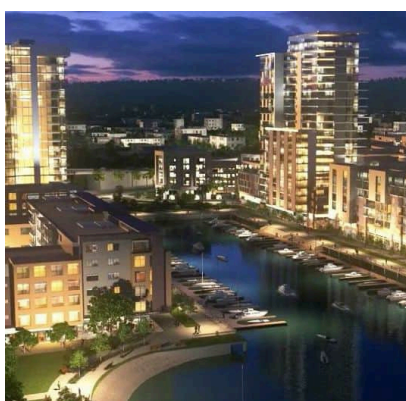


Atlas Block: Building Resilience from the Ground Up

ENGEO is the Geotechnical Engineer-of-Record, providing design recommendations for new and existing foundations, seismic-hazard mitigation, soil-structure interaction, constructability, and temporary stabilisation.

ENGEO has been performing an evaluation of the foundation systems with a three-dimensional finite element model to more accurately predict differential performance between new and existing buildings.

[Learn More](#)



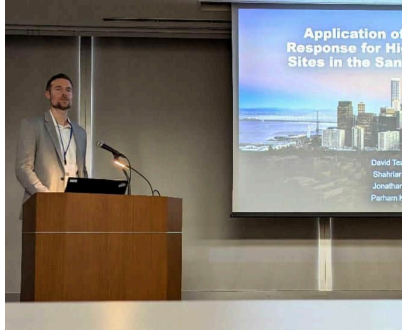
Brooklyn Basin: Transforming the Urban Life experience

The project consists of an environmentally sustainable, mixed-use urban master planned development with 3,100 residential units; 200,000 square feet of retail and commercial space; and 30 acres of parks, public trails and open space, new marinas, and renewed wetlands.

ENGEO performed a site-wide non-ergodic seismic-hazard analysis (SHA) for the development. Non-ergodic SHA involves both evaluating historical ground motions recorded at or near the site and simulating the response of the site to various ground-motion levels.

[Learn More](#)

News and Updates from the World of Earthquake Engineering



8ICEGE Presentation in Japan: Enhancing Seismic Safety with Non-Ergodic SHA

David Teague, PhD, GE, presented at the 8th International Conference on Earthquake Geotechnical Engineering in Osaka. David had the opportunity to present on "Application of Non-Ergodic Site Response for High Velocity-Contrast Sites in the San Francisco Bay Area". His presentation compared the findings of traditional (ergodic) seismic-hazard analysis (SHA) to more refined, non-ergodic SHA at two sites in the San Francisco Bay Area.

[Learn More and Access a Full Case Study](#)

ENGEO Marks Third Year with EERI, Advancing Earthquake Resilience

For the third consecutive year, ENGEO is proud to be a subscribing member of the Earthquake Engineering Research Institute (EERI), an organisation dedicated to reducing earthquake risk and promoting resilient communities. EERI's mission to advance earthquake engineering aligns with ENGEO's role as a leader in the industry, where we provide innovative solutions to complex geotechnical and seismic challenges. Through this partnership, ENGEO continues to contribute to cutting-edge research and promote seismic safety, helping build safer, more resilient structures and communities worldwide.

ENGEO Excellence



John Hollings Seismic Resilience in Practice Award 2024

We are very proud to announce that "One Whitmore Street" was awarded the John Hollings Seismic Resilience in Practice Award 2024.

Congratulations to the entire team on the remarkable achievement! Your dedication and expertise have not only earned this prestigious recognition but also advanced seismic resilience.



ENGEO Wins 2024 ASCE San Francisco Section Awards in Four Categories

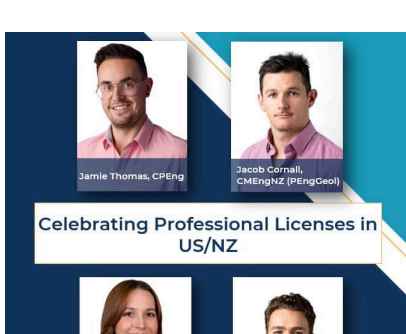
ASCE Outstanding Geotechnical Project Award for **The Pier 70 Special Use District (SUD)**

ASCE Outstanding Urban or Land Development Project Award for **The Potrero Power Station Shoreline Stabilization**

ASCE Outstanding Small Project Award for **The Oakland Zoo Entrance Emergency Culvert Repair**

ASCE Outstanding Flood Management Project Award for **The Foster City Levee Improvements**

[Learn More](#)



Celebrating Professional Licenses in US/NZ

Professional Licenses

Congratulations to newly licensed individuals:

Jamie Thomas, CMEngNZ (CPEng)
Chartered Professional Engineer, NZ

Jenna Keith, PE
Professional Engineer, CA

Rhys Bridges, CMEngNZ (CPEng)
Chartered Professional Engineer, NZ

Jake Cornall, CMEngNZ (PEngGeol)
Professional Engineering Geologist, NZ

We are honoured to have **over 100 licensed professionals** across New Zealand, Australia, and the United States.

Client's Testimonial

"Lucas Museum of Narrative Art is a geometrically complex, base isolated structure, located in Los Angeles. Achieving an enhanced set of design criteria for displacements and accelerations, while not exceeding pre-established moat dimensions, required more sophisticated thinking. This thinking came from the engineers at ENGEO who developed the design ground motions at the site using non-ergodic methods, which prior to our project had only been used in academic settings. Our project was the first commercial application of non-ergodic site response. Not only did ENGEO's work result in a better understanding of ground motions that helped us to achieve the project's structural design criteria, but they also seamlessly helped ferry this new thinking through Los Angeles Department of Building and Safety." - Dan Sesil/ LERA