

Dear Hiring Team,

I hold an undergraduate degree in Civil Engineering and a postgraduate degree in Earthquake Engineering from Japan. Additionally, I have a Master of Science in Computational Mechanics from the Technical University of Munich in Germany. Both degrees were obtained through merit-based competitions sponsored by the governments of Japan and Germany. Currently, I am a full professor at the University of Guayaquil, a position I earned through a merit contest in 2015.

Throughout my career, I have been deeply involved in various engineering projects.

The design of the longest tunnel and the design and supervision of the longest bridge in Ecuador, I have been in charge of the design and subsequent supervision of more than 2000 streets, dozens of bridges and skyscrapers and also hospitals and heliports.

I teach subjects such as Earthquake Resistant Design, Concrete Design, Structures, Statics and Dynamics, Numerical Analysis, Finite Elements, Computational Mechanics, Mathematical Models.

I have extensive experience of being the visible face before the clients and public entities, dealing with dozens of supervisors and fulfilling their observations in detail. I have been able to apply measures to build sustainable spaces in parks, schools and commercial buildings

I have been able to participate in the largest rehabilitation project in my country, which was the rehabilitation of the National Unity Bridge, where its resistance conditions were improved from 7% of gravity to 35%. I deal with young engineers since I have extensive experience as a professor of different engineering subjects and in practice.

I have more than 24 years of experience designing structures with different codes such as IBC, ACI, AISC, ASCE, and CBC, using software such as Sap2000, ETABS, PLAXIS, ANSYS, REVIT and Finite element Methods.

In all my projects I have controlled the quality of the product (consultory). I have made sure that the products are delivered within the stipulated time frame. I am used to working on several projects at the same time. I am characterized by not being afraid of difficulties, on the contrary I look for creative solutions to construction problems, to ensure that everything flows, and the established deadlines are met.

I have received three merit awards, one from the National Congress of Ecuador and from the Municipality of Guayaquil. My organizational skills and ability to meet goals within established timelines have been consistently demonstrated throughout my career.

I speak, write, and read English at an excellent level, and I am also proficient in Spanish and German. I graduated from an English academy called Benedict, affiliated with the University of Cambridge, and scored 580 on the TOEFL. Additionally, I have passed a B2 level in German.

I do not have a PE license, but as soon as I get to work I will begin the process of obtaining it and if I am able to obtain a competency license in Sap2000, ETABS or Revit, I also have a valid driver's license.

My experience demonstrates my ability to lead projects and coordinate with large multidisciplinary teams of designers. I use spreadsheets, word processors, and programming in Visual Basic and Python. I also use the most up-to-date structural engineering software with ease and the ability to build my own algorithms to solve very specific problems.

I am enthusiastic about the opportunity to bring my extensive experience in structural engineering and my strong technical skills to your company.

I am confident that my background, combined with my ability to work independently and collaboratively, will make me an asset to your team.

M.Sc(TUM)., Ing. Marcelo Moncayo Theurer
Structural Engineer

M.SC(TUM). Marcelo Moncayo Theurer
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EXPERIENCE

PROJECT DIRECTOR – STRUCTURAL - (January 2018 – July 2024)

PROJECT:

- Supervision of the construction of the specialty Clinic, Geriatric Day Hospital, design cost: \$100,000, construction cost: \$1.0 million)
- Supervision of the Reinforcement of the Structure of a Heliport for Ambulance use for the Guayaquil Clinic

ASSIGNED WORK:

- Design of concrete and steel structures. Mathematical models of hospitals, piloting, beams, columns, slabs, Seismic-resistant design, Seismic risk estimation.
 - Mathematical model of a heliport subjected to its loads, design of beams, columns, and dampers. Use of seismic standards ASCE/SEI 7, IBC, ACI 318, AISC 341, AISC 360, NDS, FEMA P-750, NEC2015.
 - Software used: SAP2000, ETABS, ANSYS, PLAXIS, EXCEL, VISUAL BASIC, QBASIC, PYTHON, JAVASCRIPT
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PROJECT DIRECTOR – Ministry of transport and public works (June 2013 - July 2018)

PROJECT:

- Rehabilitation of Ducur – Gualleturo and Jalupata Chontamarca road (25 km) in Cañar province, Construction Cost: \$4.5 million.
- Rehabilitation of Esmeraldas Road (21 km) between Bolívar and los Ríos provinces Construction Cost: \$4.5 million.
- Installation of pipes for drinking water, wastewater and irrigation in the Chordeleg commune.

ASSIGNED TASKS:

- Supervised project execution, machinery control, asphalt pavement, sidewalks, curbs, and gutters, and compliance with international standards (AASHTO).
 - Developed strategic plans and coordinated daily activities, presented progress reports. Calculus.
 - Worked with inspection and supervision to demonstrate contract compliance.
 - Development of mathematical models applied to the stability of walls and asphalt structures using SAP2000, ETABS, and PLAXIS. Designs and mathematical models for sewage and potable water boxes, applying ASSHTO and ASCE/SEI 7 standards.
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PROJECT DIRECTOR - Private contractor for Municipality (Jan. 2008 – Jan. 2013)

PROJECT:

- Supervision of Streets in the Influence Area of Feeder Routes Trunk 1, 2, and 3, Sector 1. (120 Urban Streets, 8 km of streets, Design Cost: \$250,000, Construction Cost: \$5.0 million)
- Supervision of Street Paving Construction, Popular Works Program with Emergency Character, Ximena Parish, Sector 15: Guasmo Oeste, Cooperatives: (150 urban streets, 10 km of streets, Design cost: \$300,000, Construction cost: \$6.0 million)

ASSIGNED TASKS:

- Ensuring compliance with national and international standards. Enforced adherence to work schedules. Supervised excavation, project levels, rollers, finishers, and

technical specifications of concrete and steel, asphalt pavement, sub-drains, potable water and sewer pipes, chambers, sidewalks, curbs, and gutters.

- Development of mathematical models applied to the stability of structures supporting the sewage and potable water system, using SAP2000, ETABS, and EXCEL, applying ASSHTO and ASCE/SEI 7 standards.

PROJECT DIRECTOR - Private contractor for Municipality (Aug 2005 – Dec. 2007)

PROJECT:

- Preliminary Studies and Final Designs for Asphalt Concrete Street Paving, Sector 45, Tarqui Parish, Paquisha, Pascuales, Cooperativas Assad Bucaram. (150 Urban Streets, 10 km of streets, Design Cost: \$300,000, Construction Cost: \$3.0 million)
- Preliminary Studies and Final Designs for Asphalt Concrete Street Paving, Sector 9, Ximena Parish, Central Guasmo, North Guasmo. (150 Urban Streets, 10 km of streets, Design Cost: \$300,000, Construction Cost: \$3.0 million)
- Detail engineering and design of the road to Sancan in the province of Guayas (30 km long - Study: \$300,000, Construction 4.5 million)

ASSIGNED TASKS:

- Led the execution of the detailed study, ensuring compliance with international standards (AASHTO). Enforced adherence to work schedules. Directed studies in the areas of Topography, Geology, Roads, Environment, Structure, Drainage.
- Development of mathematical models applied to the stability of walls and asphalt structures using SAP2000, ETABS, and PLAXIS. Designs and mathematical models for sewage and potable water boxes, applying ASSHTO and ASCE/SEI 7 standards.

PROJECT CO-DIRECTOR - Lahmeyer international / Sísmica / Municipio (June 2001 - June 2005)

PROJECT:

- Study of San Eduardo Tunnel Project. (Largest tunnel in Ecuador with a diameter of 13 m., 3600 m. long, 3 lanes, Design: \$2,000,000, Construction: \$50,000,000)
- Study of Traffic Interchange at Km. 4.5 of the Daule Road, (1.2 km long, 8 lanes and 3 levels, connecting 5 main roads, Design: \$2,000,000, Construction: \$15,000,000)

ASSIGNED TASKS:

- Led the execution of the study, ensuring compliance with international standards for tunnels, enforced adherence to work schedules.
- Directed the detailed studies in the areas of Topography, Geology, Roads, Environment, Explosives, Shotcrete, Structure, Lighting, Ventilation, fire design, Drainage, and Costs.
- Successfully led the design process with the collaboration of 15 Ecuadorian, 15 Germans engineers.
- Design of the structure of tunnels and a three-level overpass using SAP2000, Plaxis 3D, and Ansys. Design of the stability of slopes, beams, approaches, and abutments.

STRUCTURAL ENGINEER: Sísmica Consultores, May 1994 - May 2001

PROJECT:

- At this consultancy, I carried out bridge, tank, housing and buildings up to 20 stories design. (Design cost: \$2,000,000, Construction cost: \$17,000,000)

ASSIGNED TASKS:

- Led the studies in the areas of Geology, Roads, Environment, Shotcrete, Structures.

- Design of structures, buildings up to 25 stories, bridges, and long-span structures using SAP2000, ETABS, and ANSYS.
- Software used: SAP2000, ETABS, ANSYS, PLAXIS, EXCEL, VISUAL BASIC, QBASIC, PYTHON, JAVASCRIPT

EDUCATION

- **Master of science on computational mechanics** - Technische Universität München - October 2005
- **Postgraduate course on Earthquake Engineering** - Int. Institute of Seismology and Earthquake Engineering and University of Tokyo - June 2000
- **Civil engineer** - specialized in structural “Del litoral” Polytechnic University October 1999

MERIT AWARDS

1. April 13, 2023 - **M.I. Municipality of Guayaquil - Merit Award** - Reason for the award: Award of Merit for Scientific Research in Seismic and excellence in teaching.
2. July 25, 2022 - **National Federation of Journalists of Ecuador - Guayas College of Journalists - Eugenio de Santa Cruz y Espejo Decoration** - Reason for the award: Decoration of Merit for Scientific Research in Seismic and Disasters and for excellence in teaching.
3. October 17, 2001 - **Honorable National Congress of Ecuador - Merit Award** - Reason for the award: Award of Merit for Scientific Research in Seismic in the area of seismic reactivation of Ecuador.

SOME INTERNATIONAL PAPERS

1. Analysis of the recurrence of severe earthquakes in Ecuador, Moncayo et al. 2017, Journal of the Technical University of Panama 1 2017
2. Earthquakes greater than 6.5 on the Richter scale that occurred in Ecuador from 1900 to 1970., Moncayo et al. 2017, Journal of the Faculty of Engineering of the University of Yucatan, Mexico, Volume 21 numero 1 2017
3. Geogrid as a reinforcing element in flexible pavements, Moncayo et al. 2017, Journal of the Faculty of Engineering of the University of Yucatan, Mexico volumen 21 numero 1 2017
4. Parameters for the construction of a mathematical model to simulate the dynamic behavior of the soil beneath the University of Guayaquil – Ecuador., Moncayo et al. 2017, Journal of the Faculty of Engineering of the University of Yucatan, Mexico volumen 21 numero 1 2017