

Luis Felipe Duque, EIT, A.M. ASCE, A.M. SEI

1930 Athens, St Apt C Boulder, CO 80302 605-549-5179 luis.duque674@gmail.com

www.luisfelipeduque.com

EDUCATION

- M.S. Civil Engineering, South Dakota State University, Brookings, SD Dec 17'
Emphasis: Structural Engineering
Thesis: *UAV – Based Bridge Inspection and Computational Simulations*,
Advisor: Dr. Junwon Seo
Cumulative GPA: 4.0/4.0
- B.S. Civil Engineering, South Dakota State University, Brookings, SD May 16'
Minor: Mathematics
Cumulative GPA: 3.39/4.00

Computer Proficiencies

AutoCAD, Advance Steel, Microsoft Office Suite, R (statistical programming), Matlab, SAP2000, CSI Bridge, RISA Suite, TEDDS, and Mathcad

Multilingual

Native Language is Spanish, Proficiency in English, and Professional Working Proficiency in Portuguese

Relevant Coursework

Foundation Engineering, Concrete Theory and Design, Pre-Stressed Concrete Design, Steel Design, Matrix Analysis of Structures, Bridge Design, Advanced Reinforced Concrete Design, Design of Timber Structures, Finite Element Analysis, and Structural Dynamics.

EWB PROJECTS

Engineers Without Borders

- Project Lead**, *Drinking Water Treatment Facility* – Carmen Pampa, Bolivia Aug 14' – May 16'
- Acquired experience in real world projects by preparing implementation reports for EWB-USA.
- Enhanced the water quality of water in Carmen Pampa, Bolivia by implementing a chlorination system in 2015 and a sand filter in 2016.
- Developed communication skills by presenting the work done in Bolivia at the Mid-West Regional EWB Conference in Omaha, NE

Water Systems Inc. - Senior Capstone Team & EWB-NOVA

- Project Engineer**, *Cedar Gulch Drinking Water Treatment Facility* – Rapid City, SD Aug 15' – May 16'
- Expanded real world project experience by developing an alternative to remove radioactive particles from drinking water in the community of Cedar Gulch, SD
- Developed structural engineering experience while designing the foundation and building to enclose the water system.

PROFESSIONAL EXPERIENCE

- Project Engineer**, *DLK Engineering LLC, Lafayette, CO* Jun 18' – Present
- Performed structural design for different types of structural systems such as beams, columns, and foundations while abiding by building code standards (ASCE, IRB, and IBC).
- Produced structural drawings for residential assemblies using AutoCAD while coordinating with architects to ensure accuracy of the project.
- Conducted site inspections and prepared site review reports for new and remodel construction.
- Completed material efficient design oriented towards minimizing the amount of framing and foundation materials in residential homes for lower construction costs.
- Developed communicational, team work, and critical thinking skill while working in a well-rounded environment with costumers and team members to achieve the construction goals.
- Developed excellent organizational, time management, and communication skills as well as the ability to adapt to change while working on multiple projects at the same time.



<https://www.linkedin.com/in/luis-duque/>

- Structural Engineering Intern, POET Design and Construction, Sioux Falls – SD** Jan 18’ – May 18’
- Conducted design of industrial buildings and non-building structures.
 - Conducted steel (member sizes, braces, monorail hoist beam/crane, pipe racks, catwalks, equipment stand, hoist beams), concrete (slabs and foundations), and metal building design and analysis.
 - Implemented structural analysis software such as the RISA suite to conduct analysis and design of different industrial structures.
 - Prepared preliminary cost estimating/budgeting, site visits, procurement, and contract administration.

- Graduate Research Assistant, South Dakota State University, Brookings – SD** May 16’ – Dec 17’
- Developed drone-enabled bridge inspection and damage quantification protocols to aid future inspections.
 - Formulated a finite element model with updated bridge damage to observe variations in live load distribution factors and rating factors.
 - Prepared progress reports and publication material pertaining to the research to be published in recognizable civil engineering journals.
 - Engaged in literature searches to produce quality work within the research project and to gain knowledge of state-of-the-art implementations.
 - Gained skills in Photogrammetric processing of images for bridge reconstruction.
 - Attended professional structural engineering conferences, such as Structures Congress in Denver, Colorado, to develop and gain professional insight of current engineering practices and on-going research.

- International Project Manager Student, Daktronics Inc., Brookings - SD** Aug 15’ – May 16’
- Assisted project managers on projects valued between 100 thousand and 3 million dollars in the international regions by developing my communicational skills with costumers.
 - Gained knowledge on project close-out paperwork, writing scopes of work, project pricing estimates, sending project correspondence and other project paperwork procedures by constantly pursuing professional assistance while preparing such documents.
 - Effectively coordinated in-house project tasks including: sales to design representations, systems design, project accounting, material requisition, manufacturing/product throughput, pulling and shipping project parts, coordinating RMA parts and management feedback.
 - Worked effectively as a team member, worked under little supervision, made and implemented suggestions for product and process improvement, communicated effectively with sales, customers and project team.

INTERCOLLEGIATE ATHLETICS

- South Dakota State University, Division I NCAA Tennis Team** August 2012-May 2014
- Exercised leadership skills along with practicing self-discipline on and off the court.
 - Practiced excellent teamwork skills and strong work ethic by promoting camaraderie.
 - Reacted to complex situations quickly and effectively.
 - Demonstrated commitment and responsibility toward fellow players and coaches through genuine respect and dedication.
 - Honored with October, 2013 Strength and Conditioning Athlete of the Month award and 6 honorable mentions through my athletic career.

VOLUNTEER EXPERIENCE

Project Joy October 2013-May 2015
Helped project joy distribute Christmas gifts for children in need through athletics at SDSU

AFFILIATIONS

Honors: Phi Kappa Phi Honor Society * Engineering Dean’s List * Chi Epsilon Civil Engineering National Honor Society * Athletics Academic Commissioner’s List * Athletics Academic Honor Roll

Certificates: Order of the Engineer * Engineer-in-Training.

Memberships: American Society of Civil Engineers * Structural Engineering Institute * Engineers Without Borders, SDSU Chapter Vice President (2015) * American Wood Council * American Concrete Institute * American Institute of Steel Construction * South Dakota Engineering Society * Pi Kappa Alpha Fraternity, Founding Father

Committees: EWB Domestic Application Review * SEI Student Initiatives * SEI Timber Bridge