



**JOHN BERGELEEN, P.E., S.E.**  
**SENIOR STAFF CONSULTANT**

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Mr. Bergeleen is a Structural Engineer and Senior Staff Consultant for Engineering Systems, Inc. (ESi) where he works with the Structural and Civil Engineering team. He has over 8 years of experience in structural engineering. His primary focus has been assisting facility owners and managers achieve safe and economical solutions to complex repair and retrofit needs, by performing hands-on inspections and producing designs that are closely coordinated with project owners, equipment operators, and installing contractors. Mr. Bergeleen has a diverse background including new construction, retrofits, construction aids, damage assessments, and repair design in the healthcare, military, and industrial sectors, including seismic design and challenging mountainous conditions.

In his investigative work, Mr. Bergeleen has performed OSHA fall protection assessments, condition and seismic evaluations of wood and steel structures, crane and crane runway assessments, damage assessments of steel and concrete silo structures, bridge inspections and damage assessments, and foundation settlement assessments at both residential and commercial structures. Having also been involved in the repairs and remediation of many of these issues, he is experienced with common repair techniques as well as critical conditions which are often obscured until the use of destructive testing or invasive investigations. He is highly skilled in the use of 3D design software for the analysis of existing structures and the design of complex structural systems used in repairs and additions.

Mr. Bergeleen is a licensed Structural Engineer (S.E.) in Washington State, and licensed Civil Engineer (P.E.) in New Mexico. He is also an FHWA Certified Bridge Inspector.

**Areas of Specialization**

Construction Engineering  
Engineering Analysis  
Damage Assessment  
Failure Analysis  
Structural Analysis

**Education**

B.S., Civil Engineering, Washington State University (WSU), Pullman, 2011

**Licensed Structural Engineer (S.E.)**

State of Washington ..... License No. 55544

**Certified Bridge Inspector**

FHWA Certified Bridge Inspector, 2019

## **Previous Experience**

Prior to joining ESi, Mr. Bergeleen worked as Senior Structural Engineer at Coffman Engineers. He managed multi-discipline project teams for clients in the healthcare, government, military, industrial, construction, and alternative energy sectors, as well as performing inspections and investigations in diverse facility types. Prior to starting his engineering career, he spent several years working construction and facilities maintenance, giving him valuable insight into practical construction techniques and common defects. During his time at WSU, he served as an undergraduate researcher and was responsible for the development and operation of a compostable materials testing apparatus. He also led a team of students in designing and constructing a bridge in rural El Salvador together with Engineers Without Borders and Bridges to Prosperity.

## **Professional Associations and Affiliations**

Structural Engineers Association of Washington (SEAW)

## **Academic Honors**

Crimson Regent Scholar, WSU

Graduated Summa Cum Laude, WSU

## **Languages**

Spanish (intermediate)

## **Professional Training and Education**

ACT 20/45 Post-Disaster Building Safety Evaluation Training, 2018

Confined Space Hazards, 2019

## **Positions Held**

### **Engineering Systems Incorporated, Irvine, CA**

Senior Staff Consultant, 2022 – Present

### **Coffman Engineers, Spokane, WA**

Senior Structural Engineer, 2013 – 2022

## **Teaching Experience**

Director, Spokane Mountaineering School, 2016-2021: Instructed mountaineering and rope rescue courses.

## **Selected Project Experience**

### **Pipeline Compressor Stations Fall Protection Assessment**

Project Manager and Engineering Lead performing an assessment and remediation of fall protection hazards in gas pipeline compressor stations in Michigan, Minnesota, Wisconsin, Idaho, Washington, and Oregon. Performed on-site inspections at each facility assessing the ladders, platforms, and elevated work areas for OSHA compliant fall hazard mitigation. Documented instances of non-compliance, created as-built documents for the non-compliant situations, and provided equipment recommendations and designs for new platforms, guardrail systems, tie-off points, and other solutions to mitigate fall hazards. Worked with product manufacturers, on-site operators, and state OSHA representatives to provide safe and economical solutions.

### **Crane Runway Evaluations and Engineered Lift**

Project Manager and Engineering Lead for the condition assessment, as-built documentation, analysis, and reinforcement design of several crane runways at an aluminum production facility in Washington State which was constructed in the 1940's. Hazards identified included cracks in the steel beams and columns, cracked welds, broken rivets and bolts, and structural elements which were loaded significantly above their allowable capacities. Analysis and design was completed following the CMAA 70 specification for multiple girder cranes and ASCE Design Guide 7: Industrial Building Design.

### **Air Force Base Building Evaluation and Upgrade for ATFP Requirements**

Engineering Lead for an evaluation of an existing wood-framed structure at an Airforce Base to determine if the structure was safe under wind, snow, and seismic loading and acceptability for conversion to a recreation center from its current use as a warehouse. An inspection of the structure was conducted, documenting condition and as-built layout and sizing of structural elements. Analysis was performed in accordance with the International Existing Building Code and the ASCE 41 Seismic Evaluation and Retrofit of Existing Buildings, including 3D modelling of roof trusses and a tier 2 seismic evaluation of the roof diaphragm and shear walls. Based on our analysis, it was determined that the building was not safe to occupy, and it was demolished. Upon locating a different building for the recreation center, inspection, analysis, and design was performed to upgrade the main entryway of the building based on Anti-Terrorism Force Protection (ATFP) blast loading requirements.