

Ali Flowers

Senior Structural Engineer

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SUMMARY

Experienced structural engineer contributing over 7 years of expertise in the design and enhancement of electrical substations. Proficient in conducting structural analysis, steel, and concrete design, complemented by a solid background in preparing precise technical documentation. Customer collaboration enhances project quality while adherence to safety standards ensures reliable outcomes. Skilled in leveraging advanced engineering software for innovative solutions and efficiency improvements. Excited to join Innovative Engineering Solutions and support impactful projects that meet client needs effectively.

EXPERIENCE

Senior Structural Engineer

Innovative Engineering Solutions 📅 January 2024 - Present 📍 Baltimore, MD

As a Senior Structural Engineer, responsibilities involve leading the evaluation, analysis, and design of structural systems. Performance centers on ensuring designs align with regulatory standards while harnessing technical aptitude.

- Lead structural analysis and concrete member design for substations with a focus on IBC and AISC compliance.
- Produce and refine technical specifications and documents, driving accuracy within tight deadlines.
- Engage directly with clients, translating technical language into actionable insights and recommendations.
- Guide junior engineers by fostering collaborative learning environments around structural design techniques.
- Conduct site visits to oversee construction alignment with engineering specifications and promptly address challenges.
- Utilized MathCAD and SAP2000 for intricate calculations, optimizing workflows and enhancing accuracy.

Structural Engineer

Future Engineering Group 📅 March 2020 - December 2023 📍 Washington, DC

This role encompassed applying engineering fundamentals to propose effective design improvements across diverse projects with a keen focus on best practices.

- Engineered upgraded structural systems applicable to light industrial facilities, maintaining integrity per relevant codes.
- Collaborated cross-functionally with teams to produce integrated creative solutions, significantly improving operational safety.
- Authored comprehensive engineering reports conveying complex findings, resulting in expedited project approvals.
- Performed diligent review of plans and calculations, addressing discrepancies and advocating viable adjustments.
- Participated in stakeholder engagements to gather feedback, refining designs as needed through consultations robust in client interaction.
- Facilitated team workshops to acclimate peers with evolving software tools, driving advancements in efficiency.

Junior Structural Engineer

Engineering Innovations Inc. 📅 June 2016 - February 2020 📍 Rockville, MD

Commencing as a Junior Structural Engineer, rapidly acquired skills in structural design and became involved in practical application throughout various stages of project execution.

- Assisted in developing designs for electrical substation components, gaining foundational hands-on knowledge in engineering principles.
- Created technical drawings using RISA 3D and SAFE, underlining contributions toward critical project milestones.
- Executed studies analyzing material behavior, influencing enhancements in design methodologies integrated across projects.
- Supported teams by preparing essential documentation encompassing architectural calculations, expediting approval processes.
- Worked alongside project managers, ensuring engineering activities remained aligned with project timelines and budget constraints.
- Engaged in continuous learning initiatives aimed at building competence specifically around structural software applications.

LEADERSHIP & AWARDS

- Outstanding Employee Award, Innovative Engineering Solutions, 2025
- Best Project Execution Award, Future Engineering Group, 2022

EDUCATION

Bachelor's Degree in Civil Engineering

University of Maryland 🎓 GPA: 3.8 📅 2016 📍 College Park, MD

Coursework: Structural Analysis, Concrete Design, Material Behavior, Environmental Engineering

CERTIFICATIONS

- Professional Engineer (PE) 📅 2021
- Certified Structural Engineer 📅 2022

TECHNICAL SKILLS

- **Engineering Software:** MathCad, STAAD PRO, SAP2000, SAFE, RISA 3D, RISA Floor
- **Codes and Standards:** IBC, AISC, ASCE 7, ACI 318
- **Documentation Tools:** Microsoft Word, AutoCAD, Revit
- **Analysis Techniques:** Finite Element Method, Load Analysis, Structural Modelling
- **Construction Coordination:** Site Assessment, Field Supervision, Contractor Liaison
- **Quality Assurance:** Statistical Process Control, Design Criteria Verification
- **Field Studies:** Material Testing, Data Collection, Research Analysis
- **Project Management Tools:** Trello, Asana, MS Project
- **Environmental Considerations:** Sustainability Assessments, Waste Management Procedures
- **Software Education:** Training Sessions, Webinars, Workshops

SKILLS

- Structural Analysis
- Steel Design
- Concrete Design
- Project Management
- SAP2000
- MathCad
- RISA 3D
- Technical Documentation
- Regulatory Compliance
- Sketching/Drafting
- Blueprint Preparation
- Site Inspection
- Client Engagement
- Design Evaluation
- Material Selection
- Risk Assessment

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers (ASCE), Member since 2019
- National Council of Examiners for Engineering and Surveying (NCEES), License Holder since 2021

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST