



## MECHANICAL ENGINEER POSITION DESCRIPTION

### General Responsibilities:

The Mechanical Engineer (Engineer) is responsible for and will be held accountable for the accurate and timely completion of assigned projects, ensuring that those projects are designed in accordance with industry codes and standards, client specifications, and local codes, on time and within both time and construction budgets. The Engineer is also responsible for the sealing of final design and construction drawings. The Engineer works in conjunction with the Project Manager, Designers, and the Construction Administration Specialist in the performance of work required to meet or exceed client and company standards and expectations, as well as communicating in a timely manner any identified deviations from standard, errors or omissions observed on the project, and/or other situations that deviates from the approved plans. The Engineer is also expected to identify opportunities for improvement within each project, including potential work scope increases.

### Specific Responsibilities:

There are six major phases in the completion of a project. The specific accountabilities and responsibilities for this position are detailed below for each of those phases.

#### Proposal Phase

- Provide input on the viability of proposed projects, to help decide whether Optima should submit a proposal
- Provide assistance on preparing project proposals
- Provide input on selecting members of the design team

#### Schematic Phase

- Generate design options and cost analyses of those options
- Perform code reviews
- Provide input to the Client to aid in their selection of the preferred design scheme
- Provide assistance to the designers on the preparation of sketches and in the development of the draft report
- Conduct the in-house review and approval of the draft report and sketches
- Provide input to the final report for the client

#### Design Development Phase

- Provide input on the overall project schedule
- Assist designers in developing a complete drawing list
- Assist drafting personnel in setting up the project in AutoCAD or Revit
- Select additional design team members where needed
- Assist designers in starting design development plans project
- Conduct design check for compliance with applicable codes
- Assist designers in the creation of engineering calculations and drawings
- Create outline specifications
- Conduct preliminary Civil and Agency reviews
- Perform internal Design Development review and approval
- Assist Project Manager and designers in performing DD design and Interdiscipline Coordination



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- Conduct design QC review and verification
- Support Project Manager in final Design Development review and approval

### Construction Document Phase

- Conduct Interdiscipline coordination
- Assist designers in completing drawings and calculations
- Complete specifications
- Assist designers in the review between disciplines
- Conduct final discipline review and agency review and approval
- Assist designers and Project Manager in resolving any owner comments

### Bidding Phase

- Provide assistance to the designers in the issuance of bid documents
- Conduct and/or attend the pre-bid meeting when needed
- Assist designers in answering bidder's RFIs
- Review substitution requests
- Assist designers in issuing revisions resulting from the pre-bid meeting, and in issuing construction drawings (first full conformed set).

### Construction Administration Phase

- Assist designers in maintaining a complete conformed set of drawings and preparing submittals for review
- Attend, or ensure the appropriate designer attends any required meetings
- Review contractor RFIs and determine whether drawing revisions are required
- Where applicable, assist designers with issuing drawing revisions and determining whether the design add service is required
- Perform final punch list items
- Participate in the project postmortem review

## Key Competencies

These requirements are representative, not all-inclusive, of the knowledge, skill, and ability required to successfully perform this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Specific expertise in:
  - HVAC design
  - Technical writing
  - Delegation to HVAC Designers
  - AutoCAD software
  - Revit software
  - Basic and Intermediate level proficiency of Vantagepoint CRM System



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- General knowledge in:
  - Electrical design
  - Plumbing design
  - Fire Protection design
  - Structural requirements
  - Construction processes
  - Sustainability
  
- Demonstrated ability to:
  - Successfully manage and deliver design projects
  - Review and understand schematic and architectural drawings
  - Know how and what to provide for QC
  - Accurately estimate time to complete a project

### **Education and Experience**

- Degree in Mechanical Engineering
- Professional Engineers (PE) Certification
- Comfortable reading and understanding blueprints
- Proficient in Microsoft Office and general computer software
- Strong leadership and management skills
- Solid organizational skills including attention to detail and multi-tasking skills

### **Knowledge, Skills and Abilities**

- Ability to explain complex processes to laypeople
- Strong positive communication and team-building skills
- Ability to foster and engage in collaborative work environment
- Ability to follow up and ensure execution of company direction
- Strong work ethic and “Can Do” attitude
- Demonstrates strong leadership qualities

### **Specific Technical Competencies**

- Familiar with all types of HVAC designs (split systems, dx rooftops, water source heat pumps, chillers/boilers/cooling towers, VRF, geothermal, etc)
- Proficient in airside and waterside distribution systems and effective design of them
- Understands structural, plumbing, and electrical systems and how they affect HVAC design
- Knowledgeable about Division 23 specifications and editing them
- Provides quality control on designer projects
- Able to review and research construction pay applications and change orders
- Can investigate field issues to provide guidance and execute an effective field report



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### Other Job Duties

- Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job. Duties, responsibilities and activities may change at any time with or without notice.

This is a Full Time, exempt (Salary) position

Signature of Acceptance: \_\_\_\_\_

Date: \_\_\_\_\_

Countersigned: \_\_\_\_\_