

## MECHANICAL DESIGNER POSITION DESCRIPTION

### General Responsibilities:

The Mechanical Designer (Designer) 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 project time budget. The Designer is also responsible for the preparation of final design and construction drawings. The Designer works in conjunction with the Project Manager, Engineers, 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 any identified deviations from standard in a timely manner, errors or omissions observed on the project, and/or other situations that deviate from the approved plans. The Designer 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 an as-requested basis

#### Schematic Phase

- Provide input on design options and on code reviews
- Provide input to the Client to aid in their selection of the preferred design scheme
- Prepares sketches needed for the project
- Prepares both the draft report and the final report

#### Design Development Phase

- Provide input on the overall project schedule
- Develops a complete drawing list
- Sets the project up in AutoCAD or Revit
- Starts the design development plans project
- Conduct design check for compliance with applicable codes
- Creates engineering calculations and drawings
- Performs DD design and Interdiscipline Coordination
- Support Project Manager in final Design Development review and approval

#### Construction Document Phase

- Complete drawings and calculations
- Conduct Interdiscipline coordination
- Assist engineers in completion of specifications
- Performs the review between disciplines
- Resolves any Agency review comments
- Resolves any owner comments

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### Bidding Phase

- Issues bid documents
- Answers any bidder's RFIs
- Assists in the review of substitution requests
- Issues revisions resulting from the pre-bid meeting
- Issues full set of construction drawings (first full conformed set).

### Construction Administration Phase

- Maintains a complete conformed set of drawings
- Conducts reviews of submittals
- Assists in reviewing contractor RFIs and determining whether drawing revisions are required
- Issues design drawing revisions
- Prepares final as-built drawings
- Participates 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
  - AutoCAD software
  - Revit software
  - Basic level proficiency in Vantagepoint CRM System
- General knowledge in:
  - General Engineering principles
  - Structural knowledge
  - Construction practices
  - Vantagepoint CRM
- Demonstrated ability to:
  - Successfully manage and deliver design projects
  - Review and understand schematic and architectural drawings
  - Manage and meet deadlines

### Education and Experience

- Degree in Mechanical Engineering, Engineering Technology, other technical education or equivalent technical experience
- Comfortable reading and understanding blueprints



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- 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
- Adaptability and ability to change

### **Specific Technical Competencies**

- Basic understanding of DX systems (split systems and rooftops)
- Knows how to run HVAC load calculations
- Can use load calculations to size equipment and layout systems
- Understands how to size ductwork and distribute airflow
- Has a basic understanding of structural, plumbing, and electrical systems and how they affect HVAC design
- Can fill out basic HVAC schedules with proper information
- Selects and edits appropriate HVAC details applicable to their projects
- Can review RFIs and submittals specific to their projects

### **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.