

## Junior Building Mechanical Systems Designer

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**Employment Terms:** Permanent, Full-time after 3 month probation period

**Department:** Building Services Group

**Hours of Work:** 40 hours per week

**Salary/Wage:** To be determined based on previous experience

**Benefits:** Enrollment in a group health benefits program after 3 months of employment

**Location:** 465 Pinebush Rd., Unit 5, Cambridge, ON (or possibly our Cobourg or Windsor offices)

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### Company Background

Zon Engineering Inc. is a coalition of dedicated professionals who are focused on developing high quality solutions. We are defined by our commitment to technical excellence and known for our responsive client care. Our solutions are rooted in a pragmatic understanding of the technologies, systems, and approaches to sustainable building design.

We empower team members to excel within their areas of practice by fostering a spirit of innovation and a commitment to technical excellence. From a platform of theory and experience, we assist our clients in the pursuit of **true sustainability**.

#### Mission

Our mission is to develop an environmentally responsive design ethic wherein solar energy helps shape building design.

Our focus is on the conservation of resource use, the optimization of environmentally conscious indoor environments, and the maximization of opportunities for onsite resource collection and power generation.

#### Vision

By working closely with our clients and their teams, our aim is to assist in the creation of financially, environmentally, and socially sustainable projects.

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### Description of Position

We are presently seeking applications from qualified individuals to fill an entry-level position in our Building Services Group. Our goal is to find an individual whose personal interest and experience resonates with the stated mission and objective of Zon Engineering Inc.

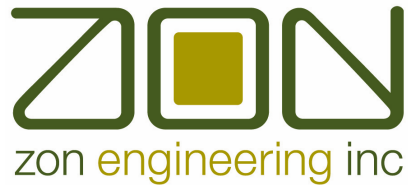
**Title of the position:** Junior Building Mechanical System Designer

**Reports To:** Lead Mechanical Engineer

#### **Consults With:**

Internal: Principals, Engineers, Designers

External: Clients, Architects/Designers, Engineers, Municipalities, Manufacturers, Suppliers, Passive House Consultants, Contractors



## **Job Summary**

The focus of our Building Service Group is to provide energy consulting and mechanical design services for Passive House, Net-Zero, and low-energy-use projects throughout Canada. To meet the growing demand for our services, we are looking for a **knowledgeable and enthusiastic** individual to add to our team of dedicated professionals. The successful candidate will collaborate closely with the Lead Mechanical Engineer and our designers to offer design and CAD support services so that we can better serve the growing Passive House, Net-Zero and low-energy building community in Canada.

Under supervision of our Lead Mechanical Engineer and other Designers, the Junior Building Mechanical Systems Designer will perform a variety of design and drafting activities relating to building heating, cooling, ventilation plumbing, and fire protection systems. This includes preparing schematic, concept and detailed designs, carrying out design and equipment sizing calculations, drawing/layout production, and attending/facilitating meetings with clients. This individual will also be required to provide other support services to more senior staff which may include energy analysis, writing/contributing to reports, carrying out product/design research, as well as, cataloging preferred equipment specifications and costs. While buildings are under construction, the Junior Building Mechanical Systems Designer may also be called on to provide support during site reviews, onsite testing, and commissioning activities.

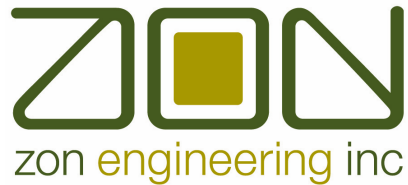
Our team is beginning the transition to using Autodesk's Autocad to Autodesk's Revit platform for all drawing and layout production in the coming months. The **ideal candidate must be proficient in the use of Revit**, and have the skills necessary to help lead this software transition in the coming months.

This is an entry level position. While the summary of roles and responsibilities above is comprehensive, we anticipate that not all candidates will have the knowledge, or experience, at this point in their careers to complete them. To address this, training, support and mentoring will be provided to the successful candidate by our team. **Our focus during the interviewing process will be to find a candidate who is enthusiastic, is a self-starter, and who expresses interest in learning to design with energy and water saving systems.**

Since our company is on the leading edge of sustainability and renewable energy generation, the nature of our work is always changing. For this reason, the Junior Building Mechanical Systems Designer may be provided with other opportunities and assigned other duties not provided in this job description as the services we offer to our clients evolves over time. These may include building condition assessments and energy audits (relating to mechanical equipment) and building system commissioning.

## **Duties and Responsibilities**

- Prepare schematic, concept and detailed designs in accordance with the requirements of the Owner, as well as, municipal or provincial building code and other applicable standards
- Assist with the preparation of basis of design documents, design briefs, and technical reports
- Assist with calculations required to size water supply and drain pipes, gas pipes, sprinkler pipes, ductwork, and equipment
- Production of design, construction, and as-built layouts / drawings, including create building sections to assist with interference coordination between building systems
- Assist with the selection of materials and equipment
- Create design specifications and equipment schedules
- Liaise with suppliers and/or manufacturers for design support, equipment and component selection



- Maintain notes, design calculations and other documentation for future reference
- Liaise with clients and other consultants to coordinate all aspects of the design
- Attend design and construction meetings (as may be required)
- Reviewing shop drawings for completeness and compliance with the design
- Create, update, and maintain standard drawing details and templates
- Helping the Building Services Group transition from drawing production using AutoCAD to Revit
- Assist with improving and maintaining office mechanical design CAD standards (manual, pen settings, layers, fonts, etc.)
- Provide CAD technical support and training to other designers as may be required
- Create, update, and maintain other design tools and templates as may be required
- Carrying out product research
- Update and maintain electronic product literature library, including current equipment pricing

### **Education and Experience**

#### ***Required:***

- University Degree or College Diploma in Mechanical Engineering, Mechanical Engineering Technology, or a related field
- Eligible to attain a P.Eng., C.E.T., or C.Tech. designation in the Province of Ontario (or in the process of obtaining one of these designations) after obtaining sufficient work experience and passing any required exams
- Demonstrated experience using Autodesk Revit and AutoCAD

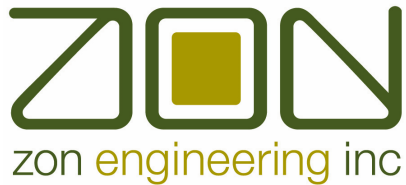
#### ***Preferred:***

- 1-3 years of experience drawing/drafting mechanical systems for residential and/or commercial buildings is considered an asset
- Possess one or more HRAI residential designer certifications
- Possess a valid Building Code Identification Number (BCIN) and have passed any or all of the following exams: “Designer Legal/Process 2012”, the “HVAC-House 2012”, Building Services 2012”, “Plumbing-House 2012”, “Plumbing-All Buildings 2012”

### **Specialized Knowledge and Abilities**

#### ***Required:***

- Proficient in the use of Autodesk Revit 2015 and AutoCAD 2015 or newer
- Ability to prepare schematic, concept, and detailed designs and carry out the necessary design and sizing calculations required to select equipment
- Able to generate layout drawings from sketches and specifications



- Knowledge of standard drafting practices, procedures, and CAD standards
- Exceptional organizational skills and attention to detail
- Excellent communication skills: interpersonal, listening, oral, and written
- Able to work with minimal supervision, efficiently schedule and manage time
- Ability to work in a complex environment driven by project deadlines
- Highly innovative with an attention to detail
- Excellent customer service skills
- Skilled in PC usage and associated software, including Microsoft Office

***Preferred:***

- Familiarity completing Heating and Cooling load calculations
- Familiarity with other mechanical system design tools such as Right-Suite, Right Radiant, etc.
- Knowledge of all applicable codes and standards (e.g. OBC, ASHRAE 62.1, ASHRAE 62.2, ASHRAE 90.1, NFPA, CSA etc.)
- Competent in creating, updating, and maintaining CAD standards and AutoCAD details and templates

**Physical Demands**

- The Junior Building Mechanical System Designer must be able to concentrate for extended periods of time paying close attention to detail.
- The employee is regularly required to sit while performing the duties of this job.
- If asked to participate in field activities, the employee will be required to drive an automobile to site, climb stairs/ladders, crouch/crawl, and traverse on building roof-tops to inspect system installations. Any safety training required for this work will be provided to the employee.

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**Application Requirements**

Please submit an electronic application to [careers@zonengineering.com](mailto:careers@zonengineering.com). This position will remain available until it is filled.

Your application must include the following documents:

- A cover letter stating your interest, experience, and reason for applying to this position
- A resume (or CV) indicating your qualifications and prior work experience
- References (typically 3) from individuals you have work worked with in the past (preferably from those who supervised your work)