

## **PRINCIPAL MECHANICAL ENGINEER**

### **Principal Objective**

Provide technical support to Engineering Department in the development and execution of various projects related to communities and infrastructure projects.

### **Major Activities Performed**

1. Familiarizes with all Royal Commission codes and standards, General Design Criteria and Technical Guidelines, standard drawings and standard guide specifications
2. Review of A/E contractors design submittals, specifications, technical reports, calculations and coordinate work of other disciplines and departments.
3. Preparation of technical specifications and drawings for bid packages related to the development of various community and industrial projects.
4. Will implement methods and solutions for complex engineering problems and will select the most efficient and economical manner to meet our clients' design objectives.
5. Leads other Engineers and design personnel in technical excellence and growth in the Quality Improvement Process.
6. Provides technical consultations for interdisciplinary analytical studies and analyses.
7. Assists in the review of vendor drawings and shop drawings.
8. Prepare conceptual design and layouts.
9. Performs field inspection and provide field support, as necessary during construction phases.
10. Provide response and technical solutions to RFI's raised by Contractors, Operation and Maintenance.
11. Must work well within a dynamic team and serve as a technical consultant to the client.

### **Experience and Qualifications**

1. Bachelor's degree from an accredited university with major course work in mechanical engineering or a related field of study.
2. Minimal 10-15 years of experience in designing mechanical systems for buildings and infrastructure projects. Must have a general broad based knowledge of both buildings and infrastructure type projects.
3. Familiar with NFPA and HVAC codes and design requirements.
4. Estimate the fire flow needed for building sprinkler systems, heating and air conditioning calculations for various occupational enclosed spaces such as in office buildings, laboratories,

power plants, water/wastewater plants, water/wastewater pumping systems etc. based on Master Plan and various building uses.

5. Be able to provide general mechanical design overview and support on projects involving plumbing, fittings, piping, sprinkler heads, wet and dry sprinkler systems, ductwork, vents, networks, pumps, motors, engines, AC Units, compressors, mechanical/forced and natural ventilation systems. Work may also include power and water/wastewater systems, so a broad area knowledge is preferred.

6. Understanding of electrical power loads and electrical requirements associated with mechanical equipment used is required.

7. Develop the hydraulic modeling simulation and design calculations of all pressurized water systems were required by local specifications and codes.

8. Coordinate with all relevant stakeholders and government authorities plus developers, consultants and contractors working within the area under study or adjacent areas.

9. Professional Engineer (PE) registration is preferred.

10. Must demonstrate continual progression of experience and expertise in relevant discipline.

11. Ability to communicate effectively in both spoken and written English. Knowledge of Arabic language is a plus.

12. Knowledge of computers and basic software applications such as: AutoCAD, WaterCAD, Creo/Solidworks, TRNSYS, FineHVAC, and MS Office (Word, Excel, Power Point).