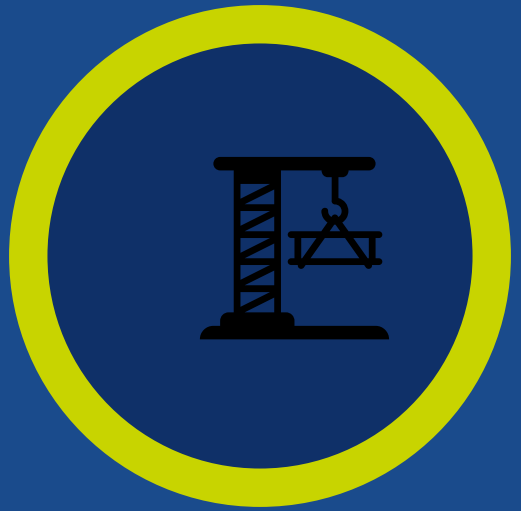
Mechanical Engineer at RTM Engineering Consultants



Nov 2024 – Present | Orlando, Florida, United States

My Role

As a Mechanical Engineer at the Orlando, Florida office since November 2024, I provide expertise in large-scale commercial projects, focusing on HVAC, piping, and fire protection system design.

My role involves collaborating with architects and contractors to deliver innovative mechanical solutions that meet both performance and regulatory standards.

Orlando, FL Office | Nov 2024 – Present

Core Responsibilities

Team Coordination

Coordinating multidisciplinary teams including architects, consultants, and contractors for design validation

System Design

Designing comprehensive mechanical systems: HVAC, boilers, pumps, and fire protection systems

Technical Management

Managing technical reviews and ensuring timely delivery of project documentation

Code Compliance

Ensuring full compliance with international building codes and UAE jurisdictional requirements

Standards Application

Applying ASHRAE, ASME, and NFPA standards throughout system design and analysis

Quality Control

Overseeing quality control for mechanical engineering deliverables across all project phases

Design & Analysis Tools

BIM & CAD Platforms

Revit and BIM coordination tools for seamless design integration, alongside AutoCAD, Trace3D for 3D modeling and simulations.

Technical Standards

Application of ASHRAE for HVAC performance, ASME for mechanical equipment, and NFPA for fire protection system analysis.

Engineering Calculations

Load analysis, equipment sizing, and system performance optimization to ensure accurate and code-compliant mechanical designs.

Standards & Compliance

IBC

International Building Codes

Compliance with international building codes and US regulations ensures all mechanical designs meet regional and global safety requirements.

ASHRAE

ASHRAE Standards

Adherence to ASHRAE standards guarantees optimal HVAC performance, energy efficiency, and indoor air quality across all projects.

ASME

ASME Codes

ASME codes for mechanical equipment safety govern the design and installation of boilers, pressure vessels, and piping systems.

NFPA

NFPA Standards

NFPA standards for fire protection systems ensure comprehensive fire safety through proper sprinkler, alarm, and suppression design.

Collaboration & Coordination

- Working closely with architects, consultants, contractors, and design representatives
- Supporting MEPFP coordination for hospitality, commercial, and mixed-use developments
- Ensuring seamless integration of mechanical systems with architectural designs
- Coordination spanning from concept through development and construction phases
- Facilitating cross-disciplinary communication and stakeholder engagement throughout project lifecycle
- Managing design validation and documentation for all project phases

Project Highlights

Our portfolio spans commercial, mixed-use, and high-rise developments across diverse markets. Each project showcases comprehensive mechanical system design including advanced HVAC solutions, fire protection systems, and pump configurations.

Commercial Towers

Multi-story office and commercial developments with integrated MEP systems

Hospitality Complexes

Large-scale hotel and resort projects with comprehensive HVAC & Piping

Mixed-Use Developments

Complex multi-function projects combining residential, retail & office spaces

Fire Protection Systems

Sprinkler, alarm, and suppression systems designed to NFPA standards

Focus on Sustainability

Energy-Efficient HVAC Strategies

Implementing variable frequency drives, heat recovery systems, and optimized controls aligned with long-term sustainability standards.

High-Performance Mechanical Systems

Development of systems designed for maximum energy savings and reduced operational costs across commercial and mixed-use developments.

Smart Building Technologies

Integration of intelligent building systems ensuring operational reliability, real-time monitoring, and optimized performance throughout the building lifecycle.

Technical Deliverables

- Detailed 3D mechanical models using Revit MEP and BIM coordination tools
- Comprehensive technical drawings for HVAC, piping, and fire protection systems
- Construction documentation packages for seamless project execution
- Engineering assessments for equipment sizing and load calculations
- System performance evaluations ensuring code compliance and efficiency
- Lifecycle implementation support from design through construction phases
- Technical reviews and quality assurance for all mechanical deliverables
- As-built documentation and operational handover materials

Summary of Impact

- ✓ Enhancing building performance, occupant comfort, and indoor air quality through optimized mechanical system designs
- ✓ Delivering cost-effective, reliable mechanical solutions that meet project requirements and exceed client expectations
- ✓ Driving multidisciplinary collaboration and project success across all phases from concept to construction
- ✓ Supporting sustainable engineering initiatives, contributing to energy efficiency and long-term operational excellence

Thank You

Questions? Contact Me