Michael J. Chonko, PE, CEM

Principal-in-Charge / Project Manager

Mike is a Principal and the leader of SMRT's Engineering Department. Mike has unique skills in assessing and designing building engineering systems. A University of Maine graduate, he has over 22 years of experience designing HVAC systems for education, government, healthcare, criminal justice, and corporate. He also provides technical peer reviews of mechanical systems for SMRT commissioning projects.

Education

University of Maine
Bachelor of Science, Mechanical Engineering

Registration

Licensed Engineer
ME, NH, MA, NY, CT, PA, MI, RI, NC

Affiliations

American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)

Relevant Experience

Eastern Maine Medical Center Co-Gen
Bangor, ME
Mechanical Engineer for the study to expand the existing combined heat and power (CHP) plant to serve a large surgical tower expansion planned for the campus. The study reviewed the existing and projected facility electrical, heating and cooling loads and analyzed the loads to determine the optimum CHP plant expansion.

Eastern Maine Medical Center, Engineering Systems Evaluation
Bangor, ME
Project Manager and Mechanical Engineer for an extensive study to review all of the mechanical systems in the 800,000 s.f. facility built over the past 150 years. Systems studied include steam/condensate, air handling, medical gases, electrical, plumbing, fire protection and chilled water. An extensive report was issued detailing the field findings and short/long term recommendations for the facility to incorporate short and long term capital planning to address the issues.

Androscoggin Valley Hospital Biomass Plant
Berlin, NH
Mechanical Engineer for an existing plant analysis and subsequent design of a 250 HP, 60 PSI steam, bole wood ship biomass boiler plant expansion to the existing oil fired heating plant. Scope includes upgrades to the existing boiler feed water system for the proposed boiler as well as the existing boiler.

MaineGeneral Medical Center Alfond Center for Health (LEED Gold)
Augusta, ME
Mechanical Engineer for the new 640,000 s.f. hospital using building information modeling (BIM) and an integrated project delivery (IPD) process. The new facility consolidates all inpatient beds in the MaineGeneral system and provides outpatient services for the Greater Augusta community.

GE Healthcare Digital X-Ray Detector Production Facility – North Greenbush, NY (LEED Gold Rating)
Mechanical Engineer for a digital x-ray detector production expansion. The 230,000 s.f. facility is a new high-tech medical equipment manufacturing plant to manufacture medical imaging machines and high tech diagnostic devices. The project included PV-based power system with cells on the roof.

GE Healthcare Manufacturing Facility

North Greenbush, New York

Project Details

To meet the growing demand for digital imaging equipment used worldwide for diagnostic testing, GE Healthcare built a new digital xray manufacturing facility in North Greenbush, NY. The advanced clean manufacturing facility, developed using an integrated engineering and design process, meets GE's requirement that the 230,000 s.f. facility serve as a model of green manufacturing.

Certified LEED Gold, an engineering challenge for cleanroom manufacturing, the facility incorporates a variety of sustainable design components, among them: passive and active solar, hydronic/radiant underslab heating, advanced ventilation strategies, lighting and building management systems, and highly efficient glazing and insulation systems. SMRT provided planning, architecture, mechanical, electrical, fire protection and structural engineering for this project.

MaineGeneral Medical Center

Alfond Center for Health
Augusta, ME

Project Details

SMRT led the effort to develop this new 600,000 s.f. hospital using building information modeling (BIM) and integrated project delivery (IPD). The 192-bed regional replacement hospital consolidated all of MGMC's inpatient beds onto its North Augusta campus, which also houses the Harold Alfond Center for Cancer Care. This consolidation of services will result in significant labor and operational savings.

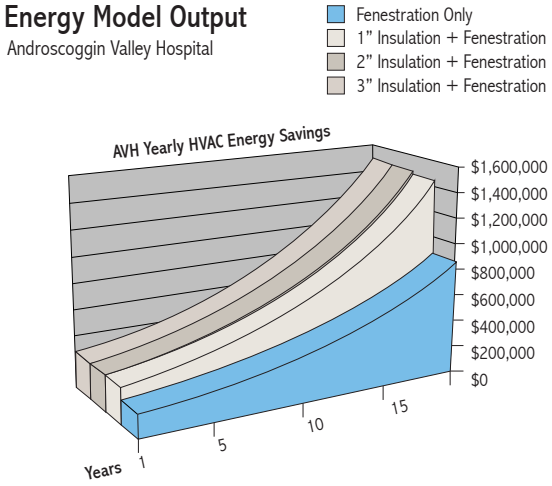
Exploring the concept of "healing enhanced by nature" through innovative use of light and outside views, the design incorporates evidence-based, LEED and lean principles. Service areas are organized to support privacy and create a tranquil therapeutic environment.

Androscoggin Valley Hospital

Energy Modeling and Biomass Plant
Berlin, NH

Energy Model Output

Androscoggin Valley Hospital



Project Details

Energy Modeling: SMRT provided energy modeling and analysis of this 1970's building envelope to determine the best energy reduction result and economic payback. Five alternatives were modeled: a baseline of the existing building, improved glazing with reduced infiltration, and three levels of increasing exterior insulation/glazing. Implemented improvements resulted in energy savings of 43.5% per year and an internal rate of return of 28%.

Biomass Plant: Faced with rising fuel oil costs, AVH looked to hardwood chips as an economical energy source that would boost the local economy. SMRT evaluated the existing heating and cooling plants, conducting an energy balance to determine the appropriate biomass boiler plant size and related energy components that are cost viable. The hospital hopes to completely offset their fuel oil consumption with the new plant and SMRT is working to accomplish this goal.

Eastern Maine Medical Center

Energy Study and Infrastructure Assessment
Bangor, ME

Project Details

Energy Study: In response to a planned facility expansion, SMRT conducted an energy study to evaluate adding a second gas turbine to provide additional combined heat and cooling power. SMRT assessed the current building power, heating and cooling consumption and augmented the current 4.5 MW on site electrical generating plant with a second gas turbine, heat exchanger and absorption chiller to maximize the on site energy generating potential.

Infrastructure Assessment: SMRT worked with EMMC to develop a better understanding and documentation of existing systems, their age and capacities. The documentation is used for maintenance, upgrades, training, etc. and as a source of information for replacement and upgrades to the systems. The changes may be as a result of age, better efficiencies, or as a result of future renovations and expansions.

The project included walking-down systems to get an understanding of the overall size, scope, and areas served and updating schematic drawings and plan views to reflect the information gathered. The drawings depict what the system serves and the capacities.

The project scope also included preparing system descriptions describing the equipment, areas served, estimated age and condition of the equipment, and estimated spare capacity where possible, as well as making recommendations if there are areas that require further testing or upgrades.