



James T. Miller, PE | LEED® BD+C | CSI-CDT

Director, Healthcare & SciTech Engineering



Background

Mr. Miller is a Senior Mechanical Engineer and Project Manager with over 25 years of Healthcare, Science & Technology, Academic and large Commercial building project experience. He leads interdisciplinary teams of engineers and designers to provide customized engineering solutions to the most complex and challenging projects. He enjoys getting to know clients and understanding their needs and expectations so appropriate design solutions can be implemented early during project conceptual design phases, but will not hesitate to propose unique and creative, out-of-the-box solutions to ensure client needs are met or exceeded.

Education

Master of Science, Architectural Engineering (MS, Building Energy Systems)
Bachelor of Science, Architectural Engineering (BAE, Environmental Option)
Pennsylvania State University, University Park, PA

Professional Licenses & Certifications

Professional Engineer licensed in New Jersey, Pennsylvania, Ohio
United States Green Building Council (USGBC), LEED® BD+C Accredited Professional
Construction Specifications Institute (CSI), Certified Construction Documents Technologist (CDT)

Affiliations

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

Select Healthcare Project Experience

- **Hackensack Meridian Health, Hackensack University Medical Center 2nd Street Tower Addition and New Central Utility Plant, Hackensack, NJ:** New 500,000 sf addition including 24 OR surgical department, new Central Sterile Supply, 200 private in-patient rooms including ICU, med/surg and univeral rooms plus a new central plant building (chilled water, high pressure steam, new campus electric service, emergency power and future Combined Heat and Power plant).
- **Inspira Medical Center Woodbury, Hospital Expansion, Woodbury, NJ:** The phased 210,000 sf renovation and expansion includes the construction of a new 22,000 sf medical office building and a 100,000 sf garage addition. Renovated and expanded programs include the emergency department, ambulatory surgery, neonatal intensive care unit, MRI suite, central sterile supply suite, physical medicine and rehabilitation, operating room support, 17-bed medical/surgical unit and the CT Scan Department.
- **Jersey Shore Medical Center, Various Renovations, Neptune, NJ:** Various renovations including a 20,000 sf Family Health Center, a 12,000 sf renovation of surgical suites and locker areas, and a 13,000 sf renovation of the Neonatal Intensive Care Unit. Renovations of the emergency department, ambulatory pharmacy, clean bulk storage area, and ob/gyn and medical records areas were also included in this project.
- **Joseph Brant Hospital, Redevelopment, New Patient Tower, Toronto, Canada:** A new 450,000 sf addition including: 65,000 sf surgical department with 11 ORs, bronch/cysto/endo procedure rooms, PACU a recovery areas and surgical staff support suite with lockers, showers and on-call; 144 new med-surg private patient rooms; new 38 bed ICU plus shell for future; new in-patient pharmacy with USP 797 suites, new clinical lab department; emergency department with satellite diagnostic imaging, new ambulatory care clinics, and new central utility plant with heat recovery chiller, high pressure, low-mass steam boilers and low-temperature condensing boilers for space and domestic water heating and 3750 kW of emergency power generation.
- **Morristown Medical Center, East Chiller Plant Energy Efficiency Upgrades, PSE&G Hospital Efficiency Program, Morristown, NJ:** Replacement of two existing centrifugal chillers (1200 and 400 TR) and a steam absorber (700 TR) with two new 1200 ton, variable-speed centrifugal chillers and relocation of an existing 900 TR centrifugal chiller to be "standby". Replaced chilled water pumps and piping, condenser water pumps and piping for variable flow. New plant optimization control to optimize total plant efficiency – chillers, cooling tower, and pumps.
- **Morristown Medical Center, Emergency Power Upgrades, Morristown, NJ:** Comprehensive study and design of emergency power systems serving central heating and cooling plant and critical air handling systems throughout the 1.3M sq. ft. facility. Upgrades include addition of a

2.5MW diesel generator to pick up primarily chilled water plant, but also to add additional AHUs to emergency power.

- **Morristown Medical Center, Steam Boiler Plant Energy Efficiency Upgrades, PSE&G Hospital Efficiency Program, Morristown, NJ:** Replacement of one 1200 BHP, high-pressure water-tube steam boiler with new 1200 BHP fire-tube boiler with variable speed blower and stack economizer. Relocated existing 500 BHP fire-tube boiler and upgraded it with new variable speed blower, stack economizer and boiler optimization controls. Upgraded combustion air system to temper incoming air. Existing 1200 BHP water-tube boiler remains in place for 'emergency standby' operation only.
- **New York University Langone Medical Center, Psychiatry and Child & Adolescent Psychiatry Consolidation, New York, NY:** Retrofit of two floors of leased space, approximately 66,000 sf, for the co-location of the clinical and research space of two distinct departments. Scope of work includes mechanical, electrical, plumbing and fire protection to accommodate both departments that demand high degrees of visual and acoustic privacy for their clientele, which has a direct relationship to system designs. The programming has a high percentage of perimeter offices, interior offices, shared office and workroom spaces, conference rooms and lounge spaces as well as support and MEP service rooms.
- **Confidential Client, Central Clinical Services Building, Bethpage, NY:** Adaptive reconstruction of a former industrial plant building for use as a large-scale central sterile processing facility and central pharmacy (USP 797 and USP 800 cleanroom compounding suites) distribution for a large health system's multiple hospitals. The original project also included a large ambulance garage addition for centralizing dispatch of emergency vehicles and EMTs through the region.
- **Summit Medical Group/MD Anderson Cancer Center, Outpatient Treatment Building, Florham Park, NJ:** Core & Shell and Tenant Fit-out of new 130,000 sq.ft 4-story building housing primarily cancer care clinics, but also a cafe, retail pharmacy and executive offices suite. Cancer care program includes Radiation Therapy (3 linear accelerators, for high-dose radiation/brachytherapy, and nuclear medicine), an Imaging Suite (CT, PET/CT, MRI and x-ray) including Breast Center (mammography), and Infusion Clinic with USP 797/800 chemo-therapy compounding pharmacy, and medical & surgical care clinics. Underground parking garage.
- **Veterans Administration Medical Center, Ambulatory Care, Spinal Cord Injury Unit and Laboratories, Cleveland, OH:** Facility master plan and engineering design to accommodate several major additions (to the existing hospital) -- emergency department, ambulatory care clinic, clinical laboratories, and spinal cord injury patient wing -- plus renovations of existing emergency department, ambulatory care clinic, pharmacy, and laboratory spaces. Energy master plan and design included and "Energy Center" addition housing a full replacement.
- **Veterans Affairs Medical Center, Health Care Center, Winston-Salem, NC:** New 375,000 sf outpatient health center including surgery, sterile processing department, laboratories and cleanroom compounding suite. Clinics include behavioral health, women's health, radiology, primary care, audiology and pulmonary medicine. Project includes a police department with readiness training room and weapons storage. The building is designed for LEED® Gold certification.
- **HUP Presbyterian Hospital, Emergency Department Renovation, Philadelphia, PA:** A phased renovation of the emergency department and a 1-story in-fill addition.