MH Professional Engineering, PLLC

UNIVERSITY PROJECT EXPERIENCE

SMART ENERGY BUILDING, BINGHAMTON UNIVERSITY
Binghamton, NY

- Lead Fire Protection Engineer for the design of 114,000 ft^2 building on the SUNY Binghamton campus.
- The building will house the departments of chemistry and physics, including 56,000 ft^2 for research, 125 fume hoods and 45 faculty offices.
- The facility will provide room for faculty, industry scientists and engineers to work side-by-side to create new energy technologies and maintain and expand the regional workforce.
- Features include micro turbines on mechanical systems, a fuel cell to produce electricity at a reduced cost to heat and cool the building, photovoltaic panels on the roof to produce electricity, hydronic radiant heating in the floor, controlled LED lighting, individual space monitoring of chemicals to reduce air flows and energy use, and water-cooled equipment wherever possible to conserve energy.

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UNIVERSITY PROJECT EXPERIENCE

NEW ATHLETICS FIELD HOUSE, STATE UNIVERSITY AT BUFFALO
Buffalo, NY

- Lead Electrical Engineer for the design of a new 92,000 ft^2 Athletics Field House for the State University at Buffalo.
- Provided electrical design sketches showing preliminary power distribution, lighting selections, and fire alarm systems.
- Investigated the existing campus power distribution system and designed incoming service for the new building.
- Provided electric power distribution to HVAC, lighting, general receptacle, and specialized equipment. The building's systems were laid out in compliance with 2015 NYS Building Codes, NFPA 72, ADA, the 2014 National Electrical Code, and ASHRAE 90.1-2013.
- Designed power, switching and wiring to indoor and exterior building mounted and site lighting, associated controls, egress lighting, and exit signs.
- Designed fire alarm voice evacuation, aspiration detection, horn/strobe, pull station and initiating device layout with the appropriate interlocks to mechanical HVAC equipment. Also designed telephone and data outlet locations with provisions of properly located empty raceway/conduit to accommodate telephone and data wiring.
- Provided empty raceway/conduit for AV equipment, and raceway/conduit/120V power connections for security/access control systems.

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UNIVERSITY PROJECT EXPERIENCE

MACDONOUGH HALL, SUNY PLATTSBURGH
Plattsburgh, NY

- Provided Electrical and Plumbing engineering design services for the rehabilitation of the roof at MacDonough Hall at SUNY Plattsburgh.
- Prepared electrical design sketches showing preliminary power distribution sources for snow melt systems.
- Prepared design development sketches showing locations of roof leaders for coordination.
- Designed electric power distribution to snow melt system.
- Designed snow melt system and associated controls.
- Designed storm water drainage system from building's flat roof area, including exterior piping to existing manhole structure.

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UNIVERSITY PROJECT EXPERIENCE

PODIUM REHABILITATION, SUNY PLATTSBURGH
Plattsburgh, NY

- Lead Mechanical, Electrical and Plumbing Engineer for the rehabilitation of the podium walkways at SUNY Plattsburgh.
- Designed a hydronic snow melt system to accommodate 47,000 ft^2 of podium walkways.
- Conducted a utility source and capacity investigation for snow melt system.
- Provided equipment and pipe layouts and sizing for new mechanical rooms to support snow melt system.
- Designed the removal and reinstallation of walkway drainage systems for 47,000 ft^2 of raised walkway including areas of "Green Roof."
- Designed new lighting systems for 39,000 ft^2 of walkway.
- Designed electric heat trace system for walkway drainage.
- Designed the removal and replacement of electrical systems that interfered with the areas of the podium that required full reconstruction.

KELLAS HALL, SUNY POTSDAM
Potsdam, NY

- Lead Mechanical, Electrical and Plumbing Engineer for the design of two new toilet rooms within an existing lecture hall building.
- HVAC system consisted of the modification of an existing supply ductwork system and new dedicated exhaust system consisting of a new roof mounted exhaust fan and exhaust ductwork system.
- Plumbing systems included water and sanitary systems and modifications to the existing storm water drainage system.
- Complete electrical design included lighting, receptacles and fire alarm system upgrade.

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UNIVERSITY PROJECT EXPERIENCE

DANA HALL, SUNY CANTON
Canton, NY

- Lead Mechanical and Electrical Engineers for a feasibility study for the complete renovation of Dana Hall. The building contains a gymnasium, a former pool, locker rooms, and other support spaces, as well as offices for the university police department.
- The building programming included removing the old pool structure and gaining the floor space by infilling the pool and adding a second story to the space.
- HVAC upgrades included replacing the entire heating system, adding code compliant ventilation to all areas, and adding air conditioning to the building.
- All plumbing and fire protection systems were to be replaced.
- The electrical systems (power distribution, lighting, tel/data, security, etc.), were to be replaced, including main electrical switchgear.

UPGRADE COOKING LABS, MACDONALD HALL, SUNY DELHI
Delhi, NY

- Lead Mechanical, Electrical, Plumbing and Fire Protection Engineers for the upgrade of cooking laboratories, modernization of kitchen infrastructure, and the renovation of the overall area to make lab facilities fully accessible.
- Project is currently in Design Development Phase.
- Designed completely new make-up air and ductwork system for kitchen hood replacements, including complicated control system for make-up air and hood exhaust due to building physical limitations place on make-up air location and size.
- Designed new plumbing systems for reconfigured spaces, including new grease traps and propane distribution to appliances.
- Electrical systems included new lighting, new power distribution, replacement panels, IT/AV security and access control.
- Project has been cancelled by SUNY for the moment.

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UNIVERSITY PROJECT EXPERIENCE

BEARD WELLNESS CENTER, SUNY COBLESKILL
Cobleskill, NY

- Lead HVAC Engineer.
- Replaced electric heat and 40-year-old air handling unit, and added air conditioning to building.
- Provided roof mounted gas-fired heat/DX cooling units.
- Modified ductwork as necessary to marry up with new rooftop units.
- Structural support was required to be added to the roof for the new units.
- Provided new gas service to building to serve rooftop units, a future generator and future building addition.

SUB-BASEMENT LECTURE CENTER, SUNY ALBANY
Albany, NY

- Lead Mechanical, Electrical, Plumbing and Fire Protection Engineers.
- Project included the complete rehabilitation of two television studios and ancillary support areas.
- Project also included the rehabilitation of the campus water-side economizer system.
- Failing evaporative coolers were replaced with dry coolers to move the campus toward meeting regulation changes concerning cooling towers.
- System was also upgraded to utilize campus chilled water loop in the summer.
- Electrical system was replaced within studios and coordinated with the needs of an audio-visual consultant.
- Campus BMS system was upgraded/expanded for new equipment.

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UNIVERSITY PROJECT EXPERIENCE

BOUCK HALL RENOVATIONS, SUNY COBLESKILL
Cobleskill, NY

- Lead Mechanical, Electrical, Plumbing and Fire Protection Engineers for the complete renovation of a performance theater and mechanical upgrades to gymnasium.
- Gymnasium upgrades included replacement of air handling units, as well as the addition of air conditioning and the addition of a sprinkler system.
- Theater upgrades included replacement of air handling units, replacement of sprinkler system, all lighting, and theater systems.
- A chilled water system is being added to the building by adding a chiller.
- Building Management System (BMS) in building is being completely replaced and upgraded.
- Electrical systems are being upgraded to support the mechanical and theatrical upgrades.

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UNIVERSITY PROJECT EXPERIENCE

SIBLEY HALL, SUNY PLATTSBURGH
Plattsburgh, NY

- Lead Fire Protection Engineer for the design of a new fire sprinkler system for Sibley Hall, located on the SUNY Plattsburgh campus.
- Sibley Hall was constructed in 1966 and most systems are in poor condition. The building and its major systems have reached or exceeded their useful life. This project is the first phase of a larger building-wide renovation project.

MEMORIAL HALL MASTERPLAN, SUNY PLATTSBURGH
Plattsburgh, NY

- Lead Mechanical, Electrical, Plumbing and Fire Protection Engineers.
- Project scope was to provide a feasibility study to increase available recreational space, improve the fitness center as well as the experience for athletic recruits, and upgrade the mechanical and electrical infrastructure.
- Key infrastructure systems within the building date back to the building's construction in the mid-1960s.
- Problems include:
  - Failing switchgear and panels
  - Failing heating and ventilating units
  - Building not currently connected to campus high temperature water loop
  - No air conditioning
  - Humidity and control issues on pool causing moisture problems elsewhere in building
  - Poor security
- As part of the study, a phasing plan to replace all the mechanical and electrical systems and add sprinklers was created while keeping the building open.

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UNIVERSITY PROJECT EXPERIENCE

ST. ANTHONY HALL, WILLIAMS COLLEGE FEASIBILITY STUDY
Williamstown, MA

- Lead Mechanical, Electrical, Plumbing and Fire Protection Engineers for a feasibility study commissioned by Williams College to determine the physical condition of St. Anthony Hall and evaluate program needs and to study options for renovation and expansion.
- St. Anthony Hall serves as the academic space, residential hall, and dining hall for Center for Development Economics students, fulfilling many of their needs in a single building.

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UNIVERSITY PROJECT EXPERIENCE

SUNY PURCHASE SITE LIGHTING
Purchase, NY

- Design of wiring for new baseball field MUSCO 80’ – 100’ tall sports lighting poles.
- Two of the sports lighting poles contained LED fixtures for security lighting after hours.
- Project also entailed design of power to (1) baseball field scoreboard, (1) softball field
- scoreboard, (2) lacrosse shot clocks, and (1) prefabricated press box.
- Lighting and power was designed to each of the two dugouts.
- Power was designed to two new bullpens.
- The existing parking lot lighting was also expanded into a new parking lot and walkway.

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UNIVERSITY PROJECT EXPERIENCE

RED DRAGON FIELD, SUNY ONEONTA
Oneonta, NY

- Lead Electrical Engineer.
- Design of power/communications to new in-ground power/communications boxes.
- Design of power for the replacement scoreboard with integral play clock.
- Design of power for the new play clock.
- Design of relocation/interception of existing underground feeder serving existing press box.
- Design of relocation/interception of existing misc. underground conduits/circuits.

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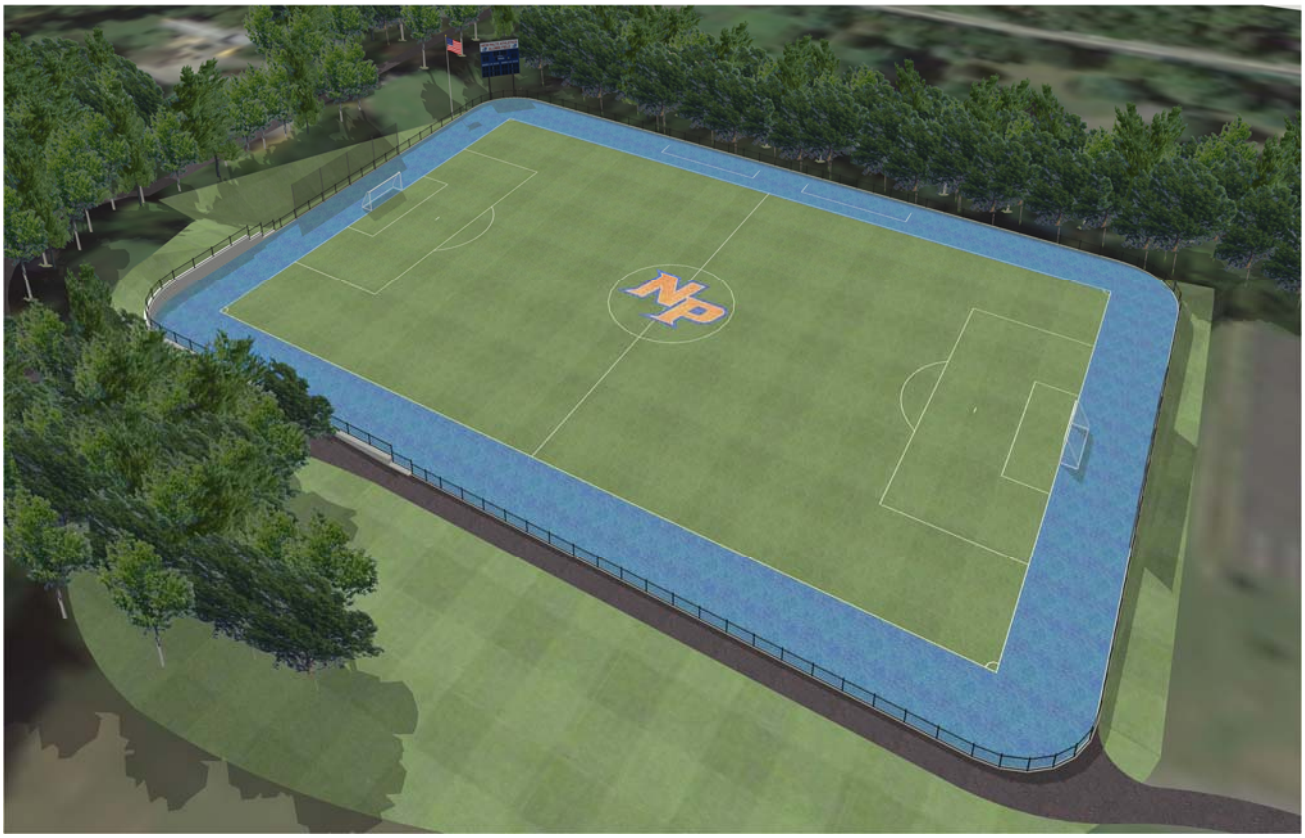
UNIVERSITY PROJECT EXPERIENCE

TURF SOCCER FIELD, SUNY NEW PALTZ
New Paltz, NY

- Lead Electrical Engineer.
- Design of new power and controls for new scoreboard.



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UNIVERSITY PROJECT EXPERIENCE

RENSSELAER POLYTECHNIC INSTITUTE
Troy, NY

- Provided electrical design services for Jonsson Engineering Center, Lab 6119 rehabilitation.
- Project included the removal of existing electrical distribution for lab, providing additional power panel, and providing new power distribution for reconfigured lab spaces.
- Provided Building Access Control Security and CCTV Video Surveillance Security systems at both the Hartford and Mystic Connecticut campuses.
- Connecticut projects also involved improving physical security, including the addition of gates and doors.

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UNIVERSITY PROJECT EXPERIENCE

STATE UNIVERSITY OF NEW YORK/STATE UNIVERSITY ADMINISTRATION HEADQUARTERS
Albany, NY

- Lead Mechanical, Electrical, Plumbing and Fire Protection Engineer for the renovation of four floors on the South Tower and six floors of the Center Tower of the SUNY Administration Building.
- HVAC system consisted of replacing fan coil units, VAV boxes, constant volume boxes, distribution system, and control system upgrade. Hot water and chilled water piping distribution system was also replaced.
- Plumbing systems included the installation of new water and sanitary systems for new toilet rooms, replacement of storm water drainage, and extension of chilled water drinking system.
- The fire sprinkler system was replaced for each floor renovated.
- Electrical power distribution was upgraded to meet new office layouts for each of the renovated floors, including new feeders and panels.
- Building management system was expanded to include all equipment provided.
- Fire alarm system upgraded on all renovated floors.

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UNIVERSITY PROJECT EXPERIENCE

NEW GREENHOUSE, STATE UNIVERSITY OF NEW YORK AT CORTLAND
Cortland, NY

- Lead Electrical Engineer for the design of a new greenhouse on the SUNY Cortland campus.
- Designed power distribution, including new 150A service, to greenhouse equipment (vents, shades, fans, heaters, water heater, evaporative cooling system).
- Designed general lighting for headhouse and moveable/adjustable lighting system for grow lighting.
- Designed fire alarm system, including carbon monoxide detection and notification.
- Designed greenhouse control system.

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UNIVERSITY PROJECT EXPERIENCE

ICEPLEX BUILDING 105, SUNY MORRISVILLE
Morrisville, NY

- Lead Electrical Engineer for upgrades to SUNY Morrisville IcePlex.
- Provided electrical engineering design for HVAC equipment replacement.
- Designed new LED lighting and new LED exit and egress (emergency) lighting to be installed in locker room/lobby/office area of the IcePlex.
- Provided electrical design to modify existing fire alarm system to accommodate new ceilings and HVAC equipment.

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UNIVERSITY PROJECT EXPERIENCE

PARKING LOT IMPROVEMENTS, SUNY FARMINGDALE
Farmingdale, NY

- Lead Electrical Engineer for the renovation of existing parking lots and walkways.
- Parking lot design consisted of powering the parking lot lights, running conduit and conductors from nearby building, and providing lighting contactors and circuit breakers as required.
- Powering the walkway lights included running conduit and conductors to a nearby building, providing lighting contactors and circuit breakers as required, and coordinating with campus standard blue light.

PARKING LOT IMPROVEMENTS, SUNY ONEONTA
Oneonta, NY

- Lead Electrical Engineer for the parking and sidewalk improvement project for the Fine Arts Building at SUNY Oneonta.
- Designed conduit and wiring to parking lot and roadway lighting.
- Provided design of power and cabling to outdoor blue light.
- Coordinated reusing existing branch circuiting with the campus.
- Coordinated with grading and proposed stair.

SOFTBALL FIELD UPGRADES, SUNY FARMINGDALE
Farmingdale, NY

- Lead Electrical Engineer for the design of a softball field as well as walkway light to the field.
- Provided services included:
  - Powering the field lighting
  - Powering the Pressbox
  - Providing fiber to the Pressbox
  - Walkway lighting
  - PA raceway
  - Scoreboard power
  - Flagpole lighting
  - Phones to the dugouts
  - Power and lighting in the dugout storage room
  - Receptacles to each bullpen

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UNIVERSITY PROJECT EXPERIENCE

REHAB ENTRY, NOLD HALL, SUNY FARMINGDALE
Farmingdale, NY

- Lead Electrical Engineer for the design of a new bus stop, powered signage and site lighting for SUNY Farmingdale.
- Provided electrical design drawings showing power distribution, lighting and controls.
- Investigated the existing campus power distribution system.
- Provided electric power distribution to specialized equipment.
- Provided communications and data interconnects conduit to specialized equipment.
- Provided conduit for future campus safety use, camera/radar.

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UNIVERSITY PROJECT EXPERIENCE

THEATER RENOVATIONS, GOODRICH THEATER, SUNY ONEONTA
Oneonta, NY

- Lead Electrical Engineer for the design of a new 158-point theatrical dimming rack system.
- Provided electrical design drawing showing power distribution.
- Investigated the existing campus power distribution system.
- Provided electric power distribution to specialized equipment.
- Designed the new power feeds for the dimming equipment, ER1 panel, stage winch, and raceways for all the control points.
- Provided pathways for electric J connector strips.
- Provided pathways and SJO cables for GIJBs.