



BUILDING SYSTEM EXCELLENCE

DESIGN • COMMISSIONING • ENERGY • CONSULTING

DESIGN SERVICES

At the core of all building design is the architecture. Our engineering staff shares the same passion for our craft and the success of our projects that our architectural partners do. Always respectful of the owner's and architect's vision, Fusion Systems Engineering expertly coordinates innovative systems and materials that complement the architectural design intent while exceeding the owner's performance requirements for energy use, maintenance, safety and comfort.

As a true measure of our commitment to advanced engineering and architectural collaboration, all designs independent of size, are completed using the latest products in BIM (Building Information Modeling) Technology. Our designers are Revit TM 2015 and AutoCAD MEP trained, so that our drawing presentation is among the best in the industry, and our designs are fully coordinated with the architecture in three dimensions.

From collaboration to accountability, our design methodology and approach coupled with the direct involvement of company ownership on every project reduces the incidence of costly change orders. We stand behind every design, and beside every client through the design, delivery and construction process. Building System Excellence. Period.

Relevant Design Projects:

- **Rascal's Restaurant Crossgate's Mall (*Albany, NY*)**

Fusion Systems Engineering designed the tenant MEP/F systems for the high-end steakhouse and concert venue. The \$2.4M renovation featured four dining areas, commercial kitchen, a green room, back office, terrace seating, and specialized lighting and climate controls for a performance stage and concert hall that houses 700 people.

Professional services were comprised of HVAC, plumbing, fire protection and electrical engineering design for the existing vacant tenant space within Crossgates Mall consisting of approximately 15,000 square feet. Our services were provided during the design development, construction documents, and construction phases.





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- **Grace Fellowship Addition (*Halfmoon, NY*)**

Fusion Systems Engineering designed the MEPF systems for the construction of a 7,600 square foot addition to the existing church. The rapidly growing congregation needed additional classroom, worship, office, and activity areas to accommodate church functions and programs. Services were provided from programming to design, through construction administration.



- **The Wick Hotel (*Hudson, NY*)**

Completely new electrical, plumbing, and HVAC systems were designed for the facility. The renovation presented unique challenges to accommodate all MEP systems within the existing structures that were erected over the years. The project successfully repurposed an abandoned warehouse facility to become a luxury hotel that features a commercial kitchen, dining area, and boasts on-site power and heat cogeneration.



- **Morello Italian Restaurant Study (*Greenwich, CT*)**

Fusion Systems Engineering DPC provided consulting engineering services for this gourmet Italian restaurant. The building was originally constructed as a savings and loan branch, and repurposed to feature a fully functioning kitchen, open bar area, mezzanine seating, private dining, and Italian pastry/bakery facility.





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- **Draper Lofts (*Rotterdam, NY*)**

Fusion Systems Engineering provided mechanical, electrical, plumbing and fire protection design for an abandoned high school building, renovated and repurposed to 96 luxury apartments. Our engineers worked on a design-build team with the Owners, each playing a role in the construction of the project (Architect, General Contractor and Equipment Vendor) for a truly cost-conscious integrated design.



- **Skidmore College Surrey Williamson Inn Renovations (*Saratoga Springs, NY*)**

Fusion Systems Engineering designed a solution that provides HVAC in the existing 60-person meeting space, inn, and banquet facility. As part of this project, Skidmore had expressed interest in resolving existing low-pressure steam distribution and boiler control issues that are present in the building. An inverter-driven multi-zone split system was designed to achieve individual control for the guest rooms and kitchen, and a new air handler for the meeting space was specified. A unique ventilation algorithm was specified to provide kitchen makeup air, and ventilation air to meet demand and conserve energy.





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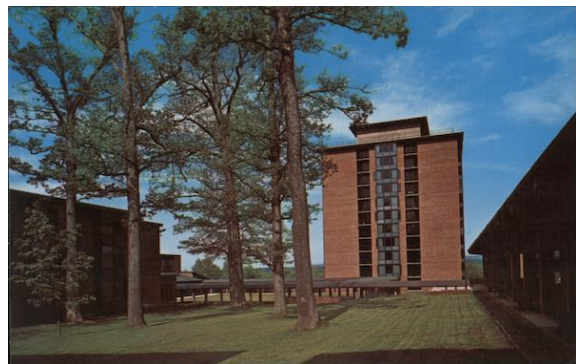
- **Maria College Mc Auley Residence Renovations (*Albany, NY*)**

The proposed program for the building was to renovate the first floor to develop a large “Learning Commons” room near the building’s entrance, second Floor Minor modifications to establish an “Activities of Daily Living” classroom, and the third Floor gut rehab of the entire floor area to establish Occupational Therapy Department spaces and one Gross Anatomy Laboratory. Fusion Systems Engineering designed a solution utilizing the existing heat pump loop, hydronic pumps, and boiler/evaporative cooler central systems. Since the facility was being repurposed as an academic institution, the occupancy density was such that mechanical ventilation will be necessary. New dedicated outdoor air system (DOAS) air-handler(s) were specified for the mechanical room on the 3rd floor. Roof-mounted intake and exhaust penthouses above the mechanical room were required.



- **Skidmore College Jonsson Health Services (*Saratoga Springs, NY*)**

Fusion Systems Engineering designed new MEP/F systems and distribution for the first floor renovation of Jonsson Tower at Skidmore College. Professional services were comprised of HVAC, plumbing, fire protection and electrical engineering design for the proposed renovations to approximately 8,000 square feet. The HVAC systems utilize the existing ground floor dedicated outdoor air system for general ventilation, the existing hot water boiler system for perimeter radiation, and a VRF system for comfort cooling. Our services were provided during the design development, construction documents, bid, and construction phases.





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- **SUNY Cobleskill Wellness Center Addition
(Cobleskill, NY)**

Fusion Systems Engineering designed the HVAC and plumbing systems for the above referenced project. Professional services were comprised of HVAC and plumbing engineering design for the proposed addition of approximately 1,000 square feet to the existing campus wellness center. Our services were provided during the design development, construction documents, and construction phases.



- **Benjamin Moore – Plank
Nov 2022 – Nov 2023**

Joseph Tamburello, VP Construction Services
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Schenectady, NY 12305
Phone: 518-344-5400
Email: jtamburello@plankllc.com

Fusion Systems designed a new medium voltage site power distribution, primary metering gear, standby generator, and all MEP infrastructure for a phased 125,000 square foot construction project that was comprised of several additions to an existing industrial manufacturing facility. Full MEP design was provided for the construction of a new manufacturing space, a warehouse facility, a process control room, and a two-story office structure.





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- **Rotterdam Army Depot– Alltek Energy Systems, Inc.**

April 2022 – June 2023

Mike O'Connor, President & COO

58 Hudson River Road

Waterford, NY 12188

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Email: mikeoc@alltekenergy.com



Fusion Systems Engineering DPC was retained by a local contractor on this design-build project to replace an existing Scotch-Marine boiler plant with a low-mass watertube system. All major components in the central plant were replaced with modern technology including variable speed pumps, chemical treatment, and right-sized expansion compensation. All new custom selected hydronic specialties were specified to address the owner requirements and central plant idiosyncrasies. Several areas of the building were further supplemented with new VRF systems to provide heating and cooling to training rooms, private offices, an resistance training facility, and a security suite. Professional services were compromised of HVAC and electrical engineering design for the renovations.

- **Aesthetic Science Institute (*Latham, NY*)**

Mechanical engineering design for a new construction 10,000 S.F. Esthetician Trade School. Program included faculty offices, conference rooms, nail clinic, waxing clinic, make-up classroom, student lounge, and faculty lounge.





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- **NSH Expansion MEP Design – Plank LLC
(Menands, NY)**

Fusion provided comprehensive MEP engineering design services—including HVAC, plumbing, and electrical for an 18,000-square-foot industrial manufacturing facility. Our scope included design development and construction documents tailored to support efficient, high-performance systems suited for industrial operations. Our final construction documents delivered fully coordinated HVAC, plumbing, electrical, and fire alarm systems ready for contractor execution, so much so that there were no RFI's during construction.



- **Pallidus Expansion - BBL**

Fusion provided full-service MEP engineering consulting—HVAC, plumbing, and electrical—for a 40,000-square-foot existing manufacturing facility, and an adjacent office addition. Our scope spanned from schematic design through construction administration, ensuring a well-coordinated and performance-driven team approach from concept to completion. The project involved paralleling redundant standby generators and high-capacity UPS backup power to ensure production output. High-efficiency VRF technology, DOAS systems, and a custom industrial ventilation energy recovery solution from process exhaust were cleverly implemented to recapture waste process heat for thermal comfort.





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- **MILA Restaurant 500 State Street - Redburn**

Fusion provided full-service MEP engineering consulting—HVAC, plumbing, and electrical—for a 40,000-square-foot existing manufacturing facility, and an adjacent office addition. Our scope spanned from schematic design through construction administration, ensuring a well-coordinated and performance-driven team approach from concept to completion. The project involved paralleling redundant standby generators and high-capacity UPS backup power to ensure production output. High-efficiency VRF technology, DOAS systems, and a custom industrial ventilation energy recovery solution from process exhaust were cleverly implemented to recapture waste process heat for thermal comfort.

