



## Fusion Systems Commissioning Experience

### Uniondale CSD Boilers (Uniondale, NY)

**Building Size: 51,400 SF**  
**Cx Duration: 04/21 to 08/21**

The Uniondale CSD replaced the aging low pressure steam boiler plants in their High School and Middle School buildings. Given the level of expertise and experience needed to commission older steam systems, the design team selected Fusion Systems Engineering to fortify the marriage between an older steam distribution and new combustion technology. The commissioning effort evidenced functional operations of all plant components for submission to the authority having jurisdiction, pursuant to the NYS Energy Code.



**The Glen at Hiland Meadows Memory Care Facility (Queensbury, NY)**  
**Building Size: 25,000 SF**  
**Cx Duration: 10/22 to 07/23**

The Glen at Hiland Meadows erected a new construction Memory Care Center on their campus to serve their aging population. The center is a fully commissioned assisted living facility located in Queensbury, NY with communal dining, residence rooms, and therapy suites. Fusion Systems Engineering was selected to provide code required commissioning services for all energy consuming systems. The design included advanced lighting controls, a condensing boiler plant, VRF systems with heat recovery, a commercial kitchen ventilation system, and dedicated outdoor air systems.





### **The Glen at Hiland Meadows Phase III**

**Building Size: 46,000 SF**

**Cx Duration: 10/22 to 08/24**

Fusion Systems Engineering was selected to provide mechanical and electrical commissioning services for an assisted living facility expansion of approximately 46,000 sq ft. The expansion included a central boiler plant upgrade, new independent living apartment units, and a natatorium with a heat recovery dehumidification system. Through the process we verified systems were installed per manufacturer parameters, that functional performance met the owner project requirements, and the construction accurately represented the design intent.



### **Superpower (Glenville, NY)**

**Building Size: 60,000 SF**

**Cx Duration: 06/20 to 11/20**

Full MEP design and commissioning of MEP & process cooling water systems of this new 60,000 square foot industrial manufacturing headquarters building. As part of the build, Fusion Systems engineered a central process cooling system and water distribution that reduced process cooling power consumption by 75%, and water consumption by an amazing 90% when compared to their previous facility.



### **Fort Drum Post Office (Building #10760) (Fort Drum, NY)**

**Building Size: 9,500 SF**

**Cx Duration: 02/21 to present**

Fusion Systems Engineering was contracted to commission all of the HVAC building systems associated with the renovation of an existing bank branch being turned into a Post Office. Testing was performed using a systemic approach and the equipment testing protocols were strictly adhered to from the Owner's Project Requirements for compliance with Fort Drum Public Works department standards.





## **Albany County Sheriff's Office (Clarksville, NY)**

**Building Size: 11,000 SF**  
**Cx Duration: 07/21 to present**

Fusion Systems Engineering was contracted to complete the functional performance testing of all energy consuming HVAC equipment and lighting associated with this building. This building is a newly constructed public safety building that houses the 911 call center and emergency operations. Fusion Systems provided commissioning services pursuant to the prescriptive requirements of the New York State Energy Conservation Code.



## **Falcon Troop Medical Center (Fort Drum, NY)**

The Falcon Troop Medical Center was a newly constructed medical clinic located on base at Fort Drum, NY. The building was constructed to LEED NC standards, and Fusion Systems Engineering was selected to provide the equivalent of LEED Enhanced Commissioning Services (EACr3).



## **Crandall Public Library Boiler Upgrade April 2023 - Present**

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The Crandall Public Library in Glens Falls, NY found that their existing single cast-iron boiler system was nearing the end of its useful life. Maintenance costs for the system were rising, and replacement parts were becoming harder to procure. The Library engaged with Fusion Systems Engineering DPC to design a boiler system upgrade and energy conservation solution that retrofitted the existing heating system with a completely new, high-efficiency cascading condensing boiler design that incorporated domestic hot water production. The new system was integrated into their DDC building management system through the use of a MODBUS gateway





and provided seamless integration with their existing hydronic distribution. The professional services was comprised of all required HVAC, Plumbing, and Electrical Engineering design.

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

**April 2022 – June 2023**

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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.



### **Halfmoon Waterford Fire Department Hydronic System Retro-Commissioning Cx Duration: 02/25 to Present**

Fusion Systems Engineering was presented with a unique challenge to retro-commission the building's HVAC systems. The building was reportedly commissioned the year prior, however several failure modes and sequences were not properly vetted, resulting in costly failures, an unsatisfactory indoor air quality, nuisance alarms, and poor energy performance. Since the building was constructed without a central building management system, Fusion was hired by the designer of record to directly manipulate local controllers as necessary to determine the root cause of the failures. Subsequently, Fusion was also hired to design the corrective actions necessary to remediate the issues identified





**Fort Drum CCF Cx (Building #2078)**  
**(Fort Drum, NY)**  
**Building Size: 4,150 SF**  
**Cx Duration: 09/22 to present**

Fusion Systems Engineering was contracted to commission the energy consuming systems associated with the renovation of an existing building into a corrosion control facility. This was to include the HVAC systems, plumbing domestic hot water system, and paint spray booth ventilation systems. During this process we verified that the systems were designed, installed, and operate as intended to ensure proper functionality and integration of all systems and components. Testing was performed using a systemic approach and the equipment testing protocols were strictly adhered to from the Owner's Project Requirements for compliance with Fort Drum Public Works department standards.

