

MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

NISKAYUNA FIRE STATION # 1

Niskayuna, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the expansion and renovation of the Niskayuna Fire Station #1.
- Project included 10,000 ft² apparatus bay addition with radiant floors, elevator, vehicle exhaust system, generator and sprinkler system.
- Existing portion of building was completely reconfigured into department offices, training room and bunk area.



MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

UNION HILL FIRE DEPARTMENT

Union Hill, NY

- Lead Mechanical Engineers for the expansion and renovation of the Union Hill Fire Department.
- Project included apparatus bay vehicle exhaust, radio room addition, reconfiguration of bunk areas, and addition of air conditioning throughout building.

KEENE FIRE DEPARTMENT

Keene, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the construction of a new 7,500 ft², single-story facility.
- Existing fire station was destroyed by Hurricane Irene.
- New facility is in a new location and includes radiant floors, vehicle exhaust system, truck fill system, compressed air drops, emergency generator and fit-out for future kitchen/meeting room area.



MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

WILLIAM P. FAIST VOLUNTEER AMBULANCE CORPS

Chestnut Ridge, NY

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers.
- Project included 2,860 ft² apparatus bay, approximately 6,585 ft² of office, training and meeting spaces.
- HVAC system consisted of boilers, pumping and heating hot water distribution, energy recovery ventilation systems, exhaust systems, radiant floors; and variable refrigerant volume heat pump system.
- Electrical systems included incoming service and service gear, electrical distribution system, generator back-up, fire alarm, security, A/V telephone/data systems, public address and tone alert systems.
- Plumbing systems included oil/water separator; water heater; water and sanitary systems, and natural gas distribution.
- A fire sprinkler system was provided for the building.



MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

MONROE TOWNSHIP FIRE STATION

Monroe Township, NJ

- Lead Mechanical, Electrical, and Plumbing Engineers for the design of a fire station for the Monroe Township Fire Department.
- Project included lighting design for interior lighting and circuiting, power and receptacle layout with specialty power connections as required for powered equipment, including HVAC equipment, telephone, data and cable television raceway, fire alarm system design, generator design (natural gas), electrical design of specialty spaces (i.e. compressor room, Decon Room, EMS area), and a speaker system for paging, and audio/visual systems for meeting/training room (dimming, ceiling projector, motorized screen, etc.)
- Designed a municipal water service entrance to meet requirements of municipality, sanitary waste piping to 5 feet outside building footprint, domestic water system throughout building, and domestic water heating system.
- Other designed systems included natural gas distribution system for HVAC equipment, kitchen equipment, and outdoor grille; fire service entrance and backflow prevention to meet requirements of municipality; wet and dry sprinkler system layout; ventilation system to meet ASHRAE and building code standards; heating hot water boiler system; general exhaust systems for all areas of the building. (i.e. toilets, kitchens, truck bays, etc.), and air-to-air heat recovery system for apparatus bay ventilation.
- General exhaust systems for all areas of the building. (i.e. toilets, kitchens, truck bays, etc.)
- Air-to-air heat recovery system for apparatus bay ventilation.



MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

CITY OF ALBANY FIREHOUSE EVALUATIONS

Albany, NY

- **Engine 1 (320 Washington Avenue):** This firehouse is on the Historical Society List and was constructed in 1892.
- **Engine 7 (670 Clinton Avenue):** While not listed specifically with the Historical Society, it was constructed in 1874 and the generator location was designed as if this facility was on the Historical List.
- **Engine 9 (356 Delaware Avenue):** This firehouse is on the Historical Society List and was originally constructed in 1912.
- **Engine 11 (439 New Scotland Avenue):** While not listed specifically with the Historical Society, the firehouse was constructed in 1926 and the generator location was designed as if this facility was on the Historical List.

Scope of Services

Provided field investigations, construction costs and recommendations for the following work at all firehouse locations:

- Sizing of new natural gas generator at each firehouse.
- Recommended size/location for new generator at each firehouse.
- Recommended size/location for new automatic transfer switch at each firehouse.
- Provided opinion of probable construction costs for each firehouse.
- Provided report describing generator size, generator location, automatic transfer switch size, and automatic transformer switch location for each firehouse.



MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

ROOSEVELT FIRE DEPARTMENT

Hyde Park, NY

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for the design of a new station for the Roosevelt Fire Department.
- Project included 10,000 ft² apparatus bay, approximately 9,000 ft² of office, training and meeting spaces.
- HVAC system consisted of new boilers, pumping and heating hot water distribution; new ventilation systems; kitchen hood exhaust system; radiant floors; general and vehicle exhaust systems.
- Electrical systems included incoming service and service gear; electrical distribution system; generator back-up; fire alarm, security, A/V and telephone/data systems; and diesel fueling station.
- Plumbing systems included grease trap; oil/water separator; water heater; water and sanitary systems, and LP gas distribution.
- A fire sprinkler system was provided for the building.



FIRE DEPARTMENT EXPERIENCE

BETHEL PARK FIRE DEPARTMENT

Bethel Park, PA

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for the design of a new 21,000 ft² station for the Bethel Park Fire Department.
- HVAC system consisted of new boilers, pumping and heating hot water distribution, new ventilation systems, kitchen hood exhaust system, radiant floors, and general and vehicle exhaust systems.
- Electrical systems included incoming service and service gear, electrical distribution system, interior generator back-up, fire alarm, security, A/V and telephone/data systems.
- Plumbing systems included grease trap; oil/water separator, water heater, water and sanitary systems, and natural gas distribution.
- A fire sprinkler system was provided for the building.
- Building lighting system was designed as all LED fixtures.



MH Professional Engineering, PLLC



FIRE DEPARTMENT EXPERIENCE

CATSKILL FIRE DEPARTMENT ADDITION

Catskill, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the design of a fire station addition for the Catskill Fire Department.
- New apparatus bay was added on to existing fire station. Overhead door openers and associated controls were relocated for the three relocated overhead doors. Lighting and circuiting design was completed for the new addition. General receptacles and cord reels for power were provided as well as power for new unit heaters. A new power panel was added to serve the new addition.
- Designed a gas-fired heating system and storm drain system for the fire station addition.

CICERO FIRE DEPARTMENT

Cicero, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the design of a new fire station for the Cicero Fire Department.
- Project included lighting design for interior lighting and circuiting as well as power and receptacle layouts. Power for special equipment, such as kitchen equipment and HVAC equipment, was provided as well as power to air compressors and a siren. An emergency generator and automatic transfer switch sizes were designed as part of the project. An empty raceway system was provided for television and closed circuit television. Outdoor lighting controls, including a time clock and photocell, were provided.
- Designed a municipal water service entrance to meet requirements of municipality, sanitary waste piping to five feet outside building footprint, domestic water system throughout building, domestic water heating system, and natural gas distribution.
- Designed wet sprinkler system layout; ventilation system to meet ASHRAE and building code standards.
- Designed heating hot water boiler system; general exhaust systems for all areas of the building. (i.e. toilets, truck bays, etc.), radiant floor heating system, and commercial kitchen hood exhaust and make-up air system.