

## LABORATORY PROJECT EXPERIENCE

### NATHAN KLINE INSTITUTE FOR PSYCHIATRIC RESEARCH

Orangeburg, NY

- **Laboratory Upgrade, Bldg. #39**

The project consisted of a complete gut rehabilitation of 11,000 ft<sup>2</sup> of research laboratory spaces. Some of the upgraded systems include the ventilation system, the steam to hot water heating system, new chiller, laboratory compressed air and vacuum system, acid waste neutralization system, humidification system, fire protection system, electrical power distribution system, emergency power distribution system, fire alarm system, laboratory fume hood controls, and building management system.



- **Cage Wash Enclosure**

The principal of the firm was involved with a cage wash enclosure that involved the construction of a 1,000 ft<sup>2</sup> building addition to accommodate the cage washing function for the animal housing area of the facility. Utility services, power, steam and condensate, domestic hot and cold water, non-potable water, sanitary and fire protection services were extended from the existing building for direct support of equipment. A coordinated, phased transition between existing facilities and the new facility was prepared to minimize impact on the care requirements of the animals. A new piece of cage washing equipment was added to the space requiring reconfiguring of existing equipment and utilities and extension of utilities to the new equipment.

- **Convert Room to Animal Housing**

The principal of the firm was involved with converting the existing mail room to a housing area for mice. The room was required to be separated from the general ventilation system and to meet the current guidelines for laboratory animal care. The National Research Council publication, "Guide for the Care and Use of Laboratory Animals," was strictly followed regarding air change rates, the allowable rate of temperature and humidity change, laminar air distribution, specialized plumbing fixtures, and animal watering system.

- **Replacement of HVAC Systems**

The principal of the firm was involved with replacing the existing HVAC systems for the housing area of various types of animals (mice to primates). These animals represented years of research regarding psychiatric disorders and medications. The rooftop HVAC units were required to be replaced without disruption of service to the facility. The replacement involved custom equipment, including specialized filtration and humidification that was required to be married into the facility's existing digital control system.

# MH Professional Engineering, PLLC



## LABORATORY PROJECT EXPERIENCE

### **FOOD LABORATORY AND WEIGHTS AND MEASURES LABORATORY**

Albany, NY

- Provided design of underground utility connections for new building on campus.
- Design involved survey of existing utility tunnels to verify sizes, locations and capacities of existing utilities.
- Designed extension of underground chilled water piping system to new building.
- Designed extension of underground steam and condensate piping system to new building, including expansion loops and condensate return pumping.
- Design included removals and repiping of existing mechanical room equipment. The mechanical room served as the connection point for extending the system.



# MH Professional Engineering, PLLC



## LABORATORY PROJECT EXPERIENCE

### FORENSIC INVESTIGATION UNITS AND COMMAND CENTERS

Ray Brook, Oneida and Middletown, NY

- MH Professional Engineering was retained by The Office of General Services (OGS) to provide consulting and design engineering services for the Forensic Investigation Unit (FIU) and Command Center addition and renovation projects in Ray Brook, Oneida, and Middletown, NY.
- The designs in all three buildings incorporated LEED standards and Executive Order 111 for “green” buildings and are LEED certified with the United States Green Building Council.
- The result of the engineering services was a coordinated prototypical set of building engineering documents allowing for consistent design and construction between the three sites.
- New FIU buildings were planned to alleviate some of the overcrowding within the existing headquarters buildings. With the rapidly expanding role of the forensic sciences in police investigations and new regulations requiring long-term storage of DNA evidence, the existing headquarters buildings no longer support the needs of the forensic investigations unit. Specifically, the FIU buildings provide much needed evidence storage, laboratory and office space for the rapidly expanding departments of Forensic Investigations and Computer Crimes.
- The command center supports all the troop radio dispatch and communications functions, the park police dispatch functions and non-business hour troop desk operations. All of the facility sites, with the exception of the Ray Brook facility, have command center upgrades, which include the design and construction of a small data center.

