

MEP Design - Education Pratt Institute, Brooklyn Campus Various Projects Brooklyn, New York

EME Group has been providing engineering services to Pratt Institute's Brooklyn Campus since 1990. Pratt comprises 24 buildings totaling 750,000 sq.ft. Most of the buildings date from the 19th century and are served from a central steam plant. Pratt has embarked on a multi-year capital program to upgrade their building systems including installing central air conditioning, upgrading HVAC controls and improving building envelopes.

Services Provided

- Mechanical, Electrical, Plumbing System Design
- Construction Administration
- Energy Conservation Analyses
- Mechanical System Troubleshooting
- Accessed NYSERDA Funding

EME Group developed construction documents and oversaw the construction for the installation of the chiller plant consisting of three 120-ton Trane screw chillers serving Memorial Hall. This building is a landmark theater and special care had to be taken to ensure that the installation did not disturb its historic integrity. The chiller plant also serves the cafeteria and related dining areas located in the North Hall.

EME Group provided similar services for the Main Building, another landmark building containing classrooms on the campus. We performed detailed load calculations, prepared the contract documents and oversaw the construction.

We also developed the mechanical, electrical and plumbing construction documents for the renovation of Pratt Studios, a 75,000 square foot building containing architecture and art studios, which included significant upgrades to the building. Similar to most projects on campus, the work had to be designed prior to the summer break so the work could be completed while classes were out of session.

In a similar project we designed and supervised the replacement of the computer lab HVAC system located in the Activities Resource Center with a VAV system. The design utilized groundwater for pre-cooling the return air as an energy conservation measure.



Memorial Hall – Pratt Institute's Brooklyn Campus

Another project included contract documents and construction supervision for 300 linear feet of new underground steam main and condensate return serving Stabile Hall, a new dormitory building. A 5-inch diameter high pressure schedule 80 and 3-inch diameter high pressure schedule 80 steel condensate return line were enclosed in a manufactured concrete Trenwa trench. The piping passed under sidewalks, roadway and open ground and careful consideration was given to thermal expansion. At system start-up, prior to covering the work, we observed the piping move approximately 6" when the 300°F steam entered the piping.

We also prepared a comprehensive energy plan for the campus that evaluated all Pratt's energy usage including fuel oil, natural gas and electric purchasing options and investigated the feasibility of installing a centralized control and monitoring system for electric load control.

EME Group also provided Pratt guidance in standardizing their campus-wide control system that included reviewing design submittals and performing Peer Review of the Trane EMS that was being installed to operate the new dormitory, Stabile Hall.