

NYU HOSPITAL FOR JOINT DISEASES

ENERGY RETRO-COMMISSIONING PROJECT

Project Value:

\$10,000,000

First Year Energy Savings:

\$966,289

Water Savings:

\$80,407

O&M Savings:

\$10,400



GOALS AND CHALLENGES

In operation since 1905, the Hospital for Joint Diseases (HJD) at NYU Langone Medical Center is ranked among the nation's top 10 hospitals for both orthopedics and rheumatology services. HJD tasked Willdan to use their expertise and operational background to provide retro-commissioning services to ensure that the hospital's equipment and facility was operating as efficiently as possible.



The HJD project exceeded ASHRAE Level II and local Law 87 compliance criteria. This project was performed under the New York State Energy Research and Development Authority (NYSERDA) FlexTech program.

SOLUTIONS AND RESULTS

This complex project needed to be phased in order to maintain the building's operation at all times and to optimize the operational needs and performance objectives of NYU. We used creative approaches to identify overlooked consumption such as AHU start up sequences; all implementation strategies included engineering and design solutions to meet the needs of a fully functioning 24-hour hospital.

By installing high-efficiency technologies and upgrading the HVAC equipment, the hospital saves 493 kW of electric demand, to equal 2,954,103 kWh per year, as well as 7,325,272 gallons of water and 23,000 MMBtu per year in steam.

In the first year, the hospital saved almost \$1 million in energy.

IMPROVEMENT DETAILS

- Upgraded existing HVAC equipment
- Energy analysis
- Implemented 14 energy conservation measures
- AHU start up sequences
- External air controls
- Magnetic bearing chillers

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