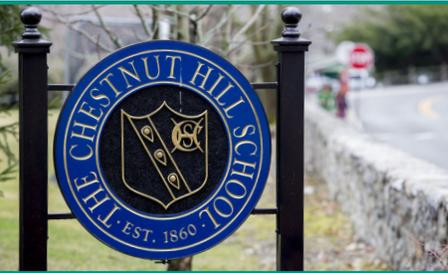




HVAC system optimization fosters an ideal learning environment for the Chestnut Hill School

THE CHESTNUT HILL SCHOOL



HVAC KNOW-HOW: UNIT VENTILATORS

Unit ventilators are a common feature in classrooms and are used to improve indoor air quality to help meet the Massachusetts Indoor Air Quality (IAQ) guidelines by conditioning and circulating outdoor air.

PROJECT ELECTRICITY SAVINGS

10%

Reduction in electricity use, providing the Chestnut Hill School a rapid payback for their investment while also lowering their greenhouse gas footprint.

For over 150 years, the Chestnut Hill School has provided a top-tier, dynamic learning experience for its students at its world-class school facility in Chestnut Hill, Massachusetts. To create an indoor environment that matched the high standards of its programs, they partnered with FMC Technologies (FMC) to design and implement an advanced energy efficiency solution that centralized HVAC control, lowered carbon emissions, and delivered energy savings.

CONFRONTING OBSTACLES TO HVAC SYSTEM CONNECTIONS

As many educators know, an essential component of a student's ability to learn is the quality of the physical environment in which they learn, including temperature and air quality. The Chestnut Hill School wanted to update their facility's HVAC system to achieve precise environmental control and cost-efficient operation. However, this was not a straightforward project. Many of the classrooms had unit ventilators that were individually controlled and not easily retrofitted with wired control devices for centralized management. Additionally, the design of several rooms made standard HVAC communications network installation challenging.

CREATING GREATER TRANSPARENCY AND ACCESS ACROSS THE SYSTEM

The Chestnut Hill School was determined to overcome these obstacles to meet the needs of their students and their objective of greater energy efficiency. For this reason, they contracted FMC to leverage their experience in building energy solutions. FMC worked with school personnel to perform a building evaluation and to design an advanced energy efficiency solution that utilized open standards for system integration. The HVAC solutions involved retrofitting the classroom unit ventilators and other HVAC units with both wired and wireless communication networks. This hybrid system was based on a mesh network and connected the HVAC units' newly installed BACnet controllers to the Energy Management System (EMS) without physical cabling. The mesh network based on open standards delivered improved operational efficiencies with lower cost in the complex retrofit.

Additionally, the system integration of the HVAC solutions and the EMS allowed facilities management to monitor the entire HVAC system with their tailored, centralized customer interface. The custom alarms, trend reports, and histories allowed them to pinpoint and resolve any issues that arose. FMC also enabled secure remote access for the EMS so key school personnel could manage and monitor building operational performance remotely on any device at any time. This helped the Chestnut Hill School make every classroom ready each morning for its students to learn in an optimal environment.

About FMC

FMC Technologies provides advanced building systems that reduce building operating expenses, increase productivity, and provide a safe, comfortable working environment.

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