Advanced Energy Solutions

FMC Technologies, Inc.

Solid, Reliable Controls

Chelmsford Middle Schools Project Profile

At a Glance:

Project Type: Direct Digital Controls
Vertical Market: Education/K-12
Location: Chelmsford, Massachusetts
Size: 300,000 square feet
Products: Novar
Installation: 2006

Customer Benefits:

- Energy efficiency
- Centralized monitoring and control
- Improved indoor air quality
- User friendly system interface

Project Overview

The Town of Chelmsford was faced with two aging middle schools with outdated building control systems. Parker Middle School and McCarthy Middle School were built in the 1950's and 1960's respectively and were no longer meeting the needs of students and town employees.

McCarthy has nearly 1000 students enrolled in its 166,200 SF two story building. Parker Middle School is approximately 135,000 SF and enrolls 730 students. The schools each have a cafeteria, gymnasium, and library in addition to the classrooms and administrative offices.

Several issues needed to be addressed during the renovation. The pneumatic control system required recalibration to maintain accuracy and was not always reliable. Temperature control was inconsistent, there was a lack of ventilation and the buildings were not energy efficient. The project also had time constraints as the majority of work needed to be completed while students were on summer break.

The Solution

The project included a new HVAC and control system for McCarthy Middle School and a new control system for the Parker Middle School and the addition of new libraries for each school. The scope of work included more than 900 control points, 2 roof top units, 4 air handling units, a new boiler plant and more than 85 new unit ventilators. The existing pneumatic control system was

A new front end system located in the Chelmsford Town Offices now allows for central monitoring and control of McCarthy and Parker as well as all the schools with Novar Logic One Systems.

The Bottom Line

This project has resulted in numerous benefits for the Town of Chelmsford and its students. Temperature and air flow are now regulated by the Building Automation System (BAS), increasing the building's efficiency and reducing waste and costs.

Central management, simpler operation, and a faster response time to issues that arise are among the project benefits. Hot and cold calls may be responded to with the click of a mouse. Gary Persichetti, the Facilities Director for the town, stated, "We have the ability to look up and see different parts of the building from a single source." Persichetti also believes the time savings is a significant benefit of the new system.

The DDC system offers precise control and reliability as well as lower life cycle costs. The new system allows for greater flexibility when future changes or additions need to be made. Improved indoor air quality and temperature control provide a better environment for students and faculty.

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