



MEADOWBROOK ELEMENTARY SCHOOL

Meadowbrook Elementary School Features Highly Innovative Air Purification System

CASE STUDY
Meadowbrook
Elementary School
Gainesville, FL

BACKGROUND

The MEP engineering firm, OCI Associates, was tasked with designing an energy-efficient, cost-effective building utilizing the latest advancements in HVAC school design. Early in the design process, they identified soft ionization, the technology behind Plasma Air's HVAC air purification solutions, as a good fit for this elementary school project.

The HVAC technology was selected as one of the key pillars of a sustainable building design for a new elementary school, in Gainesville, Florida. The Alachua County School District was committed to building a new facility that would provide a superior learning environment for its students and become a leading example of sustainable building design in the community.

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SOLUTION

“By utilizing the IAQ Procedure from the latest ASHRAE Standard 62.1 and employing the Plasma Air technology, we knew we could cut outside air intake by at least 50%,” said Jason Smith PE, Principal and Director of Mechanical Engineering with OCI. “Our air conditioning equipment could be smaller, installation costs reduced and ongoing energy usage would be significantly reduced for the school district.”

A total of 17 Plasma Air devices were installed in seven air handling units, treating almost 80,000 CFM of supply air provided to the school. The advanced technology was chosen for its ability to deliver superior air quality with little to no required maintenance.

Once the devices were installed and the building was fully occupied, testing was performed to ensure the Plasma Air units had the intended effect on the overall air quality. The testing also was employed in an effort to validate that the ASHRAE IAQ Procedure calculations were accurate that is, to insure the pollutant levels were equal to or less than those calculated.



We are extremely happy with our choice to install the Plasma Air products. Not only is our air quality exceeding expectations, but we saved on our HVAC installation costs and continue to save significantly on our annual energy costs.”

- Ed Souza,
Project Coordinator for Alachua County School District.

RESULTS

The testing concluded that the contaminants of concern, measured throughout the building, were indeed less than those calculated as part of the ASHRAE procedure. Additionally, all measured pollutant levels were found to be below accepted standards. The testing results confirmed that the presence of the Plasma Air units have a positive effect on the overall air quality.



The Meadowbrook Elementary School project earned a **4 Green Globes Certification**, the equivalent of a LEED Platinum designation. Green Globes' building rating system has emerged as a superior and more flexible tool for the achievement of a sustainable environment.