Plastic Concepts, Inc.

Project Profile

Upstate NY College Laboratory Renovation

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Project Overview

An upstate New York college embarked on a comprehensive laboratory renovation to modernize its science facilities. A primary challenge emerged early in the planning phase: the building's HVAC system was already operating at capacity, and budget constraints made a full HVAC upgrade unfeasible. The college's team was determined to find a solution that would not compromise safety or functionality, despite these limitations.
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THE CHALLENGE
The college's strict criteria for laboratory safety and operational effectiveness initially led to skepticism about alternatives to traditional ducted fume hoods. There were concerns about whether a lab could maintain high safety standards and regulatory compliance without the conventional approach of ducted exhaust systems.

SOLUTION EXPLORATION
After evaluating a range of options, the project team identified filtered fume hoods as the most promising solution. This approach would avoid additional strain on the HVAC system, but it introduced new considerations around liability, ongoing safety, and compliance. Ensuring that filtered hoods could meet the rigorous demands of the college's laboratory activities was essential.

PARTNERSHIP AND VALIDATION
This is where the partnership with Erlab became pivotal. Together, the teams conducted thorough validation of the chemical handling and processes performed in each hood. The results confirmed that filtered hoods could provide a safe and compliant environment for the college's needs, provided that certain operational requirements were addressed.

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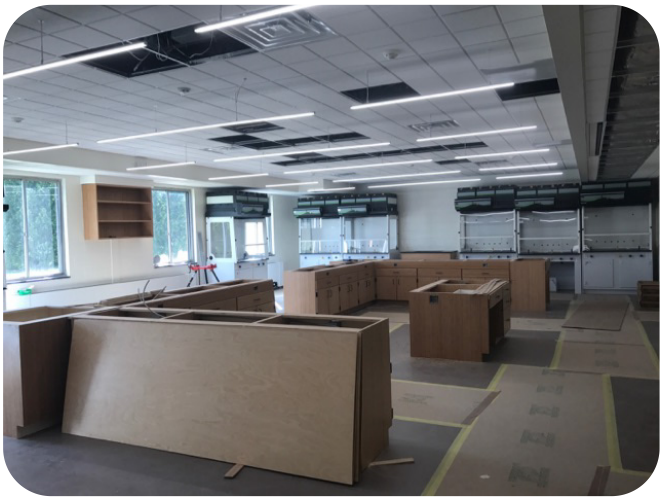
Solution and Outcome

CUSTOM ENGINEERING, DESIGN, & BUILD
To meet the college's unique requirements, PCI designed and fabricated dedicated base cabinets for each hood. These cabinets were customized to accommodate gas, water, vacuum, and cup sinks—features essential for modern laboratory work. Unlike many newer labs, all utility connections were routed from the floor up into the cabinets, ensuring both safety and ease of maintenance.



TURNKEY SOLUTIONS
All base cabinets, filtered hoods, and plumbing were custom-manufactured and installed on site by the PCI team. The result is a state-of-the-art laboratory environment that meets the college's safety, compliance, and operational needs—without requiring costly HVAC upgrades.

OUTCOME
The renovated labs now feature a clean, modern design with rows of filtered fume hoods, flexible workstations, and integrated utilities. This project demonstrates how innovative engineering, strategic partnerships, and custom solutions can overcome infrastructure limitations while delivering safe, high-performance laboratory environments.

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