



Equipment Requirements

(11) Ductless fume hoods, featuring Erlab's GreenFumeHood filtration technology.

Products Expectations:

The new Evelyn M. Anderson Hall, plus modernization of the existing science halls, have created a highly efficient, integrated, science complex on campus as these impressive metrics prove:

- 38.4% decrease in overall energy consumption, despite the 33% increase in total square footage.
- 43.2% energy cost savings reduction, earning a USGBC LEED Platinum certification.
- 8,000 CFM of exhaust and make-up air was avoided by using (11) filtered fume hoods.

CASE STUDY

Carleton College

Swing Space for Organic Chemistry Lab



Project Background

Facing the need to expand, update, and collocate their science facilities, Carleton College embraced a multi-phased plan to demolish an outdated science building and replace it with a new addition that joins the existing science buildings, Olin and Hulings Halls.

The Challenge

Delaying chemistry instruction for demolition and construction is simply not acceptable during a 36-month project. Therefore, "swing space" for the undergraduate organic chemistry teaching was mandatory. An existing biology lab with just one fume hood was available, however, organic chemistry requires each pair of students have access to a fume hood, so the existing fume hood would not be nearly enough. Furthermore, the HVAC system did not have capacity for adding (9) more fume hoods. Additionally, the campus goal of being carbon free by 2050 and the mandate of not adding energy consumption with any new construction or renovation project required a highly efficient design for the new addition.

The Solution

Energy consuming ducted fume hoods would violate the design goals. After investigating and approving their use, a total of (11) filtered, ductless fume hoods were purchased early in the project. (9) were located in the organic chemistry teaching swing space and (2) more were used in adjacent labs. After two years of use in these swing spaces, the filtered fume hoods were all easily relocated to the new science labs. The lack of ductwork also allowed one hood to be placed on a height adjustable stand and used as an ADA hood when needed.