

# Michigan State University – Food Science Building

## Client Challenge:

The Department of Food Science and Human Nutrition at Michigan State University ranks as one of the largest in the country, and offers a multidisciplinary field that applies disciplines such as chemistry, microbiology, engineering and nutrition to develop new food products and design new processes to improve the safety and quality of foods. The University recognized that the airflow control systems currently in place needed to be upgraded to provide occupant safety and scientific integrity within a cleaner, greener, sustainable laboratory environment.

## Ingenuity IEQ Solution:

Throughout various phases of the renovation, Ingenuity IEQ installed a fully integrated Phoenix Controls airflow control system providing optimized airflow to laboratories throughout the building. The system provides control of all critical airflow and space pressurization control in the facility. Ingenuity IEQ worked closely with Michigan State University and the design engineer, Peter Basso and Associates, to implement a high performance Strobic Air high dilution exhaust system that efficiently and reliably removes fumes from the building envelope.

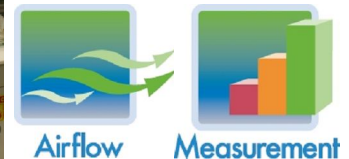
Ingenuity IEQ also installed an OptiNet™ Monitoring System in the Food Science building, the first system of its kind to be used at MSU. This system continually measures the most important aspects of indoor air quality and communicates this information to the building management system to optimize energy efficiency.

## Result:

The University realized that they couldn't manage what they didn't measure. The systems Ingenuity IEQ designed operate in response to real-time air quality demands within the laboratories by constantly monitoring airflow requirements based on occupancy, heat loads and air quality. Michigan State University can proudly say that the laboratories in the Food Science Building are energy-efficient, healthy, safe, and produce a consistent ROI through lower first costs, lower energy costs and lower maintenance costs over the life of the labs.

“I anticipate the system will pay for itself through energy savings in less than two years.”

~ Lynda Boomer, MSU



**Client:**  
Michigan State University

**Facility type:**  
Research

**Technologies:**  
Phoenix Controls; Strobic Air;  
OptiNet

**Location:**  
Lansing, MI

**Square Feet:**  
120,000

**Number of floors:**  
4

**Number of Hoods:**  
56

**Energy Savings:**  
30% reduction – 107,500 CFM

**Date occupied:**  
August 2004

**Architect:**  
Jickling Lyman Powell Associates, Inc.

**Engineer:**  
Peter Basso and Associates

**Construction company:**  
Clark Construction