

# Mass Save<sup>®</sup> Energy Efficiency Case Study

## Whitman-Hanson Regional High School

### PROJECT SUMMARY

The Whitman-Hanson Regional High School in Whitman, Massachusetts was interested in learning how they could build a state-of-the-art school building utilizing sustainable design principles.

By partner with the Mass Save program, Whitman was able to design a building that offered:

#### High Performance Building Envelope Features

- High performance glazing

#### Efficient Mechanical Equipment and Systems

- Variable air volume (VAV) HVAC distribution system with optimized controls
- Variable flow hot/chilled water pumping system
- Demand control for kitchen exhaust hoods
- Optimized chiller plant with chilled-water supply temperature reset control
- Demand control ventilation in gym, cafeteria and auditorium with CO<sub>2</sub> sensors
- High efficiency gas boilers

#### High Efficiency Lighting Systems and Controls

- Direct/indirect pendant lighting fixtures
- Reduced lighting power densities
- Daylight harvesting controls

#### Other “Green” and Renewable Systems Technologies

- 49.5 kW photovoltaic power generation system
- Storm water recovery system
- Site design that reuses existing parking lots and athletic fields to minimize the impact on open space
- Full life-cycle cost analysis, including utilization of DOE-2 simulation to predict energy performance and incorporate integrated engineering principles

**Solution:** An integrated approach utilizing resources from electric and gas utilities as well as the Massachusetts Technology Collaborative (MTC).

- Mass Save Sponsor Incentive ..... \$43,631
- Annual Electric Savings ..... 577,037 kWh
- Carbon Reduction ..... 5,789 tons



## About Whitman-Hanson Regional High School

Whitman-Hanson Regional High School serves approximately 1,250 students in grades 9-12 and is fully accredited by the New England Association of Schools and Colleges. The Whitman-Hanson Regional High School Community is committed to the intellectual, ethical, emotional, and social development of students as well as to their physical well-being.

## Mass Save As a Strategic Partner

Whether you are building a new manufacturing facility, upgrading old, inefficient equipment or manage a property in need of energy improvements, the Mass Save program will help you identify cost-effective energy efficiency improvements, provide technical assistance, and offer financial incentives in addition to interest-free loans to help kick-start your company's next big project.

To learn about these and other commercial and industrial energy efficiency programs available, visit [MassSave.com/Business](https://www.masssave.com/Business) or join the [Mass Save group on LinkedIn](#).

## About Mass Save

Mass Save is an initiative sponsored by Massachusetts' gas and electric utilities and energy efficiency service provider, including Berkshire Gas, Cape Light Compact, Columbia Gas of Massachusetts, National Grid, New England Gas Company, NSTAR, Unitil, and Western Massachusetts Electric Company. The Sponsors of Mass Save work closely with the Massachusetts Department of Energy Resources to provide a wide range of services, incentives, trainings, and information promoting energy efficiency that help residents and businesses manage energy use and related costs.

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