



A BETTER CITY

## CHALLENGE for SUSTAINABILITY

Business and Institutional Leaders  
Working Toward a Sustainable City



### CASE STUDY



#### Dana-Farber Cancer Institute- Shields Warren Building

**Principal Use** - Medical  
Administrative Office Building

**Facility Size**- 46,640  
Square Feet

**Location**- Fenway Area,  
Boston, MA

**Project Cost**- \$147,000

**Incentives**- \$10,000

**Customer Cost**- \$137,000

**Projected Annual  
Savings**- \$145,000

**Project Timeline**- Completed Fall  
2011

**Payback Period**- .95 years

## DANA-FARBER CANCER INSTITUTE- SHIELDS WARREN BUILDING

### *2014 Greatest Energy Reduction Award*

The Dana-Farber Cancer Institute (DFCI)—Shields Warren Building is an administrative office building for DFCI medical facilities across New England. Two years after joining the Challenge for Sustainability, the Shields Warren Building received the 2014 award for the 'Greatest Energy-Reduction' at A Better City's 5th Annual Challenge for Sustainability Awards. Between 2012 and 2013, the Shields Warren Building reduced energy consumption by 21%, which was the equivalent of saving approximately 200,000 kWh of electricity.

The Shields Warren Building accomplished these savings by installing motion sensor lighting and retro-commissioning the HVAC system to improve operation and control. DFCI received \$10,000 in incentives from utility provider, NSTAR Electric for the installation of occupancy sensors; an energy efficient lighting strategy that automatically turns off lights in unoccupied areas. Furthermore, the entire building was air balanced to ensure that all components of the HVAC system operate at optimum efficiency. Improved efficiency of the HVAC air handlers drastically reduced the overall amount of air needed to heat and cool individual office spaces and rooms throughout the building.

Prior to the retro-commissioning, the HVAC system at the Shields Warren Building operated twenty-four hours, seven days a week. The new system features an operating schedule configured to match building occupancy and a control switch that allows employees working off-peak hours to run the system on a shorter, two-hour cycle. Improved control of the HVAC system has already contributed to energy reduction and will continue to be paramount for future energy conservation at the facility.



## DANA-FARBER CANCER INSTITUTE - SHIELDS WARREN BUILDING (CONT)

“When we first started planning our energy reduction strategy it quickly became overwhelming, given the variety and complexity of our facilities,” said Rick Malmstrom, Senior Energy Manager at Dana-Farber Cancer Institute. “By taking part in the ABC Sustainability Challenge, we were steered toward addressing issues building by building.”

The entire retrofit cost DFCI a total of \$137,000 and is projected to save the building \$145,000 annually. These systematic adjustments have allowed the DFCI to make considerable energy reductions at the Shields Warren Building, and provide a roadmap for future energy conservation projects.

### ABOUT THE CHALLENGE FOR SUSTAINABILITY

The Challenge for Sustainability helps business or buildings save money by increasing energy efficiency, reducing resource consumption, decreasing solid waste, and reducing overall greenhouse gas emissions through hands-on technical assistance and access to local, state, and private incentives.

### ABOUT ABC

ABC is an independent, membership-based organization that works to improve the economic competitiveness and quality of life of the Greater Boston region by advancing significant transportation, land development and environmental policies, projects and initiatives. ABC mobilizes the business community to collaborate with both civic and government sectors to take action on challenges facing the region today and into the future.

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#### FUNDERS



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#### PARTNERS



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