

GANNETT HOUSE RENOVATION
1511 MASSACHUSETTS AVE, CAMBRIDGE, MA
PROJECT PROFILE

LEED CI v3 2009
LEED GOLD
2013

The renovation of the Gannett House at Harvard University’s Law School is designed to completely retrofit the interior of the building in order to improve occupant comfort and provide a healthy indoor environment. The new interior will include new single-zone fan coil units and new automatic control points to allow for controllability of the lighting systems. The system’s controls will be interfaced with a new building automation system (BAS).



Photo: Harvard GBS, 2013

Designed by Samuel William Pomeroy in 1838, Gannett House is the one of the oldest buildings on campus. Since 1925, Gannett House has been home to the Harvard Law Review, the prestigious student-run journal of legal scholarship.

In the offices and many of the shared spaces, both lighting and the HVAC systems are connected to dual-connect occupancy sensors that will shut down lighting and setback temperature set-points when occupancy is not detected. For the HVAC system, this is programmed through the building’s BAS.

LEED® Facts

Harvard University
Gannett House Renovation



Location.....	Cambridge, MA
Rating System.....	LEED-CI v2009
Certification Achieved.....	Gold
Total Points Submitted.....	62/110
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Sustainable Sites.....	17/21
Water Efficiency.....	8/11
Energy and Atmosphere.....	19/37
Materials and Resources.....	4/14
Indoor Environmental Quality.....	6/17
Innovation and Design.....	5/6
Regional Priority.....	3/4

PROJECT METRICS

- 34%** reduction in lighting power density (watts/ square foot) compared to the baseline standard (ASHRAE 90.1-2007)
- 36%** reduction in annual indoor water use compared to code minimum
- 92%** of construction waste materials were diverted from the landfill
- 92%** of the project’s connected lighting load is connected to occupancy sensors
- 89%** of all furniture and furnishings, by cost, were salvaged, refurbished, or reused



ENERGY EFFICIENCY

Harvard Law School (HLS) has committed, along with Harvard University as a whole, to reduce greenhouse gas emissions 30% below 2006 levels by 2016, inclusive of growth. Therefore, the following energy conservation measures (ECMs) were implemented as part of the Gannett House renovation project.

HEATING/COOLING SYSTEMS

- ECM 1: Direct Digital Control (DDC)** - A new DDC system controls the fan coil units via individual thermostats and occupancy sensors. The DDC system is programmed with an occupancy schedule and a night set-back schedule, which is activated during all off hours, holidays, weekends, and any time in which the space occupancy sensor senses that the space is vacant.
- ECM 2: ECM Motors** - All fan coil units are provided with ECM fan motors, which are more efficient than standard motors.
- ECM 3: Occupancy Sensors** - Occupancy sensors control the operation of the fan coil units throughout the building.
- ECM 4: Operable Windows** - Operable windows provide residents with natural ventilation and control over the thermal conditions of their space. In some cases, this alleviates the need to cool spaces and, in turn, reduces energy usage associated with cooling loads.
- ECM 5: Thermostats** - Thermostats provide a high level of thermal comfort system control by building occupants.



Photo: Copyright Harvard GBS 2013



Photo: Copyright Harvard GBS, 2013

ELECTRICAL SYSTEMS

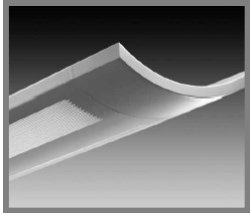
- ECM 1: Occupancy Sensors** - Occupancy sensors are installed in all spaces to turn the lights on, or off, based on actual occupancy. A combination of wall-mounted infrared occupancy sensors and dual technology ceiling sensors were installed throughout. These occupancy sensors combine the benefits of passive infrared (PIR) and ultrasonic technologies to detect occupancy.
- ECM 2: Energy Star Equipment** - Energy Star equipment was selected for 100% of Energy Star-eligible equipment in this project. This includes refrigerators, dishwashers, washing machines, and dryers.



PRODUCTS AND MATERIALS

LIGHTING AND CONTROLS

- **34.7% reduction** in lighting power density (watts/square foot)



Verve II
Focal Point

- ✓ Total fixture wattage = 52 Watts
- ✓ Highly reflective die-formed white painted aluminum reflector.
- ✓ One piece steel perforated housing.



Ceiling Mounted Sensor—CMR PDT 92P
Sensorswitch

- ✓ Dual technology occupancy sensor capable of controlling two line voltages.
- ✓ Incorporates passive infrared (PIR) technology with Microphonics



Wall Mounted Sensor—WSD
Sensorswitch

- ✓ Timer is programmable from 30 seconds to 20 minutes and is reset every time occupancy is re-detected.
- ✓ Passive infrared (PIR).

ENERGY EFFICIENT APPLIANCES

100% of the equipment purchased for the project is **ENERGY STAR RATED** (by rated power).



Side by Side Refrigerator
Model #PFSS5NFZ
GE Profile

- ✓ ENERGY STAR®
- ✓ ClimateKeeper2 System - Keeps food garden fresh longer, while protecting ice from odor transfer, with its unique dual-evaporator system



Undercounter Refrigerator
Model #6ADAM
Marvel

- ✓ ENERGY STAR®
- ✓ Exclusive MicroSentry refrigeration monitor saves energy

WATER EFFICIENCY

36% reduction in annual water use (12,280 gallons/year projected savings) when compared to EPA 1992 baseline standard



Manual Dual Flush Flushometer
Model #WES-111
Sloan

- ✓ **1.1/1.6 gallons per flush (gpf)** vs. EPA 1992 baseline of 1.6 gpf.



Ultra Efficiency Urinal
Model Washbrook
American Standard

- ✓ **0.125 gallons per flush (gpf)** vs. EPA 1992 baseline of 1.0 gpf.



Solar Powered Sensor Faucet
Model #EAF-275
Sloan

- ✓ **0.5 gallons per minute (gpm)** vs. EPA 1992 baseline of 2.2 gpm.

Please note that while many products are described in this project profile, these are provided for informational purposes only, to show a representative sample of what was included in this project. Harvard University and its affiliates do not specifically endorse nor recommend any of the products listed in this project profile and this profile may not be used in commercial or political materials, advertisements, emails, products, promotions that in any way suggests approval or endorsement of Harvard University.



PRODUCTS AND MATERIALS

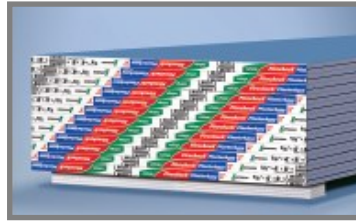
REGIONAL, RECYCLED, LOW VOC

18% recycled content value as a percentage of total materials cost
 27% regionally manufactured materials value as a percentage of total materials cost
 22% regionally extracted materials value as a percentage of total materials cost
 Only low-VOC, or no-VOC adhesives, sealants, paints and coatings were used.



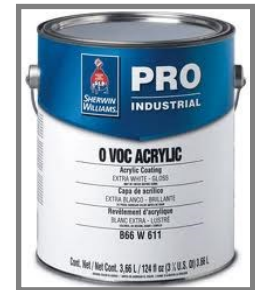
MDF Doors
Trustile

- ✓ Recycled Content
 - 10% Post-consumer
 - 20% Pre-consumer
- ✓ 50% FSC certified wood content



Fire Resistant Drywall
Lafarge

- ✓ Recycled Content
 - 94% Pre-consumer
- ✓ 100% Regionally Extracted/Manufactured



ProMar 200 Zero VOC
Sherwin Williams

- ✓ VOC Content = 0g/L vs. 65 g/L VOC Limit

PROJECT TEAM



Photo: copyright David Kurtis, 2012

Owner	Harvard Law School
Project Manager	CSL Consulting
Architect	Austin Architects
Contractor	Lake Construction
MEP Engineer	AHA Engineering
Sustainability Consultant	Harvard Green Building Services
Commissioning Authority	Harvard Green Building Services

MORE INFORMATION

- > Harvard Law School: <http://law.harvard.edu/about/administration/facilities/buildings/gannett.html>
- > Harvard Green Building Services: <http://green.harvard.edu/green-building-services>
- > Harvard Green Building Resource: <http://green.harvard.edu/theresource>
- > Follow Harvard Sustainability: <https://twitter.com/greenharvard> and <https://www.instagram.com/greenharvard/>

