Soldiers Field Park Building 4
640 Soldiers Field Road, Boston, MA
PROJECT PROFILE

Built in 1974, Soldiers Field Park Building 4 is a three story multi-family building which houses 47 residential units within a total of 43,110 square feet. The primary goal of the Soldiers Field Park Building 4 project was to renovate the existing building and surrounding site. Upgrades include all parts of the interior, including several different layouts of the residential units, and a more practical and aesthetically pleasing exterior site plan. The renovation also included mechanical, lighting, power, landscape, envelope and plumbing upgrades. This is the first phase of a four-phase construction project to upgrade the entire Soldiers Field Park residential complex.

The project team was committed to sustainability from the onset. By following the Harvard Green Building Standards, the team was able to make more informed decisions and focused on including healthier building materials. These standards led to the inclusion of a number of progressive design strategies to meet aggressive energy targets, reduced water usage, and allowed the team to provide healthier interiors for the occupants. The project achieved LEED-CI v3 Gold certification in May 2017.

LEED® Facts

Harvard University
Soldiers Field Park Building 4

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<tr>
<th>Category</th>
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<td>Total Points Awarded</td>
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Project Metrics

41% reduction in water use below code maximum.

25% of the residents in the complex have access to secure bicycle racks and storage spaces.

53% reduction in lighting power density.

90% of the average annual rainfall runoff is treated with best management practices.

100% of the adhesives, sealants, paints, coatings, and wood products are low-emitting.
The high indoor environmental quality of the Soldiers Field Park Building 4 renovation was a significant focus of the project. An indoor Quality Management Plan was enacted to ensure building systems and interior building materials were protected from air pollutants, excessive moisture exposure, and moisture damage during construction.

Further, the project serves as a model for healthy interiors as the flooring was specifically selected to not contain any antimicrobials. These chemicals have limited benefit and have been linked to several health concerns such as developmental, hormonal, and reproductive problems. Harvard University is working diligently to implement healthy materials on all projects and Soldiers Field Park Building 4 is a great example of translating research into practice.
Reducing the demand for potable water is the first step towards sustainable water management. Therefore, the plumbing system for Soldiers Field Park Building 4 was designed to reduce resource consumption, specifically potable water use.

Throughout the project, water closets with a 1.0 GPF have been installed in addition to private lavatories with a GPM of 1.0, kitchen faucets with a GPM of 1.5, and showerheads with a GPM of 1.5. These fixtures reduce water use in the building by over 41% when compared to the baseline plumbing fixtures required by code.

The Soldiers Field Park Building 4 residential units are expected to be occupied for extended periods of time throughout the calendar year. Therefore, the lighting system was designed to not only reduce energy use, but also to improve the indoor environmental quality of the space and provide optimal lighting. Some of the strategies employed include:

- Reduce lighting power density by 53% below the ASHRAE 90.1 baseline standard
- High performance LEDs installed throughout the project
PRODUCTS AND MATERIALS

LIGHTING AND CONTROLS

- **53% reduction** in lighting power density (watts/square foot)

- **Undercabinet LED Fixture**
  - Light Bar
  - MaxLite
  - Only 6 watts per foot
  - Efficacy (lumens per watt) = 51

- **Rectilinear LED Fixture**
  - BSS205
  - Bartco
  - Only 34 watts per fixture
  - Efficacy (lumens per watt) = 114

- **LED Ceiling Fixture**
  - Boxie Ceiling
  - Tech Lighting
  - Only 20 watts per fixture
  - Efficacy (lumens per watt) = 50

ENERGY EFFICIENT APPLIANCES & WATER EFFICIENCY

- **41% reduction** in annual water use when compared to EPAct 1992 baseline standard.

- **Tub/Shower System**
  - Duro 3601
  - Symmons
  - 1.5 GPM
  - ADA compliant

- **High Efficiency Toilet**
  - Vespin II 1G
  - TOTO
  - 1.0 GPF
  - Meets California water savings regulations

- **Kitchen Faucet**
  - Vella S-2610
  - Symmons
  - 1.5 GPM
  - ADA compliant

LOW-EMITTING MATERIALS

- **100%** of the project’s adhesives, sealants, paints, coatings, and wood products are **low-emitting**.

- **Semi Gloss Paint**
  - 6-4510XI Series
  - SPEEDHIDE zero
  - Zero VOCs
  - Meets SCAQMD #1113 limits

- **Millwork Lumber**
  - Tabebuia Solid Wood
  - N/FD Sterritt Lumber Company
  - 100% FSC Mix
  - Contains no added urea-formaldehyde

- **Carpet Pad Adhesive**
  - NuBroadlok
  - Mohawk
  - Zero VOCs
  - Meets SCAQMD #1168 limits

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.
Project Scorecard

Soldiers Field Park Bldg 4 Renovation

Project ID: 1000071273
Rating system & version: LEED-Ci v2009
Project registration date: 04/07/2016

LEED 2009 Commercial Interiors

Attempted: 62, Denied: 0, Pending: 0, Awarded: 62 of 109 Points

Sustainable Sites

- SSC1 Site Selection: 4/5
- SSC2 Development Density and Community Connectivity: 6/6
- SSC3 Alternative Transportation-Public Transportation Access: 6/6
- SSC4 Alternative Transportation-Bicycle Storage and Changing Room: 2/2
- SSC5 Alternative Transportation-Parking Availability: 2/2

Water Efficiency

- WEP1 Water Use Reduction-20% Reduction: 7/7
- WEC1 Water Use Reduction: 11/11

Energy and Atmosphere

- EA1.1 Fundamental Commissioning of the Building Energy Systems: Y
- EA2.2 Minimum Energy Performance: Y
- EA3.1 Fundamental Refrigerant Management: Y
- EA4.2 Optimize Energy Performance-Lighting Controls: 0/3
- EA4.3 Optimize Energy Performance-HVAC: 0/10
- EA4.4 Optimize Energy Performance-Equipment and Appliances: 0/4
- EA4.5 Enhanced Commissioning: 5/5
- EA4.6 Measurement and Verification: 0/3
- EA4.7 Green Power: 5/5

Materials and Resources

- MR1.1 Storage and Collection of Recyclables: Y
- MR2.1 Tenant Space-Space Long-Term Commitment: 1/1
- MR2.2 Building Reuse: 0/2
- MR3.1 Materials Reuse: 0/2
- MR3.2 Materials Reuse-Furniture and Fixtures: 0/1
- MR4.1 Recycled Content: 0/2
- MR5.1 Regional Materials: 0/2
- MR6.1 Rapidly Renewable Materials: 0/1
- MR7.1 Certified Wood: 0/1

Indoor Environmental Quality

- IEQ1 Minimum IAQ Performance: 7
- IEQ2.2 Environmental Tobacco Smoke (ETS) Control: 7
- IEQ3.1 Construction IAQ Mgmt Plan-During Construction: 1/1
- IEQ3.2 Construction IAQ Mgmt Plan-Before Occupancy: 1/1
- IEQ4.1 Low-Emitting Materials-Adhesives and Sealants: 1/1
- IEQ4.2 Low-Emitting Materials-Paints and Coatings: 1/1
- IEQ4.3 Low-Emitting Materials-Flooring Systems: 0/1
- IEQ4.4 Low-Emitting Materials-Composite Wood and Agrifiber Products: 0/1
- IEQ4.5 Low-Emitting Materials-Systems Furniture and Seating: 0/1
- IEQ5 Indoor Chemical and Pollutant Source Control: 0/1
- IEQ6.1 Controllability of Systems-Lighting: 1/1
- IEQ6.2 Controllability of Systems-Thermal Comfort: 1/1
- IEQ7.1 Thermal Comfort Design: 1/1
- IEQ7.2 Thermal Comfort Verification: 0/1
- IEQ8.1 Daylight and Views-Daylight: 0/2
- IEQ8.2 Daylight and Views-Views for Seated Spaces: 0/1

Innovation in Design

- IDC1.1 Innovation in Design: 0/1
- IDC1.2 Innovation in Design: 0/1
- IDC1.2 Low Mercury Lighting: 3/3
- IDC1.3 Innovation in Design: 0/1
- IDC1.4 Innovation in Design: 0/1
- IDC1.5 Innovation in Design: 0/1
- IDC1.6 Innovation in Design: 0/1
- IDC1.7 LEED® Accredited Professional: 1/1

Regional Priority Credits

- SSc3 Alternative Transportation-Bicycle Storage and Changing Room: 1/1
- WEc1 Water Use Reduction: 1/1
- EA4.1 Optimize Energy Performance-Lighting Power: 1/1

More Information

- Harvard University Housing: [http://huhousing.harvard.edu/](http://huhousing.harvard.edu/)
- Sustainability at Harvard: [http://green.harvard.edu/](http://green.harvard.edu/)