

Artists for Humanity EpiCenter

Presented by
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Overview

- Location: South Boston
(Waterfront District)
- Building type: Industrial,
K-12 education
- Lot size: 23,500 sq. ft
(2,180 sq meters)
- 4-stories
- Urban setting
- Completed September
2004
- **BRAND NEW!!!**

LEED certified with a Platinum ranking (53 points)

Key Green Design Aspects

- 49-kilowatt photovoltaic array mounted on the roof
- Highly efficient envelope design
- Natural ventilation with no air-conditioning
- Passive-solar heat gain and daylighting
- Effective daylighting from unobstructed interior spaces
- Material salvaging and reuse
- Highly recycled content in the building materials
- Rainwater harvested and stored for landscape irrigation

Key Green Design Aspects

- Grid connected photovoltaic array is currently the largest in Boston
- Sloped orientation allowed for greater density of panels and promotes self-cleaning

Key Green Design Aspects

- High performance, operable, low-emissivity windows provide 50% efficiency improvement over standard thermo-pane

Key Green Design Aspects

- Natural ventilation is provided by ceiling fans
- Giant fans power the nighttime air flushing system

Key Green Design Aspects

- Discarded automobile windshield forms guardrail system in the main gallery
- Custom-made stainless steel sinks from scrap

Environmental Awareness

- The Glass Pipe reminds occupants of the need for efficient water use
- The “Truth window” shows visitors the many layers that make up the highly efficient wall system

Economic Awareness

- Total Project Cost: \$4.9M (excluding land)
- \$5M raised from individuals, foundations, corporations, etc.
- \$520,000 grant from Massachusetts Technology Collaborative and \$200,000 grant NSTAR
- Without funding assistance, PV system would not have been viable

Economic Awareness

- The total energy cost for a base case building in minimal compliance with the ASHRAE 90.1-1999 energy standard is about \$3.00 per square foot, or \$68,000 per year
- Total estimated cost for the EpiCenter is about \$0.56 per square foot, or about \$12,732 per year

Conclusion

Green design does NOT have to be expensive!!

References

<http://www.afhboston.com/Epicenter/Photos.html>

<http://leedcasestudies.usgbc.org/overview.cfm?ProjectID=451>