

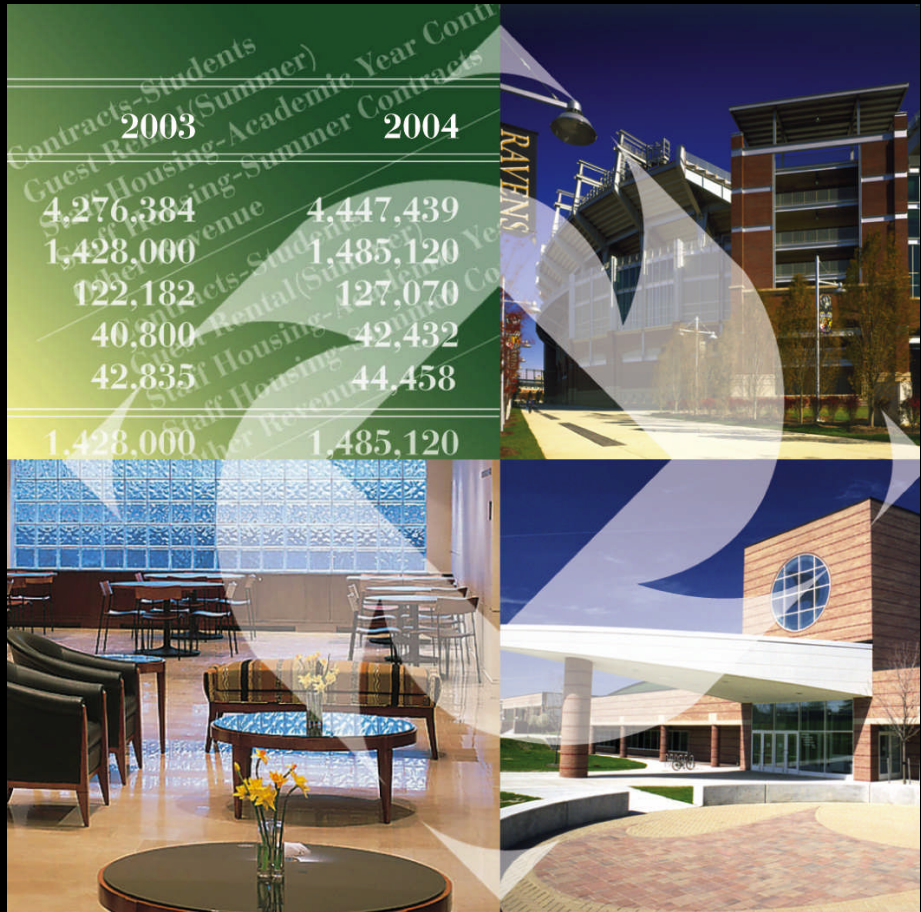
Green Building: The ROI of Sustainable Design

May 15th, 2008

Facilitators: Stephane Acel and Sheila Alexander,
PEJE Communities of Practice

Presentation Agenda

2003	2004
4,276,384	4,447,439
1,428,000	1,485,120
122,182	127,070
40,800	42,432
42,835	44,458
1,428,000	1,485,120



Introduction

- Why Go Green?
- The Financials Case
- The Fundraising Case

Introduction

Presenters

Julie Skolnicki, AIA, Regional Vice President

- Over 10yrs Campus Planning Experience
- Architecture and Construction Background
- LEED Accredited Professional

Stephane Acel and Sheila Alexander, Facilitator

- PEJE Communities of Practice



Introduction

B&D

Experience

- Over 400 Campus Planning Projects

Focus

- University & K-12 Projects
 - Independent Schools – over 50 assignments

Services

- Concept => Implementation

Staff

- Interdisciplinary/Experienced/Cross Trained

Sample of Independent School Clients:

- Baldwin School
- Episcopal Academy
- Groton
- Indian Mountain School
- Middlesex
- The Pennington School
- Middlesex
- Sidwell Friends\
- St. Andrew's School
- St. Catherine's
- St. Christopher's
- Trinity Valley

Introduction

Key Resources

- USGBC US Green Building Council www.usgbc.org
- CHPS (Coalition of High Performance Schools) www.CHPS.NET
- ULI (Urban Land Institute) www.ULI.org
- GREENGUARD environmental institute www.greenguard.org
- Greenseal www.greenseal.org
- Rocky Mountain Institute www.rmi.org
- GSA www.gsa.gov
- GREENBUILD <http://www.greenbuildexpo.org>

Introduction

Point System

LEED for Schools has four progressive certification levels:



Platinum 58-79 points

Gold 44-57 points

Silver 37-43 points

Certified 29-36 points

Over 561 schools are registered

- Only 75 schools have received the green certification.
- Only 27 in the Summer of 2007



Discussion

- What is your school already doing?
- What have been the benefits?
- What issues have you encountered?

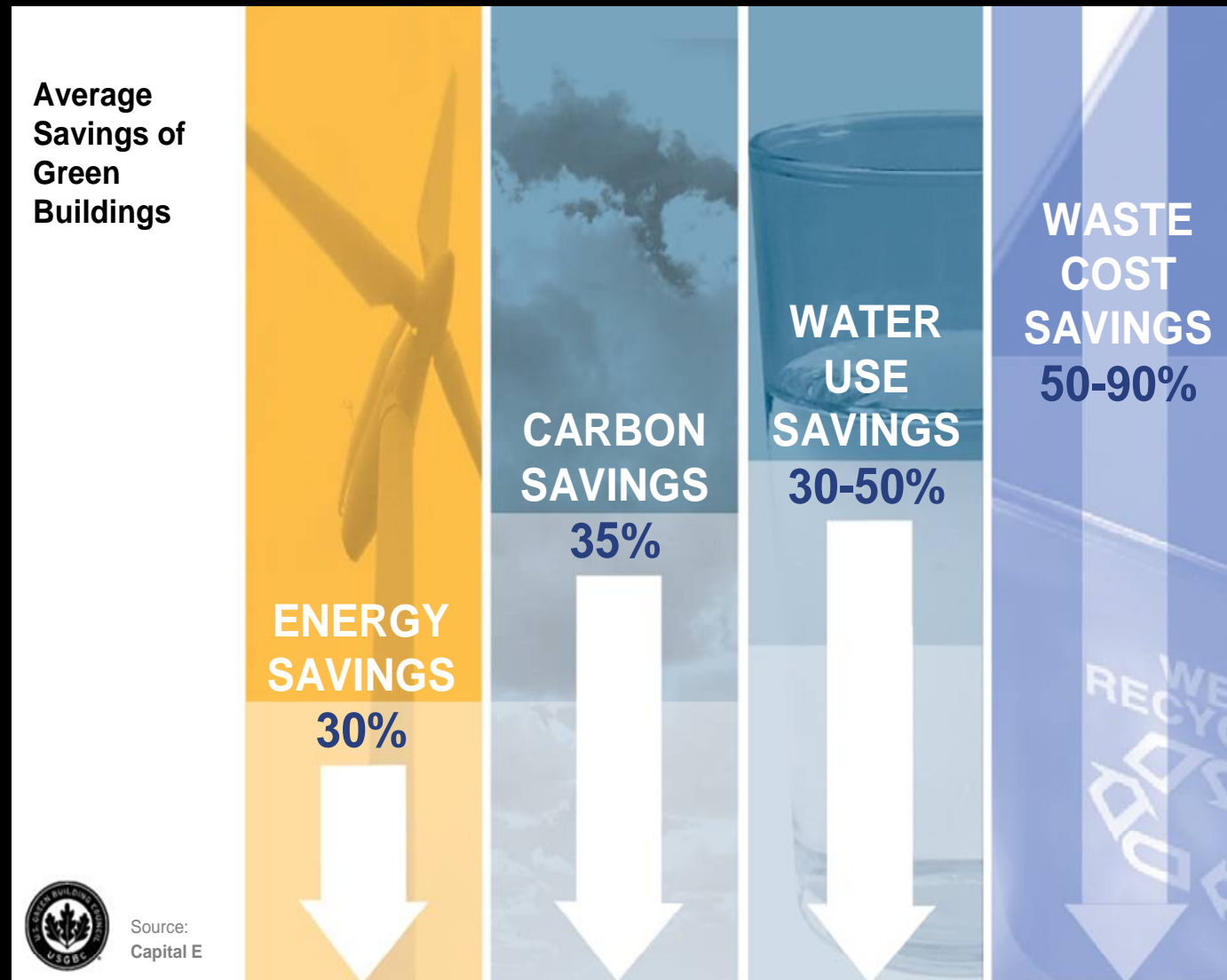
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Why Go Green?

General



Why Go Green?

Operational Benefits

- Operational Savings
- Higher teacher retention
 - 3% decrease in turnover
- Enhanced Recruitment

Source: U.S.
Green Building Council



Why Go Green?

Educational Benefits

- Healthy Productive Learning Environment
 - daylight improves performance
 - **20% Better Test Score**
 - acoustics increases learning potential
 - comfortable indoor temperatures increase occupant satisfaction.

- Positive health benefits:
 - good indoor air quality improves health.
 - mold prevention decreases asthma incidence.

- Hands-on Learning

Source: U.S. Green Building Council

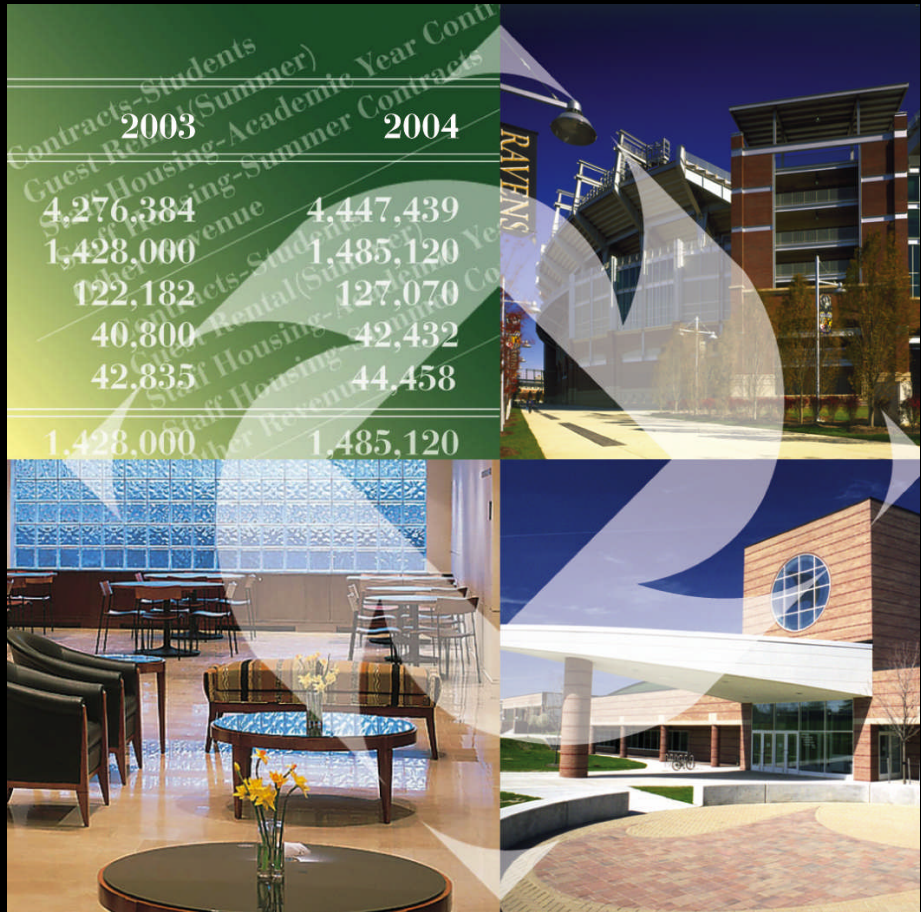


Discussion

- Who has a clarifying question?
- Do these statistics address questions that you had?
- What other statistics might be helpful?
- Might this material address school curricular issues in any way?

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The Financial Case

Capital Cost

Capital Cost for each of the 4 LEED Levels

	Green Schools	USGBC	B&D
Certified	1.17%	0.66%	2%
Silver	1.03%	2.11%	4%
Gold	1.84%	1.82%	6%
Platinum	NP	6.50%	8%

* Source: USGBC

* www.e-cap.com Greening America's Schools

The Financial Case

Operating Cost

- Reduced Operating Cost for each of the 4 LEED Levels

	Energy	Water	B&D
Certified	31%	22%	25%
Silver	36%	27%	30%
Gold	37%	42%	35%
Platinum	NP	NP	40%

* www.e-cap.com Greening America's Schools

* McGraw Hill Construction – Education: Green Building SmartMarket Report

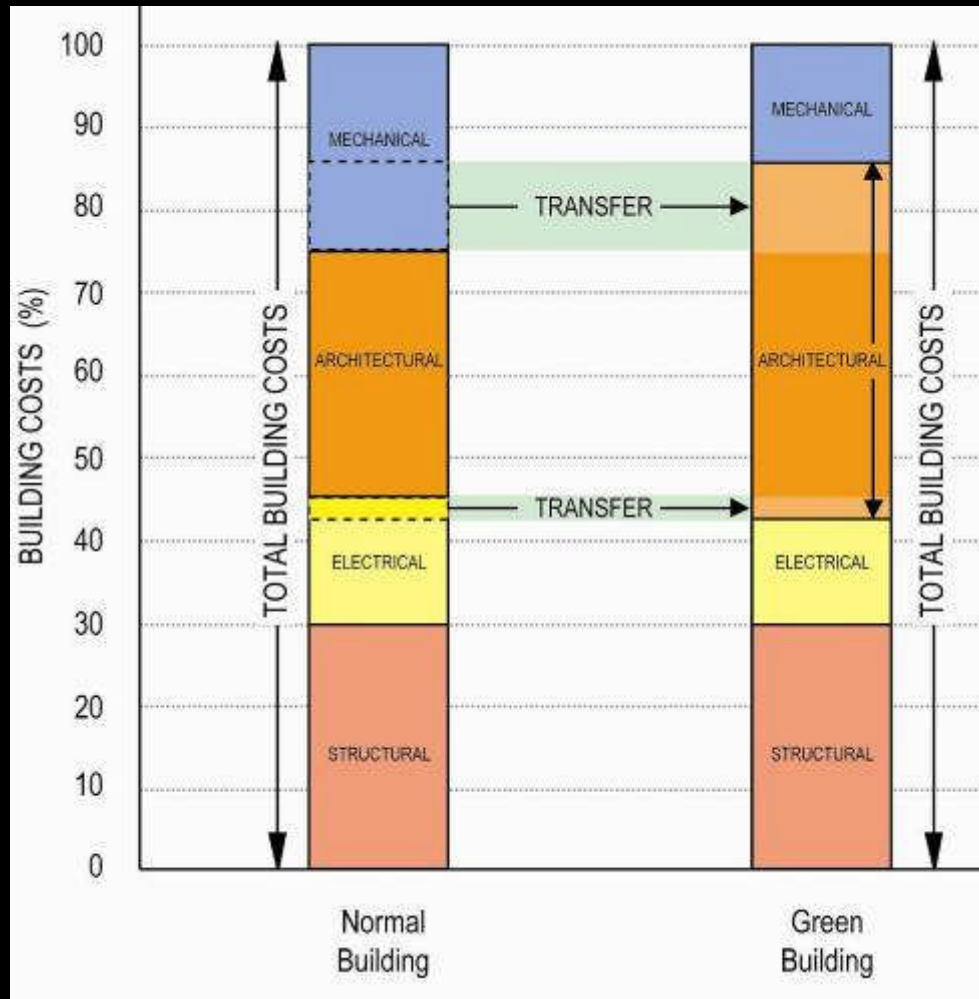
The Financial Case

ROI

	SF	\$/SF	Total Cost	Certified	Silver	Gold	Platinum
Capital Cost	40,000	\$250	\$10,000,000	2% \$200,000	4% \$400,000	6% \$600,000	8% \$800,000
Operating Cost	40,000	\$3	\$120,000	25% \$30,000	30% \$36,000	35% \$42,000	40% \$48,000
ROI				7	11	14	17

The Financial Case

Resource Reallocation



- Total cost same
- Mechanical cost less
- Invest in Architecture
- Active to passive
- Fragile to robust
- Longer life
- Less cost over life
- Simpler

Discussion

- Who has a clarifying question?
- Who forecasts uncertainty in their energy budget for next year?
- How are you addressing this?
- Who has made their own financial case along these lines to board, development committee, donors)?

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The Fundraising Case

Grants & Special Financing

- Government-sponsored incentives at the local, state, & federal level
 - As of May 2007, 72 cities, 22 counties, 27 states, and 13 federal agencies had adopted policies either mandating or incentivizing LEED standards for construction
- Private grants
 - U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy offers financial assistance / procurement for development of energy efficiencies
 - Assistance includes grants, cooperative agreements, continuation & renewal rewards
 - USDOE's Million Solar Roofs Initiative aimed to install 1 million solar energy systems by 2010
 - Lending & financing opportunities available to public & private entities



The Fundraising Case

Donor Appeal

- The educational benefits statistics are compelling
 - Improved Attendance
 - Better Test Scores
- The business world is embracing green building
- Students are passionate about it “Generation Green”
- It broadens the appeal of campaigns
 - Can shift focus from deferred maintenance or just one facility type
 - Not just an Athletic Center – a Sustainable Athletic & Wellness Center
- Environment benefits
 - Donors as good stewards of the campus and the greater world
- Cost savings
 - Funds can be reallocated from endowment to construction cost (see next slide)



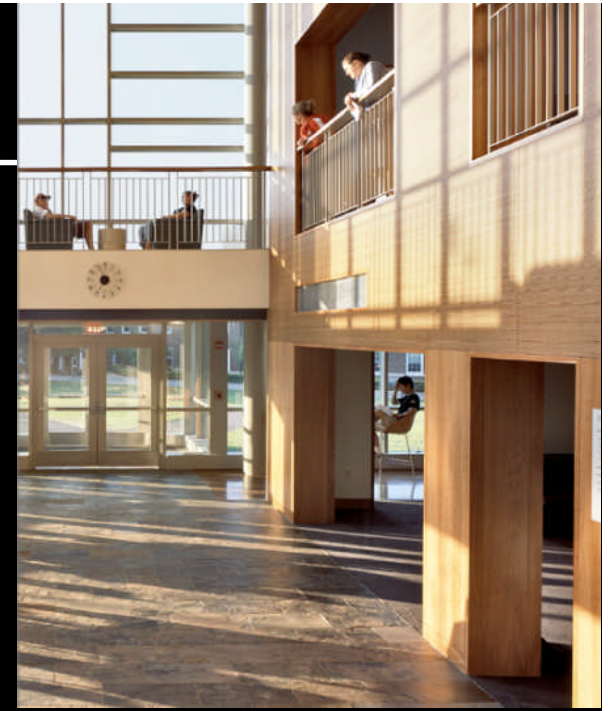
The Fundraising Case

Endowment

	SF	\$/SF	Total Cost	Certified	Silver	Gold	Platinum
Operating Cost	40,000	\$3	\$120,000	25% \$90,000	30% \$84,000	35% \$78,000	40% \$72,000
Endowment		5%	\$2,400,000	\$1,800,000	\$1,680,000	\$1,560,000	\$1,440,000

Discussion

- Who has a clarifying question?
- Who has had donors make requests of this kind?
- Who has applied for a grant or made a pitch to donors for sustainable design?
- Who has made their own fundraising case along these lines to board, development committee, donors)?



The ROI of Green Building

May 15th 2008