

# Making the Case for 3<sup>rd</sup> Party Green Building Certification!

## Notes from Building Scenarios Exercise

### Regional Green Building Challenges and Successes

May 14 USGBC-MGC program

Sizes and budgets are intended to represent a reasonable middle of the road budget scenario.

All buildings in the St. Louis Region.

### Higher Education (College/University)

Renovation of existing student housing

50 years old, complete interior rehab. Maintain existing building shell, abate asbestos in exterior cavity wall.

Budget: \$20 million excluding furnishings (approx \$175/sf)

- Sustainability commitment and evidence on campus can:
  - Attract students and parents
  - Be used for marketing
  - Be integrated into curriculum
- Be a part of larger network of higher ed sustainability and global commitments
  - Climate Leadership Commitment
  - Association for the Advancement of Sustainability in Higher Education (AASHE)
- Curriculum connections
  - Students as designers and education to utilize materials
  - Data display for educational purposes and to measure continual operational efficiencies
- Cost considerations
  - Build by each part from the ground up
  - Saving over the lifetime with energy
- Materials considerations
  - Using healthier/less harmful materials avoids potential negative impacts on student/staff health
  - Asbestos removal provides opportunity for better insulation of envelope
  - Source materials locally (on campus)
- Concern → turnover of space
  - Energy competition can engage new and existing occupants, and keep initiatives alive

### Healthcare

Renovation and addition of patient towers (half renovation / half new)

550,000 sf

Budget: \$200 million

- Make the Owner's case for green building certification
  - Discuss over lunch . . .
  - What are your goals?
    - Do they address patient well-being energy costs?
  - Provide facts that align with key decision making factors
    - Financial
      - How do you make financial decisions?
      - You can equate LEED with revenue rent and decrease vacancy
      - Reducing energy costs is like adding revenue
    - Health / Connection to mission
      - LEED can help with low VOC and low counts for particulates
      - Components of LEED can help support mental health
      - Plants to help the indoor air quality

- Improving workplace for employees
      - Better place to work to improve employee retention
- Consultant question
  - Would LEED help with infection rates and patient quality of health?

## **Municipal Govt.**

City Hall/Precinct Police Station for a community of 30,000

50,000 sf

Budget: \$11-12 million

- Short timeframe limits options, think long term
- Mayor for 4 years
- Energy investment policy < years
  - Life cycle analysis – hard wood vs. carpet
  - carbon credit
- PACE financing
- Bonds
- Passive solar
- Electric police cars
- Natural light
- IAQ
- Welcoming atmosphere at City Hall/Civic Pride Citizens Committee
- Reuse existing building?
- Commissioning vs. certifications
- Certification becomes the benchmark

## **Industrial/Manufacturing: Automotive Assembly**

Big box in Greenfield

500,000 sf

50% light assembly, 50% storage including 5,000sf finished offices

Heating and ventilation only in manufacturing, Heating, cooling and ventilation in offices

Concrete tilt up or metal building

Budget: \$25 million (\$50/sf)

- Owner – corporate sustainable initiative
  - Apply Global perspective
  - “Skin” – appropriate
  - Low margin/low labor
  - Keep costs down
  - Quantity lighting and controls
  - Basis for decisions (ROI)
  - Separate you from your competitors
- Rural
  - PV array – incentive offsets
  - 100% off the grid
  - Suggest a good “skin”
  - Natural ventilation
  - Is employee retention an issue?
  - Low margin/low pay – keep labor costs down
  - Keep construction costs down – 1<sup>st</sup> costs
  - Opportunity zones?
  - Lighting quality – LED and controls

## **Cultural Institution – Performing Arts Center**

For 2,500 person capacity

Major renovation

Urban site

\$60 million

- ROI issues
- Life cycle
- Energy savings
- Environmental health
- PR importance/value of LEED brand
- LEED represents Best practices
- Patrons/Donors are interested in supporting sustainability
- LEED can be scary (Hi-tech cost)
- Need B&W numbers comparing metrics
- Gap analysis
- Social equity
- Performing in healthy vs. unhealthy space?
- What is the benefit of commissioning/saves on operations

## **Retail – Brewery, Retail, Restaurant**

Brewery includes production, shipping & storage

Garden supports restaurant

In urban, walkable community

75,000 sf

Budget: \$19 million

- Urban micro-brewery
- (Owner) How do we address production and kitchen? (energy intensive)
  - (Consultant) Reclaim opportunities – look at overall energy usage
- (Owner) Why certify? We can advertise on our own
  - (Consultant) The market for micro-brewing is saturated
    - Certification differentiates
- (Owner) Is there any hard data on how much value certification adds to a building?
  - (Consultant) Energy usage and return on investment can be modeled. New solar incentives would help make the ROI case
  - (Consultant) Energy efficiency and certification may help from an employee recruitment perspective
- (Owner) Would potentially be interested in other credits or incentives beyond building certification
- (Owner) Interest in green dining alliance... how would we advocate that?
- (Consultant) Opportunities for bio-waste reuse
- (Consultant) Client could be persuaded by being made to feel like a local – stein storage/reuse, growler refills
- (Owner) Gap analysis may help prove benefits
- Our idea is a providing owner with a gap analysis, between bade project requirements, and an aspirational goal of a living building challenge building or LEED gold or platinum. Then by using the scorecard as a framework

## **Office & Research**

Offices, Meeting/Conference spaces with 1 large assembly, Wet & Dry labs

140,000 sf

Budget: \$50 million

- Cost benefit – sustainability
- Certification – less measurable
- Feel good
- Market green building
  - Increase revenue, occupancy