

November 5, 2010



# **LEEDing Answers: Achieving Consensus and Providing Clarity for your LEED Project**



**BRAILSFORD & DUNLAVEY**

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# B&D INTRODUCTION

Established in **1993**

**70+** Employees

**Seven** locations

**327** Higher Education Clients

More than **100** Union-related Projects

Member of USGBC & ACUI



# B&D INTRODUCTION

## SERVICES

Master Planning  
Strategic Planning & Development  
Financial Analysis & Budget Development  
Economic Impact Analysis  
Referendum Planning & Support Services  
Program Development  
Architecture / Engineering Selection  
Construction Oversight  
Business Planning  
Market Analysis  
Design Management  
Feasibility & Market Study  
Project Budget & Schedule Management  
Project / Consultant Team Coordination



# B&D INTRODUCTION

## CHET ROACH

Currently serving as Owner's Representative for over  
\$200M in college and university projects.



## MATT BOHANNON

6 Years Experience in Planning & Implementing Student Life Projects  
Managing B&D's Southern California Office.



## JOE WINTERS

Background in Real Estate and Urban Planning  
Currently Managing Union, Housing, and Rec LEED Projects





# STUDENT UNION EXPERIENCE

- Arizona State University
- Ball State University
- Baltimore City Community College
- Bowie State University
- Brooklyn College
- Buena Vista University
- California Polytechnic State U.
- California State U.-Channel Islands
- California State U.-San Marcos
- California State U.-Northridge
- California State U.-Stanislaus
- Case Western Reserve University
- Central State University
- Central Washington University
- Christopher Newport University
- Clayton State University
- Cleveland State University
- Columbia University
- Dartmouth College
- DePaul University
- Duke University
- East Carolina University
- Fairmount State University
- Fayetteville State University
- George Mason University
- Georgia Gwinnett College
- Georgia State University
- Immaculata University
- Indiana University
- Jackson State University
- Loyola University Chicago
- Louisiana State University
- Miami University
- Michigan State University
- Middle Tennessee State University
- Morehouse College
- New Mexico State University
- North Carolina State University
- North Georgia College & State U.
- Northeastern Illinois University
- Northern Kentucky University
- Northwestern University
- Oakland University
- Ohio Dominion University
- Ohio State U. at Mansfield
- The Ohio State University
- Oklahoma State University
- Oregon State University
- Queen's University
- The Richard Stockton College of NJ
- Roosevelt University
- St. Ambrose University
- San Diego State University
- San Jose` State University
- Savannah State University
- Southern Illinois U.-Edwardsville
- Springfield College
- University of Alabama
- University of Alaska-Fairbanks
- University of Arkansas
- University of Baltimore
- University of California-Riverside
- University of California-San Diego
- University of California-San Cruz
- University of Cincinnati
- University of Connecticut
- University of Houston
- University of Idaho
- University of Iowa
- University of Kentucky
- University of Mary Washington
- University of Maryland
- University of Memphis
- University of Miami
- University of Michigan
- University of Missouri-Kansas City
- University of Missouri-St. Louis
- University of Nevada-Las Vegas
- University of Nevada-Reno
- University of New Orleans
- University of North Texas
- University of Oregon
- University of San Diego
- University of Southern California
- University of South Florida-St. Pete
- University of Texas-Austin
- University of Utah
- University of Vermont
- University of Virginia
- University of West Florida
- University of Wisconsin-Eau Claire
- University of Wisconsin-Madison
- University of Wisconsin-Stout
- Washington State University
- Wayne State University
- Western Kentucky University
- Western Michigan University
- Young Harris College

# WHY THIS TOPIC?

- ❖ B&D's "SAV" approach to planning & implementation
  - ❖ Identified LEED process could often be more of a frustration than opportunity
- ❖ To strengthen "OWNER'S" position in sustainability decision
- ❖ Enhance clarity & consensus within the Project Team



# Buyer A vs. Buyer B





# TWO QUESTIONS

Question #1: Why are we pursuing a particular LEED status on our project?

- ❖ To minimize the environmental impact
  - ❖ To reduce the long-term costs of operating the facility
- ❖ To create a highly visible publicity tool
- ❖ To meet a mandate or requirement



# TWO QUESTIONS

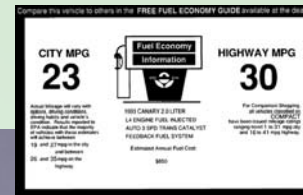
Question #2: How much money are we willing to invest to achieve LEED status on our project?

❖ *Failing to budget for the cost of implementing a LEED project will result in two outcomes:*

1. A facility that **does not meet** the institutional goals
2. A project that is **over budget** as a result of meeting its institutional goals



# What Options Are Right for Me?



# PROCESS

## **Hold an Initial LEED Discussion**

- » Answer Questions One and Two

## **Preliminary Filtering Workshop**

- » What credits are / are not achievable?

## **Initial Presentation of Options to Owner**

- » Review all possible LEED credits



# PROCESS

## **SUSTAINABLE SITES**

**26 Possible Points**



- Construction Activity Pollution Prevention
- Site Selection
- Development Density & Community Connectivity
- Brownfield Redevelopment
- Alternative Transportation, Public Transportation Access
- Alternative Transportation, Bicycle Storage & Changing Rooms
- Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles
- Alternative Transportation, Parking Capacity
- Site Development, Protect or Restore Habitat
- Site Development, Maximize Open Space
- Stormwater Design, Quantity Control
- Stormwater Design, Quality Control
- Heat Island Effect, Non-Roof
- Heat Island Effect, Roof
- Light Pollution Reduction

## **WATER EFFICIENCY**

**10 Possible Points**

- Water Use Reduction
- Water Efficient Landscaping
- Innovative Wastewater Technologies
- Water Use Reduction

# PROCESS

## **ENERGY & ATMOSPHERE**

**35 Possible Points**

Fundamental Commissioning of the Building Energy Systems  
Minimum Energy Performance  
Fundamental Refrigerant Management  
Optimize Energy Performance  
On-Site Renewable Energy  
Enhanced Commissioning  
Enhanced Refrigerant Management  
Measurement & Verification  
Green Power

## **MATERIALS & RESOURCES**

**10 Possible Points**


Storage & Collection of Recyclables  
Building Reuse, Maintain 75% of Existing Walls, Floors & Roof  
Building Reuse, Maintain 50% of Interior Non-Structural Elements  
Construction Waste Management  
Materials Reuse  
Regional Materials  
Recycled Content  
Rapidly Renewable Materials  
Certified Wood



# PROCESS

## **INDOOR ENVIRONMENTAL QUALITY**

**15 Possible Points**



- Minimum IAQ Performance
- Environmental Tobacco Smoke (ETS) Control
- Outdoor Air Delivery Monitoring
- Increased Ventilation
- Construction IAQ Management Plan, During Construction
- Construction IAQ Management Plan, Before Occupancy
- Low-Emitting Materials, Adhesives & Sealants
- Low-Emitting Materials, Paints & Coatings
- Low-Emitting Materials, Carpet Systems
- Low-Emitting Materials, Composite Wood & Agrifiber Products
- Indoor Chemical & Pollutant Source Control
- Controllability of Systems, Lighting
- Controllability of Systems, Thermal Comfort
- Thermal Comfort, Design
- Thermal Comfort, Verification
- Daylight & Views, Daylight 75% of Spaces
- Daylight & Views, Views for 90% of Spaces

# PROCESS

## **INNOVATION & DESIGN**

Innovation in Design: Provide Specific Title

**6 Possible Points**

## **REGIONAL PRIORITY**

Regional Priority: Provide Specific Title

**4 Possible Points**

Project Totals

100 Points

**Certified: 40-49 Points**

**Silver: 50-59 Points**

**Gold: 60-79 Points**

**Platinum: 80+ Points**

## Selection of Credits to Pursue:

- ❖ The functionality of each credit
  - What am I getting if I pursue this credit?
- ❖ The implementation method for each credit
  - How am I going to achieve this credit?
- ❖ The initial investment cost for each credit
  - How much am I going to spend to pursue this credit?
- ❖ The payback calculation for credits
  - How long will I have to use the building before I recover the cost of my investment?



# PROCESS

## **Approaches to LEED for your project:**

- ❖ Most Cost-Effective Method
- ❖ Completely Purpose/Goal Driven Method
- ❖ The Hybrid Approach



# CASE STUDIES

## University of Vermont Davis Student Center

Level:	Gold (39pts)
Opened:	2007
Architect:	WTW Architects
Total SF:	186,000
Enrollment:	10,940
Sf per Student:	17 SF
Total Cost:	\$ 61 million
Cost per SF:	\$ 328

### *Key Features:*

- ❖ Advanced monitoring system
- ❖ 63% regional materials
- ❖ Smart Windows



<http://buildingdashboard.com/clients/uvm/davis/>

# CASE STUDIES

## University of Missouri-Kansas City Student Union

Level:	Silver (maybe Gold!)
Opened:	2010
Architect:	Gould Evans
Total SF:	110,000
Enrollment:	13,500
Sf per Student:	8.1 SF
Total Cost:	\$ 38 million
Cost per SF:	\$347

### *Key Features:*

- ❖ Green Roof
- ❖ Natural Daylighting
- ❖ Advanced Stormwater Management



<http://www.umkc.edu/union/index.asp/>



# CASE STUDIES



**DID YOU KNOW?**

**RECYCLED CONTENT**  
The choice of building materials, including structural steel, decking, and aluminum windows, casework, doors, floor finishes, ceiling systems, and tile, has reduced the impact of natural resources.

**DID YOU KNOW?**

**LOW EMITTING MATERIALS**  
This building contains low emitting materials, including floor finishes, ceiling systems, adhesives, sealants, paints and coatings.

**DID YOU KNOW?**

**DAYLIGHTING**  
The building's windows and skylights provide daylighting, which reduces energy usage and provides a connection between the indoor and outdoor spaces.

**DID YOU KNOW?**

**CONTROLLABILITY OF SYSTEMS**  
Indoor environmental control is an important factor associated with occupant comfort and productivity. This building's lighting system allows occupants to individually control lighting levels.

# BACK TO OUR TWO QUESTIONS

1. Why are we pursuing a particular LEED status on our project?
2. How much money are we willing to invest to achieve LEED status on our project?

## DISCUSSION

# CONTACT INFORMATION

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