Use of Commissioning for LEED Projects

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Learning Objectives

1. Use of the commissioning process for more efficient delivery of LEED projects
2. Identify problems that reduce level of success
3. How to provide value to the owner and project team
Overview

• What Makes Successful LEED Projects
• Issues That Reduce the Success of a Project
• Overcoming Adversity
Successful Projects

Arthur Blank Family Office

• Services
  ○ Holistic Commissioning
    - Predesign through warranty
      » Envelope
      » MEP
      » Stormwater/Rainwater
  ○ LEED Consulting
  ○ Energy Modeling
Successful Projects

LEED Gold

- 40% Energy Savings
  $114,000 (year 1)
- $6,500/yr water savings
- Reduced Risk Priceless
- 100% Occupant Satisfaction
“The commissioning process defined our goals, provides a 2nd pair of eyes, and verification that helps ensure that the owner gets what they have paid for”

Bill Darden
Owner’s Representative
Successful Projects

Balzer Theater at Herren’s

- Existing Historical Building
- Reduced energy consumption of existing building by +27% over ASHRAE 90.1-1999
- Reduced potable water consumption by 80%
- 1st freestanding theatrical theater to attain LEED Certification in southeast (Silver)
Successful Projects

Darlington Middle School

• Services
  ○ Holistic Commissioning
    - Predesign through one year post warranty
      » Building Envelope
      » MEP
  ○ LEED Consultation
  ○ Energy Modeling

• LEED Gold
  ○ 27% more efficient
  ○ 60% less water
Successful Projects

Common Theme

• Utilized the complete commissioning process from pre design through warrant
• Excellent Team Dynamics
  ○ Committed owner
  ○ Ownership of roles and responsibilities
    - Owner
    - Designers
    - Contractors
    - O&M Staff
Less Successful Projects

Recreational Activity Center

• LEED Certified – Student Body Required
  ○ 27% more efficient
  ○ 36% less water
  ○ LEED requirements clearly specified
    - $1.2 M + over construction budget
      » Owner allowed nationally recognized contractor to exempt LEED from bid
      » Contractor resistant to providing required documentation
Less Successful Projects

County Administration and Conference Center

• LEED Silver
  ○ OPR – LEED Gold
  ○ Holistic Commissioning
    - Predesign through Warranty
      » Building Envelope
    - MEP
  ○ LEED Consulting
  ○ Energy Modeling

• Design Build Project
Less Successful Projects

Common Theme

• Contractual Agreements Missing Defined Roles and Responsibilities
  ○ Lack of 100% Team Commitment

• Owner’s Project Requirements Not Part of Contractual Agreements

• Missing OPR – No defined end goal beyond LEED Certification
  ○ Lack of Integration Between Architectural Program – Functional Requirements – Sustainability
Factors Affecting Success

• Owner’s Communications
  ○ Documentation of Objectives & Criteria
  ○ Written Agreements
    - Clearly Defined Activities, Roles & Responsibilities
  ○ Actions
    - Spoken & Unspoken
    - Leadership
Factors Affecting Success

• Team Dynamics
  ○ Interactions
    - Respect
    - Teamwork
    - Commitment to Same Goals
  ○ Experience
    - Working Together
    - Commissioning
    - LEED
  ○ Clear Communications
Factors Affecting Success

• Utilizing Complete Commissioning Process
  ○ Pre-Design through Warranty
  ○ On-Going Commissioning
    - Persistence of Performance
      » Feedback Loop
      » Goals
      » Incentives
      » Authority to Take Action
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Thank-you

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