

LABORATORY OF TREE-RING RESEARCH RENOVATIONS

LEED PROGRAM

UA Project No. 06-8727

Prepared for:

The University of Arizona
Tucson, Arizona

Draft May 8, 2008





Laboratory of Tree-Ring Research Renovations

Tucson, Arizona

M3-PN08004 U. of A. Project No.: 06-8727 May 8, 2008

PROJECT NARRATIVE

Scope of Work

This is an initial analysis for sustainable design of the LEED program for the facility. It indicates potential LEED Credits for the design to achieve the minimum LEED Certification.

M3's initial review of the LEED CI (Commercial Interiors) indicates that there are 24 points that are definite credits for this project with an additional 9 points that are possibilities for the design. This project could be designed for either a LEED Certified requiring 21-26 points or a LEED Sliver Certification which requires 33-38 points. Further analysis of the project design will be done as the project develops to achieve the required points for the targeted certification.

The project will be registered with the USGB at the final acceptance of the Schematic Design Phase.

Approach

This document includes the initial project checklist identifying possible LEED credits followed by the support data for each credit.

The checklist includes four added categories. First category assigns research tasks for the Team members. The three remaining columns identify credits points with no cost impact, credits points with cost impact and possible credit points cost impact.

The data sheets outline the intent of the each possible credit, the requirements for the credit, the submittals requirements and the potential technologies and strategies in achieving the credit.

LEED for Commercial Interiors v2.0 Registered Project Checklist

Project Name: U of A Tree Ring Lab

Project Address: University of Arizona 4 0 **0** 0 0 0 Credit 1 Select a LEED Certified Building OR Locate the tenant space in a building with following characteristics: 0.0 Option 1A 1 1/2 Option 1B Stormwater Management: Rate and Quantity 1/2 Option 1C Stormwater Management: Treatment 1/2 1/2 to 1 Option 1D Heat Island Reduction: Non-Roof Option 1E Heat-Island Reduction: Roof 1/2 Light Pollution Reduction 1/2 Option 1F Water Efficient Irrigation: Reduce by 50% 1/2 Option 1G Option 1H Water Efficient Irrigation: No Potable Use or No Irrigation 1/2 Option 1I Innovative Wastewater Technologies 1/2 Water Use Reduction: 20% Reduction Option 1.J 1/2 Option 1K Onsite Renewable Energy 1/2 to 1 0.0 Option 1L Other Quantifiable Environmental Performance 1/2 to 3 **Development Density and Community Connectivity** Credit 2 Alternative Transportation: Public Transportation Access Credit 3.1 Alternative Transportation: Bicycle Storage & Changing Rooms Credit 3.2 Credit 3.3 Alternative Transportation: Parking Availability 0 2 0 Credit 1.1 Water Use Reduction - 20% Reduction Water Use Reduction - 30% Reduction 6 0 **0** Energy & Atmosphere **Fundamental Commissioning** Prereq 1 Required Prereq 2 **Minimum Energy Performance** Required CFC Reduction in HVAC&R Equipment Prereq 3 Required Optimize Energy Performance - Lighting Power 1 to 3 1 0 0 Credit 1.1 1 Option A: Reduce lighting power density to 15% below the standard Option B: Reduce lighting power density to 25% below the standard Option C: Reduce lighting power density to 35% below the standard Optimize Energy Performance - Lighting Controls Credit 1.2 Optimize Energy Performance - HVAC Credit 1.3 1 to 2 Option A: Equipment Efficiency and Zoning & Controls 1 to 2 Option B: Reduce Design Energy Cost 1 to 2 Credit 1.4 Optimize Energy Performance - Equipment and Appliances 1 to 2 70% of ENERGY STAR eligible equipment is ENERGY STAR rated 2 90% of ENERGY STAR eligible equipment is ENERGY STAR rated 2 0 Credit 2 **Enhanced Commissioning** O Credit 3 **Energy Use, Measurement & Payment Accountability** 1 to 2 Case A: Projects with area less than 75% of total building area Case B: Projects with area 75% or more of total building area O Credit 4 Green Power 4 3 0 Materials & Resources Prereq 1 Storage and Collection of Recyclables Required Credit 1.1 **Tenant Space, Long Term Commitment** Building Reuse, Maintain 40% of Interior Non-Structural Components Credit 1.2 Credit 1.3 Building Reuse, Maintain 60% of Interior Non-Structural Components Construction Waste Management, Divert 50% From Landfill Credit 2.1 Credit 2.2 Construction Waste Management, Divert 75% From Landfill Resource Reuse, 5% 0 Credit 3.1 Credit 3.2 Resource Reuse, 10% Resource Reuse, 30% Furniture and Furnishings Credit 3.3 Recycled Content, 10% (post-consumer + 1/2 pre-consumer)
Recycled Content, 20% (post-consumer + 1/2 pre-consumer) Credit 4.1 Credit 4.2 Regional Materials, 20% Manufactured Regionally Credit 5.1 Regional Materials, 10% Extracted and Manufactured Regionally 0 Credit 5.2 Rapidly Renewable Materials O Credit 6 Credit 7 **Certified Wood** 9 4 0 Prereq 1 Minimum IAQ Performance Required Prereq 2 **Environmental Tobacco Smoke (ETS) Control** Required redit 1 Outside Air Delivery Monitoring 1 Credit 2 **Increased Ventilation** 1 Credit 3.1 Construction IAQ Management Plan, During Construction 1 Credit 3.2 Construction IAQ Management Plan, Before Occupancy Credit 4.1 Low-Emitting Materials, Adhesives and Sealants Low-Emitting Materials, Paints and Coatings Credit 4.2 1 Low-Emitting Materials, Carpet Systems 1 Credit 4.3 Low-Emitting Materials, Composite Wood and Laminate Adhesives 1 Credit 4.4 Credit 4.5 Low-Emitting Materials, Systems Furniture and Seating 1 Indoor Chemical and Pollutant Source Control Credit 5 Credit 6.1 Controllability of Systems, Lighting Controllability of Systems, Temperature and Ventilation Credit 6.2 Credit 7.1 Thermal Comfort - Compliance Credit 7.2 Thermal Comfort - Monitoring 0 Credit 8.1 Daylight & Views - Daylight 75% of Spaces Credit 8.2 Daylight & Views - Daylight 90% of Spaces O Credit 8.3 Daylight & Views - Views for 90% of Seated Spaces 1 0 0 Innovation & Design Process Credit 1.1 Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title 0 Credit 1.2 0 Credit 1.3 Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title 0 Credit 1.4 **0 0** Credit 2 LEED™ Accredited Professional **24** 9 **0** Project Totals (pre-certification estimates) 57 Points

Certified: 21 to 26 points, Silver: 27 to 31 points, Gold: 32 to 41 points, Platinum: 42 to 57 points

Assigned Task	Yes with no cost impact	Yes with cost impact	Maybe with cost impact
7 Golgiled Table	impact	impaot	impaot
CD/DC LIA	1		
SD/RS - UA UA/M3	1		
UA/M3		1	
UA/M3	1		
MF - check if there			
are options for these			
points		1	
MF - check if there are options for these			
points		1	<u></u>
UA M2		YES	
M3 M3/UA		YES YES	
M3		1	
		1	
M3 M3		1	
IVIO		1	
UA/M3	2		
UA/M3			
		1	
	YES		
UA/M3	TES		
M3	1		
M3	1		
M3		1	
M3	1	1	
	<u>'</u>		
M2			
M3		1	
MF - vehicles in area may impact IAQ -			
ductwork not possible			YES
UA	YES		
M3 M3		1	
M3		1	
M3		1	
M3 M3	1		
M3	1		
M3	1		
UA	1		
M3		1	
M3		1	
M3 M3		1	
-			
M3		1	
	13	19	
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