

Green Building Finance Consortium

Implementation Plan

June 2007



**GREEN BUILDING
FINANCE CONSORTIUM**

Introduction

This Implementation Plan outlines accomplishments of the Green Building Finance Consortium to date and presents the “Going Forward” plan to complete the work of the Consortium and transition the organization into a non-profit educational and research organization.

This report is presented in four sections:

- Mission
- Accomplishments to Date
- Financial and Organizational Considerations
- Consortium “Going Forward” Plan

The Consortium has accomplished a lot during the last 18 months. During the next seven months of 2007, we will produce analytic frameworks, guidelines, and information for underwriting and valuing sustainable properties that will have direct application for corporate owner-users, tenants, investors, developers, lenders and governments.

Consortium Background and Mission

The Green Building Finance Consortium (GBFC) is a working research project founded and led by The Muldavin Company, Inc. GBFC is the only group of its kind working on the fundamental infrastructure and process necessary to enable private sector participants to evaluate sustainable properties from a fiduciary perspective.

Given the critical importance of independence, GBFC does not accept membership or financial support from green product or building companies or organizations, and limits the individual investments of any organization in the Consortium’s work.

The Consortium’s mission is to 1) develop the valuation and risk assessment methods and practices necessary to enable assessment of a sustainable property from a fiduciary perspective and 2) disseminate this information to key sectors of the real market—corporate real estate executives, investors, lenders, developers, brokers, government, and the public.

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The Consortium is led by Executive Director, Scott Muldavin, a recognized leader in the real estate finance and investment industry. His biography is presented in Exhibit 1. Additional information on Scott Muldavin and The Muldavin Company can be found at www.muldavin.com.

Accomplishments to Date

Organizational Development

- Built a multi-disciplinary team of Consortium members, Advisory Board members, Implementation Team members and real estate industry trade groups to create and disseminate the Consortium's work product (Exhibit 2);
- Developed a valuable web page with searchable Research Library, targeted industry resource links, and GBFC Research including numerous speeches and publications from GBFC staff and advisors and a GBFC Glossary and Acronym index (www.GreenBuildingFC.com)
- Developed a valuable searchable Rolodex contact list with over 1100 contacts in the "green" industry coded by contact type, research category, property type, and over 20 other key categories;
- Created a substantial digital and hard copy library of key documents and related information bearing specifically on the valuation and assessment of sustainable property risk;
- Raised sufficient funding through The Muldavin Company and Founding Consortium members to initiate the Consortium's work to achieve its mission.

Research

- Collected and organized thousands of documents related to achieving the mission.
- Evaluated documents and conducted hundreds of interviews to develop the base knowledge necessary to develop the detailed Work Plan necessary to achieve mission (See Exhibits 3 and 4—these Exhibits supplement and refine the 29 page Research Program which is available on the web site)
- Completed substantial research in most of the 24 project areas identified in the Work Plan shown in Exhibits 3 and 4.

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- Initiated and managed specific research with approximately 20 Implementation Team Members—a select sample of which are mentioned below:
 - Working with Molly McCabe, prior head of Bank of America's Real Estate Capital Markets, Andy Fuscas, GBFC Managing Director, Roy Schneiderman, Bard Consulting, and Patrick Lord of Arbor Realty Trust on the cost-benefit, underwriting, and sustainable element based evaluation frameworks which are the heart of "Underwriting Sustainable Properties, A Fiduciary Framework, due out in the Summer;
 - Working with Jackson Lehr, Harvard Business School, Mark Mendell, Lawrence Berkeley National labs, and Don Horn, GSA, and others on worker health and productivity issues;
 - Working with John D'Andrea, GBFC, EPA EnergyStar Division, CB Richard Ellis, Kennedy Real Estate Counsel, CalSTRS, Steve Selkowitz, LBNL, and others on energy related issues;
 - Working with Tim Lowe, Waronzo Associates, Brian Gross, Waronzo Associates, Chris Corps, Asset Strategics, Peter Korpacz, PWC, and Jim Amorin, Appraisal Institute, and others on valuation issues;
 - Working with Peter Morris, Davis Langdon, David Gottfried, World Build, and many others on assessing the risks in the sustainable development and construction process.

Communications

The Consortium has been actively involved in communicating its preliminary findings and providing an independent financial perspective to a broad spectrum of industry forums and complimentary research efforts. While dissemination of the consortium's work will be the focus once the bulk of the content is produced, the speed at which the sustainable property market has emerged has required a more active role in communications during the last year.

The resulting participation of the Consortium's Executive Director, Implementation Team Members, and Advisory Board in industry forums and collaborative research projects has leveraged our research efforts, provided the industry with critically needed independent financial perspective, and cemented important strategic relationships for completion of the Consortium's mission.

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1. Participation in Industry Presentations

Consortium leaders have spoken at over 50 industry forums and conferences in the US, Canada, Mexico, and Europe for organizations and events including:

- BOMA International
- CoreNet Global
- Mortgage Bankers Association
- Urban Land Institute
- Counselors of Real Estate
- International Council of Shopping Centers
- Commission for Environmental Cooperation
- World Business Council for Sustainable Development
- Vancouver Valuation Accord
- World Green Building Council
- US Green Building Council
- CB Richard Ellis Global Client Roundtable
- MIT School of Architecture and Planning
- Swinerton Green Building Forums
- National Council of Real Estate Fiduciaries
- Gaining Ground (June 2007)
- Los Angeles Business Council (July 2007)
- Etc.

2. Publications and Interviews

Consortium leadership has interacted with scores of media representatives and provided interviews and or articles for many publications including:

- Pension Real Estate Quarterly (Summer 2007)
- Urban Land Green Quotient;
- Valuation Insights and Perspectives;
- Investment and Pensions Europe (IPE) Real Estate;
- Building Design+Construction, Green Building and the Bottom Line;
- Building Operation Management;

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- American Banker;
- Urban Land Magazine;
- REALTORS Commercial Alliance Report;
- Environmental Design and Construction Magazine;
- REALTOR Magazine;
- Etc.

3. Collaborations with Industry Groups

Our most important communications are our collaborations with industry groups where we are able to insure the input of independent financial perspective into important initiatives underway and leverage our research activities through combining resources with organizations working on projects complimentary to the Consortium's mission. Important collaborations include:

- **Commission for Environmental Cooperation:** Member of Advisory Group assisting NAFTA created group's multi-year research program on sustainable building. Working closely on finance and valuation issues; providing independent policy recommendations for Canada, Mexico, and US.
- **World Business Council for Sustainable Development:** We are collaborating with the WBCSD, made up of 180 of the largest corporations in the world, on their finance and valuation initiatives. Joint interview in Zurich of 10 of the largest financial institutions in Europe on their sustainability practices.
- **Appraisal Institute:** Work closely with Appraisal Institute to get their perspective on our work and begin development of educational information and appraisal guidance for sustainable property investment.
- **Mortgage Bankers Association:** In discussions concerning potential revision/updating of commercial mortgage underwriting training materials to reflect expected growth in sustainable property lending.
- **Vancouver Valuation Accord:** We participated in the Vancouver Valuation Accord in early 2007, where valuation professional associations and organizations from around the world, and other governments and companies, came together to promote the importance of valuation in assessing sustainability and set out an ambitious agenda to move this goal forward over the next few years. Continue work with and coordination of valuation related activities.

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- **Lawrence Berkeley National Laboratories:** Work with large group of building energy and health scientists working on Consortium related energy and building health issues and provide finance/investment perspective to their Zero Energy Building, and related initiatives.
- **CoreNet Global Energy Research Project:** Member of Advisory Panel working with CoreNet staff and corporate real estate executives to identify key barriers and enablers to investment in energy efficiency and assess the value implications of energy investment. This project is international in scope and involves in-depth case studies, an extensive survey of corporate real estate executives, and other research valuable to the efforts of the Consortium.
- **High Performance Building Database and Repository Project:** On Steering committee of industry group developing the consistent frameworks and databases necessary to measure the performance of sustainable buildings in the future. We are also working with key real estate data sources to begin "marking" sustainable properties to enable better empirical work to be done in the future.
- **Responsible Property Investment Project:** Coordinating with group of investors and academics to evaluate the socially responsible investment market and related Responsible Property Investment movement and its implications on capital availability and tenant demand for sustainable properties.
- **US Green Building Council:** Provide finance and investment perspective to various USGBC venues including Annual CEO Forum, GreenBuild, Research Agenda for the Future Summit, and other venues. Collaborate on select research initiatives.
- **EPA EnergyStar Division:** Working with EnergyStar to assess potential modifications and enhancements to Portfolio Manager and Target Finder evaluation tools to further enhance consideration of energy efficiency/carbon output in sales, leasing, acquisition and securitization.
- **PECI:** PEGI and the Consortium are assisting each other on complimentary projects regarding commissioning.

Financial and Organizational Considerations

Current Financial Status

The Consortium is raising additional funds to complete the work through year-end identified in Exhibits 3 and 4. Hard costs for salaries, rent, overhead, travel, and all other expenses for the Consortium have been \$684,229 (through end of May 2007):

2005: \$58,005

2006: \$384,362

2007: \$ 186,862 (through April 30, 2007)

\$ 684,229

Additional expenses of \$ 55,000 per month, or \$385,000 for the remaining 7 months of 2007 are budgeted. (Expenses include payment of Scott Muldavin at 25% of hourly rate for hours worked on project—80% FTE in 2006; 100% FTE in 2007).

Revenues from Consortium membership and select travel/speech reimbursement have been \$196,089 plus an additional \$62,500 committed but not yet paid for a total of \$258,589. The Muldavin Company is funding the existing and budgeted shortfall as additional funds are raised.

Financial Support and Fundraising

We have twelve Founding Members who have shown leadership in supporting the Consortium. Key trade groups/professional associations (BOMA International, the National Association of Realtors, Northwest Energy Efficiency Alliance); pension investment managers (Cherokee Investment Partners, Kennedy Real Estate Counsel, Revival Fund Management); service providers: Paul Hastings (law), Davis Langdon (cost estimation), Swinerton Builders (contracting/construction); governments (City of Seattle, EPA EnergyStar Division); and diversified service/investment firms (CB Richard Ellis) have formed the foundation of the Consortium's financial support.

We have also received substantial indirect financial support from the pro-bono contributions of the Implementation Team, Advisory Board Members, and scores of other individuals, trade groups, and companies, some of whom are identified in Exhibit 2.

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We have sent out membership proposals, called, and in many cases visited 250 prospective contributors. Many potential Members are very interested, but the difficulties of finding the right person in the organization, the need for multiple face-to-face meetings, and just working through the normal process with many organizations has made the time commitment to follow every lead time prohibitive.

Starting in June 2007, we are undertaking a new capital raising initiative to follow-up and close support from those companies/organizations that have expressed interest and with those companies who we have approached without success in our fundraising which we initiated over a year ago. New contributors going forward will be identified as "Sustaining Members".

Organizational Strategy

The Consortium's strategy to date has been to try to move the many facets of the Consortium forward simultaneously—organizational development, research, communications, collaborations, and fundraising (see accomplishments above). We relied on Consortium Members, contributions from the Muldavin Company, pro-bono individual contributions and organizational collaborations to complete the work we have done to date.

Given the complexity, focus, and synthesis required to complete the work identified in our Implementation Plan (particularly the written product), Scott Muldavin will be refocusing his efforts on writing, direct research, and coordination of the talented pro-bono Implementation Team.

Consortium "Going Forward" Plan

1. Scope of Work to enable Completion by Year-end 2007

The scope of work outlined in Exhibits 3 and 4 is necessary for the development of the most important methods and practices necessary to enable private investor underwriting and valuation of sustainable properties.

The work scope identified in Exhibits 3-4 will provide significant value by articulating and documenting the key risk and benefit considerations that private investors/corporations/appraisers will need to incorporate and address in their underwriting, due diligence and appraisal processes. Full development of specific policies and procedures will need to be customized for specific organizations following the guidelines and direction in the Consortium's reports.

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2. Raise a minimum of \$ 500,000 to Complete Work through Year-end

As discussed above, the ability to complete the modified work scope outlined in Exhibits 3-4 by year-end 2007 as planned is predicated upon raising an additional \$500,000. If no or limited additional funds are secured, it will effect the work scope and/or timing accordingly. Additional capital will be solicited to continue the educational-service mission of the Consortium in 2008 and beyond.

3. Focus on Research and Writing

In order to complete the work by year-end within the proposed budget, Scott Muldavin will have to focus at least 80% of his effort on research and writing and 20% on fund-raising management of the enterprise, collaborations and other activities. Accordingly, presentations, collaborations, media relations, and other service-oriented assistance will be largely postponed until the completion of the Consortium's work.

4. Management and Collaboration with Volunteers

Management and collaboration with key pro-bono Implementation Team members and select other organizations are critical to getting the work done at the high level of quality we demand. Scott Muldavin will spend more time with those Implementation Team Members who are focused on thinking, researching and writing up final work product as well as key expert reviewers and Advisory Board Members.

5. Transition GBFC to an Education-Service Oriented Non-Profit

GBFC will have a life after completion of its work by year-end. The plan is to transition to a non-profit organization with an education-service orientation.

The focus in 2008 and beyond will be on education and dissemination of the information and analyses in our reports through media relationships and collaborations with trade groups, other non-profits, and private organizations. The Consortium will also focus on fully up-dating and culling the web-site Research Library and industry resources sections of the web site to provide an improved targeted resource tool to supplement educational activities.

To aid this transition, and capitalize on the excellent educational reputation of the California Center for Civic Participation, a non-profit educational organization founded and run by Jim Muldavin for 25 years, GBFC has formed a formal relationship with the Center who will serve as a non-profit sponsor for GBFC's non-profit activities.

Conclusion

I want to thank everyone who has assisted me and the work of the Consortium during the last 18 months. My Founding Members and Advisory Board gave me the confidence to move forward. My Implementation Team provides insights and expertise to make me look smart. My collaboration partners have provided information and contacts to further my learning and research. And finally, thanks to the many other organizations and individuals who have expressed their interest and support for our work.

Scott Muldavin, Executive Director

Exhibit 1
**Summary Biography
Scott Muldavin, CRE, FRICS**

In 2006, Mr. Muldavin became Executive Director of the Green Building Finance Consortium, a group he founded with the support of leading real estate companies and trade groups to address the private sector's need for valuation and underwriting practices that would enable an assessment of sustainable properties from a "fiduciary" perspective.

Mr. Muldavin serves on the Advisory Board of the NAFTA created Commission for Environmental Cooperation's Green Building Initiative, an Advisory Panel member of CoreNet's Global Energy Research Project, a member of the Responsible Property Investment Project, on the Steering Committee of the High Performance Building Database and Infrastructure Project, and is actively collaborating with Lawrence Berkeley National Laboratory, Brookings Institution, EPA's EnergyStar division, the World Business Council for Sustainable Development, and the Appraisal Institute on property sustainability issues

Scott Muldavin is President of The Muldavin Company, Inc., a consulting firm serving the real estate industry. Prior to founding The Muldavin Company in 1999, Mr. Muldavin was a leader of the real estate consulting practice at Deloitte & Touché.

For 25 years, Mr. Muldavin has advised the nation's leading real estate companies including CalPERS, RREEF, Bank of America, UBS, Alaska Permanent Fund, Catellus, Equitable Real Estate, Standard Insurance Company, Merrill Lynch, Standard & Poor's Corporation, and Freddie Mac.

Mr. Muldavin is also a founding principal and served for three years on the investment committee of Guggenheim Real Estate, a \$ 4 billion private real estate investment company managing investments in properties, REITs, and high yield debt. Until the recent acquisition by Charles Schwab, he served as an Advisory Board Member of Global Real Analytics, a registered investment company advising and managing over \$1 billion of private REIT and CMBS funds.

Mr. Muldavin has been involved in the commercial mortgage-backed securities industry since it's beginning in 1984. He was the lead consultant that developed the first commercial mortgage risk-rating system for Standard & Poor's Corporation that initiated the \$600 billion CMBS industry.

As a national leader of the Real Estate Financial Institutions practice for Deloitte & Touché, he worked with financial institutions like Freddie Mac and First Bank systems to improve their underwriting and servicing systems, assess risks in their mortgage portfolios, and estimate loan potential losses.

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Mr. Muldavin has been involved in the Real Estate Investment Trust (REIT) market since the early 1980s advising clients including E.F. Hutton, Merrill Lynch, CalPERS and others concerning new REIT securities offerings and investment issues. As an investment committee member of Guggenheim Real Estate, he monitored the REIT market and participated in investment decisions concerning the allocation of hundreds of millions of dollars of REIT investments.

Mr. Muldavin has been involved in the structuring and due diligence of real estate property and business transactions. He has completed due diligence engagements involving the acquisition of office buildings, retail properties, hotels, multi-family properties, industrial properties, large land parcels, mortgage portfolios, mortgage companies, commercial banks, real estate service companies and other real estate assets. As an advisor and Investment Committee member of Guggenheim Real Estate, Mr. Muldavin reviewed hundreds of retail, office, industrial and multi-family investment opportunities throughout the United States, as well as investments in mezzanine loans, B-piece investment, funds, preferred equity, and REITs.

Mr. Muldavin is a frequent speaker and has authored over 200 articles published in *Real Estate Finance*, *Urban Land Magazine*, *Bankers Magazine*, *The Journal of Property Management*, *The Pension Real Estate Quarterly*, *Real Estate Issues*, *The Investment Property and Real Estate Capital Markets Reports*, *Institutional Investor*, *Builder and Developer*, *The Real Estate Accounting and Tax Journal*, and other industry publications.

Mr. Muldavin has been recognized by the American Society of Real Estate Counselors and the Royal Institute of Chartered Surveyors, each of whom have awarded him their highest level of professional certification.

Mr. Muldavin has a bachelor's degree in Environmental Studies from UC Berkeley and a Masters in City and Regional Planning from Harvard University.

Exhibit 2

GBFC Members and Collaborators

Consortium Members

- BOMA International
- National Association of Realtors
- Cherokee Investment Partners
- CB Richard Ellis
- Kennedy Real Estate Counsel
- Revival Fund Management, LLC
- Swinerton Builders
- Paul Hastings Janofsky & Walker, LLP
- Davis Langdon
- Northwest Energy Efficiency Alliance
- EPA EnergyStar Division
- City of Seattle
- William McDonough & Partners (Supporting)

Consortium Advisory Board

- **Brenna Walraven**, Chairman Elect-BOMA International, Executive Director, National Property Mgmt, USAA Realty
- **Gary Pivo**, Senior Fellow, University of Arizona, Co-leader, Responsible Property Investment Project
- **Mark Mendell**, Staff Scientist - Epidemiologist; EETD, Lawrence Berkeley National Laboratory
- **Ron Herbst**, Global Leader of Energy and Sustainability, CB Richard Ellis
- **Karen Cook**, President, EECOM
- **Leanne Tobias**, Principal, Malachite LLC
- **Chris Corps**, Principal, Asset Strategics Ltd.
- **Stephan Castellanos**, AIA Representative, Architectural Services Director QUAD KNOFF
- **Peter Korpacz**, PriceWaterhouseCoopers LLP

Exhibit 2

GBFC Members and Collaborators (cont.)

- **Jim Amorin**, MAI, SRA, Vice President, Appraisal Institute, Atrium Real Estate Services
- **Brent Palmer**, CRE, MAI, FRICS, Senior Vice President and Chief Valuation Officer, New Tower Trust Company

Consortium Implementation Team

GBFC Staff

Scott Muldavin, CRE, FRICS, Executive Director, GBFC

Andy Fuscas, CRE, Managing Director, GBFC

Sue Ragen, MPP, Director, GBFC

John D'Andrea, PhD., Director, GBFC

Jayne Verdon, Administrative Manager, GBFC

Jaime Ohm, Research Associate, Intern, GBFC

Select Pro-Bono Implementation Team Members/Collaborators

Tim Lowe, MAI, CRE, Principal, Waronzof Associates, Inc.

Brian Gross, Waronzof Associates, Inc.

Theddi Chappell, CRE, MAI, FRICS, AAPI, Managing Director, Global Advisory Practice, Pacific Security Capital

Peter Morris, MCRIS, Davis Langdon

James Spielman, Davis Langdon

Patrick Ramsey, Partner, Paul Hastings Janofsky & Walker

Robert Freilich, Of Counsel, Real Estate Department, Paul Hastings Janofsky & Walker

Stuart Brodsky, EPA, National Program Manager, Commercial Property Markets, Energy Star

Jackson Lehr, Harvard Business School, Green Order

Molly McCabe, Hayden Tanner, LLC

Exhibit 2

GBFC Members and Collaborators (cont.)

Patrick Lord, Asset Management Analyst, Arbor Realty Trust, Inc.

David Wood, Senior Research Associate, the Institute for Responsible Investment at The Center for Corporate Citizenship at Boston College Wallace E. Carroll School of Management

Roy Schneiderman, President, Bard Consulting

Exhibit 3: GBFC Implementation Plan Summary of Planned Output and Activities

I. Foundational Knowledge ¹	II. Special Reports on Sustainable Property Underwriting	III. Building the Foundation for Valuing Sustainable Properties	IV. Communications
<ul style="list-style-type: none"> 1. Understanding Sustainable Property Investment 2. Understanding Sustainable Properties: A Fiduciary Framework 	<ul style="list-style-type: none"> 1. Energy 2. Worker Productivity and Health 3. Socially Responsible Investment Capital 4. Gov. Regulations & Incentives 5. Commissioning 6. Process Risks 7. Product and Material Risks 8. Water 9. Sustainable Sites 10. Existing Buildings 	<ul style="list-style-type: none"> 1. Overview of Approach to Sustainable Valuation 2. Tenant/User Demand 3. Investor Demand 4. Income Approach 5. Sales Comparison Approach 6. Cost Approach 7. Sustainable Valuation Standards 8. Information Infrastructure 	<ul style="list-style-type: none"> 1. Presentations 2. Facilitate Trade Group Dissemination 3. Contribute to Government Policy Action 4. Collaborate with Industry Groups

¹ Bold projects in Sections I and II are priority deliverables; purple projects in Section II (3-10) will be summary reports of key issues and industry resources; blue tasks in Section III are those where GBFC will assist; green tasks in Section IV will be limited until completion of bold and purple projects by year-end 2007.

Exhibit 4: Summary of GBFC Output ⁽¹⁾

<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
<p>I. Foundational Knowledge</p> <p>1. Understanding Sustainable Property Investment</p>	<p>Provide key background information and vocabulary necessary for investors/tenants sustainable property decision-making.</p>	<ul style="list-style-type: none"> • What is a Sustainable Property? • Sustainable property investment decision-making process • Sustainable products and materials • Sustainable development process and participants • Current trends and perspectives on sustainable finance
<p>2. Understanding Sustainable Properties: A Fiduciary Framework</p>	<p>Provide foundational understanding of the special considerations in underwriting sustainable properties. Present frameworks that clearly delineate and describe the nature of the benefits and risks of sustainable property investment. Provide framework to guide modifications to existing decision-making process.</p>	<ul style="list-style-type: none"> • A summary assessment of the applicability of prior Cost-Benefit reports to the underwriting process. • A clear description of the risk and benefits of sustainable property investment for landlords and tenants/users. • Identification and appropriate classification of the menu of potential sustainability investments; description of these key features or elements; and assessment of special risk or benefit considerations. • Assessment of required modifications to existing underwriting or decision frameworks used by lenders, investors, corporations. • Special considerations in underwriting by property type: office, industrial, retail, multi-family, hospitality.

(1) When we use the term underwriting process we refer to the decision making process employed by corporate owners, tenants, investors, lenders, and developers as they make sustainable property investment decisions.

<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
<p>II. Special Reports on Sustainable Property Underwriting</p> <p>1. Underwriting building energy Investments</p>	<p>Provide the background information and context necessary for investors/tenants to evaluate energy investment from a fiduciary perspective. Focus on developing a process for evaluating the reliability and accuracy of energy performance and cost forecasts.</p>	<ul style="list-style-type: none"> • Implementing energy efficient investment: organizational resources; role of EnergyStar; phasing of investment; integration with sustainable investing; new construction versus existing buildings. • Assessment of energy performance and forecasting models and approach to underwriting there liability and accuracy of forecasts. • Assessment of the implications of energy investment on risk, cash flow and value. Underwriting and valuation methods and practices.
<p>2. Worker Productivity and Health</p>	<p>Summarize and assess approaches to enable private investors/tenants to evaluate potential health, well-being and productivity of occupants from a fiduciary perspective.</p>	<ul style="list-style-type: none"> • Survey of scientific research describing and analyzing the relationship between building attributes and health. • Provide an independent critique of the ten (or so) most important alleged benefits from worker productivity and health that are currently cited in the marketplace. • Outline approaches to measuring potential worker productivity and health benefits for a specific property.
<p>3. Socially Responsible Investment Capital</p>	<p>Summarize potential implications on value resulting from the flow of SRI capital into real estate, and the indirect effect on corporate real estate</p>	<ul style="list-style-type: none"> • Assess the magnitude, growth and form of SRI capital projected to flow into real estate. • Assess how SRI investment at the corporate equity level will affect corporate behavior concerning the leasing, acquisition and development of sustainable property.

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<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
	<p>behavior of the flow of SRI capital into corporations. (This task will be integrated with tasks from III.-2 in evaluating the influence of sustainability movement on tenant/user demand.)</p>	<ul style="list-style-type: none"> • Develop the specific hypothesis describing the influence of the flow of SRI capital into real estate and its effect on value (Capitalization, rates, and discount rates) and volatility of capital flows over time.
<p>4. Government Regulations & Incentives</p>	<p>Evaluate the financial and risk implications of government regulations and incentives affecting private sustainable property.</p>	<ul style="list-style-type: none"> • Develop assessment of the speed of change and expectations regarding future regulatory/incentive actions by governments in light of global warming concerns, and efforts by the U.S. Conference of Mayors, many state governments, and increasingly the federal government, as well as national and international organizations. • Assess potential implications of ASHRAE 189P (under development) on municipal standards for the design of high performance sustainable buildings. • Categorize the menu of potential regulations and incentives into logical categories for analysis. • Summarize potential methods and techniques to assess the financial and risk related benefits for each of the different generic types of regulations and incentives at each government level.
<p>5. Commissioning</p>	<p>Enable investors/tenants to assess the reasonableness of projected commissioning costs and benefits.</p>	<ul style="list-style-type: none"> • Describe the differences in the cost of a commissioning report by property type and the depth and comprehensiveness of the report. • Investigate whether commissioning has historically provided a net benefit, and those factors which maximize the benefit of commissioning.

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<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
6. Underwriting Risks in the Sustainable Property Development Process	Summarize and assess approaches to minimize/mitigate risks inherent in the sustainable property development process.	<ul style="list-style-type: none"> • Describe clearly the nature of risks, and potential value implications resulting from failures in the process of implementing sustainable developments. • Assessment of problems and risks in the design and engineering phase. • Assessment of the importance of integrated design and the attributes of integrated design critical to success. • An assessment of the risks related to contractor cost, quality and availability. • Development of best practices and underwriting guidance to mitigate process risk.
7. Product and Material Risks	Summary of the risks and issues inherent in the selection of products and materials.	<ul style="list-style-type: none"> • Summary of the risks and issues inherent in the selection of products and materials
8. Water	Summary of the benefits and risks of sustainable water building features.	<ul style="list-style-type: none"> • Inventory of sustainable water features. • Summary assessment of risks and benefits.
9. Underwriting Sustainable Sites	Summary of the benefits and risks of sustainable sites from a fiduciary perspective.	<ul style="list-style-type: none"> • Inventory of sustainable site features. • Summary assessments of risk and benefits.
10. Existing Buildings	Summary of some of the key issues in underwriting existing buildings from a fiduciary perspective.	<ul style="list-style-type: none"> • Summarize key underwriting and valuation issues for existing properties. • Evaluate and outline ideas for addressing the “split incentives” between landlords and tenants;

<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
		<ul style="list-style-type: none"> Clearly articulate the maintenance and operations actions that can be taken.
<p>III. Building the Foundation for Valuing Sustainable Properties</p> <p>1. Overview of Approach to Sustainable Valuation</p>	<p>Assist others in the development of a report that will provide a preliminary overview of the key issues in valuing sustainable properties to provide context for further work and debate among valuation professionals and standard setting organizations. This report will also put into context the relationship between formal appraisals (such as an MAI appraisal performed in compliance with USPAP) and value knowledge applied in other sustainable building decision-making situations.</p>	<ul style="list-style-type: none"> Assist in development of report addressing the bullets below. Current state of sustainable valuation practice. Survey. Literature review of all work done in this area to date. Preliminary opinions on new information needs and/or modifications to traditional methods required. Preliminary discussion of key issues including most probable buyer analysis, functional obsolescence, integrating risk measures into value, database and information needs, and other considerations.
<p>2. Tenant/User Demand</p>	<p>Develop process and information for measuring tenant/user demand for</p>	<ul style="list-style-type: none"> Assist in development of a focused tenant/user demand survey of all LEED NC and Core and Shell private non-owner occupied properties (approximately 60 such buildings in the U.S. as of February 2007).

<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
	individual sustainable elements.	<p>Survey to be designed and performed by real estate valuation professionals.</p> <ul style="list-style-type: none"> • Assessment of the impact on tenant/user demand of rapidly growing corporate sustainability movement; measure rate of change and proxy's for specific changes in corporate real estate strategies to reflect corporate sustainability commitment. • Summary review of corporate and tenant rep. broker research and models for understanding the factors influencing tenants, to properly place sustainability demand in the overall context of factors influencing tenants. • Develop a clear and detailed articulation of the hypotheses for the link between sustainable properties and increased tenant/user demand. .
3. Investor Demand	Evaluate investor demand for sustainable properties and potential implications on discount and capitalization rates as well as value volatility.	<ul style="list-style-type: none"> • Review the work being done in Section II-3 on the magnitude of socially responsible investment capital directed towards real estate. • Evaluate the growing number of private investment funds directed towards sustainable properties. • Evaluate the more important trend towards sustainable investing by the overall corporate equities market on private real estate investment capital. • Clearly articulate the relationship between investor demand for sustainable properties and capitalization or discount rates.
4. Income Approach	Assist in the development of recommendations on modifications to the income approach for select sustainable properties.	<ul style="list-style-type: none"> • Assist in report summarizing recommended modifications to income approach by property type and life cycle based on knowledge to date, with further modifications as special reports and sustainable property underwriting and tenant/user demand work are completed. • Assist in review of the influence of market conditions on the influence of

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<u>Report/Action</u>	<u>Purpose</u>	<u>Key Content/Research</u>
		<p>sustainable demand on tenants/investors.</p> <ul style="list-style-type: none"> • Assist in the development of a process for measuring and integrating the influence of sustainable property features on key value metrics: rents, absorption, tenant retention, rent increases, discount rates, capitalization rates, capital expenditures, tenant improvements, and leasing commissions. • Assist particularly on the integration of the risk related benefits of sustainable properties—reduced energy volatility, protection against changes in government regulations and corporate leasing behavior, liability risk reduction, etc.—on value.
5. Sales Comparison Approach	Assist in the development of recommendations on modifications to the sales comparable approach for sustainable properties	<ul style="list-style-type: none"> • Assist in the development of preliminary recommendations and suggested modifications to the traditional sales comparison approach by property type and life cycle. • Assist in the assessment of the reasonableness and reliability of sales comparison approach under different circumstances.
6. Cost Approach	Assist in the development of recommendations on modifications to the income approach for sustainable properties	<ul style="list-style-type: none"> • Assist in the development of recommended modifications to the cost approach by property type and life cycle. • Assist in the development of approaches to addressing functional and external obsolesces.
7. Sustainable Valuation Standards	Insure the widest possible adoption of sustainable valuation standards and practices by major U.S. and international appraisal practice or standard setting organizations.	<ul style="list-style-type: none"> • Work with the Vancouver Valuation Accord or other efforts which are focused on promoting the process within appraisal standards organizations necessary to their adopting sustainable valuation standards and practices. • Work with Implementation Team and Advisory Board Members of the Appraisal Institute to adapt Consortium work product into a publication

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<p>8. Information Infrastructure</p>	<p>Assist in the creation of the required information resources necessary to enable high quality and cost effective appraisal and analysis of sustainable properties.</p>	<p>addressing the special considerations of sustainable property valuation.</p> <ul style="list-style-type: none"> • Support the work of the Responsible Property Investment Project in their efforts to adapt CoStar databases to enable sustainable property comparable analysis and other related research. • Continue discussions with Real Capital Analytics and other major real estate and valuation information providers to establish “markers” for sustainable properties and related database adjustments to enable improved empirical work in the future. • Continue work on the High Performance Building Data Protocol Committee to develop a centralized source for the wide range of property and non-property specific data and information necessary to evaluate sustainable properties from a fiduciary perspective.
<p>IV. Communications</p> <p>1. Presentations</p>	<p>Build support and foundation for adoption of Consortium work product and approach. Contribute to improved communication between real estate capital decision-makers and the sustainable building construction and service sector.</p>	<ul style="list-style-type: none"> • Expanded focus on presentations following completion of work product subject to fund raising.
<p>2. Facilitate Trade Group Dissemination</p>	<p>Work with key real estate trade groups to facilitate dissemination of appropriate content from the Consortium’s work to</p>	<ul style="list-style-type: none"> • Work with trade groups to customize content for different member segments and different distribution channels. • Participate in conferences, seminars, and other opportunities for direct dissemination to real estate trade groups.

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	their members.	<ul style="list-style-type: none"> • Work with sustainable construction and service provider sectors to improve communications with real estate sector.
3. Contribute to Government Policy Action	Assist local, state, national, and international governments in crafting appropriate government policies to motivate private sector investment in sustainable properties in the most effective manner.	<ul style="list-style-type: none"> • Continue work with organizations such as the Commission for Environmental Cooperation, Bookings Institution, Lawrence Berkeley Labs, BOMA, the EPA's EnergyStar division, the U.S. Conference of Mayors, and related organizations and governments focused on sustainable building policy development.
4. Collaborate with Industry Groups	Collaborate with national and international industry groups working to improve the quality of sustainable building decision-making.	<ul style="list-style-type: none"> • Continue work with key groups such as the World Building Council for Sustainable Development, the Responsible Property Investment Project, the Vancouver Valuation Accord, ASHRAE, USGBC, the High Performance Building Data Protocol Committee, and other groups.